

41st Annual International Conference of the IEEE Engineering in Medicine and Biology Society



July 23-27 2019

Messe Berlin
Berlin, Germany

Conference Chair

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Conference Co-Chairs

Thomas Lenarz, Medical University of Hannover (MHH), Germany

Mohamad Sawan, Westlake University Hangzhou, China

Program Chair

Olaf Dössel, Karlsruhe Institute of Technology, Germany

Program Co-Chairs

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President's Welcome Message



On behalf of IEEE EMBS, I am extremely pleased to welcome all of you to the 41st EMB Conference in Berlin. The theme and location cannot be more contextual or relevant to today. Engineering is playing an ever more important role in shaping wellness and health care and the advent of dramatically new innovations in engineering technologies is revolutionizing the life of humans across the planet. With the new wearable sensor devices that can monitor myriad features of humans dynamically and continuously combined with our ability to process the largesse of data in real time, we can rightly describe the emergence of the “digital human”. The 2019 EMB Conference will highlight the latest technologies, innovations and applications to human health and well-being and provide a roadmap for the future.

EMBS has spearheaded technical committees that integrally form the theme of the Conference this year. Innovations in technologies ranging from nano to macro scales, measurements that span molecular components to whole body and models that can cascade across scales are the hallmark of this year's conference presentations. While multiple facets of human physiology are coming within the scope of engineering, the human brain can be considered the ultimate frontier for engineering in biology and medicine. The exquisite detail in which we can now capture the brain circuitry in relationship to its function and the innovations in building the brain connectome have the potential to revolutionize our understanding of a thinking and functioning human! These challenges will ultimately lead not only to understanding normal function of the human brain, but the degeneration in the aging brain, myriad pathologies of the brain including cancer, dementia and scores of diseases and lead the way to improving the ultimate quality of life.

In this age of knowledge explosion and ability to obtain any information in seconds through the World Wide Web, the importance of training in engineering cannot be underemphasized. Especially, the young engineers who will inherit the future, have to be encouraged to spearhead entirely new challenges as well as take leadership roles towards the future in engineering health care. This in combination with the strongest emphasis in fostering the role of women and under-represented minorities in engineering will form an essential theme of this Conference. This will also serve as a major objective for EMBS in the coming years.

The Conference will also provide the community with the ability to determine what policies will impact the society as well as the growth of engineering in health care. The role of ethical guidelines and importance of understanding amongst the public on the strengths and limitations of use of engineering approaches will be emphasized by the speakers aiding policy makers to enact meaningful policies.

I want to welcome you to the historic city of Berlin, which is arguably the most appropriate location for this Conference. Berlin which sits at the nexus of the past and the future has emerged as a vibrant European city that sets the standards for modern living. This international melting pot city will invigorate the discussions on the impact of engineering in healthcare and set the stage for the future of the society. I hope you will enjoy the Conference and the stay in Berlin and help build the future of engineering in medicine and biology.



Shankar Subramaniam
University of Southern California, San Diego
EMBS President, 2019-2020



Welcome Message from the Organizing Committee

Welcome to EMBC 2019! We are glad to see you in Berlin joining the IEEE Engineering in Medicine and Biology Conference this year. Preparations for the conference began four years ago and the work during the last 12 months has been intense, but it also has been a rewarding journey.

We are proud to present outstanding keynote lectures from leaders in the field, many from biomedical engineering companies based in Germany and Europe. The carefully tailored program was achieved with a selection of various plenary, keynote and tutorial speakers. However, this outstanding program would not have been achievable without the large number of contributions submitted by authors from over 60 countries. We would like to warmly thank everyone who participated to make EMBC'19 in Berlin a very successful event. You will find the regular program integrated with workshops, minisymposia, special and invited sessions, in addition to a vibrant poster and exhibition area. Please, make use of the extensive space, rooms and corners of the CityCube for networking and socializing.

Our conference theme, “Biomedical Engineering: Ranging from Wellness to Intensive Care Medicine” highlights Germany as a country with a strong focus on exporting and producing goods of high quality, medical engineering products. Berlin is also a major hub for startups, many of them in the medical, healthcare and wellness fields. Current developments in healthcare concentrate on developing new and exciting technologies related to intensive care monitoring and intensive care interventions. Charité University Hospital is devoted to this kind of high quality care and is proud to be one of the largest university hospitals in Europe who supported our time and efforts in realizing this conference. Because of this, biomedical engineering will see a boost in wellness and health applications related to preventive and supportive healthcare. With all this activity around, we see Berlin as an exciting place for the EMB conference.

Berlin is not only devoted to science but also a cultural center with international shows, theater, music, and entertainment. Our long summer nights will provide opportunity for much fun and joy, hopefully in the local biergarten! Please enjoy the city with its many aspects of culture from the classic to avant garde with international openness for all kind of thoughts, opinions, and lifestyles. After a day of science, enjoy the area and everything it has to offer in the new and changing city of Berlin!

It takes many people to create a conference and we would like to recognize the Program Committee and the EMB Conference Editorial Board who diligently worked to create an interesting and dynamic program for the conference. We would like to thank the EMBS Executive Office, Conventus and Smith-Bucklin for keeping us on schedule. And most importantly, the support of local EMBS members and the biomedical community provided by the National Biomedical Engineering Society, the German DGBMT / VDE and the Austrian Biomedical Engineering Society.

We are happy to have you in Berlin!

Thomas Penzel, Thomas Lenarz, Mohamad Sawan
Conference Chairs

Olaf Dössel, Luca Mainardi, Konstantina S. Nikita, James Weiland
Program Chairs

General Conference Information

Registration

Registration is located on the Main Level of the City Cube Berlin and will be open Monday, July 22 through Saturday, July 27. Staff will be able to assist you during the following time schedule.

- Monday 7/22 15:00 – 17:00
- Tuesday 7/23 08:00 – 17:00
- Wednesday 7/24 07:30 – 19:00
- Thursday 7/25 07:30 – 18:00
- Friday 7/26 07:30 – 18:00
- Saturday 7/27 07:30 – 12:00

Conference Badges

- Badges should be worn by all conference participants while in the conference areas. Badges validate your registration and may be utilized to validate registration for sessions and workshops
- Badges can be printed at any registration area during the published open hours of the conference
- Name as provided for registration will be the name that appears on the badge
- \$20 Fee applies for reprint or replacement of a badge

Exhibits

Exhibits will be located in Hall B on Level 2 of the City Cube

Exhibition Hours will run Wednesday, July 24– Friday, July 26

- Wednesday, July 24 08:00 – 21:00
- Thursday, July 25 08:00 – 19:30
- Friday, July 26 08:00 – 19:30

Set-Up

- Tuesday, July 23 08:00 – 20:00

Dismantling

- Friday, July 26 19:30 – 24:00

Welcome Reception

The welcome reception will be held on Wednesday, July 24 at 19:30 in Hall B

The Welcome Reception is included with your registration fee. If you would like to bring a guest, you can purchase them a ticket via the registration site or onsite at the registration desk for \$80.00, plus tax.

Mothers' Room

Nursing mothers may visit the registration desk for access to a private nursing room at the City Cube. Please find a member of the EMBC Registration Staff Team and we will be happy to assist you.

Mobile App

For attendees who prefer to use their Smartphones to access the program and papers, the mobile app “EMBC 2019” can be downloaded from the Apple Store or the Google Play Store.

Proceedings

EMBC accepted papers will be available on the cloud platform InfoVaya (<https://events.infovaya.com/event?id=37>), from July 23, 2019, until October 23, 2019. The manuscripts will be accessible to registered attendees only. We will have WiFi in the meeting space; however, we do recommend that you download/print any papers ahead of time as we will not have a printer available on-site. Attendees will be able to view individual PDF files along with any author-uploaded documents (e.g. posters or slides). A downloadable folder with the entire set of papers will be available 48 hours after the end of EMBC 2019.

Infovaya Login Instructions

First-time users:

1. Visit <https://events.infovaya.com/register>

Enter the email address that you have provided to the conference.

A link to set your password will be emailed to you.

Existing InfoVaya® users: Simply log into your account.

Poster Sessions

- Wednesday, July 24 18:00 – 19:30
- Thursday, July 25 18:00 – 19:30
- Friday, July 26 18:00 – 19:30

Poster Sessions will take place in Hall B. Please make sure to hang your poster 2 hours prior to your scheduled presentation time. Upon conclusion of your poster session, please remove your poster. If your poster is left behind, it will be discarded. Velcro or Push Pins will be provided to attach your posters to your assigned poster board.

Oral Presentations

A video projector will be available in each room and will be connected to a computer supporting resolution up to 1080p. Please upload your presentation to the centralized system in the speaker ready room which is located on level one in the Cube Club at least 2 hours prior to your talk. It is the responsibility of the presenting author to load the presentation ahead of time and test it to ensure the presentation will be viewed properly.

Author No Show Policy

EMBS enforces a “no show” policy. Any accepted paper included in the final program is expected to have at least one author attend and present the paper at the conference. Authors of the accepted papers included in the final program who do not attend the Conference will be subscribed to a “No Show List”, compiled by the Society. The “no-show” papers will be removed from the proceedings and noted as “Author unavailable for presentation” prior to submitting to IEEE for inclusion in Xplore. The “No Show List” will be available to all EMBS conference organizers, who can reject submissions from these authors in the following two years, based on their past negative impact on an EMBS conference.

Student, WIE, and EMB Society Events

Time	July 24, 2019 (Wednesday)	Room
08:00 - 09:30	Regional Chapter Meeting (NA and LA)	M7
13:00 - 14:00	Lunch with Leaders	A4
14:00 -15:00	How to Start Your First Lab	M7
17:00-18:00	Networking I	M7
Time	July 25, 2019 (Thursday)	Room
08:30 - 09:30	Student Paper Competition I	M7
10:30 - 12:00	Funding Your Graduate Education	M7
13:00 - 14:00	Lunch with Leaders	A4
13:00 - 14:00	EMB Meet the Editors	R13
14:00 - 15:00	Student Paper Competition II	M7
16:00 - 17:00	Student Paper Competition III	M7
17:00 - 18:00	Student Paper Competition Judging	M7
18:00 - 19:00	Women in Engineering Social Event	Cube Cafe
19:30 - 21:00	EMB AE Forum	A5
21:00 - 22:00	EMB AE Reception	A4
Time	July 26, 2019 (Friday)	Room
08:30 - 10:00	Scientific Writing and Manuscript Preparation	M7
10:30 - 12:00	Tips on Effective Presentation Design	M7
13:00 - 14:00	Women in Engineering Lunch	M2
13:00 - 14:00	Student Panel Discussion	A4
17:00 -18:00	Entrepreneur Session + Business	M7
19:30 - 22:30	Student and Young Professionals Reception	Cube Cafe
Time	July 27, 2019 (Saturday)	Room
08:30 - 10:00	Member and Student Committee	M7
10:30 - 12:00	Volunteering and Local Activities with EMBS	M7

Technical Committees

Time	July 23, 2019 (Tuesday) Sofitel Hotel Meeting Closed to Public	Room
16:00-18:00	EMBS Technical Committee Chairs' Board Meeting	Concorde
18:00-19:00	Joint Dinner for Technical Committee Chairs and PubCom	Concorde
Time	July 24, 2019 (Wednesday) Technical Committee Meeting Meeting Closed to Public	Room
13:00-14:00	Committee Meeting Neuroengineering (NE)	R2
13:00-14:00	Committee Meeting Cardio Pulmonary Systems (CPS)	R3
13:00-14:00	Committee Meeting Biomedical and Health Informatics (BHI)	R4
13:00-14:00	Committee Meeting Biomedical Imaging and Image Processing (BIIP)	R5
13:00-14:00	Committee Meeting Translational Engineering & Healthcare Innovations (TEHI)	R8
13:00-14:00	Committee Meeting Therapeutic Systems and Technologies (TST)	R10
13:00-14:00	Committee Meeting Wearable Biomedical Sensors and Systems (WBSS)	R12
13:00-14:00	Committee Meeting Standards	R13
13:00-14:00	Committee Meeting Bio nanotechnology & BioMEMS (BNBM)	M3
13:00-14:00	Committee Meeting Bio Robotics (BR)	M5
13:00-14:00	Committee Meeting Biomedical Signal Processing (BSP)	M7

This year our Technical Committees (TC) will be hosting a booth in the Exhibit Hall for you to stop by, learn about any of the Technical Committees, ask what innovative areas they are involved with, what direction they are taking and how you can be involved. The booth will be open July 24-26 during the 10 am break Wed-Fri, lunchtime 1-2 pm Thurs-Fri and during the evening poster sessions Wed-Fri.



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Conference Co-Chairs

Thomas Lenarz, *Hanover, Germany*

Mohamad Sawan, *Hangzhou, China*

Program Chair

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Werner Wolf, *München, Germany*
Ulf Ziemann, *Tübingen, Germany*

Program at a Glance

Tuesday, July 23, 2019	
08:00–17:00	Registration Open
08:30–12:30	<p>Workshops (Pre-Registration Required)</p> <ul style="list-style-type: none"> • Intellectual property strategies for international protection of biomedical products and technologies • Wearable sensor solutions for integrated mobile EEG/EXG, motion capture & eye tracking in the real and virtual worlds • SimpleITK: A tool for biomedical image processing, from cells to anatomical structures • Neuromuscular modeling for evaluating neural prosthesis control and myoelectric decoding • Cardiorespiratory physiology and modeling with clinical applications (FULL DAY) • Advances and challenges in the field of emotion recognition and emotion regulation for designing technology-based interventions for affective disorders • The fast-changing landscape of electroencephalography • Heat-based techniques for cancer removal: A journey through state-of-the-art, research and clinical application
13:30–17:30	<p>Workshops (Pre-Registration Required)</p> <ul style="list-style-type: none"> • Science at-home: Breaking with the limitation of today's electrophysiological studies • Image-based estimation of cardiovascular tissue motion and elasticity • Interpretable & transparent deep learning • Cardiorespiratory physiology and modeling with clinical applications • Stress reduction methods using biofeedback and virtual reality • Major BCI methodological approaches and design of BCI applications for communication, neurorehabilitation, neurological assessment, deep brain stimulation and functional mapping with EEG and ECoG. • Telemedicine and telemonitoring in AAL home environments • Tutorial on computational modelling of therapeutic devices • The future of sleep health: A data-driven revolution in sleep science and medicine

Wednesday, July 24, 2019	
07:30–19:00	Registration Open
08:30–10:00	Minisymposium, Oral Sessions, Invited Sessions, Special Sessions
10:00–10:30	Coffee Break, Exhibition, Poster Viewing
10:30–12:00	Opening Ceremony & Plenary Session
12:00–13:00	Plenary Keynote
13:00–14:00	Lunch Break on own Lunch with Leaders (pre-registration required) Exhibition, Poster Viewing
14:00–15:30	Minisymposium, Oral Sessions, Invited Sessions, Special Sessions
15:30–16:00	Coffee Break, Exhibition, Poster Viewing
16:00–17:00	Theme Keynotes
17:00–18:00	Ignite Oral Presentation Sessions
18:00–19:30	Poster Session
19:30–21:00	Welcome Reception

Thursday, July 25, 2019	
07:30–18:00	Registration Open
08:30–10:00	Minisymposium, Oral Sessions, Invited Sessions, Special Sessions Student Paper Competition
10:00–10:30	Coffee Break, Exhibition, Poster Viewing
10:30–12:00	Minisymposium, Oral Sessions, Invited Sessions, Special Sessions Student Paper Competition
12:00–13:00	Plenary Keynote
13:00–14:00	Lunch Break on own Lunch with Leaders (pre-registration required) Exhibition, Poster Viewing
14:00–15:30	Minisymposium, Oral Sessions, Invited Sessions, Special Sessions Student Paper Competition
15:30–16:00	Coffee Break, Exhibition, Poster Viewing
16:00–17:00	Theme Keynotes
17:00–18:00	Ignite Oral Presentation Sessions
18:00–19:30	Poster Session
17:30–19:00	Women in Engineering Networking Event

Friday, July 26, 2019	
07:30–18:00	Registration Open
08:30–10:00	Minisymposium, Oral Sessions, Invited Sessions, Special Sessions
10:00–10:30	Coffee Break, Exhibition, Poster Viewing
10:30–12:00	Minisymposium, Oral Sessions, Invited Sessions, Special Sessions
12:00–13:00	Plenary Keynote
13:00–14:00	Lunch Break on own Exhibition, Poster Viewing Student Panel Discussion (pre-registration required) Women in Engineering Luncheon (pre-registration required)
14:30–15:30	Minisymposium, Oral Sessions, Invited Sessions, Special Sessions
15:30–16:00	Coffee Break, Exhibition, Poster Viewing
16:00–17:00	Theme Keynotes
17:00–18:00	Ignite Oral Presentation Sessions
18:00–19:30	Poster Session
19:30–21:00	Student/Young Professional Reception (pre-registration required)

Saturday, July 27, 2019	
07:30–12:00	Registration Open
08:30–10:00	Minisymposium, Oral Sessions, Invited Sessions, Special Sessions
10:00–10:30	Coffee Break
10:30–12:00	Minisymposium, Oral Sessions, Invited Sessions, Special Sessions
12:00–13:00	Lunch Break on own
13:00–14:30	Oral Sessions
14:30–16:00	Oral Sessions

Special Sessions

Wednesday, July 24, 2019, 08:30-10:00, Location: Hall A4 - Level 1

Early-Career Researcher Mentoring: Transitioning from Graduate Studentship to a Professional Career

Organizers: Aishwarya Bandla, Nitish Thakor

This session is specially designed for early-career researchers to make them future-ready and a career springboard to launch as a young PI, scientist in industry or entrepreneur. We target the burning topics which intrigue young scientists and fresh graduates while they transition from studentship to postdoc to a permanent position. The session will be fashioned to hold 4 talks by eminent personalities in Biomedical Engineering and followed by a panel discussion format to answer Q&A from the floor. The workshop will conclude with a networking session. Join us at the IEEE EMBC Conference 2019, for this exciting Early-Career Researcher Series workshop and networking session.

Thursday, July 25, 2019, 10:30-12:00, Location: R3 - Level 3

Ethical, Legal and Regulatory Issues of Machine Learning in Medical Systems

Organizers: Olaf Doessel, Christian Herzog

Machine learning (ML) is currently making a major step in terms of performance and fields of application. Support Vector Machines, Decision Trees and Forests, Neural Networks and Deep Learning can be found in nearly all fields of Biomedical Engineering. Both, biosignal and image analysis currently make significant profit from machine learning. The following aspects will be discussed in this special session in 3 lectures and a panel discussion: Ethical, legal and regulatory issues of machine learning in medical systems

Thursday, July 25, 2019, 14:00-15:30, Location: M2 - Level 3

A Physician, an Engineer and a Patient Walk into a Room: A Team-Based Approach to Developing Brain Cancer Treatments

Organizers: Punit Prakash, Govindarajan Srimathveeravalli, Ze'ev Bomzon

We propose an innovative and interactive special session where we will bring together a team of two physicians (a neurosurgeon and a radiologist), two biomedical engineers who have worked on novel solutions to treat brain cancer, and a patient diagnosed with glioblastoma. Through discussion and interaction, this team representing different stakeholders in the treatment process will arrive upon requirements for and evaluate candidate therapeutic technologies.

Friday, July 26, 2019, 10:30-12:00, Location: Hall A1 - Level 1

Detection of Atrial Fibrillation using Smartwatches and Smartphones

Organizer: Ki Chon

There has been an emergence of novel wearable devices for cardiovascular monitoring over the past several years. While event and Holter monitors can be considered some of the first wearable devices for arrhythmia detection, with the advent of smartwatches, smartphones, smart-patches and accelerometer-based wearables such as Fitbit, long-term and cost-effective arrhythmia monitoring is now potentially realizable. Paroxysmal atrial fibrillation detection is of particular interest as it requires long-term monitoring. This invited session's speakers will detail the latest development of various cost-effective and long-term monitoring devices for arrhythmia detection including atrial fibrillation. In particular, the latest developments on smartwatches (including Apple watch and Samsung Gear), a novel patch and armband devices for arrhythmia detection will be discussed by some of the invited speakers.

Friday, July 26, 2019, 14:00-15:30, Location: R4 - Level 3

**The Role of Biomedical Engineering in the Rise of
Personal and Precision Health Care**

Organizers: Ron Leder, Luis Kun, Alexander James Casson, Joaquin Azpiroz

Genetics, nutrition, toxins (internal and external) and environmental factors are the pillars of health. When something goes wrong the problem can be traced to one or more of these factors. Some expand these to seven components, and we must include the practical technology for data collection and data management and interpretation, commonly called medical informatics.

Conference Editorial Board

EMBC 2019, Berlin, Germany

I would like to sincerely thank all the members of the Conference Editorial Board. There were 3445 submissions overall. Of these, 2278 were full contributed manuscripts that were part of our rigorous peer-review process. These papers were reviewed with a minimum of two reviewers per paper. Theme Editors made initial “accept/reject” decisions and created a draft scientific program for each Theme.

There were 29 Invited Session proposals resulting in 141 1-page papers and 36 Minisymposia proposals, resulting in 177 one-page papers. These were also carefully reviewed by a separate review panel selected by the program committee.

Finally, there were 797 Research Poster submissions this year. These were reviewed by a special team of associate editors, handpicked by the local organizers and the EMB Technical Committees. I thank all these individuals for their time as they rapidly reviewed them.

Each year we maintain the highest quality of papers being selected, each with ratings and feedback given to authors from reviewers. The continued dedication and commitment of Editors, Associate Editors and Reviewers, makes this Annual Conference an active and vibrant community of science. So please let me again warmly thank all the members of the Editorial Board, listed here below. It has been an honour and a privilege to be part of such a fine community of esteemed scientists.

Riccardo Barbieri, Editor in Chief - Conference Editorial Board

Theme Editors

Theme 01. Biomedical Signal Processing

Editor: Georgios Mitsis
Co-Editor: Luca Mainardi

Theme 2. Biomedical Imaging and Image Processing

Editor: Jim Ji
Co-Editor: Marius George Linguraru
Co-Editor: Arrate Munoz Barrutia

Theme 3. Micro/Nano-bioengineering; Cellular/Tissue Engineering & Biomaterials

Editor: Esmail Jabbari
Co-Editor: Nathalia Peixoto

Theme 4. Computational systems & Synthetic Biology; Multiscale Modeling

Editor: Jie Liang
Co-Editor: Socrates Dokos

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Editor: Thomas Penzel
Co-Editor: Ramakrishna Mukkamala

Theme 6. Neural and Rehabilitation Engineering

Editor: Richard Jones
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Editor: Emil Jovanov
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Theme 8. Biorobotics and Biomechanics

Editor: Yasin Dhafer
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Theme 9. Therapeutic & Diagnostic Systems and Technologies

Editor: Dorin Panescu
Co-Editor: Dieter Haemmerich

Theme 10. Biomedical & Health Informatics

Editor: Mark van Gils
Co-Editor: Omer Inan

Theme 11. Biomedical Engineering Education and Society

Editor: Bruce Wheeler

Theme 12. Translational Engineering for Healthcare Innovation & Commercialization

Editor: Atam P Dhawan

Theme 13. Pharmaceutical Engineering and Drug Delivery Systems

Editor: Kyungsoo Park

Theme 14. Smart Implants

Editor: Wilfried Mokwa
Co-Editor: Klaus-Peter Hoffmann

Minisymposia, Invited and Special Session Editor
Olaf Dössel

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Ifeachor, Emmanuel
James, Christopher
Kahya, Yasemin P.
Laguna, Pablo
Magenes, Giovanni
Michmizos, Konstantinos
Pachori, Ram Bilas
Porta, Alberto
Signorini, Maria G.
Song, Dong
Sornmo, Leif
Valenza, Gaetano
Vanrumste, Bart
Voss, Andreas
Westwick, David
Yamamoto, Yoshiharu
Yana, Kazuo

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Alic, Lejla
Amini, Amir
Anastasio, Mark
Beg, Mirza Faisal
Chan, Kevin C.
Ding, Lei
Du, Yiping
Duan, Qi
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Qi, Jinyi
Razansky, Daniel
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Sidky, Emil
Sikdar, Siddhartha
Staub, Lawrence H.
Suzuki, Kenji
Toschi, Nicola
Vinegoni, Claudio

Theme 03. Micro/Nano- Bioengineering; Cellular/Tissue Engineering & Biomaterials

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Thekkedath Chackochan, V.	Vannozi, Lorenzo	Wang, Yuhling	Yang, Liangjing
Thomas, Philip	Vanrumste, Bart	Wang, Zhigong	Yang, Tao
Tian, Jie	Varghese, Rejin John	Ward, Arlen	Yang, Xiaofeng
Tiseo, Carlo	Varghese, Tomy	Warren, Steve	Yang, Xiaolong
Tkacz, Ewaryst	Varnfield, Marlien	Warrick, Philip A.	Yang, Zhi
tognetti, alessandro	Varon, Carolina	Washizawa, Yoshikazu	Yang, Zi
Tognola, Gabriella	Värri, Alpo	Watabe, Hiroshi	Yano, Kenichi
Tokuda, Takashi	Vato, Alessandro	Wear, Keith	Yao, Bing
Tolonen, Antti	Vaz, Pedro G.	Weber, Ewald	Yao, Jianchu
Tomar, Namrata	Veasey, Ben	Weddell, Stephen J.	Yao, Jun
Tome, Ana Maria	Vega-Alvarado, Leticia	Weigel, Robert	Yao, Lin
Tong, Kai Yu, Raymond	Vegas-Sanchez-Ferrero, G.	Weiland, James	Yavari, Ehsan
Tong, Shanbao	Velazquez, Ramiro	Wen, Lingfeng	Ye, Hongwei
Toppi, Jlenia	Veltink, Peter	Wen, Yue	Ye, Jong Chul
Torkaman, Giti	Veluvolu, Kalyana C.	Wendling, Fabrice	Yen, Sheng-che
Torous, John	Ventouras, Errikos	Wessel, Niels	Yepez Montenegro, Jonathan A.
Torres, Abel	Venture, Gentiane	Westwick, David	Yetik, Imam Samil
Torres, Elizabeth	Verdu, Gumersindo	Wheeler, Bruce	Yi, Jingang
Torres, Gabriela	Verdú, Gumersindo	Wheeler, Jean	Yildirim, Isa
Torricelli, Diego	Verghese, George	Whitelock, John	Yilmaz, Atila
Toschi, Nicola	Vidaurre, Carmen	Wiesener, Constantin	Yim, Sehyuk
Toyoda, Shuichi	Vides, Silvia	Wiest, Joachim	Yokosawa, Koichi
Tran, Yvonne	Vidotto, Marco	Williams, Haleigh	Yong, Keong
Traver, Vicente	Vieira, Pedro Miguel	Williams, Matthew	Yoo, So-Hyeon
Tridandapani, Srin	vigario, ricardo	Wissenwasser, Jürgen	Yoshida, Eiichi
Trieu, Hoc Khiem	Viik, Jari	Wolf, Didier	Yoshida, Hisashi
Tripathy, Rajesh	Vila, Xose A.	Wolf, Werner	Yoshida, Ken

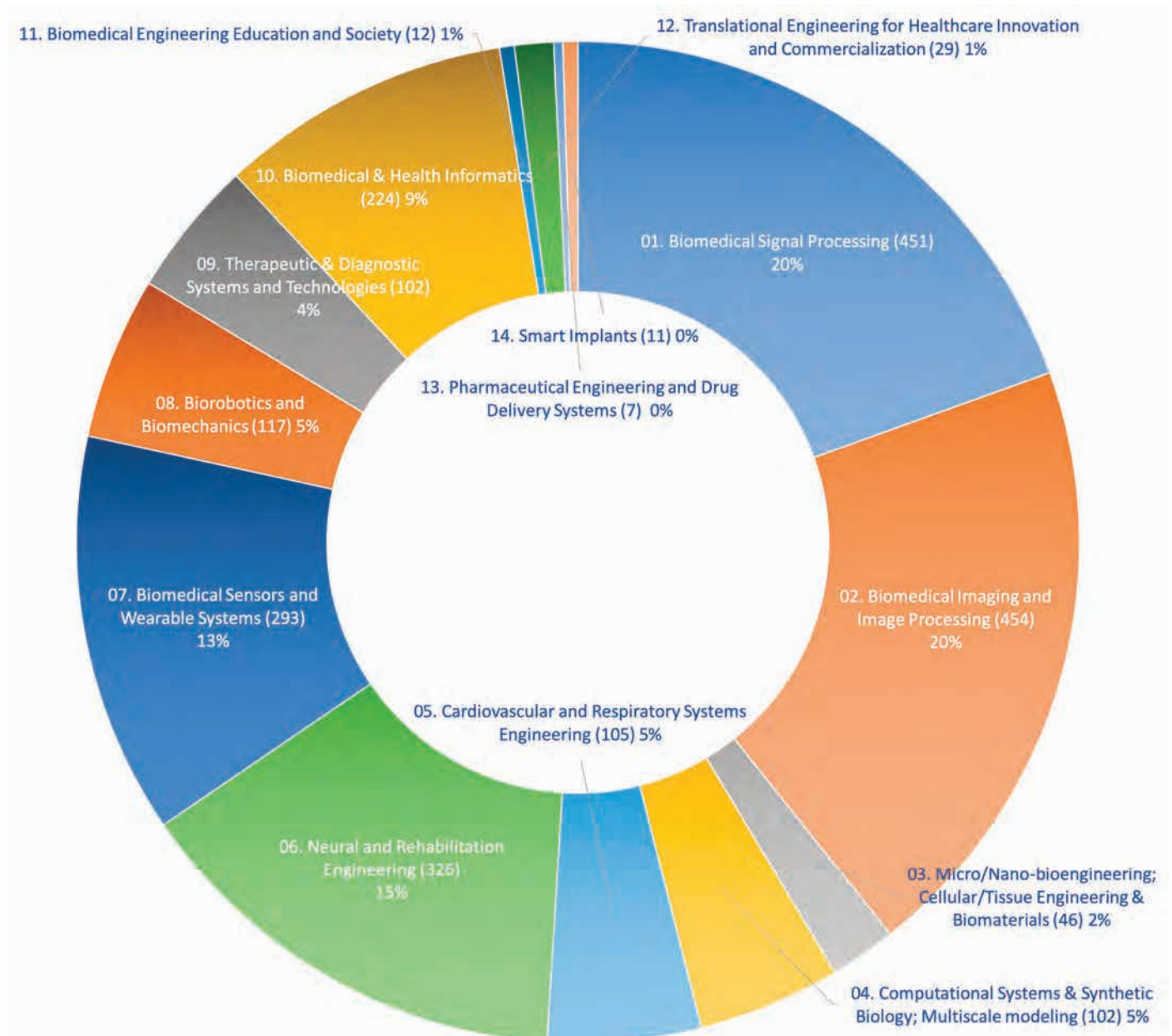
Yoshimura, Takumi	Zerubia, Josiane	Zhou, Huiyu
Yoshiyasu, Yusuke	Zhang, Aili	Zhou, Iris Yuwen
Yoshizawa, Makoto	Zhang, Cheng	Zhou, Jian
Yoshizawa, Nobuyuki	Zhang, Erlei	Zhou, Jinghao
Younesi, Aida	Zhang, Fan	Zhou, Qifa
Young, Alistair	Zhang, Guanqun	Zhou, Zhihao
Youssef Ali Amer, Ahmed	Zhang, Qin	Zhu, Fansan
Yu, Gene	Zhang, Qing	Zhu, Shao Ying
Yu, Pen-Ning	Zhang, Sainan	Zhu, Xin
Yu, Shaode	Zhang, Songmao	Zhu, Yuemin
Yu, Shuangyue	Zhang, Songyao	Zink, Rob
Yu, Wenwei	Zhang, Teng	Zoltowski, Mariusz, Leslaw
Yu, Xinchu	Zhang, Tinghe	Zong, Wei
Yu, Yih-Choung	Zhang, Xiaohui	Zouridakis, George
Yuan, Jiayao	Zhang, Xu	Zwiggelaar, Reyer
Yuan, Jing	Zhang, Yi	
Yuanfei, Huang	Zhang, Yiman	
Yuce, Mehmet	Zhang, Yingchun	
Zacharaki, Evangelia	Zhang, Yiyuan	
Zago, Matteo	Zhang, Yong	
Zamora, Gilberto	Zhang, Zhuo	
Zanos, Theodoros	Zhao, Bo	
Zariffa, Jose	Zhao, Chen	
Zarkogianni, Konstantia	Zhao, Guoru	
Zayed, Nourhan	Zhao, Jianhua	
Zbinden, Daniel	Zhao, Jieling	
Zderic, Vesna	Zhao, Yue	
Zecca, Massimiliano	Zheng, Guoyan	
Zenzeri, Jacopo	Zheng, Yang	
Zequera Diaz, Martha Lucia	Zheng, Yue	

Editor's Notes

The 41st Annual International Conference of the IEEE Engineering in Medicine and Biology Society hosted an electronic paper submission. It was the responsibility of the submitting Author to ensure the document was viewable and absent of errors. Said errors or viewing restrictions would prevent the Conference from including the paper in Digital Proceedings.

All conference papers were peer-reviewed by experts chosen by the Conference Editorial Board.

Full papers by theme, presented at EMBC 2019, Berlin, Germany:



Keynote & Plenary Speakers



Ingeborg J. Hochmair

CEO, CTO and co-founder of MED-EL with its global Headquarters in Innsbruck, Austria.

Ingeborg J. Hochmair holds Dipl.Ing. and Dr.tech degrees in Electrical Engineering and a *venia legendi* in Biomedical Engineering from the Technical University of Vienna, where she, together with Erwin Hochmair, developed the very first microelectronic multichannel cochlear implant, implanted in December 1977 in Vienna. The cochlear implant is the first replacement of a human sense, the sense of hearing. After research work at the Institute for Electronics in Medicine at Stanford University, USA and at the Inst. of Applied Physics at the Univ. of Innsbruck she cofounded the company MED-EL, hired the first employees in 1990 and as the CEO and CTO grew the company into a leading global hearing implant group with 30 daughter companies and offices and a team of more than 2000 people supporting implant centers in 123 countries.

With its innovative neuroprosthetic technologies MED-EL now helps individuals of all ages to overcome hearing loss and to restore other body functions that are a barrier to communication and impair the quality of life. Translational research and biomedical engineering activities are the basis for the innovations.

Ingeborg J. Hochmair has (co-) authored 120 publications and numerous patents.

She received 3 honorary doctorate degrees in medicine from the Technical University of Munich, the Medical University of Innsbruck and the University of Bern.

In 2013 she won the Lasker DeBakey clinical medical Research Award and in 2015 the Russ prize of the US National Academy of Engineering, all for the pioneering work in the area of restoration of the sense of hearing in the deaf.



Michael Kaschke
President and CEO of ZEISS Optical

Michael Kaschke is President and CEO of the ZEISS Group and oversees Strategic Development, Brand & Communications, Legal & Compliance, Human Resources and Digital Innovation. He is also responsible for the Asia Pacific region. Michael Kaschke became Member of the Executive Board of the ZEISS Group in 2000, and was appointed as President and CEO in 2011.

In addition to his offices as Chairman of the Supervisory Board of Carl Zeiss Meditec AG, a company listed on the Frankfurt Stock Exchange (MDax), and of other ZEISS companies, he is a Member of the Supervisory Boards of Henkel AG & Co. KGaA, Deutsche Telekom AG and Robert Bosch GmbH.

In 2014 Michael Kaschke was appointed to the German Council of Science and Humanities, one of the country's most important scientific-political advisory boards.

In 2009 Kaschke became honorary professor of the Faculty of Electrical Engineering and Information Technology at the Karlsruhe Institute of Technology. He gives regular lectures on optical medical technology and innovation management.

Michael Kaschke is Chairman of the Aalen University Council.

Michael Kaschke was born in Greiz, Germany, on 18 June 1957. In 1983, he graduated with a degree in physics from Friedrich Schiller University in Jena.

He obtained two doctorates, the first in 1986 (Dr. rer. nat.) and the second in 1988 (Dr. sc. nat.). As part of his scientific work, he conducted research into the generation and application of ultra-short laser pulses.



Klaus-Robert Müller
Technische Universität Berlin

Klaus-Robert Müller is a Professor for Machine Learning at the department of Computer Science at Technische Universität Berlin and at the Department of Cognitive Science and Engineering at Korea University, Seoul. For 5 years he was director of the Bernstein Center for Neurotechnology, from 2014 I became Co-director of the Berlin Center for Big Data and from 2018 he simultaneously became director of the Berlin Machine Learning Center. In 2012, Klaus-Robert Müller was elected to be a member of the German National Academy of Sciences – Leopoldina, in 2017 of the Berlin Brandenburg Academy of Sciences and also in 2017 as an external scientific member of the Max-Planck Society (MPII). Among other awards in 2014, he received the Berlin Science prize awarded by the governing Mayor of Berlin; in 2017 the Vodafone Innovation Award. Over all, there are 30 full time researchers under my direct supervision. His research interest is in the field of machine learning, deep learning and data analysis covering a wide range of theory and numerous scientific (Physics, Chemistry, Neuroscience and Biomedical Engineering) and industrial applications



Vasilis Ntziachristos
Technical University of Munich

Vasilis Ntziachristos PhD is a Professor of Medicine and Electrical Engineering, the Director of the Chair for Biological Imaging (CBI) and of the Munich School of Bioengineering (MSB) at the Technical University of Munich and the director of the Institute for Biological and Medical Imaging (IBMI) at the Helmholtz Zentrum München. He received a Diploma in Electrical Engineering and Computer Science from the Aristotle University of Thessaloniki, Greece, and MSc and PhD degrees in Bioengineering from the University of Pennsylvania in Philadelphia PA and served as faculty at Harvard University and the Director of the Laboratory for Bio-optics and Molecular imaging at the Massachusetts General Hospital. Professor Ntziachristos regularly serves as chair in international meetings and councils and on the editorial boards of several scientific journals and has received numerous awards and distinctions, including the Gold Medal from the Society for Molecular Imaging (2015), the Gottfried Wilhelm Leibniz prize (2013), and the Erwin Schrödinger Award (2012) and was named one of the world's top innovators by the Massachusetts Institute of Technology (MIT) Technology Review in 2004.



Robert Riener
ETH Zurich

Robert Riener studied Mechanical Engineering at TU München, Germany, and University of Maryland, USA. He received a Dr.-Ing. degree in Engineering from the TU München in 1997. After postdoctoral work at Politecnico di Milano and TU München, he became assistant professor at ETH Zurich and University Hospital Balgrist in 2003. In 2010 he has been promoted to full professor for Sensory-Motor Systems, ETH Zurich. Since 2012, Riener is member of the Department of Health Sciences and Technology, which he was chairing 2016 – 2018. Riener has published more than 400 peer-reviewed journal and conference articles, 20 books and book chapters and filed 23 patents. He has received 19 personal distinctions and awards. Riener's research focuses on the investigation of the sensory-motor interactions between humans and machines. This includes the development of user-cooperative robotic devices and virtual reality technologies applied to neurorehabilitation. Riener is the initiator and organizer of the Cybathlon, which was honored with the European Excellence Award and the Yahoo Sports Technology Award.



Tobias Schaeffter
Physikalisch-Technische Bundesanstalt (PTB)

Tobias Schaeffter studied electrical engineering at TU-Berlin until 1993 and obtained his PhD degree in magnetic resonance (MR) spectroscopic imaging at University Bremen (Prof. Leibfritz) in 1996. From 1996-2006, he worked as a Principal Scientist at the Philips Research Laboratories in Hamburg (Germany). He was responsible for the development of new MR-acquisition and reconstruction techniques as well as investigation of MR-compatible devices. He managed the clinical evaluation and product integration of research results.

In April 2006, Professor Schaeffter took up the post as the Philip Harris Professor of Imaging Sciences at King's College London. A major aim of his research is the investigation of fast and quantitative imaging techniques for cardiovascular applications with a strong focus on translation of biomedical engineering into clinical practice. From 2012 to 2015, he was department head of biomedical engineering and the deputy head of the division in imaging sciences. He taught in the BSc and MSc programmes of Biomedical Engineering. As director of the EPSRC doctoral training centre in medical imaging he was responsible for the PhD training programme between King's and Imperial College London. Since beginning of 2015 Prof. Schaeffter heads the division of medical physics and metrological information technology at Physikalisch-Technische Bundesanstalt (PTB) in Berlin. Prof. Schaeffter has attracted over €10M in grants during the last 5 years and has published over 180 peer-reviewed papers, 10 book chapters, 400 conference abstracts and 30 international patents.



Peter Schardt
Siemens Healthcare GmbH

He has been loyal to Siemens and the medical field, both in-vivo and in-vitro diagnostics, throughout his professional career. Peter obtained his Ph.D. in Physics at the Technical University in Darmstadt, Germany, in 1995 and joined Siemens as an R&D project manager for innovation projects for X-Ray tubes.

He developed high performance X-Ray tubes for Computed Tomography and continued as department head for Innovation Management and Business Development, before he became General Manager of the large Development and Manufacturing site in Kemnath for mechatronic systems and components in 2009.

In 2011 he joined the Siemens Laboratory Diagnostics Business Area as the VP for Program Management in Tarrytown, NY, in order to develop, manufacture, release and market the Atellica Solution product family, an innovative high throughput Immunoassay and Clinical Chemistry Analyzer to run more than 200 assays.

In January 2018, Peter returned to the Diagnostic Imaging Business Area and was assigned as head the X-Ray Products Business Line.



Katja Schenke-Layland
Eberhard Karls University Tübingen (UKT)

Prof. Dr. Katja Schenke-Layland currently holds a dual appointment as Professor of Biomedical Technologies and Regenerative Medicine at the University Women's Hospital at the Eberhard Karls University Tübingen (UKT), and the Director of the Natural and Medical Sciences Institute (NMI) Reutlingen, Germany. Katja is also an Adjunct Associate Professor in the Department of Cardiology at UCLA, Los Angeles, USA, is the Co-Editor-in-Chief of Tissue Engineering, Part B, Reviews, and an Executive Editor for Advanced Drug Delivery Reviews, which is, one of the top journals in the field of advanced drug delivery. Katja is the Study Dean for Medical Technology at the UKT and sits on the board of multiple journals and biomedical associations. Katja is a biologist with a main interest in stem cell, developmental and extracellular matrix biology. Her work focuses on the translation of developmental processes into clinically relevant biomaterials and regenerative therapy strategies, and the development of diagnostic tools to discover and validate therapeutic candidates and diagnose diseases



Jessica Burgner-Kahrs
University of Toronto

Jessica Burgner-Kahrs is Associate Professor and Director of the Continuum Robotics Laboratory at University of Toronto, Canada. From 2013 to 2019 she was with Leibniz University Hannover, Germany and from 2010 to 2012 with Vanderbilt University, USA. She received her Diploma and Ph.D. in Computer Science from Karlsruhe Institute of Technology (KIT), Germany in 2006 and 2010 respectively.

Her research focus lies on continuum robotics and in particular on their design, modeling, planning and control, as well as human-robot interaction. Her fundamental robotics research is driven by applications in minimally-invasive surgery and maintenance, repair, and operations. In 2015 her research was recognized with the Heinz Maier-Leibnitz Prize, the Lower Saxony Science Award in the category Young Researcher, and she was entitled Young Researcher of the Year 2015 in Germany. The Berlin-Brandenburg Academy of Sciences awarded her the Engineering Science Prize in 2016. She was elected as one of the Top 40 under 40 in the category Science and Society in 2015, 2016, and 2017 by the business magazine Capital. In 2019, she was selected as a Young Global Leader of the World Economic Forum.



Gregoire Courtine
EPFL, Switzerland

Gregoire Courtine was trained in Mathematics, Physics, and Neurosciences. He received his PhD degree from the French institute of health (INSERM) and University of Pavia in Italy in 2003. After obtaining the Chancellor Award during his post-doctoral training at the University of California Los Angeles (UCLA), he established his own laboratory at the University of Zurich in 2008. He became Associate Professor in the Center for Neuroprosthetics at the Swiss Federal Institute of Technology, Lausanne (EPFL) in 2012. The results of his research in spinal cord repair have been published in various high-profile publications such as *Science* and *Nature*, and discussed extensively in national and international media. In 2014, he launched a startup, GTX Medical, which aims to translate the medical and technological breakthroughs gained over the past 15 years into clinical treatments.



Dario Farina
Imperial College London, London, UK

Dario Farina (IEEE Fellow) is currently Full Professor and the Chair in Neurorehabilitation Engineering at the Department of Bioengineering of Imperial College London, UK. He has previously been Full Professor at Aalborg University, Aalborg, Denmark, (until 2010) and at the University Medical Center Göttingen, Georg-August University, Germany, where he founded and directed the Department of Neurorehabilitation Systems (2010-2016). His research focuses on biomedical signal processing, neurorehabilitation technology, and neural control of movement. Within these areas, he has (co)-authored ~450 papers in peer-reviewed Journals, and over 500 among conference papers/abstracts, book chapters, and encyclopedia contributions. Professor Farina has been the President of the International Society of Electrophysiology and Kinesiology (ISEK) (2012-2014) and is currently the Editor-in-Chief of the official Journal of this Society, the *Journal of Electromyography and Kinesiology*. He is also currently an Editor for *Science Advances*, *IEEE Transactions on Biomedical Engineering* and the *Journal of Physiology*. He is a Fellow IEEE, AIMBE, EAMBES, and ISEK.



Dieter Haemmerich
Medical University of South Carolina

Dieter Haemmerich is Professor of Pediatrics at the Medical University of South Carolina (Charleston, SC, USA), with adjunct appointment in the Department of Bioengineering at Clemson University (Clemson, SC, USA). He received his Ph.D. degree in Biomedical Engineering from the Univ. Wisconsin-Madison (Madison, WI, USA), and his M.S. degree in Electrical and Computer Engineering from the Vienna University of Technology (Vienna, Austria). Dr. Haemmerich is past President (2012-13) of the Society for Thermal Medicine (STM), Fellow of the Heart Rhythm Society (HRS), and Co-Organizer of the IEEE EMBS International Summer School on Computer Modeling in Medicine (2017, 2019).

His current research interests include image-guided drug delivery and image-guided therapies, with specific focus on integrating computational modeling with experimental studies to guide the engineering of better of drug delivery systems. He has co-authored over 100 peer-reviewed journal and conference papers, 6 book chapters, and holds 8 patents. Two of the patents have been licensed by Medtronic, with a commercial device available and clinically used since 2004. Dr. Haemmerich has served as journal reviewer for over 80 scientific journals, is on the Editorial Board of 9 journals, and is Section Editor for the International Journal of Hyperthermia and Thermal Therapies. He is co-founder and past President of the start-up company Medical Engineering Innovations Inc., which commercializes surgical devices for cancer treatment.



Karsten Hiltawsky
Drägerwerk AG & Co. KGaA

Dr. Karsten Hiltawsky joined Dräger in 2012 and is currently responsible for the global technology development and for Dräger's intellectual property. In his current role he is introducing new technologies into Dräger's product lines in critical care (anesthesia, intensive care and perinatal care) and safety (e.g., fire fighter and industrial respiratory protection, hazardous gas detection) as well as protecting Dräger's intellectual property globally through patents and trademarks.

Prior to that he worked for Siemens Healthcare and General Electric in different positions with focus on imaging technologies and in-vitro-diagnostics. Dr. Hiltawsky worked as a M.D. in internal medicine and received a Ph.D. in electrical engineering from Ruhr-University, Germany. He is a member of the German National Merit Foundation and received a grant to study at Purdue University, IN.



Pablo Laguna
University of Zaragoza

Pablo Laguna is Full Professor of Signal Processing and Communications in the Department of Electrical Engineering at the Engineering School, where he has been vice-dean for international relations (1999-2002), and a researcher at the Aragón Institute for Engineering Research (I3A), both at University of Zaragoza, Spain, where he has been responsible of the Biomedical Engineering division of the I3A (2000-2011) and of the master in Biomedical Engineering (2003-2010). He is also member, and has served as scientific director (2011-2015), of the Spanish Center for Biomedical Engineering, Biomaterial and Nano-medicine Research CIBER-BBN.

His professional research interests are in Signal Processing, in particular applied to Biomedical applications. He has co-authored more than 150 research papers on this topic, over 300 international conference papers, and has advised 15 Ph.D. Theses.

He has led a broad number of projects on biomedical signal interpretation specially in the cardiovascular domain, most of them with international collaborations at clinical and engineering sites. He is having some international scientific responsibilities, as serving as past-president of the board of directors of Computing in Cardiology conference, editor of the digital signal processing journal (Eurasip), and of the Medical and Biological Engineering and Computing (Springer), organizer of different scientific conferences, etc. He is also responsible of the Ph.D. program in Biomedical Engineering at Zaragoza University. He is Fellow of the IEEE. He is, together with L. Sörnmo, the author of Bioelectrical Signal Processing in Cardiac and Neurological Applications, book (Elsevier, 2005)



Nigel Lovell
UNSW Sydney

Nigel Lovell received the B.E. (Hons) and Ph.D. degrees from UNSW Sydney, Australia. He is currently at the Graduate School of Biomedical Engineering UNSW Sydney where he holds a position of Scientia Professor and Head of School. He has authored 250+ journal papers and been awarded over \$80 million in R&D and infrastructure funding. Over his career he has mentored 70 PhD students and delivered more than a hundred keynote presentations. He is a Fellow of seven learned academies throughout the world including the IEEE and AIMBE.

His research work has covered areas of expertise ranging from cardiac and retinal modeling, medical informatics and data analytics especially related to telehealth technologies, biological signal processing, and visual prosthesis design. Through a spin-out company from UNSW, TeleMedCare Pty. Ltd. that he co-founded, he has commercialised a range of telehealth technologies for managing chronic disease and falls in the older population. He is also one of the key researchers leading an R&D program to develop in Australia a retinal neuroprosthesis or 'bionic eye'. For 2017 and 2018 he is the President of the world's largest biomedical engineering society – the IEEE Engineering in Medicine and Biology Society.



Gernot Plank
Medizinische Universität Graz

Gernot Plank is Professor of Computational Cardiology at the Medical University of Graz, Austria. He received an M.Sc. Degree in Electrical Engineering in 1996 and a Ph.D. degree in Biomedical Engineering in 2000, both from the Technical University of Graz, Austria. He has been a Postdoctoral Fellow at Technical University of Valencia, Spain (2000–2002), at the University of Calgary, Canada (2003) and, as a Marie Curie Fellow, he held a Visiting Faculty position at the Johns Hopkins University, USA (2006–2008). In 2008 he became Academic Fellow at the Oxford e-Research Centre and the Oxford Computing Laboratory at the University of Oxford, U.K before being appointed as Associate Professor in 2011 at the Medical University of Graz. Since 2018 he is Professor of Computational Cardiology and head of the Computational Cardiology Laboratory.

His research has been supported by grants from the Austrian Science Fund, NIH, Wellcome Trust, European FP7 and H2020 awards as well as by industry and resulted in more than 120 peer-reviewed journal publications. His basic research interests are focused on the development of computational methods for modeling total cardiac function and their application to the development of anatomically accurate and biophysically detailed *in silico* models for gaining mechanistic insights into the pathological electrophysiological, electromechanical and mechano-fluidic behavior of the heart. Jointly with Dr. Vigmond he is the key developer of the cardiac modeling software CARPentry which is used by many of the leading cardiac modeling centers around the world. His work has a strong translational component centered on improving diagnosis and treatment of cardiovascular diseases with the main focus on pacing therapies to treat arrhythmias and pump dysfunction. In this regard parameter identification and data assimilation strategies for personalizing models to a specific patient have become a major avenue of research in his lab. As a Co-founder of NumeriCor he is actively involved in the commercialization of simulation and modeling technologies as medical device development tools.



Dinggang Shen
UNC-CH School of Medicine

Dinggang Shen is Jeffrey Houtp Distinguished Investigator, and a Professor of Radiology, Biomedical Research Imaging Center (BRIC), Computer Science, and Biomedical Engineering in the University of North Carolina at Chapel Hill (UNC-CH). He is currently directing the Center for Image Analysis and Informatics, the Image Display, Enhancement, and Analysis (IDEA) Lab in the Department of Radiology, and also the medical image analysis core in the BRIC. He was a tenure-track assistant professor in the University of Pennsylvania (UPenn), and a faculty member in the Johns Hopkins University. Dr. Shen's research interests include medical image analysis, computer vision, and pattern recognition. He has published more than 900 papers in the international journals and conference proceedings, with H-index 84. He serves as an editorial board member for eight international journals. He has also served in the Board of Directors, The Medical Image Computing and Computer Assisted Intervention (MICCAI) Society, in 2012-2015, and will be General Chair for MICCAI 2019. He is Fellow of IEEE, Fellow of The American Institute for Medical and Biological Engineering (AIMBE), and also Fellow of The International Association for Pattern Recognition (IAPR).



Sabine Van Huffel
KU Leuven

Sabine Van Huffel is Full Professor of Biomedical Engineering at the Department of Electrical Engineering (ESAT) of the KU Leuven since 2002 and Programme Director of the Master of Science in Biomedical Engineering KU Leuven. She received a Master degree in Computer Science Engineering, a postgraduate in Biomedical Engineering and a Ph.D. degree in Electrical Engineering from the KU Leuven, in 1981, 1985 and 1987, respectively. She was a guest professor at Stanford University (USA) in 2000 and at Uppsala University (Sweden) in 2002. She is IEEE, SIAM and EAMBES founding fellow and member of the Royal Flemish Academy of Belgium for Sciences and the Arts. In April 2013 she received an honorary doctorate from Eindhoven University of Technology (NL), together with an appointment as a Distinguished professor since 2014.

She is leading a large biomedical data processing research group (25 people), renowned for the development of numerical matrix/tensor-based algorithms, and their applications in biomedical multimodal- and multichannel processing for improving medical diagnostics. Her expertise techniques comprise EEG-fMRI, multiparametric MRI, ECG and EEG with focus on epilepsy and neonatal monitoring.

She has been supervisor of more than 60 PhD students, mostly all interdisciplinary, in cosupervision with medical colleagues. She is author of more than 400 peer reviewed international journal papers and more than 400 conference papers. She is holder of an ERC Advanced Grant 339804 BIOTENSORS: “Biomedical Data Fusion using Tensor based Blind Source Separation”(01-04-2014 till 31-03-2019)



Heike Walles
OvGU Magdeburg

I studied biology at the JLU-Giessen. Immediately after the diploma thesis at the MPI for Biochemistry in Martinsried/Munich I started the PhD thesis in the area of applied biomedical research at the LMU Munich and the MPI. Thereafter I moved for my first PostDoc position as group leader to the newly founded Leibniz Institute for Artificial Organs (LEBAO) at the MH Hannover. Since then, my scientific focus is Tissue Engineering. Under the guidance of Prof. Haverich I started a junior professorship at the LEBAO with the focus on the development of pre-vascularized scaffolds (BioVaSc) for biomedical application. To ensure the translation of tissue-engineered products, I moved from Hannover to the Fraunhofer Institute IGB, headed by Prof. Dr. Brunner a specialist in Biotechnology and process development.

Here we developed relevant technologies for standardized, semi-automated (GMP) production of complex human tissue models and autologous implants based on the BioVaSc-TERM®- platform technology. Based on these new methods and technical products, I received a grant from the Bavarian state to build up the Translational Center “Regenerative Therapies in oncology and musculoskeletal diseases” (TLC-RT) in Wuerzburg combined with a W3 position for Tissue Engineering (TERM), at the LMU Wuerzburg.

We established interdisciplinary teams at TLC-RT and TERM. The teams reflects all necessary disciplines as biologists, pharmacists, engineers, and clinical staff, and is successfully funded by internal and external grants, acquired on a competitive basis. The core competence of the team is based on human cell biology and the

cultivation of these cells on a vascularized scaffold (BioVaSc-TERM®) in specific bioreactors. The TLC-RT has been evaluated in January 2019 as an excellent interdisciplinary team, focusing on applied research. Based on this excellent evaluation the TLC-RT will at consolidating as a Fraunhofer Unit and improving current technologies in the field of regenerative medicine under the guidance of PD Dr. Marco Metzger.

Since 2019 I'm a professor at the university OvGU Magdeburg to establish with colleagues a center for medical engineering.



Bruce Wheeler
University of California, San Diego

Bruce Wheeler moved to the University of California at San Diego in 2015 as an Adjunct Professor of Bioengineering with duties principally aimed at supporting the new Systems Bioengineering major at UCSD. He served 7 years at the University of Florida and 28 years at the University of Illinois at Urbana-Champaign. At Illinois he wrote the successful proposal for the BS, MS, PHD and Department of Bioengineering and served as Director and then Founding and Interim Head (2003-8). He was also a Professor of Electrical and Computer Engineering and of the Beckman Institute; he served as Chair of the Neuroscience Program and as Associate Head for Undergraduate Affairs of the Electrical and Computer Engineering Department. He served as Acting Chair of the J. Crayton Pruitt Family Department of Biomedical Engineering (2009-12) where he co-authored the proposal for the BS BME degree.

He served as President of the IEEE Engineering in Medicine and Biology Society, strongly advocating for Biomedical and Health Informatics as the fastest growing component of biomedical engineering. Previously (2007-12) he was Editor in Chief of the IEEE Transactions on Biomedical Engineering. He has just been elected to become VP Finance for EMBS.

Prof. Wheeler's research interests lie in the application of electrical engineering methodologies to neuroscience. His work influenced the development of neural spike sorting technologies, demonstrated that microelectrode array recording from brain slices was possible and productive, and has been a leader in the development of lithography to control cells, especially neurons, in culture. This work aims at basic science understanding of the behavior of small populations of neurons, in hopes of creating better insight into the functioning of the brain.

He is a Fellow of AAAS, IEEE, BMES, AIME, and IAMBE. He is likely the only person to start two undergraduate BME degree programs, as well as to participate in the implementation of a third. He is Emeritus Professor at Illinois and Florida.

2019 EMBS AWARDS



ACADEMIC CAREER ACHIEVEMENT AWARD

Nicholas A. Peppas
University of Texas at Austin, USA

EARLY CAREER ACHIEVEMENT AWARD

Catherine Chang
Vanderbilt University, USA

DISTINGUISHED SERVICE AWARD

Jean-Christophe Olivo-Marin
Institute Carnot Pasteur Microbes et Santé, France

WILLIAM J. MORLOCK AWARD

Bin He
Carnegie Mellon University, USA

TECHNICAL ACHIEVEMENT AWARD

Elisa Konofagou | Columbia University, USA
Tony Jun Huang | Duke University, USA

PROFESSIONAL ACHIEVEMENT AWARD

Richard Boudreault
Polar Knowledge, Canada

2019 Best EMBS Chapter Award

IEEE-EMBS Malaysia
Chapter

EMBS Best Student Chapter/Club Award

Pontificia Universidad
Católica del Perú IEEE
EMBS Student Chapter

2019 OUTSTANDING EMBS REGIONAL CHAPTER AWARD WINNERS

Asia Pacific

- IEEE-EMBS Malaysia Chapter

Latin America

- EMB Ecuadorian Society EMBS

Europe

- IEEE-EMBS Portugal Chapter

2019 OUTSTANDING EMBS REGIONAL STUDENT CHAPTER OR CLUB AWARD WINNERS

Asia Pacific

- IEEE-EMBS St. Joseph's Student Branch

Latin America

- PUC Peru IEEE Student Branch

Middle East and Africa

- EMBS Hashemite University Student Branch

North America

- Carleton University EMB Student Club

Europe

- IEEE NTUA EMB Chapter

North America

Dan Wu | Massachusetts Institute of Technology

"An integrated and automated electronic system for point-of-care protein testing"

Europe

Camille Krewcun | Institut Pascal

"Fast Simulation of Stent Deployment with Plastic Beam Elements"

Asia-Pacific

Chen-Ying Hung | National Tsing Hua University

"Predicting Gastrointestinal Bleeding Events from Multimodal In-Hospital Electronic Health Records Using Deep Fusion Networks"

Middle East-Africa

Asem Alaa | Cairo University

"Protein Subcellular Localization Prediction Based on Internal Micro-Similarities of Markov Chains"

South America

Guilherme Silva Umemura | University of São Paulo

"Assessment of Postural Control after Sleep Deprivation with a Low-Cost Force Plate"

2019 EMBC Student Paper Competition

Open Finalists

Ali Fahim Khan

University of Oklahoma

"Dynamic Activation Patterns of the Motor Brain Revealed by Diffuse Optical Tomography"

Jiayao Yuan

Columbia University

"Modeling of Transport Mechanisms in the Respiratory System: Validation via Congestive Heart Failure Patients"

Kaan Sel

Texas A&M University

"Measurement of Chest Physiological Signals using Wirelessly Coupled Bio-Impedance Patches"

Laura Morchi

The BioRobotics Institute

"A Pilot Study for a Quantitative Evaluation of Acoustic Coupling in US-Guided Focused Ultrasound Surgery"

James A. Beauchamp

Northwestern University

"Experimentally Modifiable Parameters and Their Relation to the Tonic Vibration Reflex in Chronic Hemiparetic Stroke"

Aji Resindra Widya

Tokyo Institute of Technology

"3D Reconstruction of Whole Stomach from Endoscope Video Using Structure-From-Motion"

Parya Jafari

Western University

"Incorporating Pathology-Induced Heterogeneities in a Patient-Specific Biomechanical Model of the Lung for Accurate Tumor Motion Estimation"

Hiroki Sato

University of Electro-Communications

"Multi-Frequency Integration Algorithm of Contrast Source Inversion Method for Microwave Breast Tumor Detection"

Luke Hong Lu Zhao

The University of Sydney

"Preliminary Validation of Electroporation-Electrolysis (E2) for Cardiac Ablation Using a Parameterisable In-Vivo Model"

Micol Colella

University of Rome

"Ultra-Focal Magnetic Stimulation Using a μ TMS Coil: A Computational Study"



The **IEEE Engineering in Medicine and Biology Society** advances the application of engineering sciences and technology to medicine and biology, promotes the profession, and provides global leadership for the benefit of its members and humanity by disseminating knowledge, setting standards, fostering professional development, and recognizing excellence.

The field of interest of the IEEE Engineering in Medicine and Biology Society is the application of the concepts and methods of the physical and engineering sciences in biology and medicine. This covers a very broad spectrum ranging from formalized mathematical theory through experimental science and technological development to practical clinical applications. It includes support of scientific, technological and educational activities.

PUBLICATIONS

IEEE PULSE: A Magazine of the IEEE Engineering in Medicine and Biology Society
Transactions on Biomedical Engineering
Transactions on Neural Systems and Rehabilitation Engineering
Transactions on Medical Imaging
Transactions on NanoBioscience
Transactions on Biomedical Circuits and Systems
Transactions on Computational Imaging
Transactions on Radiation and Plasma Medical Sciences
Transactions on Medical Robotics
Reviews on Biomedical Engineering
Journal on Translational Engineering in Health & Medicine
Journal of Biomedical and Health Informatics
Journal on Electromagnetic, RF & Microwaves in Medicine and Biology

ELECTRONIC PRODUCTS

EMBS Electronic Resource (over 120,000 documents)

CONFERENCES

Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC)
IEEE EMBS Special Topic Conference on Neural Engineering (NER)
International Symposium on Biomedical Imaging (ISBI)
International Conference on Biomedical Robotics and Biomechanics (BIROB)
International Conference on Rehabilitation Robotics (ICORR)
IEEE Healthcare Innovation Point of Care Technologies Conference (HI-POCT)
EMBS Micro and Nanotechnology in Medicine (MNM)
IEEE EMBS International Conference on Body Sensor Networks (BSN)
IEEE EMBS International Conference on Biomedical and Health Informatics (BHI)
IEEE EMBS Student Conferences: For Students, By Students
IEEE Life Sciences Conference

SUMMER SCHOOLS Sponsored by EMBS

International Summer School on Biomedical Imaging
International Summer School on Biomedical Signal Processing
International Summer School on Biocomplexity, Biodesign and Bioinnova
International Summer School on Information Technology in Biomedicine
International Summer School on Neural Engineering
International Summer School on Computer Modeling in Medicine
International Summer School on Medical Devices and Biosensors

Going Gold!



IEEE Engineering in Medicine & Biology Society, the world's largest, international biomedical society is pleased to announce the launch of its new gold fully open access journal: **IEEE Open Journal of Engineering in Medicine and Biology (OJ-EMB)**

IEEE EMBS, established in 1952, continues to provide more options and choices to support the work and needs of all authors and researchers -- those who prefer to publish in traditional subscription journals or those who prefer or need to publish in open access.

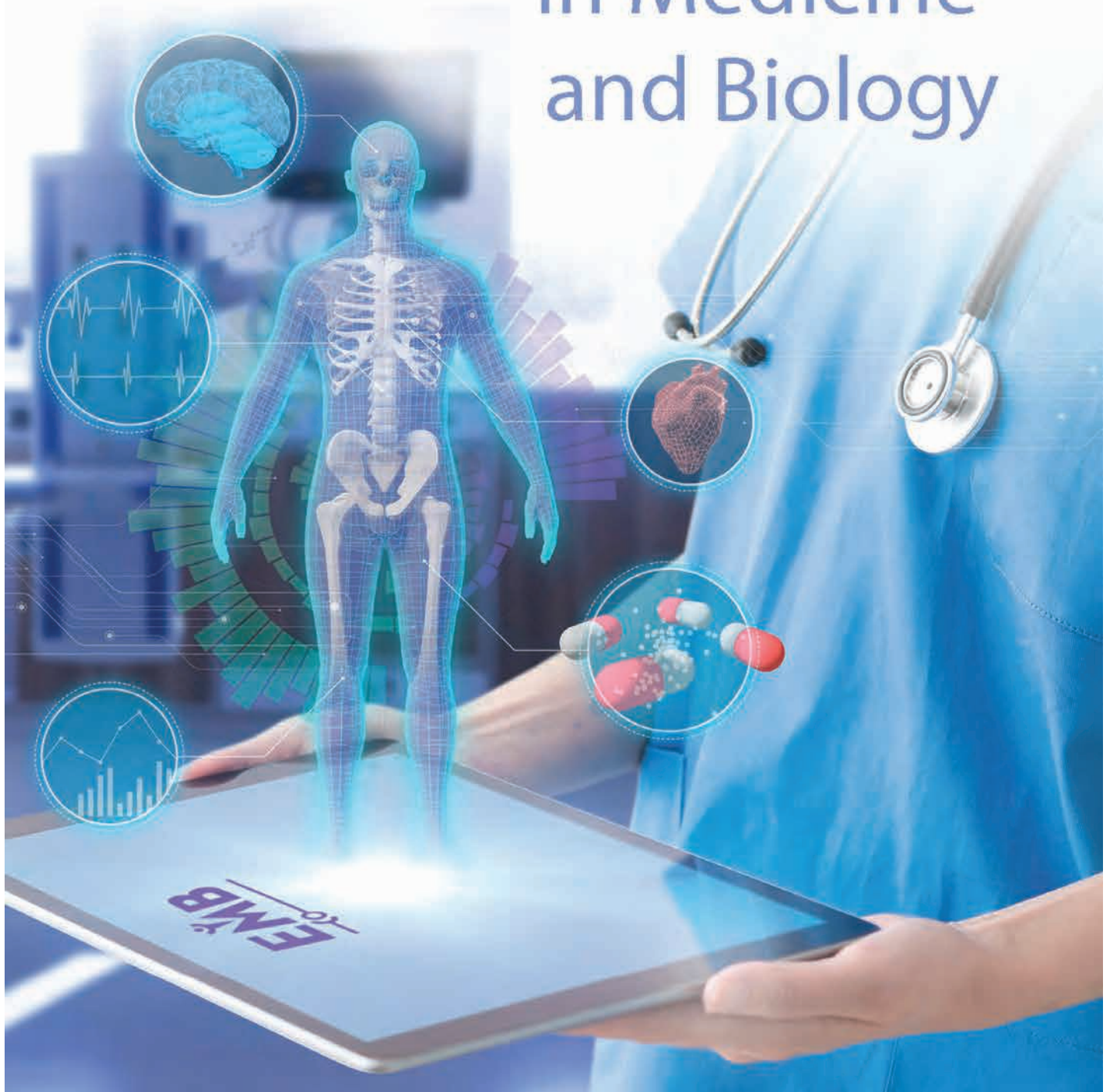
IEEE EMBS will publish high-quality articles including cutting-edge studies and breakthroughs in technology innovation and will follow IEEE's established high standard of peer review, drawing on expert technical communities to continue to publish the most highly cited content.

OJ-EMB will be hosted on the IEEE Xplore® platform, visited by over five million unique users per month.

The new Journal will begin accepting submissions in the fall of 2019 and publish its first articles in early 2020.

www.oj-emb.embs.org

IEEE Open Journal of Engineering in Medicine and Biology



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Special Topics Conference on Healthcare Innovations and Point of Care Technologies

November 20-22, 2019

NIH Natcher Conference Center, 9000 Rockville Pike, Bethesda, MD 20892

Call For Papers



The NIH-IEEE Special Topics Conference on Healthcare Innovations and Point of Care Technologies (HI-POCT) will focus on technologies for personalized health, disease detection and real-time patient monitoring to address pressing unmet medical needs. This conference will provide a scientific forum for collaboration among biomedical researchers, engineering and computer scientists, students and industry to explore potential technology solutions for research and clinical needs.

Panel discussions and open forum sessions along with research presentations will focus on the development, testing and implementation of POCT and healthcare innovations in medical (hospital, emergency, acute, chronic and primary care) and non-clinical settings. The overall goal of the strategic conference is to provide opportunities for stakeholders to explore collaborations, define needs across fields and identify synergies to HI-POCT development, validation, dissemination and implementation.

This year's conference will include keynote presentations, panel discussions, breakout sessions with leaders in the field, and diverse stakeholders addressing clinical needs, enabling technologies, regulatory protocols, funding opportunities, and business models. Additionally, we invite oral and poster presentation abstracts to be submitted for potential inclusion in the final program.

Important Submission Dates

Four-page paper Submission Deadline

July 17, 2019

Notification Deadline

August 16, 2019

Final Submission of Accepted Four-page Papers

September 5, 2019

One Page-paper Abstract Submission Deadline

August 8, 2019

Notification Deadline

August 29, 2019

Final Submission of Accepted Abstracts

September 12, 2019

Please see our conference website for full details on submissions and other updates.

<https://hipt.embs.org/2019/>

Special Topics Conference on Healthcare Innovations and Point of Care Technologies

November 20-22, 2019

NIH Natcher Conference Center, 9000 Rockville Pike, Bethesda, MD 20892

Call For Papers

There are two (2) paths to presenting your work at HI-POCT:

1. Full papers (4 pages) can be submitted for an acceptance review and will be considered for either an oral or poster presentation as well as a demo presentation. Full papers accepted to the conference will be published in the conference proceedings and in IEEE Xplore.

For publication in a special issue of IEEE Journal of Translational Engineering in Health and Medicine (<http://health.embs.org/>) please see the conference website for details

2. Research abstracts (one page papers) can be submitted for an acceptance review and will be considered for either an oral or poster presentation as well as a demo presentation. One-page papers accepted to the conference will be visible in the conference proceedings but not in IEEE Xplore.

[A trans-disciplinary technical committee will review all contributions. Submissions must contain original material that has neither been previously published nor is currently under review by another conference or journal.]

Detailed instructions for submissions of papers and abstracts are available at our conference website:
<https://hipt.embs.org/2019/>

Conference Themes for Paper Submissions

- Health and wellness across the lifespan (including pain management, disease prevention, immunosenescence, frailty, fatigue, sarcopenia)
- Tools for real-time patient monitoring for chronic disease or health conditions (e.g., re-emergence of disease or infection, measuring responses to treatment)
- Earlier diagnosis of infection and rapid drug susceptibility testing to enable effective initiation of treatment, reduce transmission, and reduce the development of anti-microbial resistance
- Earlier detection/prediction of disease or toxicity to facilitate earlier intervention

Papers Focused on the following technologies that address the conference themes are encouraged

- Wearable/implantable technology
- Microphysiological systems, Tissue- or Organ-on-chip platforms
- Nanotechnology
- Omics technologies - identify needs for moving these capabilities to point of care level
- RNA/DNA detection (stem-loop probes, CRISPR/Cas, synthetic biology)
- Biosensors – physiological, chemical, molecular, non-blood biospecimens (sweat/skin, hair, urine, oral fluid, interstitial fluid), exosomes
- Environmental sensors
- Imaging - whole body PET, retinal imaging
- Deployable tools for in-home or remote monitoring
- Data integration, predictive analytics, EHR interoperability and aggregators
- Artificial Intelligence, machine learning applications
- Paper-based diagnostics
- Multiplexing – consideration of rationale (i.e. what makes sense to test together)
- Systems engineering

<https://hipt.embs.org/2019/>



IEEE ISBI 2020

International Symposium on Biomedical Imaging

Coralville Marriott Hotel & Conference Center | Iowa City, Iowa, USA | 4-8 April 2020



CALL FOR PAPERS

IMPORTANT DATES

Proposal Submission

May 28, 2019-Oct 15, 2019

Tutorials

May 15, 2019-Oct 1, 2019

Challenge Proposal

Oct 16, 2019

Challenge Accept/Reject Notification

Nov 15, 2019

Challenges open for registration

May 15, 2019-July 15, 2019

Workshops

Four-Page Papers

Aug 1, 2019

Submission Opens

Oct 15, 2019

Submission Deadline

Dec 18, 2019

Accept/Reject Notification

Jan 15, 2020

Final Submission

Workshop & One-Page Papers

Nov 19, 2019

Submission Opens

Jan 15, 2020

Submission Deadline

Jan 29, 2020

Accept/Reject Notification

Feb 12, 2020

Final Submission Deadline

The IEEE International Symposium on Biomedical Imaging (ISBI) is a scientific conference dedicated to mathematical, algorithmic, and computational aspects of biological and biomedical imaging, across all scales of observation. It fosters knowledge transfer among different imaging communities and contributes to an integrative approach to biomedical imaging. ISBI is a joint initiative from the IEEE Signal Processing Society (SPS) and the IEEE Engineering in Medicine and Biology Society (EMBS). The 2020 meeting will be held in Iowa City, Iowa, USA and will include tutorials, challenges and a scientific program composed of plenary talks, workshops, as well as oral and poster presentations of peer-reviewed papers. High-quality papers are requested containing original contributions to the topics of interest including image formation and reconstruction, image processing and analysis, dynamic imaging, visualization, image quality assessment, machine learning for big image data, and physical, biological, and statistical modeling. Accepted 4-page regular papers will be published in the symposium proceedings published by IEEE and included in IEEE Xplore. To encourage attendance by a broader audience of imaging scientists and clinical professionals and to offer additional presentation opportunities, ISBI 2020 will include workshops with specific clinical focus and it will continue to have a second track featuring posters selected from 1-page abstract submissions.

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Please visit: biomedicalimaging.org/2020

The 42nd Annual International Conference of the
IEEE Engineering in Medicine and Biology Society
July 20 - 24



"Enabling Innovative Technologies
for Global Healthcare"



Palais des congrès de Montreal -SAVE THE DATE-



CMBES/SCGB

The IEEE Engineering in Medicine and Biology Society is pleased to announce the **42nd Annual International Conference of the IEEE Engineering in Medicine and Biology Society**, to be held in **Montreal, Quebec, Canada, July 20th - 24th, 2020**. The theme of the meeting is "Enabling Innovative Technologies for Global Healthcare". As the world's largest international biomedical engineering meeting, a broad array of scientific tracks will cover diverse topics of cutting-edge research and innovation in biomedical engineering, healthcare technology R&D, translational clinical research, technology transfer and entrepreneurship, and biomedical engineering education.

In addition to the high-profile keynotes, the conference program will feature mini symposia, workshops, special sessions, oral and poster sessions, sessions for students and young professionals, sessions for clinicians and entrepreneurs, and exhibits from vendors and universities. Themes include:

Biomedical Signal Processing
Biomedical Imaging and Image Processing
Micro/Nano-bioengineering
Cellular/Tissue Engineering & Biomaterials
Computational Systems & Synthetic Biology
Multiscale modeling
Cardiovascular and Respiratory Systems Engineering
Neural and Rehabilitation Engineering

Biomedical Sensors and Wearable Systems
Biorobotics and Biomechanics
Therapeutic & Diagnostic Systems and Technologies
Clinical Engineering
Biomedical & Health Informatics
Biomedical Engineering Education and Society
Translational Engineering for Healthcare Innovation and Commercialization

Important Dates

Sessions Proposals, Mini-Symposia, Workshops, & Special Sessions

Submission deadline	Nov 22, 2019
Accept/reject notification	Dec 19, 2019
Final submission deadline	Jan 16, 2020

Full papers

Submission deadline	Jan 23, 2020
Accept/reject Notification	April 10, 2020
Final Submission Deadline	April 30, 2020

1-page papers (Research Poster Papers)

Submission deadline	April 17, 2020
Accept/reject notification	April 28, 2020
Final submission deadline	May 3, 2020

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<http://embc.embs.org/2020/>

EMBC FUTURE LOCATIONS



MONTREAL, CANADA
20 - 24 JULY '20


GUADALAJARA, MEXICO
SUMMER 2021
26 - 30 JULY '21



GLASGOW, SCOTLAND
SUMMER 2022
11 - 15 JULY '22

SYDNEY, AUSTRALIA
SUMMER 2023
24-28 JULY '23





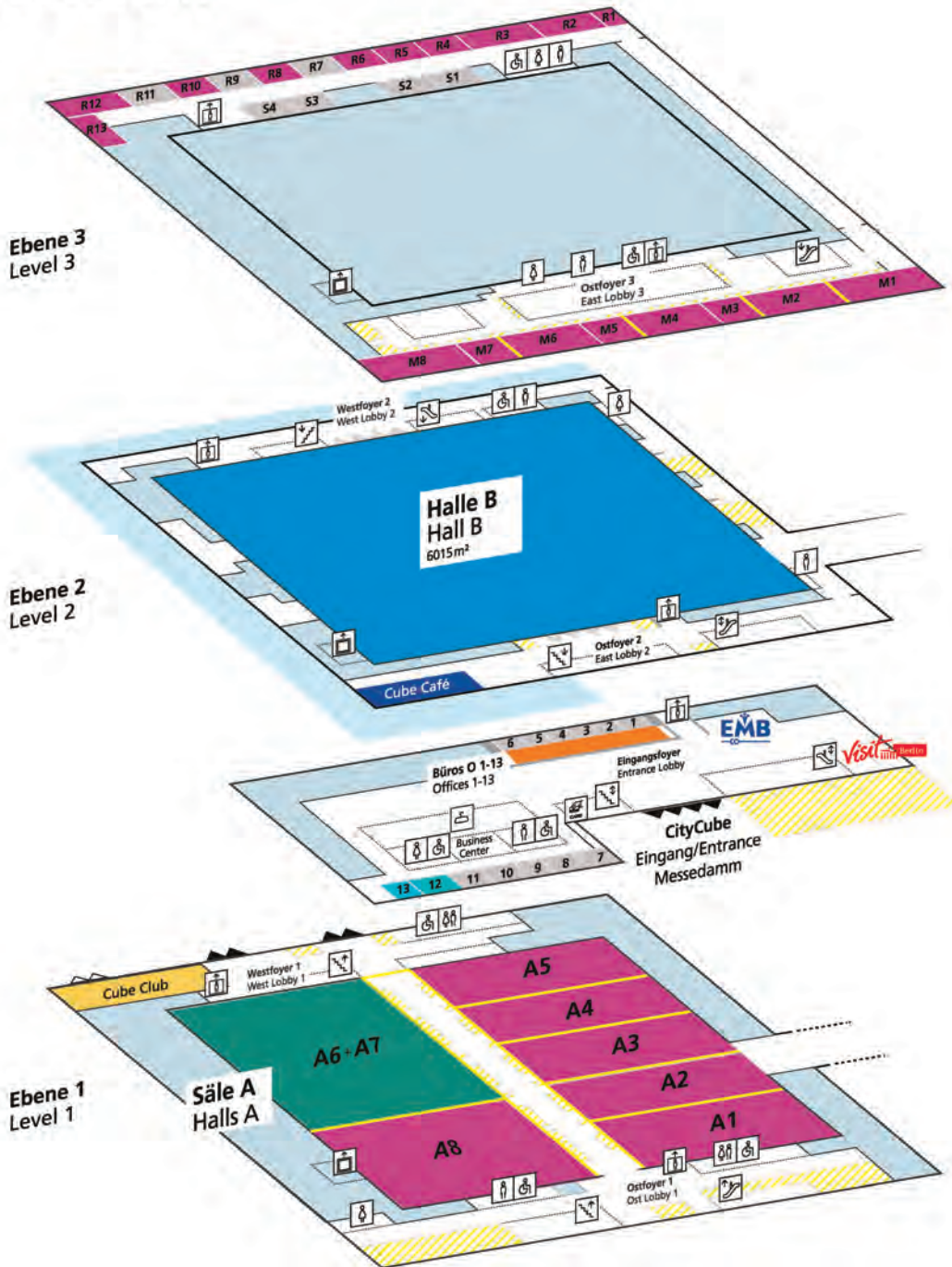
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|  Registration |  Speakers' Lounge |  Plenary Hall |  Session Rooms |
|  Industry Posters |  Cube Café |  Prayer Room |  Mothers' Room |

Understanding the Program Coding

The conference program is scheduled for a specific day, time slot, and track.

A session code in the program will therefore have the following format:

Day	Time Slot	Track
We	A	02

- WeA02 This is a schedule code with a designating 'A' time slot on Wednesday (8:30-10:00) for track '2'.

Program in Chronological Order

* – Corresponding Author

Note: Minisymposia (MS) session talk times are only indicative and talks will be scheduled in such a way as to occupy the 90 minute time slot at the discretion of the MS organizer

July 24 Wednesday

Wednesday, 24 July 2019

WeA02: 08:30-10:00 Hall A8 – Level 1
Adaptive and Kalman Filtering (Oral Session)
Chair: Aramendi, Elisabete (*University of the Basque Country*)
Co-Chair: Sassi, Roberto (*Università degli Studi di Milano*)

08:30-08:45 WeA02.1
Comparison of Single and Multi-Reference QRD-RLS Adaptive Filter for Non-Invasive Fetal Electrocardiography
Sulas, Eleonora* (*University of Cagliari*); Urru, Monica (*Division of Paediatric Cardiology, S. Michele Hospital, Cagliari*); Tumbarello, Roberto (*Division of Paediatric Cardiology, S. Michele Hospital, Cagliari*); Raffo, Luigi (*University of Cagliari*); Pani, Danilo (*University of Cagliari*)

08:45-09:00 WeA02.2
Physical Activity Estimation from Accelerometry
Garnotel, Maël (*CRNH*); Simon, Chantal (*CRNH Rhône-Alpes/CENS, Centre Hospitalier Lyon Sud – 165 chemin*); Bonnet, Stéphane* (*CEA Léti MINATEC*)

09:00-09:15 WeA02.3
A Cortisol-Based Energy Decoder for Investigation of Fatigue in Hypercortisolism
Wickramasuriya, Dilranjan (*University of Houston*); Faghni, Rose T.* (*University of Houston*)

09:15-09:30 WeA02.4
Extraction of the Fetal Pulse Curve for Transabdominal Pulse Oximetry using Adaptive and Comb Filters
Böttrich, Marcel* (*Technische Universität Ilmenau*); Husar, Peter (*Ilmenau University of Technology*)

09:30-09:45 WeA02.5
Impedance based Automatic Detection of Ventilations during Mechanical Cardiopulmonary Resuscitation
Jaureguibeitia, Xabier (*University of the Basque Country (UPV/EHU)*); Irusta, Unai* (*UPV/EHU*); Aramendi, Elisabete (*University of the Basque Country*); Alonso, Erik (*University of the Basque Country*); Owens, Pamel (*University of Texas Southwestern Medical Center, Dallas, Texas*); Wang, Henry (*University of Texas Health Science Center, Houston*); Idris, Ahamed (*University of Texas Southwestern Medical Center*)

09:45-10:00 WeA02.6
Refined Ventricular Activity Cancellation in Electrograms during Atrial Fibrillation by Combining Average Beat Subtraction and Interpolation
Rivolta, Massimo Walter (*Università degli Studi di Milano*); Sassi, Roberto (*Università degli Studi di Milano*); Vila, Muhamed* (*Università degli Studi di Milano*)

WeA03: 08:30-10:00 Hall A3 – Level 1
Image Processing – Machine learning / Deep Learning Approaches (Oral Session)
Chair: Anand, Ajay (*University of Rochester*)
Co-Chair: Cardoso, Jaime S. (*INESC TEC and University of Porto*)

08:30-08:45 WeA03.1
Automated Ultrasound Doppler Angle Estimation using Deep Learning
Patil, Nilesh (*University of Rochester*); Anand, Ajay* (*University of Rochester*)

08:45-09:00 WeA03.2
Brain Metabolic Connectome Classify Mild Cognitive Impairment into Alzheimer's Dementia
Wang, Min (*Shanghai University*); Yan, Zhuangzhi* (*Shanghai University*); Jiang, Jiehui (*Shanghai University*)

09:00-09:15 WeA03.3
Retinal Vessel Segmentation using Round-Wise Features Aggregation on Bracket-Shaped Convolutional Neural Networks
Hua, Cam-Hao* (*Kyung Hee University*); Huynh-The, Thien (*Kumoh National Institute of Technology*); Lee, Sungyoung (*Kyung Hee University*)

09:15-09:30 WeA03.4
Automatic Classification for the Type of Multiple Synapse based on Deep Learning
Luo, Jie (*Hubei University*); Hong, Bei (*Institute of Automation, Chinese Academy of Sciences*); Jiang, Yi (*Institute of Automation, Chinese Academy of Sciences*); Li, Linlin (*Institute of Automation Chinese Academy of Sciences*); Xie, Qiwei (*Institute of Automation, Chinese Academy of Sciences*); Han, Hua* (*Institute of Automation, Chinese Academy of Sciences*)

09:30-09:45 WeA03.5
Averse Deep Semantic Segmentation
Cruz, Ricardo* (*INESC TEC & University of Porto*); Pinto Costa, Joaquim F. (*Faculty of Sciences, University of Porto*); Cardoso, Jaime S. (*INESC TEC & University of Porto*)

09:45-10:00 WeA03.6
Classification and Quantification of Retinal Cysts in OCT B-Scans: Efficacy of Machine Learning Methods
Racha, Vamshi Teja (*Indian Institute of Technology Hyderabad*); Manne, Shanmukh Reddy* (*Indian Institute of Technology Hyderabad*); Marupally, Abhilash Goud (*L V Prasad Eye Institute*); Mohammed, Abdul Rasheed (*Smt. Kanuri Santhamma Centre for Vitreo-Retinal Diseases, LV Pra*); Dansingani, Kunal (*Univ. of Pittsburgh Medical Center*); Chhablani, Jay (*L.V. Prasad Eye Institute Hyderabad*); Vupparaboina, Kiran Kumar (*Indian Institute of Technology Hyderabad*); Jana, Soumya (*Indian Institute of Technology Hyderabad*)

WeA04: 08:30-10:00 Hall A1 – Level 1
Acoustic and Optical Sensors (Oral Session)
Co-Chair: Farrell, Francesca (*University of Strathclyde*)

08:30-08:45 WeA04.1
AcCorps: A Low-Cost 3D Printed Stethoscope for Fetal Phonocardiography
Charlier, Pierre* (*University of Lille (France)*); De Jonckheere, Julien (*CHRU de Lille*); Logier, Regis (*CHRU de Lille*)

08:45-09:00 WeA04.2
Integrated In-Ear Device for Auditory Health Assessment
Paul, Akshay* (*Univ. of California San Diego*); Akinin, Abraham (*UCSD*); Deiss, Steve (*Univ. of California San Diego*); Cauwenberghs, Gert (*Univ. of California San Diego*)

09:00-09:15 WeA04.3
Wearable, Fiber-Less, Multi-Channel System for Continuous Wave Functional Near Infrared Spectroscopy based on Silicon Photomultipliers Detectors and Lock-In Amplification
Chiarelli, Antonio* (*Università "Gabriele d'Annunzio", Chieti-Pescara, Italy*); Perpetuini, David (*University G. D'Annunzio of Chieti-Pescara*); Greco, Giuseppe (*University of Palermo*); Mistretta, Leonardo (*Dept. of Energy, Information Engineering & Mathematical m*); Rizzo, Raimondo (*University of Palermo*); Vinciguerra, Vincenzo (*STMICROELECTRONICS*); Romeo, Mario Francesco (*STMICROELECTRONICS*); Merla, Arcangelo (*ITAB-Foundation Univ. G.d'Annunzio*); Fallica, Piero Giorgio (*STMICROELECTRONICS*); Giaconia, Costantino (*Università degli Studi di Palermo*)

09:15-09:30 WeA04.4
A Wearable Phototherapy Device Utilizing Micro-LEDs
Farrell, Francesca* (*University of Strathclyde*); Xie, Enyuan (*University of Strathclyde*); Guilhabert, Benoit (*Institute of Photonics, University of Strathclyde*); Haughey, Anne-Marie (*University of Strathclyde*); Connolly, Patricia (*University of Strathclyde*); Dawson, Martin D (*Institute of Photonics, University of Strathclyde*); Laurand, Nicolas (*Institute of Photonics, University of Strathclyde*)

09:30-09:45 WeA04.5
Potential of Laser Doppler Flowmetry in the Medical Needle Insertion Procedures
Kravtcova, Anastasiia* (*Aalto Univ.*); Zhou, Quan (*Aalto Univ.*)

09:45-10:00 WeA04.6
Estimating the Dependence of Differential Pathlength Factor on Blood Volume and Oxygen Saturation using Monte Carlo Method
Chatterjee, Subhasri* (*City, University of London*); Kyriacou, Panayiotis (*City University London*)

WeA05: 08:30-10:00 Hall A2 – Level 1
Signal Processing and Classification of Cardiac Signals (Oral Session)
Co-Chair: Baselli, Giuseppe (*Politecnico di Milano*)

08:30-08:45 WeA05.1
A Novel Detection Method of Bundle Branch Block from Multi-Lead ECG
Hu, Jing* (*Guangzhou Shiyuan Electronic Technology Co., Ltd.*); Zhao, Wei (*Guangzhou Shiyuan Electronics Co., Ltd.*); Jia, Dongya (*CVTE, Guangdong Province, China*); Yan, Cong (*Guangzhou Shiyuan Electronics Co., Ltd.*); Wang, Hongmei (*Guangzhou Shiyuan Electronics Co., Ltd.*); Li, Zhenqi (*Guangzhou Shiyuan Electronics Co., Ltd.*); You, Tianyuan (*Guangzhou Shiyuan Electronics Co., Ltd.*)

08:45-09:00 WeA05.2
Beat-to-Beat Analysis of Vectorcardiogram by Inhomogeneous Template Adaptation
Karisik, Filip* (*University of Adelaide, School of Electrical & Electronic Engi*); Baumert, Mathias (*The University of Adelaide*); Schmidt, Martin (*TU Dresden*)

09:00-09:15 WeA05.3
Distance and Similarity Measurements of P Waves before and after Pulmonary Vein Isolation in Patients with Atrial Fibrillation
Ortigosa, Nuria* (*I.U. Matemática Pura y Aplicada, Universitat Politècnica de València*); Cano, Óscar (*Hospital Universitari i Politècnic La Fe, Servicio de Cardiología*); Mainardi, Luca (*Politecnico di Milano*)

09:15-09:30 WeA05.4
Data-Driven Separation and Estimation of Atrial Dynamics in Very High-Dimensional Electrocardiograms from Epilepsy Patients
Stamoulis, Catherine* (*Harvard Medical School*); Connolly, Jack (*Boston Children's Hospital*); Duffy, Frank (*Harvard Medical School*)

09:30-09:45 WeA05.5
Dofetilide-Induced Microvolt T-Wave Alternans
Marcantoni, Ilaria (*Università Politecnica delle Marche*); Laratta, Rosita (*Università Politecnica delle Marche*); Mascia, Guido (*Università Politecnica delle Marche*); Ricciardi, Leonardo (*Università Politecnica delle Marche*); Sbrollini, Agnese (*Università Politecnica delle Marche*); Nasim, Amnah (*Università Politecnica delle Marche*); Morettini, Micaela (*Università Politecnica delle Marche*); Burattini, Laura* (*Università Politecnica delle Marche*)

09:45-10:00 WeA05.6
A Real-Time ECG Feature Extraction Algorithm for Detecting Meditation Levels within a General Measurement Setup
Alawieh, Hussein* (*American University of Beirut*); Dawy, Zaher (*American University of Beirut*); Yaacoub, Elias (*American University of Beirut*); Abbas, Nabil (*NeuroPro AG*); El-Imad, Jamil (*Imperial College London*)

WeA06: 08:30-10:00 Hall A5 – Level 1
Pediatric Rehabilitation: Novel Devices and Interventions (Minisymposium)
Chair: Bulea, Thomas C. (*National Institutes of Health*)
Co-Chair: Fu, Michael J. (*Case Western Reserve University*)

08:30-08:45 WeA06.1
Pediatric Rehabilitation Engineering and Devices
Cruz, Theresa* (*Northwestern University*)

08:45-09:00 WeA06.2
Neural Interfaces for Mobility and Pain in Cerebral Palsy
McEwan, Alistair* (*The University of Sydney*); Dusseldorp, Joe (*University of Sydney*); Gschwind, Claudia (*Royal North Shore Hospital, Sydney*); Scott, Timothy (*Royal North Shore Hospital, Sydney*); Andersen, Tomas (*The University of Sydney*); Suaning, Gregg (*The University of Sydney*)

09:00-09:15 WeA06.3
Electrical Stimulation-Assisted Video Games for Hand Therapy in Children with Hemiplegia
Fu, Michael J* (*Case Western Reserve University*)

09:15-09:30 WeA06.4
Design of a Modular Pediatric Exoskeleton (P-LEGS) for Assist-as-Needed Overground Walking
Eguren, David (*Univ. of Houston*); Cestari, Manuel (*Univ. of Houston*); Luu, Trieu Phat (*Univ. of Houston*); Kilicarslan, Atilla (*Univ. of Houston*); Steele, Alexander G. (*Univ. of Houston*); Contreras-Vidal, José* (*Univ. of Houston*)

09:30-09:45 WeA06.5
Novel Control Approaches for Deployment of Wearable Exoskeletons as Pediatric Rehabilitation Devices
Bulea, Thomas C.* (*National Institutes of Health*); Fu, Michael J (*Case Western Reserve University*)

09:45-10:00 WeA06.6
CPWalker: Robotic-Assisted Gait Training Rehabilitation Strategies for Pediatric Population with Cerebral Palsy
Rocon, Eduardo* (*CSIC*)

WeA08: 08:30-10:00 M8 – Level 3
Rehabilitation (Oral Session)
Co-Chair: Carrozza, Maria Chiara (*Scuola Superiore Sant'Anna*)

08:30-08:45 WeA08.1
Clinical and Functional Imaging Changes Induced from Vision Therapy in Patients with Convergence Insufficiency
Alvarez, Tara* (*New Jersey Institute of Technology*); Scheiman, Mitchell (*Philadelphia College of Optometry, Salus Univ.*); Santos, Elio (*Biomedical Engineering, New Jersey Institute of Technology*); Morales, Cristian (*Biomedical Engineering, New Jersey Institute of Technology*); Yaramothu, Chang (*New Jersey Institute of Technology*); d'Antonio-Bertagnolli, John Vito (*Biomedical Engineering, New Jersey Institute of Technology*); Gohel, Suril (*Univ. of Medicine & Dentistry of New Jersey*); Biswal, Bharat (*Univ. of Medicine & Dentistry of New Jersey*); Li, Xiaobo (*Biomedical Engineering, New Jersey Institute of Technology*)

08:45-09:00 WeA08.2
Electrocortical Activity Changes in Response to Unpredictable Trip Perturbations Induced by a Split-Belt Treadmill
An, Junmo* (*University of Houston*); Yoo, Dongyual (*University of Houston*); Lee, Beom-Chan (*University of Houston*)

09:00-09:15 WeA08.3
The Therapeutic Effects of Low-Amplitude, High-Frequency Perturbations on Neuromuscular Abnormalities Associated with Spasticity in Children with Cerebral Palsy
Noroozi, Shamim (*Islamic Azad University of Science & Research Branch, Tehran, I*); Lotfian, Mahboube (*Tehran University of Medical Sciences*); Nowshiravan Rahatabad, Fereidoun (*Dept. of Biomedical Engineering, Science & Research Branch*); Shahrokhi, Amin (*Noorafshar Hospital, Tehran, Iran*); Irani, Ashkan (*Dept. of Occupational Therapy, Faculty of Rehabilitation, S*); Mirbagheri, Mehdi* (*Northwestern University/TUMS*)

- 09:15-09:30 WeA08.4 **Improvement of Sense of Agency during Upper-Limb Movement for Motor Rehabilitation using Virtual Reality**
Aoyagi, Kei* (*The University of Tokyo*); Wen, Wen (*The University of Tokyo*); An, Qi (*The University of Tokyo*); Hamasaki, Shunsuke (*The University of Tokyo*); Yamakawa, Hiroshi (*The University of Tokyo*); Tamura, Yusuke (*The University of Tokyo*); Yamashita, Atsushi (*The University of Tokyo*); Asama, Hajime (*The University of Tokyo*)
- 09:30-09:45 WeA08.5 **Improving Stability in Upper Limb Rehabilitation using Variable Stiffness**
Jujjavarapu, Sri Sadhan (*University at Buffalo*); Esfahani, Ehsan* (*University at Buffalo, SUNY*)
- 09:45-10:00 WeA08.6 **Impact of Anti-Gravity Locomotion (AlterG) Training on Structure and Function of Corticospinal Tract and Gait in Children with Cerebral Palsy**
Azizi, Shahla (*Dept. of Medical Physics & Biomedical Engineering*); Moradi Birgani, Parmida (*Tehran University of Medical Sciences*); Irani, Ashkan (*Dept. of Occupational Therapy, Faculty of Rehabilitation, S*); Shahrokhi, Amin (*Noorafshar Hospital, Tehran, Iran*); Molavi, Mohammad (*Dey Hospital & Pejvak Radiology Center, Tehran, Iran*); Mirbagheri, Mehdi* (*Northwestern University/TUMS*)
- WeA09: 08:30-10:00 M1 – Level 3
Data-Driven Model Construction (Oral Session)
Chair: De Angelis, Annalisa (*ICEmB at DIET Univ. of Rome Sapienza*)
- 08:30-08:45 WeA09.1 **An Improved Object Detection Method for Mitosis Detection**
Lei, Haijun (*Shenzhen Univ.*); Liu, Shaomin (*Shenzhen Univ.*); Xie, Hai (*Shenzhen Univ.*); Lei, Baiying* (*Shenzhen Univ.*)
- 08:45-09:00 WeA09.2 **Microdosimetric Realistic Model of Cells with Endoplasmic Reticulum**
De Angelis, Annalisa* (*ICEmB at DIET University of Rome Sapienza*); Denzi, Agnese (*Istituto Italiano di Tecnologia (IIT@Sapienza)*); Merla, Caterina (*ENEA*); Andre, Franck (*Vectorology & Anticancer Therapies, Univ. Paris*); García-Sánchez, Tomás (*Universitat Politècnica de Catalunya*); Mir, Lluís (*Vectorology & Anticancer Therapies, Univ. Paris*); Apollonio, Francesca (*ICEmB@La Sapienza Univ. Rome*); Liberti, Micaela (*ICEmB at Sapienza University of Rome*)
- 09:00-09:15 WeA09.3 **Cell-to-Cell Variability in Protein Expression during Viral Infection: Monte-Carlo Simulation and Validation based on Confocal Imaging**
Saxena, Abha* (*Indian Institute of Technology Hyderabad*); Upadhyay, Vikas (*Indian Institute of Technology, Hyderabad*); Dhyani, Vaibhav (*Indian Institute of Technology Hyderabad*); Jana, Soumya (*Indian Institute of Technology Hyderabad*); Giri, Lopamudra (*Indian Institute of Technology Hyderabad*)
- 09:15-09:30 WeA09.4 **Slow-Fast Duffing Neural Mass Model**
Jafarian, Amirhossein* (*Univ. Collage London*); Freestone, Dean Robert (*The Univ. of Melbourne*); Nestic, Dragan (*The Univ. of Melbourne*); Grayden, David B. (*The Univ. of Melbourne*)
- 09:30-09:45 WeA09.5 **On Early Brain Folding Patterns using Biomechanical Growth Modeling**
Wang, Xiaoyu* (*IMT Atlantique, Brest, France*); Bohi, Amine (*Aix Marseille Univ, CNRS, INT, Inst Neurosci Timone, Marseille*); Al Harrach, Mariam (*UTC*); Dinomais, Mickael (*Laboratoire Angevin de Recherche en Ingénierie des Systèmes (LAR)*); Lefevre, Julien (*Institut de Neurosciences de la Timone*); Rousseau, François (*Telecom Bretagne*)
- 09:45-10:00 WeA09.6 **A Critical Comparison of Pipelines for Structural Brain Network Analysis**
Franke, Robert* (*Interdisciplinary Competence Center Biomedical Data Science, Ins*); Ivanova, Galina (*Interdisciplinary Competence Center Biomedical Data Science, Ins*)
- WeA10: 08:30-10:00 M2 – Level 3
Ablation Systems and Technologies (Oral Session)
Chair: Panescu, Dorin (*Zidan Medical, Inc.*)
Co-Chair: Linte, Cristian A. (*Rochester Institute of Technology*)
- 08:30-08:45 WeA10.1 **Experimental Validation of the Multiphysics Modelling of Radiofrequency Ablation using Physical Phantom**
Thipayawat, Tawanwart* (*University of Sydney*); Minh, Duc Nguyen (*The University of Sydney*); Prinable, Joseph Barry Yoo Sik (*University of Sydney*); McEwan, Alistair (*The University of Sydney*); Barry, M.A. (*Westmead Hospital, Sydney*)
- 08:45-09:00 WeA10.2 **Towards OCT-Navigated Tissue Ablation with a Picosecond Infrared Laser (PIRL) and Mass-Spectrometric Analysis**
Schlüter, Matthias* (*Hamburg Univ. of Technology*); Fuh, Manka M. (*Univ. Medical Center Hamburg-Eppendorf*); Maier, Stephanie (*Max Planck Institute for the Structure & Dynamics of Matter*); Otte, Christoph (*Hamburg Univ. of Technology*); Kiani, Parnian (*Univ. Medical Center Hamburg-Eppendorf*); Hansen, Nils-Owe (*Max Planck Institute for the Structure & Dynamics of Matter*); Miller, R. J. Dwayne (*Max Planck Institute for the Structure & Dynamics of Matter*); Schlüter, Hartmut (*Univ. Medical Center Hamburg-Eppendorf*); Schlaefer, Alexander (*Hamburg Univ. of Technology*)
- 09:00-09:15 WeA10.3 **Laser Ablation in Biliary Tree: Analysis of the Intraductal and Superficial Thermal Effects during the Treatment**
Saccomandi, Paola* (*Politecnico di Milano*); Quero, Giuseppe (*IHU-strasbourg*); Gassino, Riccardo (*Dept. of Electronics & Telecommunications, Politecnico di*); Lapergola, Alfonso (*Dept. of Surgery, Unit of Surgical Oncology, "G. D'Annunzio"*); Barberio, Manuel (*IHU Institute of Image-Guided Surgery, Strasbourg*); Schena, Emiliano (*Univ. of Rome Campus Bio-Medico*); Perrone, Guido (*Dept. of Electronics & Telecommunications, Politecnico di*); Vallan, Alberto (*Dept. of Electronics & Telecommunications, Politecnico di*); Costamagna, Guido (*Unit of Digestive Endoscopy, Università Cattolica del Sacro Cuor*); Marescaux, Jacques (*IRCAD*); Di Matteo, Francesco Maria (*Univ. Campus Bio-Medico of Rome*)
- 09:15-09:30 WeA10.4 **Stabilization of Electrosurgical Cutting Performance based on Electrode Speed**
Bluvshtein, Vlad* (*Minnetronix*); Lucke, Lori (*Minnetronix, Inc.*); Widule, Matthew (*Minnetronix*)
- 09:30-09:45 WeA10.5 **Feasibility of High-Resolution Electrical Mapping for Characterizing Conduction Blocks Created by Gastric Ablation**
Aghababae, Zahra* (*University of Auckland*); Chan, Chih-Hsiang Alexander (*University of Auckland*); Paskaranandavadi, Niranchan (*The University of Auckland*); Beyder, Arthur (*Mayo Clinic*); Farrugia, Gianrico (*Mayo Clinic College of Medicine*); Asirvatham, Samuel (*Mayo Clinic*); O'Grady, Greg (*The University of Auckland*); Cheng, Leo K (*The University of Auckland*); Angeli, Timothy Robert (*Auckland Bioengineering Institute, University of Auckland*)
- 09:45-10:00 WeA10.6 **Early Preclinical Experience with a Novel Endobronchial Radiofrequency Ablation System for Lung Cancer Treatment**
Yoneda, Ken (*Univ. of California, Davis*); Li, Shiyue (*Guangzhou Institute of Respiratory Disease*); Herth, Felix (*Univ. of Heidelberg, Germany*); Spangler, Taylor (*VDx Veterinary Diagnostics*); Gelfand, Mark (*Coridea, Inc.*); Raina, Shashank (*Zidan Medical*); Panescu, Dorin* (*Zidan Medical, Inc.*)

WeA11: 08:30-10:00 M4 – Level 3
Challenges and Opportunities of Cardiac Imaging and Advanced Data Analysis in Cardiovascular Disease (Minisymposium)
Co-Chair: Zhong, Liang (*National Heart Centre Singapore, Duke-NUS Medical School, National University of Singapore*)

08:30-08:45 WeA11.1
Cardiac Atlases and Machine Learning for Heart Shape and Function Assessment
Young, Alistair* (*University of Auckland*); Suinesiaputra, Avan (*University of Auckland*); Gilbert, Kathleen (*University of Auckland*); Mauger, Charlene Alice (*University of Auckland*); Omens, Jeffrey (*UCSD*); Nash, Martyn (*University of Auckland*); McCulloch, Andrew (*University of California, San Diego*)

08:45-09:00 WeA11.2
Physiology Guided Percutaneous Coronary Intervention: Basics, Evolution and Clinical Application
Chin, Chee Yang* (*National Heart Centre Singapore*)

09:00-09:15 WeA11.3
Evaluation of Clinical Performance of Vessel-Length based CT-FFR
Lee, Kyung Eun (*Kangwon National Univ.*); Kwon, Soon-Sung (*SiliconSapiens Corp.*); Shim, Eun Bo* (*Kangwon National Univ.*)

09:15-09:30 WeA11.4
Coronary Plaque Morphology with Reduced Order CFD based Fractional Flow Reserve for Lesion-Specific Ischemia Assessment
Zhong, Liang* (*Duke-Duke Medical School, National University of Singapore*); Zhang, Jun-Mei (*National Heart Center*); Lim, Soo Teik (*National Heart Centre Singapore*); Tan, Ru-San (*National Heart Centre Singapore*)

09:30-09:45 WeA11.5
Cardiac Diffusion Tensor MRI: Application in Heart Failure
Moulin, Kévin (*Dept. of Radiology, Stanford University, Stanford, CA*); Perotti, Luigi E. (*University of Central Florida*); Verzhbinsky, Ilya (*Stanford University*); Loecher, Michael (*Dept. of Radiology, Stanford University, Stanford, CA*); Ennis, Daniel* (*Stanford University, Stanford, CA*)

09:45-10:00 WeA11.6
The Role of CMR in Heart Failure
Tan, Ru-San* (*National Heart Centre Singapore*); Leng, Shuang (*National Heart Centre Singapore*); Zhao, Xiaodan (*National Heart Centre Singapore*); Zhong, Liang (*Duke-Duke Medical School, National University of Singapore*)

WeA12: 08:30-10:00 M6 – Level 3
Brain Imaging and Image Analysis (I) (Oral Session)
Chair: Toschi, Nicola (*University of Rome*)

08:30-08:45 WeA12.1
Modeling of the BOLD Signal using Event-Related Simultaneous EEG-fMRI and Convolutional Sparse Coding Analysis
Prokopiou, Prokopis (*McGill University*); Mitsis, Georgios D.* (*McGill University*)

08:45-09:00 WeA12.2
Low Rank Self-Calibrated Brain Network Estimation and Auto-Weighted Centralized Multi-Task Learning for Early Mild Cognitive Impairment Diagnosis
Cheng, Nina (*Shenzhen Univ.*); Elazab, Ahmed (*Shenzhen Univ.*); Yang, Peng (*Shenzhen Univ.*); Liu, Dongdong (*Shenzhen Univ.*); Yu, Shuangzhi (*Shenzhen Univ.*); Wang, Tianfu (*Shenzhen Univ.*); Lei, Baiying* (*Shenzhen Univ.*)

09:00-09:15 WeA12.3
Simultaneous EEG-fMRI Study Reveals Separate Bias Mechanisms Modulated by Stimulus Evidence during Rapid Face Processing
Tu, Tao* (*Columbia Univ.*); Sajda, Paul (*Columbia Univ.*)

09:15-09:30 WeA12.4
Hybridizing EMD with cICA for fMRI Analysis of Patient Groups
Wein, Simon (*University of Regensburg*); Tome, Ana Maria* (*Universidade de Aveiro*); Goldhacker, Markus (*University of Regensburg*); Greenlee, Mark (*University of Regensburg*); Lang, Elmar W. (*University of Regensburg*)

09:30-09:45 WeA12.5
Post-Traumatic Cerebral Microhemorrhages and their Effects Upon White Matter Connectivity in the Aging Human Brain
Fan, Di (*Univ. of Southern California*); Chaudhari, Nikhil (*Univ. of Southern California*); Rostovsky, Kenneth A. (*Univ. of Southern California*); Calvillo, Maria (*Univ. of Southern California*); Lee, Sean (*Univ. of Southern California*); Chowdhury, Nahian F. (*Univ. of Southern California*); Zhang, Fan (*Harvard Medical School*); O'Donnell, Lauren (*BWH*); Irimia, Andrei* (*Univ. of Southern California*)

09:45-10:00 WeA12.6
Whole Brain in-Vivo Axonal Diameter Mapping in Multiple Sclerosis
De Santis, Silvia (*Univ. Miguel Hernandez de Elche*); Herranz, Elena (*Athinoula A. Martinos Center for Biomedical Imaging, Boston, MA*); Treaba, Constantina (*Dept. of Radiology, Athinoula A. Martinos Center for Biomed*); Barletta, Valeria (*Martinos Center for Biomedical Imaging (MGH) & Harvard Medical*); Mehndiratta, Ambica (*Martinos Center for Biomedical Imaging (MGH) & Harvard Medical*); Mainero, Caterina (*Dept. of Radiology, Athinoula A. Martinos Center for Biomed*); Toschi, Nicola* (*Univ. of Rome "Tor Vergata", Faculty of Medicine*)

WeA13: 08:30-10:00 R2 – Level 3
Recent Advances on Cuff-Less Blood Pressure Measurement Technology (I) (Minisymposium)
Chair: Mulkamala, Ramakrishna (*Michigan State University*)

08:30-08:45 WeA13.1
An iPhone Application for Cuff-Less and Calibration-Free Measurement of Blood Pressure
Chandrasekhar, Anand (*Indian Institute of Technology Madras*); Natarajan, Keerthana (*Michigan State University*); Yavarimanesh, Mohammad (*Michigan State University*); Mulkamala, Ramakrishna* (*Michigan State University*)

08:45-09:00 WeA13.2
Aktiia Bracelet: Monitoring of Blood Pressure using Off-the-Shelf Optical Sensors
Sola, Josep* (*Aktiia SA*); Vybornova, Anna (*Aktiia SA*); Fallet, Sibylle (*Aktiia SA*); Grossenbacher, Olivier (*Aktiia SA*); De Marco, Bastien (*Aktiia SA*); Olivero, Elisa (*aktia S.A.*); Siutryk, Nadège (*Aktiia SA*); Chapuis, Valentin (*Aktiia SA*); Bertschi, Mattia (*aktia*)

09:00-09:15 WeA13.3
Cuffless Blood Pressure Monitoring on Smartphone: Blood Pressure Estimation based on Pulse Wave Analysis
Yoon, Seung Keun* (*Samsung Advanced Institute of Technology*); Kwon, Uikun (*Samsung Electronics*); Park, Chang Soon (*Samsung Advanced Institute of Technology*); Jang, Dae-Geun (*Samsung Advanced Institute of Technology*); Noh, Seungwoo (*Interdisciplinary Program, Bioengineering, Graduate School, Seoul*); Choi, Jin Woo (*Seoul National Univ.*); Choi, Changmok (*Samsung Electronics Co., Ltd.*); Lee, Jongwook (*Samsung Electronics*); Kim, Youngsoo (*Samsung Electronics*); Hwang, Jeong-Eun (*Samsung Advanced Institute of Technology*); Ko, Byung-Hoon (*Samsung Advanced Institute of Technology*); Park, Sangyun (*Samsung Advanced Institute of Technology*); Kwon, Yongjoo (*Samsung Advanced Institute of Technology*); Kang, Jaemin (*Samsung*); Kim, Youn Ho (*Samsung Advanced Institute of Technology*); Lee, Hong Ji (*Seoul National Univ.*); Cho, Sung-Hwan (*Samsung*); Jung, Sunok (*Samsung Electronics*); Sung, Jidong (*Center for Health Promotion, Samsung Medical Center, Sungkyunkwa*); Park, Seung Woo (*Division of Cardiology, Samsung Medical Center*)

<p>09:15-09:30 WeA13.4 Image-Free Ultrasound Technique for Calibration-Free Cuffless Blood Pressure Measurement Joseph, Jayaraj (<i>HTIC, Indian Institute of Technology Madras</i>); V, Raj Kiran* (<i>IIT Madras</i>); P M, Nabeel (<i>Indian Institute of Technology Madras</i>); Sivaprakasam, Mohanasankar (<i>Indian Institute of Technology Madras</i>)</p>	<p>09:45-10:00 WeA14.6 Combining Electrodermal Activity and Speech Analysis Towards a more Accurate Emotion Recognition System Greco, Alberto* (<i>Univ. of Pisa</i>); Marzi, Claudia (<i>National Research Council of Italy</i>); Lanata', Antonio (<i>Univ. of Pisa</i>); Scilingo, Enzo Pasquale (<i>Univ. of Pisa</i>); Vanello, Nicola (<i>Univ. of Pisa</i>)</p>
<p>09:30-09:45 WeA13.5 Effect of Medication on Cuff-Less Blood Pressure and Pulse Wave Velocity Ma, Botong (<i>Massachusetts Institute of Technology</i>); Ouyang, Victoria (<i>Massachusetts Institute of Technology</i>); Sengupta, Shantanu (<i>Sengupta Hospital & Research Institute</i>); Mungulmare, Kunda (<i>Sengupta Hospital & Research Institute</i>); Sengupta, Partho (<i>True Vision</i>); Fletcher, Richard Ribon* (<i>Massachusetts Institute of Technology</i>)</p>	<p>WeA15: 08:30-10:00 M3 – Level 3 Bioinformatics – Bioinformatics for Health Monitoring (Oral Session) Co-Chair: Smith, Michael (<i>University of Calgary</i>)</p>
<p>WeA14: 08:30-10:00 R3 – Level 3 Signal Processing and Classification of Acoustic and Auditory Signals (Oral Session) Chair: Ambrosini, Emilia (<i>Politecnico di Milano</i>) Co-Chair: Celler, Branko George (<i>University of New South Wales</i>)</p>	<p>08:30-08:45 WeA15.1 Evaluating the Accuracy of Consensus Nanopore Squiggles Generated by Dynamic Time Warp Barycentre Averaging (DBA) Smith, Michael* (<i>University of Calgary</i>); Chan, Rachel S. L. (<i>Electrical & Computer Engineering, University of Calgary</i>); Gordon, Paul (<i>Bioinformatics, Alberta Children's Hospital Research Institute</i>)</p>
<p>08:30-08:45 WeA14.1 Blood Pressure Estimation using Time Domain Features of Auscultatory Waveforms and GMM-HMM Classification Approach Celler, Branko George* (<i>Univ. of New South Wales</i>); Le, Phu N. (<i>Univ. of New South Wales</i>); Argha, Ahmadreza (<i>Univ. of New South Wales</i>); Ambikairajah, E (<i>Univ. of New South Wales</i>)</p>	<p>08:45-09:00 WeA15.2 Patient-Specific Debye Parameters for Human Blood Santorelli, Adam* (<i>National University of Ireland Galway</i>); O'Halloran, Martin (<i>National University of Ireland, Galway</i>)</p>
<p>08:45-09:00 WeA14.2 Automatic Speech Analysis to Early Detect Functional Cognitive Decline in Elderly Population Ambrosini, Emilia* (<i>Politecnico di Milano</i>); Caielli, Matteo (<i>Politecnico di Milano</i>); Milis, Marios (<i>Signal GeneriX Ltd</i>); Loizou, Christos (<i>Signal GeneriX Ltd</i>); Azzolino, Domenico (<i>Fondazione IRCCS Cà Granda Ospedale Maggiore Policlinico</i>); Damanti, Sarah (<i>Fondazione IRCCS Cà Granda Ospedale Maggiore Policlinico</i>); Bertagnoli, Laura (<i>Fondazione IRCCS Cà Granda Ospedale Maggiore Policlinico</i>); Cesari, Matteo (<i>Fondazione IRCCS Cà Granda Ospedale Maggiore Policlinico</i>); Moccia, Sara (<i>Unviersità Politecnica delle Marche</i>); Cid, Manuel (<i>Consejería de Sanidad y Políticas Sociales, Junta de Extremadura</i>); Galán de Isla, Carmen (<i>Consejería de Sanidad y Políticas Sociales, Junta de Extremadura</i>); Salamanca, Paula (<i>Consejería de Sanidad y Políticas Sociales, Junta de Extremadura</i>); Borghese, Nunzio Alberto (<i>University of Milan</i>); Ferrante, Simona (<i>Politecnico di Milano</i>)</p>	<p>09:00-09:15 WeA15.3 MOTA: Multi-Omic Integrative Analysis for Biomarker Discovery Fan, Ziling (<i>Georgetown University</i>); Zhou, Yuan (<i>Georgetown University</i>); Resson, Habtom* (<i>Georgetown University</i>)</p>
<p>09:00-09:15 WeA14.3 Automatic Identification of Cough Events from Acoustic Signals Pramono, Renard Xaviero Adhi* (<i>Imperial College London</i>); Imtiaz, Syed Anas (<i>Imperial College London</i>); Rodriguez-Villegas, Esther (<i>Imperial College London</i>)</p>	<p>09:15-09:30 WeA15.4 Simulation of a Cellular Automaton with Markov Chains: Applications in Self-Organized Dynamical Systems Lambrou, George I. (<i>National & Kapodistrian Univ. of Athens</i>); Ioannidou, Pinelopi (<i>Dept. of Biomedical Research, Institute of Molecular Biolog</i>); Bizopoulos, Paschalis* (<i>National Technical Univ. of Athens</i>); Toumpaniaris, Petros (<i>National Technical Univ. of Athens</i>); Kepentzis, Stavros (<i>National Technical Univ. of Athens</i>); Koutsouris, Dimitrios (<i>Biomedical Engineering Laboratory, School of Electrical & Comp</i>)</p>
<p>09:15-09:30 WeA14.4 Regression between EEG and Speech Signals for Spoken Vowels Sikdar, Debdeep (<i>IIT Kharagpur</i>); Roy, Rinku (<i>IIT Kharagpur</i>); Mahadevappa, Manjunatha* (<i>Indian Institute of Technology Kharagpur</i>)</p>	<p>09:30-09:45 WeA15.5 A Cross-Platform Comparison of Affymetrix, Agilent, and Illumina Microarray Reveals Functional Genomics in Colorectal Cancer Progression Lim, Hendrick Gao-Min* (<i>Taipei Medical University</i>); Lee, Yuan-Chii Gladys (<i>Taipei Medical University</i>)</p>
<p>09:30-09:45 WeA14.5 Automated Verbal and Non-Verbal Speech Analysis of Interviews of Individuals with Schizophrenia and Depression Xu, Shihao* (<i>Nanyang Technological University, School of Electrical & Elect</i>); Yang, Zixu (<i>Institute of Mental Health</i>); Chakraborty, Debsubhra (<i>Institute for Media Innovation, Nanyang Technological University</i>); Yi Han Chua, Victoria (<i>Nanyang Technological University, School of Electrical & Elect</i>); Dauwels, Justin (<i>NTU</i>); Thalmann, Daniel (<i>Ecole Polytechnique Fédérale de Lausanne (EPFL)</i>); Magnenat Thalmann, Nadia (<i>Institute for Media Innovation, Nanyang Technological University</i>); Tan, Bhing-Leet (<i>Health & Social Sciences, Singapore Institute of Technology</i>); Lee, Jimmy (<i>Institute of Mental Health</i>)</p>	<p>09:45-10:00 WeA15.6 A Queryable Graph Representation of Vascular Connectivity in the Whole Mouse Brain Nowak, Michael* (<i>Texas A&M University</i>); Lee, Junseok (<i>Texas A&M University, Dept. of Computer Science & Enginee</i>); Choe, Yoonsuck (<i>Texas A&M University</i>)</p>
<p>WeA16: 08:30-10:00 M5 – Level 3 Data-Driven Translational Biomedicine (Oral Session) Chair: Molteni, Erika (<i>King's College London</i>)</p>	<p>08:30-08:45 WeA16.2 A Minimal Model Approach for the Description of Postprandial Glucose Responses from Glucose Sensor Data in Diabetes Mellitus Eichenlaub, Manuel M.* (<i>Univ. of Warwick</i>); Hattersley, John Glenn (<i>Univ. Hospitals Coventry & Warwickshire/Univ. of War</i>); Khovanova, Natasha (<i>Univ. of Warwick</i>)</p>
<p>08:30-08:45 WeA16.1 A Full-Body Model of Burn Pathophysiology and Treatment using the BioGears Engine McDaniel, Matthew* (<i>Applied Research Associates</i>); Baird, Austin (<i>Applied Research Associates</i>)</p>	<p>08:45-09:00 WeA16.2 A Minimal Model Approach for the Description of Postprandial Glucose Responses from Glucose Sensor Data in Diabetes Mellitus Eichenlaub, Manuel M.* (<i>Univ. of Warwick</i>); Hattersley, John Glenn (<i>Univ. Hospitals Coventry & Warwickshire/Univ. of War</i>); Khovanova, Natasha (<i>Univ. of Warwick</i>)</p>

- 09:00-09:15 WeA16.3
Comparison of Multi-Class Machine Learning Methods for the Identification of Factors Most Predictive of Prognosis in Neurobehavioral Assessment of Pediatric Severe Disorder of Consciousness through LOCFAS Scale
 Molteni, Erika* (*King's College London*); Colombo, Katia (*Scientific Institute, IRCCS E. Medea*); Beretta, Elena (*IRCCS "E. Medea", Associazione La Nostra Famiglia, Bosisio Parini*); Galbiati, Susanna (*IRCCS Eugenio Medea Scientific Institute*); Dos Santos Canas, Liane (*King's College London*); Modat, Marc (*King's College London*); Strazzer, Sandra (*IRCCS*)
- 09:15-09:30 WeA16.4
Modeling of Combination Chemotherapy and Immunotherapy for Lung Cancer
 Curtis, Louis (*University of Louisville*); Frieboes, Hermann* (*University of Louisville*)
- 09:30-09:45 WeA16.5
STAR-Liège Clinical Trial Interim Results: Safe and Effective Glycemic Control for All
 Uyttendaele, Vincent* (*University of Canterbury*); Knopp, Jennifer L. (*University of Canterbury*); Pirotte, Marc (*University of Liege*); Morimont, Philippe (*University Hospital of Liège*); Lambermont, Bernard (*University of Liege*); Shaw, Geoffrey M (*Christchurch Hospital*); Desai, Thomas (*University of Liege*); Chase, J. Geoffrey (*University of Canterbury*)
- 09:45-10:00 WeA16.6
Joint and Long Short Term Memory Regression of Clinical Scores for Alzheimer's Disease using Longitudinal Data
 Yang, Mengya (*Shenzhen University*); Elazab, Ahmed (*Shenzhen University*); Yang, Peng (*Shenzhen University*); Xia, Zaimin (*Shenzhen University*); Wang, Tianfu (*Shenzhen University*); Lei, Baiying* (*Shenzhen University*)
- WeA17: 08:30-10:00 R12 – Level 3
Atrial Fibrillation and Cardiac Electrophysiology (Oral Session)
Co-Chair: Chon, Ki (*University of Connecticut*)
- 08:30-08:45 WeA17.1
Local Activation Time Estimation in Fractionated Electrograms of Cardiac Mappings
 Abdi, Bahareh* (*TU Delft*); Alle-Jan, van der Veen (*TU Delft*); de Groot, Natasja (*Erasmus MC, Rotterdam*); Hendriks, Richard (*TU Delft*)
- 08:45-09:00 WeA17.2
Preliminary Validation of Electroporation-Electrolysis (E2) for Cardiac Ablation using a Parameterisable in-Vivo Model
 Zhao, Luke Hong Lu* (*The Univ. of Sydney*); Rasko, Adam Emery (*The Univ. of Sydney*); Drescher, Christian (*Micropace Pty Ltd*); Maleki, Sanaz (*The Univ. of Sydney*); Cejnar, Michael (*Micropace Pty Ltd*); McEwan, Alistair (*The Univ. of Sydney*)
- 09:00-09:15 WeA17.3
Structural Analysis of Complex Atrial Intramural Microstructure from a Multi-Layer Model based on Siamese Network
 Li, Jianning (*Tsinghua University*); Chen, Riqing (*The Institute of Biomedical Engineering, Graduate School at Shen*); Wu, Jian* (*Tsinghua University*)
- 09:15-09:30 WeA17.4
Atrial Fibrillation Detection in ICU Patients: A Pilot Study on MIMIC III Data
 Bashar, Syed Khairul* (*University of Connecticut*); Ding, Eric (*University of Massachusetts Medical School*); Albuquerque, Daniella (*University of Massachusetts Medical School*); Winter, Michael (*Boston University*); Binici, Sophia (*University of Massachusetts Medical School*); Walkey, Allan (*Boston University*); McManus, David (*University of Massachusetts Medical Center*); Chon, Ki (*University of Connecticut*)
- 09:30-09:45 WeA17.5
Effectiveness of CRT-D versus ICD on Prevention of Electrical Storm: Big Data from the USA
 Shakibfar, Saeed* (*Univ. of Copenhagen*); Yazdchi, Mohammadreza (*Isfahan Univ.*); Aliakbarhosseinabadi, Susan (*the Center for Sensory-Motor Intraaction, Dept. of Health Sc*)
- 09:45-10:00 WeA17.6
The Role of the Size of Infarcted Area on Two Kinds of Vulnerable Window in Two Dimension Ventricular Tissue
 Liang, Cuiping* (*Harbin Institute of Technology*); Wang, Kuanquan (*Harbin Institute of Technology*); Li, Qince (*Harbin Institute of Technology*); Zhang, Henggui (*Harbin Institute of Technology, School of Computer Science & T*)
- WeA18: 08:30-10:00 R13 – Level 3
Human Performance (I) (Oral Session)
Chair: Jones, Richard D. (*New Zealand Brain Research Institute*)
Co-Chair: Petroff, Neil (*Tarleton State University*)
- 08:30-08:45 WeA18.1
A Mobile Solution for Rhythmic Auditory Stimulation Gait Training
 Aholt, Katharina* (*Friedrich-Alexander-Univ. Erlangen-Nürnberg*); Martindale, Christine (*Friedrich-Alexander-Univ. Erlangen-Nürnberg*); Küderle, Arne (*Friedrich-Alexander-Univ. Erlangen-Nürnberg*); Gaßner, Heiko (*Univ. sklinikum Erlangen, Dept. of Molecular Neurology*); Gladow, Till (*Medical Valley Digital Health Application Center GmbH, Bamberg*); Rojo, Javier (*Technical Univ. of Madrid*); Villanueva-Mascato, Samanta (*Universidad Politécnica de Madrid*); Klucken, Jochen (*Univ. Hospital Erlangen*); Arredondo Waldmeyer, María Teresa (*Universidad Politécnica de Madrid*); Eskofier, Bjoern M (*Friedrich-Alexander-Univ. Erlangen-Nürnberg*)
- 08:45-09:00 WeA18.2
An Eye-Tracking based Evaluation on the Effect of Far-Infrared Therapy for Relieving Visual Fatigue
 Feng, Yong (*Southern University of Science & Technology*); Wang, Lei (*Southern University of Science & Technology*); Chen, Fei* (*Southern University of Science & Technology*)
- 09:00-09:15 WeA18.3
An Instrumented Measurement Scheme for the Assessment of Upper Limb Function in Individuals with Friedreich Ataxia
 Nguyen, Khoa D.* (*Deakin University*); Corben, Louise Anne (*Murdoch Children's Research Institute*); Pathirana, Pubudu N. (*Deakin University*); Horne, Malcolm (*Florey Institute of Neuroscience & Mental Health*); Delatycki, Martin (*Murdoch Children's Research Institute*); Szmulewicz, David (*Victorian Eye & Ear Hospital*)
- 09:15-09:30 WeA18.4
Foot Care to Improve Physical Function and Prevent Falling of Frail Elderly Adults with and without Dementia
 Yamashita, Tomoko* (*Takase Clinic*); Yamashita, Kazuhiko (*Ryotokuji University*); Yoshimasa, Takase (*Takase Clinic*)
- 09:30-09:45 WeA18.5
Specific Neuronal Oscillatory Coupling over Frontal and Occipito-Temporal Regions during Face Perception
 Yin, Zhongliang (*Xidian Univ.*); Wang, Yue (*Xidian Univ.*); Yin, Kuiying (*Nanjing Institute of Electronic Technology*); Dong, Minghao (*Xidian Univ.*); Liang, Jimin* (*Xidian Univ.*)
- 09:45-10:00 WeA18.6
High-Definition Transcranial Direct Current Stimulation (HD-tDCS) Enhances Working Memory Training
 Wang, Ningci* (*Tianjin Univ.*); Ke, Yufeng (*Tianjin Univ.*); Du, Jiale (*Tianjin Univ.*); Liu, Wentao (*Tianjin Univ.*); Kong, Linghan (*Tianjin Univ.*); Zhao, Xin (*Tianjin Univ.*); Liu, Shuang (*Tianjin Univ.*); Xu, Minpeng (*Tianjin Univ.*); An, Xingwei (*Tianjin Univ.*); Ming, Dong (*Tianjin Univ.*)
- WeA19: 08:30-10:00 R4 – Level 3
General and Theoretical Informatics – Data Intelligence (Oral Session)
Co-Chair: Dickhaus, Hartmut (*University of Heidelberg*)
- 08:30-08:45 WeA19.1
Cortical Functional Connectivity during Praxis in Autism Spectrum Disorder
 Harvy, Jonathan (*Singapore Institute for Neurotechnology*); Ewen, Joshua (*Kennedy Krieger Institute*); Thakor, Nitish (*National Univ. of Singapore*); Bezerianos, Anastasios (*National Univ. of Singapore*); Li, Junhua* (*National Univ. of Singapore*)

08:45-09:00 WeA19.2
Automatic Clinical Procedure Detection for Emergency Services
 Heard, Jamison* (*Vanderbilt Univ.*); Paris, Richard (*Vanderbilt Univ.*); Scully, Deirdre (*Vanderbilt Univ.*); McNaughton, Candace (*Vanderbilt Univ. Medical Center*); Ehrenfeld, Jesse M. (*Vanderbilt Univ. Medical Center*); Coco, Joseph (*Vanderbilt Univ. Medical Center*); Fabbri, Daniel (*Vanderbilt Univ. Medical Center*); Bodenheimer, Robert (*Vanderbilt Univ.*); Adams, Julie A. (*Oregon State Univ.*)

09:00-09:15 WeA19.3
Clustering Cardiovascular Risk Trajectories of Patients with Type 2 Diabetes using Process Mining
 Pebesma, Joyce (*University of Twente*); Martinez-Millana, Antonio* (*Universitat Politècnica de València*); Sacchi, Lucia (*University of Pavia*); Fernandez-Llatas, Carlos (*Universidad Politécnica de Valencia*); De Cata, Pasquale (*Fondazione Salvatore Maugeri*); Chiovato, Luca (*Fondazione Salvatore Maugeri*); Bellazzi, Riccardo (*University of Pavia*); Traver, Vicente (*ITACA – Universitat Politècnica de València*)

09:15-09:30 WeA19.4
Patient-Care Team Contact Patterns Impact Treatment Length of Stay in the Emergency Dept.
 Poigai Arunachalam, Shivaram (*Mayo Clinic*); Asan, Onur (*Stevens Institute of Technology*); Nestler, David (*Mayo Clinic*); Heaton, Heather (*Mayo Clinic*); Hellmich, Thomas (*Mayo Clinic*); Wutthisirisart, Phichet (*Mayo Clinic*); Marisamy, Gomathi (*Mayo Clinic*); Pasupathy, Kalyan* (*Mayo Clinic*); Sir, Mustafa (*Mayo Clinic*)

09:30-09:45 WeA19.5
An Unsupervised Feature Learning Approach to Reduce False Alarm Rate in ICUs
 Ghazanfari, Behzad* (*Northern Arizona University*); Afghah, Fatemeh (*Northern Arizona University*); Najarian, Kayvan (*University of Michigan – Ann Arbor*); Mousavi, Sajad (*Northern Arizona University*); Gryak, Jonathan (*University of Michigan*); Todd, James (*Northern Arizona University*)

09:45-10:00 WeA19.6
Mining Disease Courses across Organizations: A Methodology based on Process Mining of Diagnosis Events Datasets
 de Toledo, Paula* (*Universidad Carlos III de Madrid*); Joppien, Carolin (*Leuphana University Lüneburg*); Sesmero Lorente, M. Paz (*Universidad Carlos III de Madrid*); Drews, Paul (*Leuphana University of Lüneburg*)

WeA20: 08:30-10:00 R5 – Level 3
Novel Sensing Methods (Oral Session)

08:30-08:45 WeA20.1
Design Optimization of Contactless Generator for Implantable Energy Harvesting System Utilizing Electrically
 Mochida, Takumi* (*Tokyo Institute of Technology*); Hijikata, Wataru (*Tokyo Institute of Technology*)

08:45-09:00 WeA20.2
Self-Image-Guided Ultrasonic Wireless Power Transmission to Millimeter-Sized Biomedical Implants
 Meng, Miao (*The Pennsylvania State University*); Kiani, Mehdi* (*Pennsylvania State University*)

09:00-09:15 WeA20.3
Novel Capacitive MEMS Sensor for Monitoring In-Stent Restenosis
 Iqbal, Muhammad Mubasher (*New York University Abu Dhabi*); Sultan, Saad* (*New York University Abu Dhabi*); Qasaimah, Mohammad Ameen (*New York University Abu Dhabi*)

09:15-09:30 WeA20.4
Effect of Yoga on Pulse Rate Variability Measured from a Venous Pressure Waveform
 Hernando, David* (*Univ. of Zaragoza (Spain)*); Nardelli, Mimma (*Univ. of Pisa*); Hocking, Kyle (*VoluMetrix, Nashville TN, USA*); Lázaro, Jesús (*Univ. of Zaragoza*); Alvis, Bret (*Dept. of Anesthesiology, Vanderbilt Univ. Medical Cent*); Gil, Eduardo (*Zaragoza Univ. & CIBER-BBN*); Scilingo, Enzo Pasquale (*Univ. of Pisa*); Brophy, Daniel R (*VoluMetrix, Nashville TN, USA*); Valenza, Gaetano (*Univ. of Pisa*); Laguna, Pablo (*Zaragoza Univ. & CIBER-BBN*); Brophy, Colleen (*VoluMetrix, Nashville TN, USA*); Bailon, Raquel (*Univ. of Zaragoza*)

09:30-09:45 WeA20.5
Measurement of Chest Physiological Signals using Wirelessly Coupled Bio-Impedance Patches
 Sel, Kaan* (*Texas A&M University*); Zhao, Jialu (*Texas A&M University*); Ibrahim, Bassem (*Texas A&M University*); Jafari, Roozbeh (*Texas A&M University*)

09:45-10:00 WeA20.6
Comparison between Different Optical Systems for Optogenetics based Head Mounted Device for Retina Pigmentosa
 Soltan, Ahmed* (*Newcastle Univ., School of Engineering*); Liu, Yu (*Newcastle Univ., School of Engineering*); Armstrong, Niall (*C4 Sightcare Ltd, Northumberland House, Newcastle upon Tyne, NE1*); Akhter, Mahbub (*Tyndall National Institute, Cork, Ireland*); Corbett, Brian (*Tyndall National Institute, Cork, Ireland*); Degenaar, Patrick (*Newcastle Univ.*)

WeA21: 08:30-10:00 R8 – level 3
Image Feature Extraction (Oral Session)

08:30-08:45 WeA21.1
Mapping of Color Information from Camera Images to 3D Models for the Manufacturing of Aesthetic Dentures
 Pitz, Katrin* (*Technische Universität Darmstadt*); Anderl, Reiner (*Technische Universität Darmstadt*)

08:45-09:00 WeA21.2
Sway Risk Analysis based on Age Group Classification
 Ismail, Hafsa* (*Univ. of Canberra*); Radwan, Ibrahim (*Australian National Univ.*); Suominen, Hanna (*Data61/CSIRO, Australian National Univ.*); Waddington, Gordon (*Univ. of Canberra*); Goecke, Roland (*Univ. of Canberra*)

09:00-09:15 WeA21.3
Automatic Extraction of Dermatological Parameters from Nevi using an Inexpensive Smartphone Microscope: A Proof of Concept
 Meiburger, Kristen M.* (*Politecnico di Torino*); Veronese, Federica (*University of Eastern Piedmont*); Tarantino, Vanessa (*University of Eastern Piedmont*); Salvi, Massimo (*Politecnico di Torino*); Fadda, Matteo (*Politecnico di Torino*); Seoni, Silvia (*Politecnico di Torino*); Zavattaro, Elisa (*University of Eastern Piedmont*); De Santi, Bruno (*Politecnico di Torino*); Michielli, Nicola (*Politecnico di Torino*); Savoia, Paola (*University of Eastern Piedmont*); Molinari, Filippo (*Politecnico di Torino*)

09:15-09:30 WeA21.4
Selection of Radiomics Features based on their Reproducibility
 Ligeró Hernández, Marta (*Vall d'Hebron Institute of Oncology. Barcelona*); Torres, Guillermo* (*Computer Vision Center, Univ. Autònoma de Barcelona.*); Sanchez, Carles (*Computer Vision Center & Univ. Autònoma de Barcelona*); Diaz-Chito, Katerine (*Univ. Autònoma de Barcelona – UAB Barcelona*); Perez, Raquel (*Vall d'Hebron Institute of Oncology. Barcelona*); Gil, Debora (*Computer Vision Center*)

09:30-09:45 WeA21.5
The Method for Visualization and Analysis of Eye-Blinking Patterns using Dynamic Vision
 Lee, Woon-Hee* (*Seoul National University*); Woo, Jong-Hyuk (*Seoul National University, Samsung Electronics*); Seo, Jong Mo (*Seoul National University, School of Engineering*)

09:45-10:00	WeA21.6	Assessment of the Effect of Intensity Standardization on the Reliability of T1-Weighted MRI Radiomic Features: Experiment on a Virtual Phantom Bologna, Marco* (<i>Politecnico di Milano</i>); Corino, Valentina (<i>Politecnico di Milano</i>); Mainardi, Luca (<i>Politecnico di Milano</i>)	15:00-15:15	WeC01.5	Physiological Reactions in Single-Player and Competitive Arm Rehabilitation Games Catalán Orts, José María* (<i>Univ. Miguel Hernandez de Elche</i>); Blanco Ivorra, Andrea (<i>Univ. Miguel Hernandez de Elche</i>); Díez Pomares, Jorge (<i>Univ. Miguel Hernández de Elche</i>); García Perez, José Vicente (<i>Univ. Miguel Hernandez de Elche</i>); García-Aracil, Nicolas (<i>Univ. Miguel Hernandez</i>)
WeA22: 08:30-10:00	R10 – Level 3	Veterinary Medicine Engineering (Invited Session) Chair: Bressan, Nadja (<i>University of Prince Edward Island</i>) Co-Chair: Creighton, Catherine (<i>University of Prince Edward Island</i>)	15:15-15:30	WeC01.6	Position based Impedance Control Strategy for a Lower Limb Rehabilitation Robot Liang, Xu (<i>Institute of Automation, Chinese Academy of Sciences</i>); Wang, Weiqun* (<i>Chinese Academy of Sciences</i>); Hou, Zeng-Guang (<i>Institute of Automation, Chinese Academy of Sciences</i>); Ren, Shixin (<i>Chinese Academy of Science</i>); Wang, Jiaxing (<i>Institute of Automation, Chinese Academy of Sciences</i>); Shi, Weiguo (<i>Chinese Academy of Sciences</i>); Peng, Liang (<i>Institute of Automation, Chinese Academy of Sciences</i>); Su, Tingting (<i>North China University of Technology</i>)
08:30-08:45	WeA22.1	Veterinary Medicine Engineering in Practice Creighton, Catherine* (<i>University of Prince Edward Island</i>); Bressan, Nadja (<i>University of Prince Edward Island</i>)	WeC02: 14:00-15:30	Hall A8 – Level 1	Imaging Human Brain Networks with Different Neuroimaging Modalities: From the Laboratory to the Patients (Minisymposium) Chair: Ding, Lei (<i>University of Oklahoma</i>) Co-Chair: Yuan, Han (<i>University of Oklahoma</i>)
08:45-09:00	WeA22.2	3D Printing of Drug-Eluting Bio-Absorbable Scaffolds for Animal Healthcare Ahmadi, Ali* (<i>University of Prince Edward Island</i>)	14:00-14:15	WeC02.1	Non-Invasive Multimodal Neuromonitoring and Brain Injury in Patients with ECMO Cho, Sung-Min* (<i>Johns Hopkins University School of Medicine</i>)
09:00-09:15	WeA22.3	Simulation of Aquatic Animal's Electroreceptive Sense Cibis, Tobias* (<i>Friedrich-Alexander Universität Erlangen-Nürnberg</i>); McEwan, Alistair (<i>The University of Sydney</i>)	14:15-14:30	WeC02.2	Tracking Resting State Connectivity Dynamics in the Diseased Human Brain Yuan, Han* (<i>University of Oklahoma</i>)
09:15-09:30	WeA22.4	The Sustainable Design of Veterinary Medicine Engineering Bressan, Nadja* (<i>University of Prince Edward Island</i>); Creighton, Catherine (<i>University of Prince Edward Island</i>)	14:30-14:45	WeC02.3	Tripolar EEG and fNIRS Multimodal Brain Signal Acquisition Besio, W. G.* (<i>University of Rhode Island</i>)
WeC01: 14:00-15:30	Hall A6+A7 – Level 1	Rehabilitation Helped by Technology (Oral Session) Chair: Petroff, Neil (<i>Tarleton State University</i>)	14:45-15:00	WeC02.4	The Dynamics of MEG Hubs in Large Scale Networks Della Penna, Stefania* (<i>Univ. G. D'Annunzio of Chieti-Pescara</i>); Corbetta, Maurizio (<i>Univ. of Padua</i>); Spadone, Sara (<i>Univ. G. D'Annunzio of Chieti-Pescara</i>); Betti, Viviana (<i>Univ. La Sapienza, Rome</i>); Wens, Vincent (<i>Universite´ libre de Bruxelles(ULB)</i>); de Pasquale, Francesco (<i>Univ. of Teramo</i>)
14:00-14:15	WeC01.1	The Effects of Different Tracking Tasks on Muscle Synergy through Visual Feedback Huang, Yao (<i>University of Technology Sydney</i>); Song, Rong* (<i>Sun Yat-Sen University</i>); Chen, Wenhui (<i>University of Technology Sydney</i>); Yu, Hairong (<i>University of Technology, Sydney</i>); Argha, Ahmadreza (<i>University of New South Wales</i>); Celler, Branko George (<i>University of New South Wales</i>); Su, Steven Weidong (<i>University of Technology, Sydney</i>)	15:00-15:15	WeC02.5	Reconstructing Resting State Networks from EEG Ding, Lei* (<i>University of Oklahoma</i>)
14:15-14:30	WeC01.2	Modulation of Cortical Activity by Selective Steady-State Somatosensory Stimulation Zarei, Asghar* (<i>Center for Neuroplasticity & Pain (CNAP), Aalborg Univ.</i>); Lontis, Eugen Romulus (<i>Aalborg Univ.</i>); Jensen, Winnie (<i>Center for Sensory-Motor Interaction</i>)	WeC03: 14:00-15:30	Hall A3 – Level 1	Magnetic Resonance Elastography: Quantification of Viscoelastic Parameters from Specimens to In-Vivo Organs (Minisymposium) Chair: Klatt, Dieter (<i>The University of Illinois at Chicago</i>) Co-Chair: Bertalan, Gergely (<i>Charité – Univ. Berlin, Germany</i>)
14:30-14:45	WeC01.3	Does Repetitive Transcranial Magnetic Stimulation (rTMS) Have Therapeutic Effects on Dynamic Balance of Children with Cerebral Palsy? Dadashi, Farnoosh (<i>Tehran University of Medical Sciences</i>); Lotfian, Mahboube (<i>Tehran University of Medical Sciences</i>); Shahrokhi, Amin (<i>Noorafshar Hospital, Tehran, Iran</i>); Nourian, Ruhollah (<i>Sports Medicine Research Center, Tehran University of Medical Sc</i>); Irani, Ashkan (<i>Dept. of Occupational Therapy, Faculty of Rehabilitation, S</i>); Mirbagheri, Alireza (<i>Tehran University of Medical Sciences (TUMS)</i>); Mirbagheri, Mehdi* (<i>Northwestern University/TUMS</i>)	14:00-14:15	WeC03.1	Review of MR Elastography Methodology and Future Directions for Data Acquisition and Processing Klatt, Dieter (<i>The University of Illinois at Chicago</i>); Reiter, Rolf* (<i>University of Illinois at Chicago</i>)
14:45-15:00	WeC01.4	Effects of an Exoskeleton-Assisted Gait Motor Imagery Training in Functional Brain Connectivity Gaxiola Tirado, Jorge Antonio (<i>Center for Research & Advanced Studies (Cinvestav), Monterrey's</i>); Ianez, Eduardo (<i>Univ. Miguel Hernandez de Elche</i>); Ortiz, Mario (<i>Univ. Miguel Hernández</i>); Gutierrez, David (<i>Cinvestav Monterrey</i>); Azorin, Jose M.* (<i>Univ. Miguel Hernandez de Elche</i>)	14:15-14:30	WeC03.2	Transformation Elastography: Reconstruction by Spatial Distortion to Convert Anisotropy and Inhomogeneity into Isotropy and Homogeneity Guidetti, Martina* (<i>University of Illinois at Chicago</i>); Palnitkar, Harish (<i>University of Illinois at Chicago</i>); Klatt, Dieter (<i>The University of Illinois at Chicago</i>); Royston, Thomas (<i>University of Illinois at Chicago</i>)
			14:30-14:45	WeC03.3	MR Elastography: Current and Future Clinical Applications Eisenmenger, Laura* (<i>University of Wisconsin – Madison</i>)

14:45-15:00 WeC03.4
Prostate Cancer Assessment using Ex Vivo MR Elastography at 9.4 Tesla
 Reiter, Rolf* (*University of Illinois at Chicago*); Majumdar, Shreyan (*University of Illinois at Chicago*); Kearny, Steven (*University of Illinois at Chicago*); Kajdacsy-Balla, Andre (*University of Illinois at Chicago*); Macias, Virgilia (*University of Illinois at Chicago*); Mar, Winnie (*University of Illinois at Chicago*); Caldwell, Brandon (*University of Illinois at Chicago*); Abern, Michael (*University of Illinois at Chicago*); Klatt, Dieter (*The University of Illinois at Chicago*)

15:00-15:15 WeC03.5
High-Resolution Multifrequency MRE at High Field Strengths
 Bertalan, Gergely* (*Charité – Universitätsmedizin Berlin, Germany*); Guo, Jing (*Charité – Universitätsmedizin Berlin, Germany*); Sack, Ingolf (*Charité-Universitätsmedizin*); Braun, Jurgen (*Charité-Universitätsmedizin*)

15:15-15:30 WeC03.6
Harmonic Displacement Measurement in Biphasic Materials by Inversion-Recovery MR Elastography
 Lilaj, Ledia* (*Dept. of Radiology, Charité – Univ., Berlin.*); Hirsch, Sebastian (*Berlin Center for Advanced Neuroimaging, Bernstein Center for Co*); Braun, Jurgen (*Charité-Univ.*); Sack, Ingolf (*Charité-Univ.*)

WeC04: 14:00-15:30 Hall A1 – Level 1
Human Centric Sensing and Computing: Data Interpretation at the Edge (Minisymposium)
Chair: Michel, Bruno (*IBM Research – Zurich*)
Co-Chair: Magno, Michele (*ETH Zurich*)

14:00-14:15 WeC04.1
FANNCortexM: An Open Source Toolkit for Multi-Layer Neural Networks on Wearable Device based on ARM Cortex-M. Performance Analysis with Stress Detection
 Magno, Michele* (*ETH Zurich*); Cavigelli, Lukas (*ETH Zurich*); Mayer, Philipp (*ETH Zurich*); von Hagen, Ferdinand (*ETH Zurich*); Benini, Luca (*University of Bologna*)

14:15-14:30 WeC04.2
Internet of the Body: Edge Enhanced Wearable Monitoring and Coaching
 Michel, Bruno* (*IBM Research – Zurich*)

14:30-14:45 WeC04.3
A Cognitive IoT Monitoring and Support System for Elderly Care
 Hu, Rui* (*IBM Research Zurich*); Brunschweiler, Thomas (*IBM Research – Zurich*); Russo, Dario (*National Research Council of Italy*); Mora, Niccolo' (*Univ. of Parma*); Montanari, Enrico (*Azienda Unita' Sanitaria Locale Di Parma*); Michel, Bruno (*IBM Research – Zurich*); Matrella, Guido (*Università di Parma*); Ciampolini, Paolo (*Univ. of Parma*); Spada, Maria Rita (*WindTre*); Ceresini, Rocco (*Auroradomus*); Nunziata, Stefano (*Lepida*)

14:45-15:00 WeC04.4
Automated Point-of-Care Processing and Interpretation of Pulse Oximetry for Global Health Applications
 Karlen, Walter* (*ETH Zurich*)

WeC05: 14:00-15:30 Hall A2 – Level 1
Biomedical Data Fusion using Tensor Methods (Invited Session)
Chair: Van Huffel, Sabine (*KU Leuven*)
Co-Chair: Hunyadi, Borbala (*KU Leuven*)

14:00-14:15 WeC05.1
The Power of Tensor-Based Approaches for ECG Signal Processing
 Goovaerts, Griet (*KU Leuven*); Padhy, Sibasankar (*VIT Vellore*); Boussé, Martijn (*KU Leuven*); De Lathauwer, Lieven (*KU Leuven*); Van Huffel, Sabine* (*KU Leuven*)

14:15-14:30 WeC05.2
Biomarker Discovery through Structure-Revealing Fusion of Multi-Modal Neuroimaging Data
 Acar, Evrim* (*Simula Metropolitan Center for Digital Engineering*); Schenker, Carla (*Simula Metropolitan Center for Digital Engineering*); Levin-Schwartz, Yuri (*Icahn School of Medicine at Mount Sinai*); Calhoun, Vince (*The Mind Research Network/University of New Mexico*); Adali, Tulay (*University of Maryland Baltimore County*)

14:30-14:45 WeC05.3
Complementary Tri-View (CTV) Data Fusion: Uniting Functional (EEG), Phenotypic, and Structural (MRI) Perspectives of Pediatric Data via Tensor Analysis
 Kinney-Lang, Eli (*University of Edinburgh*); Dron, Noramon (*University of Edinburgh*); Chin, Richard (*The University of Edinburgh*); Escudero, Javier* (*University of Edinburgh*)

14:45-15:00 WeC05.4
Stability Analysis of Tensor Decomposition based on Tensor Spectral Clustering with Applications in Neural Signal Processing
 Hu, Guoqiang* (*Dalian University of Technology*); Hao, Yuxing (*Dalian University of Technology*); Zhao, Wei (*Dalian University of Technology*); Zhang, Chi (*Dalian University of Technology*); Cong, Fengyu (*Dalian University of Technology*)

15:00-15:15 WeC05.5
Flexible Double Coupled Factorization for EEG and fMRI Fusion
 Chatzichristos, Christos* (*Kapodistrian Univ. of Athens*); Van Eyndhoven, Simon (*KU Leuven, Univ. of Leuven*); Kofidis, Eleftherios (*Univ. of Piraeus*); De Lathauwer, Lieven (*KU Leuven*); Van Huffel, Sabine (*KU Leuven*); Theodoridis, Sergios (*National & Kapodistrian Univ. of Athens*)

15:15-15:30 WeC05.6
Robust Joint Low-Rank Canonical Polyadic Approximation of a Set of Tensors for Brain Source Localization
 Taheri, Nasrin* (*LTSI INSERM U1099*); Kachenoura, Amar (*Université de Rennes1 & INSERM*); Karfoul, Ahmad (*Université de Rennes1*); Han, Xu (*University of Rennes 1*); Ansari-Asl, Karim (*Shahid Chamran University of Ahvaz*); Senhadji, Lotfi (*Université de Rennes 1 & INSERM*); Merlet, Isabelle (*INSERM – Université de Rennes 1*); Albera, Laurent (*Université de Rennes 1 & INSERM*)

WeC06: 14:00-15:30 Hall A5 – Level 1
Understanding the Link between Brain Dynamics and Behavior (Invited Session)
Chair: Faghih, Rose T. (*University of Houston*)
Co-Chair: Santaniello, Sabato (*University of Connecticut*)

14:00-14:15 WeC06.1
Temporal Evolution and Diagnostic Utility of High Frequency Oscillations in the Brain under Epilepsy
 Sumsky, Stefan (*University of Connecticut*); Santaniello, Sabato* (*University of Connecticut*)

14:15-14:30 WeC06.2
The Influence of Internal States on Movement Variability
 Breault, Macauley S. (*Johns Hopkins University*); Sarma, Sridevi V.* (*Johns Hopkins University*)

14:30-14:45 WeC06.3
Wearable-Machine Interface Architectures for Mental Stress
 Amin, Md. Rafiul (*Univ. of Houston*); Wickramasuriya, Dilranjan (*Univ. of Houston*); Faghih, Rose T.* (*Univ. of Houston*)

14:45-15:00 WeC06.4
Divisive Normalization of Affect in the Primary Motor Cortex of a Non-Human Primate
 Hessburg, John (*SUNY Downstate*); Zhao, Yao (*SUNY Downstate Medical Center*); Francis, Joseph Thachil* (*University of Houston*)

- 15:00-15:15 WeC06.5
Right-Left Brain Push-Pull System Encodes Risk-Taking Bias in Human Decision-Making
 Sacré, Pierre* (*University of Liège*); Gonzalez-Martinez, Jorge (*Cleveland Clinic*); Gale, John (*Cleveland Clinic*); Sarma, Sridevi V. (*Johns Hopkins University*)
- 15:15-15:30 WeC06.6
'The Museum as a Laboratory': Understanding Brain Responses 'in Action and in Context' using Mobile Brain-Body Imaging
 Contreras-Vidal, José* (*Univ. of Houston*); Jesus, Cruz-Garza (*Univ. of Houston*); Robleto, Dario (*Univ. of Houston*); Valls, Rebecca (*Univ. of Houston*); Witt, Woodrow (*Univ. of Houston*)
- WeC08: 14:00-15:30 M8 – Level 3
Effect of Rehabilitation Robotics on Recovery and Related Mechanisms (Invited Session)
Co-Chair: Forrest, Gail F. (*Kessler Foundation*)
- 14:00-14:15 WeC08.1
Gait Training with Multi Joint Lower Extremity Exoskeleton
 Karunakaran, Kiran* (*NJIT, Kessler Foundation*); Nolan, Karen J. (*Kessler Foundation*)
- 14:15-14:30 WeC08.2
Corticospinal Connectivity during Walking with Robot Assistance
 Saleh, Soha* (*Kessler Foundation*); Nolan, Karen J. (*Kessler Foundation*); Forrest, Gail F. (*Kessler Foundation*)
- 14:30-14:45 WeC08.3
Mobility and Cognitive Changes after Robotic Exoskeleton Gait Training in Persons with MS
 Androwis, Ghaith* (*Kessler Foundation, & New Jersey Institute of Technology*); Fakhoury, Farris N (*Kessler Institute for Rehab.*); Kwasnica, Marek (*Kessler Foundation*); Niewrzol, Peter (*Montclair State Univ.*); Popok, Paula (*Montclair State Univ.*); McKenna, Ashley L. (*Kessler Institute for Rehab.*); Williams, Todd E. (*Kessler Institute for Rehab.*); Nori, Phalgun (*Kessler Institute for Rehab.*); Kong, Yekyung (*Kessler Institute for Rehab.*); Sandroff, Brian (*Univ. of Alabama*); Forrest, Gail F. (*Kessler Foundation*); Chiaravalloti, Nancy (*Kessler Foundation*); Yue, Guang (*Kessler Foundation*); DeLuca, John (*Kessler Foundation*)
- 14:45-15:00 WeC08.4
Spinal Stimulation during Powered Exoskeleton Training
 Forrest, Gail F* (*Kessler Foundation*); Momeni, Kamyar (*Kessler Foundation*); Ravi, Manikandan (*Kessler Foundation*); Ramanujam, Arvind (*Kessler Foundation*); Augustine, Jonathan (*Kessler Foundation*); Garbarini, Erica (*Kessler Foundation*)
- 15:00-15:15 WeC08.5
Rehabilitation Robotics for Post Stroke Functional Recovery
 Nolan, Karen J.* (*Kessler Foundation*); Ames, Gregory R. (*Kessler Foundation*); Bapineedu, Radhika (*Kessler Institute for Rehabilitation*); Kong, Yekyung (*Kessler Institute for Rehabilitation*); Jasey, Neil (*Kessler Institute for Rehabilitation*)
- WeC09: 14:00-15:30 M1 – Level 3
Computational Cardiac Modeling at the Interface of Engineering and Clinics (Invited Session)
Chair: Loewe, Axel (*Karlsruhe Institute of Technology (KIT)*)
Co-Chair: Vandersickel, Nele (*Gent University*)
- 14:00-14:15 WeC09.1
Patient-Specific Electro-Mechano-Fluidic Models of the Human Heart to Study the Impact of Aortic Valve Disease Upon Ventricular Load
 Augustin, Christoph M* (*Medical University of Graz*); Gsell, Matthias (*Medical University of Graz*); Karabelas, Elias (*Medical University of Graz*); Marx, Laura (*Medical University of Graz*); Plank, Gernot (*Medical University of Graz*)
- 14:15-14:30 WeC09.2
A Patient-Specific Computational Fluid Dynamics Model for Thrombotic Risk Assessment in Atrial Fibrillation
 Masci, Alessandro (*DEI, Univ. of Bologna*); Barone, Lorenzo (*DEI, Univ. of Bologna*); Colonnelli, Michela (*DEI, Univ. of Bologna*); Tomasi, Corrado (*Santa Maria delle Croci Hospital, Ravenna, AUSL della Romagna*); Corsi, Cristiana* (*Univ. of Bologna*)
- 14:30-14:45 WeC09.3
Combined Experimental and Computational Research into Cardiac-Neural Interactions and Arrhythmias
 Pueyo, Esther* (*University of Zaragoza*)
- 14:45-15:00 WeC09.4
Importance of 3D Models for Reliable Assessment of AF Mechanism
 Ali, Gharaviri* (*Center for Computational Medicine in Cardiology*)
- 15:00-15:15 WeC09.5
Effect of the Far-Field on the Electrical Mapping
 Martinez-Mateu, Laura* (*Univ. Politècnica de València (UPV)*); Berenfeld, Omer (*Univ. of Michigan*); Saiz, Javier (*UPV*)
- 15:15-15:30 WeC09.6
Network Theory as a Novel Tool to Analyze Cardiac Arrhythmias: An Application to Atrial Tachycardia to Demonstrate How the Tool Outperforms the Latest Mapping Technology
 Van Nieuwenhuysse, Enid* (*Ghent University*); Strisciuglio, Teresa (*AZ Sint-Jan, Cardiology Dept., Bruges, Belgium*); Lorenzo, Giuseppe (*AZ Sint-Jan, Cardiology Dept., Bruges, Belgium*); El Haddad, Milad (*AZ Sint-Jan, Cardiology Dept., Bruges, Belgium*); Goedgebeur, Jan (*Ghent University*); Van Cleemput, Nico (*Ghent University*); De Pooter, Jan (*Ghent University Hospital Heart Center, Ghent University, Ghent.*); Tavernier, Rene (*AZ Sint-Jan, Cardiology Dept., Bruges, Belgium*); Vandekerckhove, Yves (*AZ Sint-Jan, Cardiology Dept., Bruges, Belgium*); Panfilov, Alexander V (*Ghent University*); Knecht, Sebastien (*Hopital Haut Leveque*); Duytschaever, Mattias (*AZ Sint-Jan, Cardiology Dept., Bruges, Belgium*); Vandersickel, Nele (*Gent University*)
- WeC10: 14:00-15:30 M2 – Level 3
Computational Head Models for Transcranial Stimulation (Invited Session)
Chair: Dokos, Socrates (*University of New South Wales*)
Co-Chair: Bai, Siwei (*Technical University of Munich*)
- 14:00-14:15 WeC10.1
Computer Model of Electroconvulsive Therapy with Tractography
 Bai, Siwei* (*Technical Univ. of Munich*); Riel, Stefanie (*Technical Univ. of Munich*); Bashiri, Mohammad (*Technical Univ. of Munich*); Hemmert, Werner (*Technical Univ. of Munich*)
- 14:15-14:30 WeC10.2
Targeting Optimization and Validation of TES Montages
 Bicalho Saturnino, Guilherme (*Technical Univ. of Denmark*); Gökso, Cihan (*Middle East Technical Univ., Electrical & Electronics Eng*); Madsen, Kristoffer H. (*Copenhagen Univ. Hospital Hvidovre, Denmark & Dept. of Appl*); Hanson, Lars G. (*Danish Research Center for Magnetic Resonance & Technical Univ.*); Thielscher, Axel* (*Copenhagen Univ. Hospital Hvidovre, Denmark & Biomedical En*)
- 14:30-14:45 WeC10.3
Adapting Water-Content based Electrical Properties Tomography for the Creation of Computational Head Models of Brain Tumor Patients
 Wenger, Cornelia* (*Novocure GmbH*); Hershkovich, Hadas Sara (*Novocure Ltd., Haifa, Israel*); Tempel-Brami, Catherine (*Novocure Ltd., Haifa, Israel*); Giladi, Moshe (*Novocure*); Bomzon, Ze'ev (*Novocure*)
- 14:45-15:00 WeC10.4
A Method for High-Throughput Creation of Patient Specific Head Models
 Bomzon, Ze'ev* (*Novocure*); Urman, Noa (*Novocure*)
- 15:00-15:15 WeC10.5
Boundary Element Fast Multipole Method for TES Modeling
 Makarov, Sergey* (*Electrical & Computer Engineering, Worcester Polytechnic Institute*); Pham, Dung (*Worcester Polytechnic Institute*); Noetscher, Gregory (*Worcester Polytechnic Institute*); Nummenmaa, Aapo (*Massachusetts General Hospital*); Deng, Zhi-De (*National Institute of Mental Health*)

15:15-15:30 WeC10.6
Brain E-Field Distributions in Electroconvulsive Therapy: Simulations in a Patient Cohort
 Ahmad Bakir, Azam (*The University of New South Wales*); Bai, Siwei (*Technical University of Munich*); Lovell, Nigel H. (*University of New South Wales*); Martin, Donel (*School of Psychiatry, University of New South Wales*); Loo, Colleen (*School of Psychiatry, University of New South Wales*); Dokos, Socrates* (*University of New South Wales*)

14:30-14:45 WeC12.3
Extending Supervoxel-Based Abnormal Brain Asymmetry Detection to the Native Image Space
 Martins, Samuel* (*University of Campinas*); C. Telea, Alexandru (*Dep. of Mathematics & Computing Science, University of Groning*); Falcao, Alexandre Xavier (*University of Campinas*)

WeC11: 14:00-15:30 M4 – Level 3
Engineering and Medicine in Extreme Environments (Minisymposium)
Chair: Cibis, Tobias (*Friedrich-Alexander Univ. Erlangen-Nürnberg*)
Co-Chair: McGregor, Carolyn (*Univ. of Ontario Inst of Technology*)

14:45-15:00 WeC12.4
Classification of Alzheimer's Disease in MRI based on Dictionary Learning and Heavy Tailed Modelling
 Mayo, Perla* (*University of Bristol*); Holmes, Robin (*University of Bristol*); Achim, Alin (*University of Bristol*)

15:00-15:15 WeC12.5
Graph Spectral Characterization of Brain Cortical Morphology
 Maghsadagh, Sevil (*Independent researcher*); Eklund, Anders (*Linköping University*); Behjat, Hamid* (*Lund University*)

14:00-14:15 WeC11.1
Biomedical Underwater Engineering-Motivation and Approaches
 Cibis, Tobias* (*Digital Sport Group, Friedrich-Alexander Univ. Erlangen-Nü*); McEwan, Alistair (*The Univ. of Sydney*); Eskofier, Bjoern M (*Friedrich-Alexander-Univ. Erlangen-Nürnberg*)

15:15-15:30 WeC12.6
An Automatic Framework for Segmentation of Brain Tumours at Follow-Up Scans after Radiation Therapy
 Karami, Elham (*Sunnybrook Research Institute, Univ. of Toronto*); Jalalifar, Ali (*York Univ.*); Ruschin, Mark (*Sunnybrook Health Sciences Centre, Univ. of Toronto*); Soliman, Hany (*Univ. of Toronto, Sunnybrook Health Sciences Centre*); Sahgal, Arjun (*Sunnybrook Health Sciences Centre, Univ. of Toronto*); Stanisz, Greg (*Sunnybrook Research Institute, Univ. of Toronto*); Sadeghi-Naini, Ali* (*York Univ.*)

14:15-14:30 WeC11.2
Autonomous Health Monitoring for Long Range Space Missions
 McGregor, Carolyn* (*Univ. of Ontario Inst of Technology*)

14:30-14:45 WeC11.3
Tactical Operations as an Extreme Environment
 Bonnis, Brendan* (*IFTech Inventing Future Technologies Inc*); McGregor, Carolyn (*Univ. of Ontario Inst of Technology*)

WeC13: 14:00-15:30 R2 – Level 3
Recent Advances on Cuff-Less Blood Pressure Measurement Technology (II) (Minisymposium)

14:45-15:00 WeC11.4
Stress Monitoring of Soldiers in Extreme Environments
 Friedl, Karl* (*University of California at San Francisco*); Telfer, Brian (*MIT Lincoln Laboratory*); Palmer, Jeffrey (*MIT Lincoln Laboratory*); Rabat, Arnaud (*IRBA*); Balkin, Thomas (*Walter Reed Army Institute of Research*); Hoyt, Reed (*US Army Research Institute of Environmental Medicine*)

14:00-14:15 WeC13.1
Unobtrusive Detection of Changes in Systolic Blood Pressure using RJ-Interval of Healthy Adults with Potential Application in Orthostatic Hypotension and Supine Hypertension
 Chang, Isaac Sungjae* (*University of Toronto*); Armanfar, Narges (*University of Toronto*); Javaid, Abdul Qadir (*University of Toronto*); Boger, Jennifer (*University of Waterloo*); Mihailidis, Alex (*University of Toronto*)

15:00-15:15 WeC11.5
Monitoring Health Status of Firefighters in Extreme Conditions
 Weiss, Jonas* (*IBM Research – Zurich*); Gerke, Sebastian (*IBM Research – Zurich*); Sridhar, Arvind (*IBM Research – Zurich*); Pluntke, Ulrike (*IBM Deutschland GmbH*); Michel, Bruno (*IBM Research – Zurich*)

14:15-14:30 WeC13.2
Effects of Passive and Active Modulation of Arterial Stiffness on Cuffless Measurement of Blood Pressure
 Avolio, Alberto P* (*Macquarie Univ.*); Shirbani, Fatemeh (*Macquarie Univ., Faculty of Medicine & Health Sciences*); Tan, Isabella (*Macquarie Univ.*); Butlin, Mark (*Macquarie Univ.*)

15:15-15:30 WeC11.6
Biologically Inspired Physiological Monitoring
 McEwan, Alistair* (*The University of Sydney*); Cibis, Tobias (*Friedrich-Alexander Universität Erlangen-Nürnberg*)

14:30-14:45 WeC13.3
Effects of Short Term Variability on the PTT-SBP Link
 Di Rienzo, Marco* (*IRCCS Fondazione Don Carlo Gnocchi*); Isilay, Zeynep Melike (*IRCCS Fondazione Don Carlo Gnocchi*)

15:15-15:30 WeC11.7
Physiological Monitoring in Extreme Environments
 Telfer, Brian* (*MIT Lincoln Laboratory*); Palmer, Jeffrey (*MIT Lincoln Laboratory*)

14:45-15:00 WeC13.4
Continuous and Passive Blood Pressure Monitoring using Wearable Devices by Day and by Night
 Holz, Christian* (*Microsoft Research*); Carek, Andrew (*Georgia Institute of Technology*)

WeC12: 14:00-15:30 M6 – Level 3
Brain Imaging and Image Analysis (II) (Oral Session)
Co-Chair: Chan, Kevin C. (*New York University*)

15:00-15:15 WeC13.5
Wearable and Unobtrusive Cuffless Blood Pressure Measurement Technologies based on Cardiogenic Body Vibrations: SeismoWatch and Weighing Scale Systems
 Carek, Andrew (*Georgia Institute of Technology*); Inan, Omer* (*Georgia Institute of Technology*)

14:00-14:15 WeC12.1
Global Perturbation of Initial Geometry in a Biomechanical Model of Cortical Morphogenesis
 Bohi, Amine* (*Aix Marseille Univ, CNRS, INT, Inst Neurosci Timone, Marseille*); Wang, Xiaoyu (*IMT Atlantique, Brest, France*); Al Harrach, Mariam (*UTC*); Dinomais, Mickael (*Laboratoire Angevin de Recherche en Ingénierie des Systèmes (LAR)*); Rousseau, François (*Telecom Bretagne*); Lefevre, Julien (*Institut de Neurosciences de la Timone*)

14:15-14:30 WeC12.2
Posterior Corpus Callosal Integrity based on Automated Fiber Quantification Predicts Age-Related Decline of Cognitive Performance
 Xue, Ke (*Shanghai Jiao Tong University*); Wang, Danni (*Shanghai Jiao Tong University*); Wang, Tianyao (*The Fifth People's Hospital of Shanghai, Fudan University*); Li, Yao* (*Shanghai Jiao Tong University*)

WeC14: 14:00-15:30 R3 – Level 3
Signal Processing and Classification for Spectroscopy and Oximetry (Oral Session)
Co-Chair: Mitsis, Georgios D. (*McGill University*)

14:00-14:15 WeC14.1
Non-Invasive Analysis of Actinic Keratosis using a Cold Stimulation and Near-Infrared Spectroscopy
Seoni, Silvia* (*Politecnico di Torino*); Veronese, Federica (*Univ. of Eastern Piedmont*); Tarantino, Vanessa (*Univ. of Eastern Piedmont*); Zavattaro, Elisa (*Univ. of Eastern Piedmont*); Salvi, Massimo (*Politecnico di Torino*); Michielli, Nicola (*Politecnico di Torino*); De Santi, Bruno (*Politecnico di Torino*); Molinari, Filippo (*Politecnico di Torino*); Savoia, Paola (*Univ. of Eastern Piedmont*); Meiburger, Kristen M. (*Politecnico di Torino*)

14:15-14:30 WeC14.2
Reduced Featured K-NN Classifier Model Optimal for Classification of Dengue Fever from Salivary Raman Spectra
Othman, N. H. (*Univ. Teknologi MARA*); Mohd Radzol, Afaf Rozan (*Univ. Teknologi MARA*); Lee, Yoot* (*Univ. Teknologi MARA*); Mansor, Wahidah (*Univ. Teknologi MARA*)

14:30-14:45 WeC14.3
Determination of Physiological Lactate and pH by Raman Spectroscopy
Olaetxea, Ion* (*CIC nanoGUNE*); Lopez, Eneko (*CIC nanoGUNE*); Valero, Ana (*CIC nanoGUNE*); Seifert, Andreas (*CIC nanoGUNE*)

14:45-15:00 WeC14.4
Machine Learning based SpO2 Computation using Reflectance Pulse Oximetry
Venkat, Swaathi* (*Healthcare Technology Innovation Centre*); Tanveejul, Mohamed (*Healthcare Technology Innovation Centre*); Alex, Anna Mol (*HTIC IIT Madras*); SP, Preejith (*Healthcare Technology Innovation Center – IITMadras*); Thangakunam, Balamugesh (*Christian Medical College*); DJ, Christopher (*Christian Medical College*); Joseph, Jayaraj (*HTIC, Indian Institute of Technology Madras*); Sivaprakasam, Mohanasankar (*Indian Institute of Technology Madras*)

15:00-15:15 WeC14.5
Cancellation of Superficial Blood Flow in Brain Function Measurements using Near-Infrared Spectroscopy
Fukuda, Keiko* (*Tokyo Metropolitan College of Industrial Technology*); Motoyoshi, Daisuke (*Tokyo Metropolitan College of Industrial Technology*); Sato, Daisuke (*Tokyo Metropolitan College of Industrial Technology*)

15:15-15:30 WeC14.6
Detection of Music Preferences using Cerebral Blood Flow Signals
Yamada, Yoshiyuki* (*Meiji Univ.*); Ono, Yumie (*Meiji Univ.*)

WeC15: 14:00-15:30 M3 – Level 3
Image Segmentation for Radiotherapy Application (Minisymposium)
Chair: Gu, Xuejun (*Univ. of Texas Southwestern Medical Center*)

14:00-14:15 WeC15.1
Computed Tomography based OARs Auto-Contouring for H&N Cancer Radiotherapy
Chen, Haibin* (*Sun Yat-Sen Univ.*); Lu, Yao (*Sun Yat-Sen Univ.*)

14:15-14:30 WeC15.2
Gross Tumor Volume (GTV) Delineation on Multi-MRI Sequences for Nasopharyngeal Carcinoma Radiotherapy
Chen, Haibin* (*Sun Yat-Sen Univ.*); Lu, Yao (*Sun Yat-Sen Univ.*)

14:30-14:45 WeC15.3
Prostate Segmentation Techniques for Radiotherapy Treatments
Zhang, You (*Univ. of Texas, Southwestern Medical Center*); Zhao, Bo* (*Univ. of Texas, Southwestern Medical Center*); Gu, Xuejun (*Univ. of Texas Southwestern Medical Center*)

14:45-15:00 WeC15.4
Automatic Image Segmentation Techniques in Radiotherapy
Gu, Xuejun* (*University of Texas Southwestern Medical Center*)

15:00-15:15 WeC15.5
Automatic Segmentation Software in Radiotherapy
Chen, Mingli (*Univ. of Texas Southwestern Medical Center*); Gu, Xuejun (*Univ. of Texas Southwestern Medical Center*); Lu, Weiguo* (*Univ. of Texas Southwestern Medical Center*)

15:15-15:30 WeC15.6
Radiotherapy Disease-Site Specific Organs and Target Segmentation Guidance
Zhao, Bo* (*University of Texas, Southwestern Medical Center*); Gu, Xuejun (*University of Texas Southwestern Medical Center*)

WeC16: 14:00-15:30 M5 – Level 3
Fractional Models of Biomedical Systems (Invited Session)
Chair: Laleg, Taous-Meriem (*King Abdullah University of Science and Technology (KAUST)*)

14:00-14:15 WeC16.1
Fractional-Order Lumped Parameter Models of Arterial Hemodynamic
Bahloul, Mohamed A. (*KAUST*); Laleg, Taous-Meriem* (*King Abdullah University of Science & Technology (KAUST)*)

14:15-14:30 WeC16.2
Towards a Complete Regulatory System for Optimal Control of General Anesthesia
Dana, Copot* (*Ghent University*)

14:30-14:45 WeC16.3
Fractional Dynamic Model for the Cerebral Blood Flow Response to Neural Activation
Alhazmi, Fahd (*King Abdullah University of Science & Technology (KAUST)*); Belkhatir, Zehor (*KAUST*); Laleg, Taous-Meriem* (*King Abdullah University of Science & Technology (KAUST)*)

14:45-15:00 WeC16.4
Fractional-Order Model of Blood Glucose Dynamics for Type 1 Diabetes Patients
Ndoye, Ibrahima* (*King Abdullah University of Science & Technology (KAUST)*); Voos, Holger (*HS Ravensburg-Weingarten*); Laleg, Taous-Meriem (*King Abdullah University of Science & Technology (KAUST)*)

WeC17: 14:00-15:30 R12 – Level 3
Blood Pressure and Cardiovascular Hemodynamics (Oral Session)
Chair: Avolio, Alberto P. (*Macquarie University*)
Co-Chair: Heldt, Thomas (*Massachusetts Institute of Technology*)

14:00-14:15 WeC17.1
Clustering Blood Pressure Trajectories in Septic Shock in the Emergency Dept.
Prasad, Vares* (*Massachusetts Institute of Technology*); Lynch, James (*Massachusetts Institute of Technology*); Filbin, Michael (*Massachusetts General Hospital*); Reisner, Andrew (*Massachusetts General Hospital*); Heldt, Thomas (*Massachusetts Institute of Technology*)

14:15-14:30 WeC17.2
Forecasting Hypotension during Vasopressor Infusion via Time Series Analysis
Shin, Sungtae (*University of Maryland*); Reisner, Andrew* (*Massachusetts General Hospital*); Yapps, Bryce (*Stanley Black & Decker*); Bighamian, Ramin (*George Mason University*); Rubin, J. Tyler (*Massachusetts General Hospital*); Goldstein, Joshua (*Massachusetts General Hospital*); Rosenthal, Eric (*MGH*); Peterson, Jeffrey (*Massachusetts General Hospital*); Hahn, Jin-Oh (*University of Maryland*)

14:30-14:45 WeC17.3
Polar Coordinate Description of Blood Pressure Measurements and Implications for Sex-Specific and Personalized Analysis
Kerkhof, Peter LM* (*VU University Medical Center*); Konradi, Alexandra O. (*Almazov National Medical Research Centre, Saint-Petersburg*); Shlyakhto, Evgeny V. (*Almazov National Medical Research Centre, Saint-Petersburg*); Handly, Neal (*Dept. Emergency Medicine, Drexel University College of Medicine.*); Li, John K-J. (*Rutgers University*)

14:45-15:00 WeC17.4
Novel Geometric Representation for One-Dimensional Model of Arterial Blood Pulse Wave Propagation
 Ramakrishna, Prashanth (*New York University*); P M, Nabeel* (*Indian Institute of Technology Madras*); Sivaprakasam, Mohanasankar (*Indian Institute of Technology Madras*)

15:00-15:15 WeC17.5
Characterizing Fluid Response and Sepsis Progression in Emergency Dept. Patients
 Gu, Qiao (*Hong Kong University of Science & Technology*); Prasad, Varesh (*Massachusetts Institute of Technology*); Heldt, Thomas* (*Massachusetts Institute of Technology*)

15:15-15:30 WeC17.6
Characterization of Microvascular Post Occlusive Hyperemia using Laser Doppler Flowmetry Technique in Subjects with Cardiometabolic Disorders
 Fabregate Fuente, Martín (*Endothelial & Cardiometabolic Medicine Unit, Ramón y Cajal Uni*); Arbeitman, Claudia (*CONICET Consejo Nacional de Investigaciones Científicas y Tecnol*); Cymberknop, Leandro Javier* (*Univ. Tecnológica Nacional*); Bara Ledesma, Nuria (*Endothelial & Cardiometabolic Medicine Unit, Ramón y Cajal Uni*); Arriazu Galindo, Mario (*Endothelial & Cardiometabolic Medicine Unit, Ramón y Cajal Uni*); Martín Fernández, Leticia (*Endothelial & Cardiometabolic Medicine Unit, Ramón y Cajal Uni*); Armentano, Ricardo Luis (*Republic Univ.*); Sabán Ruiz, José (*Endothelial & Cardiometabolic Medicine Unit, Ramón y Cajal Univ.*)

WeC18: 14:00-15:30 R13 – Level 3
Human Performance (II) (Oral Session)

14:00-14:15 WeC18.1
An Investigation of Computer-Based Brain Training on the Cognitive and EEG Performance of Employees
 Miller, Steve* (*PlatypusNeuro*); Chelian, Suhas (*PlatypusNeuro*); McBurnett, Will (*PlatypusNeuro*); Tsou, Winnie (*Fujitsu Laboratories of America*); Kruse, Amy (*Platypus Institute*)

14:15-14:30 WeC18.2
Detection and Prediction of Microsleeps from EEG using Spatio-Temporal Patterns
 Shoorangiz, Reza* (*Univ. of Canterbury*); Buriro, Abdul Baseer (*Univ. of Canterbury*); Weddell, Stephen J. (*Univ. of Canterbury*); Jones, Richard D. (*New Zealand Brain Research Institute*)

14:30-14:45 WeC18.3
Looking through Blue Glasses: Bioelectrical Measures to Assess the Awakening after a Calm Situation
 Bilucaglia, Marco* (*Behavior & Brain Lab – Univ. IULM*); Laureanti, Rita (*Politecnico di Milano*); Zito, Margherita (*Univ. IULM*); Circi, Riccardo (*Behavior & Brain Lab – Univ. IULM*); Fici, Alessandro (*Behavior & Brain Lab – Univ. IULM*); Rivetti, Fiamma (*Behavior & Brain Lab – Univ. IULM*); Valesi, Riccardo (*Behavior & Brain Lab – Univ. IULM*); Wahl, Siegfried (*Univ. Tuebingen*); Russo, Vincenzo (*IULM Univ. of Milan*)

14:45-15:00 WeC18.4
Combining ICA Clustering and Power Spectral Density for Feature Extraction of Mental Fatigue of Spinal Cord Injury Patients
 Chai, Rifai* (*Swinburne Univ. of Technology*); Tran, Yvonne (*Macquarie Univ.*); Ling, Sai Ho, Steve (*Univ. of Technology Sydney*); Craig, Ashley (*The Univ. of Sydney*); Nguyen, Hung T. (*Swinburne Univ. of Technology*)

15:00-15:15 WeC18.5
Neural Correlates of Internal States that Capture Movement Variability
 Breault, Macauley S.* (*Johns Hopkins Univ.*); Gonzalez-Martinez, Jorge (*Cleveland Clinic*); Gale, John (*Cleveland Clinic*); Sarma, Sridevi V. (*Johns Hopkins Univ.*)

15:15-15:30 WeC18.6
Toward Clinically-Relevant Joint Moment Estimation during Sit to Stand: A Feasibility Study
 Hwang, Seoyoon* (*DGIST (Daegu Gyeongbuk Institute of Science & Technology)*); Choi, Seoyoung (*Daegu Gyeongbuk Institute of Science & Technology*); Kim, Jonghyun (*DGIST*)

WeC19: 14:00-15:30 R4 – Level 3
General and Theoretical Informatics – Data Mining (Oral Session)
Co-Chair: Seidl, Karsten (*University of Duisburg-Essen*)

14:00-14:15 WeC19.1
Abnormal Gait Recognition using 3D Joint Information of Multiple Kinects System and RNN-LSTM
 Lee, Deok-Won (*Gwangju Institute of Science & Technology*); Jun, Kooksung (*Gwangju Institute of Science & Technology*); Lee, Sanghyub (*Gwangju Institute of Science & Technology*); Ko, Joong-Kwang (*GIST*); Kim, Mun Sang* (*Gwangju Institute of Science & Technology*)

14:15-14:30 WeC19.2
Relationship between Dynamics of Physiological Signals and Subjective Quality of Life and Its Lifestyle Dependency
 Amano, Ryota* (*Tohoku University*); Karashima, Akihiro (*Tohoku University*); Motoike, Ikuko (*Tohoku University*); Katayama, Norihiro (*Tohoku Univ*); Kinoshita, Kengo (*Tohoku University*); Nakao, Mitsuyuki (*Tohoku University*)

14:30-14:45 WeC19.3
Outlier Detection in Health Record Free-Text using Deep Learning
 Wallace, Duncan* (*University College Dublin*); Kechadi, Tahar (*Insight Centre for Data Analytics, University College Dublin*)

14:45-15:00 WeC19.4
Towards a Flexible Deep Learning Method for Automatic Detection of Clinically Relevant Multi-Modal Events in the Polysomnogram
 Olesen, Alexander Neergaard* (*Technical Univ. of Denmark*); Chambon, Stanislas (*LTCI Telecom ParisTech, Univ. Paris-Saclay*); Thorey, Valentin (*Dreem, Paris*); Jennum, Poul (*Univ. of Copenhagen, Denmark*); Mignot, Emmanuel (*Stanford Univ.*); Sorensen, Helge B D (*Technical Univ. of Denmark*)

15:00-15:15 WeC19.5
Deep Q-Learning for Predicting Asthma Attack with Considering Personalized Environmental Triggers' Risk Scores
 Do, Quan* (*New Mexico State Univ.*); Doig, Alexa (*New Mexico State Univ.*); Tran, Son (*New Mexico State Univ.*)

15:15-15:30 WeC19.6
Prediction of Patient-Specific Acute Hypotensive Episodes in ICU using Deep Models
 Chan, Brandon* (*Queen's University*); Sedghi, Alireza (*Queen's University*); Laird, Philip (*Queen's University*); Maslove, David M (*Queen's University*); Mousavi, Parvin (*Queen's University*)

WeC20: 14:00-15:30 R5 – Level 3
Sensor Enabled Biomechanical Analysis (Oral Session)
Co-Chair: Rocon, Eduardo (*CSIC*)

14:00-14:15 WeC20.1
IMU-Based Knee Angle Estimation using an Extended Kalman Filter
 Hidalgo, Andrés Francisco (*Centre for Automation (CAR) – CSIC*); Lora, Julio (*CSIC*); Rocon, Eduardo* (*CSIC*)

14:15-14:30 WeC20.2
Rehabilitation Exercise Segmentation for Autonomous Biofeedback Systems with ConvFSM
 Bevilacqua, Antonio* (*University College of Dublin*); Brennan, Louise (*University College Dublin*); Argent, Rob (*University College Dublin*); Caulfield, Brian (*UCD*); Kechadi, Tahar (*Insight Centre for Data Analytics, University College Dublin*)

14:30-14:45 WeC20.3
Analysis of Biomedical Longitudinal Multi-Sensory Data: Extracting Interpretable Features by Context
 Schreiber, Max (*Interdisciplinary Competence Center Biomedical Data Science, Ins*); Handel, Till (*Institute for Applied Informatics (InfAI)*); Ivanova, Galina* (*Interdisciplinary Competence Center Biomedical Data Science, Ins*)

14:45-15:00	WeC20.4	Evaluation of Parkinson's Disease at Home: Predicting Tremor from Wearable Sensors Heijmans, Margot* (<i>Maastricht University</i>); Habets, Jeroen (<i>Maastricht University</i>); Kuijf, Mark (<i>Maastricht University Medical Center</i>); Kubben, Pieter Leonard (<i>Maastricht University Medical Center</i>); Herff, Christian (<i>Maastricht University</i>)	18:00-19:30	WePOS-01.3	Design Guidelines for Feedforward Cancellation of the Occlusion-Effect in Hearing Aids Coelho Borges, Renata* (<i>Federal University of Technology – Paraná</i>); Delcio Parreira, Wemerson (<i>Universidade do Vale do Itajaí</i>); Holsbach Costa, Márcio (<i>UFSC</i>)
15:00-15:15	WeC20.5	Machine Learning based Human Gait Segmentation with Wearable Sensor Platform Potluri, Sasanka* (<i>Otto-von-Guericke University Magdeburg, Institute for Automation</i>); Chandran, Arvind (<i>OVGU Magdeburg</i>); Diedrich, Christian (<i>Otto-von-Guericke University Magdeburg, Institute for Automation</i>); Schega, Lutz (<i>Otto-von-Guericke University Magdeburg, Institute for Sport Scie</i>)	18:00-19:30	WePOS-01.4	A Regularized and Smoothed General Linear Kalman Filter for more Accurate Estimation of Time-Varying Directed Connectivity Pagnotta, Mattia Federico* (<i>University of Fribourg</i>); Plomp, Gijs (<i>University of Fribourg</i>); Pascucci, David (<i>University of Fribourg</i>)
15:15-15:30	WeC20.6	Automatic Measurements of Neck Angles Toward the Bedside Treatment for the Dysphagia Patients at the Community-Based Health Care Kuramoto, Naomi* (<i>Univ. of Tsukuba</i>); Ichimura, Kazuhiro (<i>Ichimura Dental Clinic</i>); Jayatilake, Dushyantha (<i>PLIMES Inc</i>); Hidaka, Kikue (<i>Univ. of Tsukuba</i>); Suzuki, Kenji (<i>Univ. of Tsukuba</i>)	18:00-19:30	WePOS-01.5	SVD Square-Root Iterated Extended Kalman Filter for Modeling of Epileptic Seizure Count Time Series with External Inputs Moontaha, Sidratul* (<i>Christian-Albrechts-Universität of Kiel, Universitätsklinikum S</i>); Galka, Andreas (<i>Christian-Albrechts-Univ. of Kiel</i>); Siniatchkin, Michael (<i>Univ. of Kiel</i>); Scharlach, Sascha (<i>DRK-Norddeutsches Epilepsiezentrum für Kinder und Jugendliche</i>); von Spiczak, Sarah (<i>Dept. of Neuropediatrics, Univ. of Kiel, 24098 Kiel, G</i>); Stephani, Ulrich (<i>Christian-Albrechts-Univ. of Kiel</i>); May, Theodor (<i>Univ. of Bielefeld</i>); Meurer, Thomas (<i>Faculty of Engineering, Univ. of Kiel</i>)
WeC21: 14:00-15:30		R8 – level 3	18:00-19:30		WePOS-01.6
Emerging Technologies and Innovations in Biomedical Engineering Accelerate Global Standards Development (Minisymposium) Chair: Carey, Carole C. (<i>C3-Carey Consultants, LLC</i>) Co-Chair: Pino, Esteban J. (<i>Universidad de Concepcion</i>)			Towards a Unified Framework for De-Noise Neural Signals Kilicarslan, Atilla* (<i>University of Houston</i>); Contreras-Vidal, José (<i>University of Houston</i>)		
14:00-14:15		WeC21.1	WePOS-02: 18:00-19:30		Hall B
3D Simulation and 3D Printing Standard for Medical Education and Clinical Application Moon, Young Lae* (<i>Chosun University Hospital</i>)			Connectivity and Causality – Poster (Poster Session)		
14:15-14:30		WeC21.2	18:00-19:30		WePOS-02.1
Body Sensing for Health Lo, Benny* (<i>Imperial College London</i>)			The Optimal Setting for Multilayer Modularity Optimization in Multilayer Brain Networks Puxeddu, Maria Grazia* (<i>Sapienza, University of Rome</i>); Petti, Manuela (<i>Univ. of Rome "Sapienza", Neuroelectrical Imaging & BCI Lab IR</i>); Mattia, Donatella (<i>Fondazione Santa Lucia IRCCS</i>); Astolfi, Laura (<i>University of Rome Sapienza</i>)		
14:30-14:45		WeC21.3	18:00-19:30		WePOS-02.2
Brain-Computer Interfaces: Sharing a Model to Share Methods and Tools Bianchi, Luigi* (<i>Tor Vergata University of Rome</i>)			Evolution of Graph Theory in Dynamic Functional Connectivity for Lateralization of Temporal Lobe Epilepsy Fallahi, Alireza (<i>Biomedical Engineering Dept., Hamedan Univ. of Technol</i>); Baniasad, Fatemeh (<i>Tehran Univ. of Medical Sciences</i>); Lotfi, Nastaran (<i>Univ. of Zanjan, Zanjan</i>); Mohammadi-Mobarakeh, Neda (<i>Research Center for Molecular and Cellular Imaging (RCMCI), Tehra</i>); Tapak, Leili (<i>Biostatistics School of Health, Hamadan Univ. of Medical Sc</i>); Mirbagheri, Mehdi (<i>Northwestern Univ./RIC</i>); Hashemi Fesharaki, Seyed Sohrab (<i>Dept. of Epilepsy, Pars Hospital, Tehran</i>); Pooyan, Mohammad (<i>head of engineering faculty, Shahed Univ.</i>); Mehvari Habibabadi, Jafar (<i>Isfahan Neuroscience Research Center, Isfahan Univ. of Medic</i>); Nazem-Zadeh, Mohammad-Reza* (<i>Tehran Univ. of Medical Sciences</i>)		
14:45-15:00		WeC21.4	18:00-19:30		WePOS-02.3
Modern Trends in Biomedical Engineering Technology and Standards Development at IEEE Carey, Carole C.* (<i>C3-Carey Consultants, LLC</i>); Balachandran, Pradeep (<i>IEEE EMBC Standards</i>)			Selection of Efficient Clustering Index to Estimate the Number of Dynamic Brain States from Functional Network Connectivity Vergara, Victor Manuel* (<i>The Mind Research Network</i>); Abrol, Anees (<i>Georgia State University, The Mind Research Network</i>); Espinoza, Flor (<i>The Mind Research Network</i>); Calhoun, Vince (<i>The Mind Research Network/University of New Mexico</i>)		
15:00-15:15		WeC21.5	18:00-19:30		WePOS-02.4
Reporting Standards for Neural Interface Research (RSNIR) to Accelerate Interoperability, Clinical Integration, and Commercialization of NeuroTechnologies McKinney, Zach* (<i>Scuola Superiore Sant'Anna</i>)			Estimation of Brain Connectivity through Artificial Neural Networks Antonacci, Yuri* (<i>University of Rome Sapienza</i>); Toppi, Jlenia (<i>University of Rome "Sapienza"</i>); Mattia, Donatella (<i>Fondazione Santa Lucia IRCCS</i>); Pietrabissa, Antonio (<i>University of Rome Sapienza</i>); Astolfi, Laura (<i>University of Rome Sapienza</i>)		
WePOS-01: 18:00-19:30		Hall B			
Adaptive and Kalman Filtering – Poster (Poster Session)					
18:00-19:30		WePOS-01.1			
A Novel Filter for Tracking Real-World Cognitive Stress using Multi-Time-Scale Point Process Observations Wickramasuriya, Dilranjan (<i>University of Houston</i>); Faghieh, Rose T.* (<i>University of Houston</i>)					
18:00-19:30		WePOS-01.2			
A Characteristic Filtering Method for Pulse Wave Signal Quality Assessment Lin, Wan-Hua (<i>Shenzhen Institutes of Advanced Tech.</i>); Ji, Ning (<i>Shenzhen Institutes of Advanced Tech.</i>); Wang, Lin (<i>Shenzhen Institutes of Advanced Tech., Chinese Academy of S</i>); Li, Guanglin* (<i>Shenzhen Institutes of Advanced Tech.</i>)					

18:00-19:30 WePOS-02.5
A New Mutual Information Measure to Estimate Functional Connectivity: Preliminary Study
 El Sayed Hussein Jomaa, Mohamad* (*Univ. Angers – LARIS*); Colominas, Marcelo Alejandro (*Univ. Angers – LARIS*); Jrad, Nisrine (*LTSI – Univ. of Rennes 1*); Van Bogaert, Patrick (*Centre Hospitalier Univ. d'Angers*); Humeau-Heurtier, Anne (*Univ. of Angers*)

18:00-19:30 WePOS-04.3
CANet: A Channel Attention Network to Determine Informative Multi-Channel for Image Classification from Brain Signals
 Kim, Yangwoo* (*Gwangju Institute of Science & Technology*); Jang, Sehyeon (*Gwangju Institute of Science & Technology*); Won, Kyungho (*Gwangju Institute of Science & Technology*); Jun, Sung Chan (*Gwangju Institute of Science & Technology*)

18:00-19:30 WePOS-02.6
A Phase Lag Index Hardware Calculation for Real-Time Electroencephalography Studies
 Gutierrez Nuno, Rafael Angel* (*University of Southampton*); Maharatna, Koushik (*University of Southampton*)

18:00-19:30 WePOS-04.4
EEG-Based Emotion Recognition with Prototype-Based Data Representation
 Wang, Yixin (*Institute of Automation, Chinese Academy of Science*); Qiu, Shuang (*Institute of Automation, Chinese Academy of Science*); Zhao, Chen (*Renmin University of China*); Yang, Weijie (*Beijing Technology & Business University*); Li, Jinpeng (*Research Center for Brain-inspired Intelligence, Institute of Au*); Ma, Xuelin (*Institute of Automation, Chinese Academy of Sciences*); He, Huiguang* (*Institute of Automation, Chinese Academy of Sciences*)

18:00-19:30 WePOS-02.7
Sex Difference in EEG Functional Connectivity during Sleep Stages and Resting Wake State based on Weighted Phase Lag Index
 Liao, Yuanyuan (*Sun Yat-Sen University, Guangzhou City, Guangdong Prov, China*); Zhou, Guolin (*Sun Yat-Sen University*); Luo, Yu-Xi* (*Sun Yat-Sen University*)

18:00-19:30 WePOS-04.5
Monte-Carlo Analysis for Quality Estimation of Gradient Correction Algorithms in Simultaneous Surface EMG-MRI Measurements using Signal Synthesis and Class Probability
 Schwartz, Martin* (*Univ. of Tübingen*); Reuter, Milan (*Institute of Signal Processing & System Theory, Univ. of*); Yang, Bin (*Institute of Signal Processing & System Theory, Univ. of*); Schick, Fritz (*Dept. of Diagnostic & Interventional Radiology, Univ.*)

WePOS-03: 18:00-19:30 Hall B
Independent and Principal Component Analysis – Poster (Poster Session)

18:00-19:30 WePOS-03.1
PCA-Based Channel Selection in High-Density EMG for Improving Force Estimation
 Hajian, Gelareh* (*Queen's University*); Morin, Evelyn (*Queen's University*); Etemad, S. Ali (*Queen's University*)

18:00-19:30 WePOS-04.6
EEG-Based Emotion Detection using Unsupervised Transfer Learning
 Gonzalez Diaz, Hector Andres* (*Technische Univ. Dresden*); Yoo, Jerald (*National University of Singapore*); Elfadel, Ibrahim (Abe) (*Masdar Institute of Science & Technology*)

18:00-19:30 WePOS-03.2
Subspace Averaging of Auditory Evoked Potentials
 Wang, David X. (*Southern Methodist University*); Davila, Carlos* (*Southern Methodist University*)

18:00-19:30 WePOS-04.7
An Investigation of Dimensionality Reduction Techniques for EMG-Based Force Estimation
 Hajian, Gelareh* (*Queen's University*); Etemad, S. Ali (*Queen's University*); Morin, Evelyn (*Queen's University*)

18:00-19:30 WePOS-03.3
Monitoring Brain Hemodynamics Coupling in Neonates using Updated Tensor Decompositions
 Caicedo, Alexander (*Univ. del Rosario*); De Wel, Ofelie (*KU Leuven*); Vandecappelle, Michiel (*KU Leuven*); Thewissen, Liesbeth (*UZ Leuven*); Smits, Anne (*UZ Leuven*); Allegaert, Karel (*KU Leuven*); De Lathauwer, Lieven (*KU Leuven*); Naulaers, Gunnar (*Univ. Hospitals Leuven*); Van Huffel, Sabine* (*KU Leuven*)

18:00-19:30 WePOS-04.8
Signal2Image Modules in Deep Neural Networks for EEG Classification
 Bizopoulos, Paschalis* (*National Technical University of Athens*); Lambrou, George I. (*National & Kapodistrian University of Athens*); Koutsouris, Dimitrios (*Biomedical Engineering Laboratory, School of Electrical & Comp*)

18:00-19:30 WePOS-03.4
A SOC Design of ORICA-Based Highly Effective Real-Time Multi-Channel EEG System
 Ho, Yun-Lung (*National Chiao Tung Univ.*); Huang, Yu Da (*National Chiao Tung Univ.*); Wang, Kai Yen (*National Chiao Tung Univ.*); Fang, Wai-Chi* (*National Chiao Tung Univ.*)

18:00-19:30 WePOS-04.9
LSTMs and Neural Attention Models for Blood Glucose Prediction: Comparative Experiments on Real and Synthetic Data
 Mirshekarian, Sadegh (*Ohio Univ.*); Shen, Hui (*Ohio Univ.*); Bunescu, Razvan* (*Ohio Univ.*); Marling, Cindy (*Ohio Univ.*)

18:00-19:30 WePOS-03.5
A Morphological Way to Remove Baseline and Spike Separation in EEG
 Mahapatra, Arindam Gajendra* (*Graduate School of Medicine, Yamaguchi University, Ube*); Singh, Balbir (*National Institute of Physiological Sciences*)

18:00-19:30 WePOS-04.10
Learning to Sort: Few-Shot Spike Sorting with Adversarial Representation Learning
 Wu, Tong* (*University of Minnesota, Twin Cities*); Rátkai, Anikó (*Eötvös Loránd University, Dept. of Physiology & Neurobiol*); Schlett, Katalin (*Dept. Physiology & Neurobiology, Eotvos Lorand University*); Grand, László (*Imperial College London*); Yang, Zhi (*University of Minnesota*)

WePOS-04: 18:00-19:30 Hall B
Neural Networks and Support Vector Machines for Biosignal Processing – Poster (Poster Session)

18:00-19:30 WePOS-04.1
Estimation of 8-Electrode Configuration for Recognition of Uterine Contraction with Electrohysterogram
 Hao, Dongmei* (*Beijing University of Technology*)

18:00-19:30 WePOS-04.11
Deep Learning Approach to Parkinson's Disease Detection using Voice Recordings and Convolutional Neural Network Dedicated to Image Classification
 Wodzinski, Marek* (*AGH Univ. of Science & Technology*); Skalski, Andrzej (*AGH Univ. of Science & Technology*); Hemmerling, Daria (*AGH Univ. of Science & Technology*); Orozco-Aroyave, Juan-Rafael (*Universidad de Antioquia*); Noeth, Elmar (*Friedrich-Alexander-Univ. Erlangen-Nuremberg*)

18:00-19:30 WePOS-04.2
Prediction of Response Time and Vigilance Score in a Sustained Attention Task from Pre-Trial Phase Synchrony using Deep Neural Networks
 Torkamani-Azar, Mastaneh* (*Sabancı Univ.*); Kanik, Sümeýra Demir (*Sabancı Univ., Istanbul, Turkey*); Ahmed, Sara Atito Ali (*Sabancı Univ.*); Aydin, Serap (*HACETTEPE Univ.*); Cetin, Mujdat (*Univ. of Rochester*)

WePOS-05: 18:00-19:30 Hall B
Nonlinear Analysis of Biosignals – Poster (Poster Session)

18:00-19:30 WePOS-05.1
Transfer Entropy in Artificial and Cardiovascular Environment in Stress
Skoric, Tamara* (*University of Novi Sad, Faculty of Technical Sciences*); Japundzic-Zigon, Nina (*University of Belgrade*); Bajic, Dragana (*University of Novi Sad*)

18:00-19:30 WePOS-05.2
The Relation of Skin Conductance and Pupillary Fluctuations Assessed by Phase-Rectified Signal Averaging
Schumann, Andy* (*Psychiatric Brain & Body Research Group Jena, Dept. of Psyc*); Kietzer, Stephanie (*University Hospital Jena*); Ebel, Juliane (*University Hospital Jena*); Bär, Karl-Jürgen (*Friedrich-Schiller-University of Jena*)

18:00-19:30 WePOS-05.3
Quantification of Dynamic Gastric Slow Wave Activity using Recurrence Plots
Paskaranandavadeivel, Niranchan* (*The Univ. of Auckland*); Avci, Recep (*Univ. of Auckland*); Cheng, Leo K (*The Univ. of Auckland*)

18:00-19:30 WePOS-05.4
A Novel Multiscale Cross-Entropy Method Applied to Navigation Data Acquired with a Bike Simulator
Jamin, Antoine* (*COTTOS Medical*); Duval, Guillaume (*Dept. of Geriatric Medicine, Angers University Hospital, An*); Annweiler, Cédric (*Dept. of Geriatric Medicine, Angers University Hospital, An*); Abraham, Pierre (*Centre Hospitalier Universitaire d'Angers*); Humeau-Heurtier, Anne (*University of Angers*)

18:00-19:30 WePOS-05.5
Cross Entropy Profiling to Test Pattern Synchrony in Short-Term Signals
Udhayakumar, Radhagayathri* (*Univ. of Melbourne*); Karmakar, Chandan (*Deakin Univ.*); Palaniswami, Marimuthu (*The Univ. of Melbourne*)

WePOS-06: 18:00-19:30 Hall B
Physiological Systems Modeling – Poster (Poster Session)

18:00-19:30 WePOS-06.1
Nanoswimmer-Oriented Direct Targeting Strategy Inspired by Momentum-Based Gradient Optimization
Ali, Muhammad (*University of Waikato*); Cree, Michael (*University of Waikato*); Sharifi, Neda (*The University of Waikato*); Chen, Yifan* (*The University of Waikato*)

18:00-19:30 WePOS-06.2
Tonic and Phasic Decomposition of Skin Conductance Data: A Generalized-Cross-Validation-Based Block Coordinate Descent Approach
Amin, Md. Rafiul (*University of Houston*); Faghieh, Rose T.* (*University of Houston*)

18:00-19:30 WePOS-06.3
Modeling the Measurement Error of Factory-Calibrated Continuous Glucose Monitoring Sensors: Application to Dexcom G6 Sensor Data
Vettoretti, Martina* (*Univ. of Padova*); Del Favero, Simone (*Univ. of Padova, Padova, Italy*); Sparacino, Giovanni (*Univ. of Padova*); Facchinetti, Andrea (*Univ. of Padova*)

18:00-19:30 WePOS-06.4
Can we Rely on the Pulse Transit Time – Pressure Relationship – Models Comparison
Polinski, Artur (*Gdansk University of Technology*); Bujnowski, Adam (*Gdansk University of Technology*); Kocejko, Tomasz* (*Gdansk University of Technology*); Wtorek, Jerzy (*Gdansk University of Technology*)

WePOS-07: 18:00-19:30 Hall B
Signal Processing and Classification for BCIs and Motor Imagery – Poster (Poster Session)

18:00-19:30 WePOS-07.1
Classification of EEG Motor Imagery Tasks using Convolution Neural Networks
Ling, Sai Ho, Steve* (*University of Technology Sydney*); Makgawinata, Henry (*University of Technology Sydney*); Monsivais, Fernando Huerta (*University of Technology Sydney*); Lourenco, Andre dos Santos Goncalves (*University of Technology Sydney*); Lyu, Juan (*Harbin Engineering University*); Chai, Rifai (*Swinburne University of Technology*)

18:00-19:30 WePOS-07.2
Discrimination of SSVEP Responses using a Kernel based Approach
Oikonomou, Vangelis* (*Centre for Research & Technology Hellas*); Nikolopoulos, Spiros (*Information Technologies Institute, Centre for Research & Tech*); Kompatsiaris, Ioannis (Yannis) (*Information Technologies Institute, CERTH*)

18:00-19:30 WePOS-07.3
Evaluation of Electroencephalography Analysis Methods
Wetzel, Dominik* (*Univ. of Applied Sciences Zwickau*); Spahn, Nico (*Univ. of Applied Sciences Zwickau*); Heilemann, Martin (*Univ. of Applied Sciences Zwickau*); Löffler, Marcus Michael (*Univ. of Applied Sciences Zwickau*); Seidel, Markus (*Univ. of Applied Sciences Zwickau*); Kolbig, Silke (*Univ. of Applied Sciences Zwickau*); Winkler, Dirk (*Leipzig Univ.*)

18:00-19:30 WePOS-07.4
A Framework on Optimization Strategy for EEG Motor Imagery Recognition
Yang, Banghua* (*Shanghai University*); Fan, Chengcheng (*Shanghai University*); Guan, Cuntai (*Nanyang Technological University*); Gu, xuelin (*Shanghai University*)

WePOS-08: 18:00-19:30 Hall B
Signal Processing and Classification for Contactless Measurements – Poster (Poster Session)

18:00-19:30 WePOS-08.1
Non-Contact Blood Pressure Measurement Scheme using Doppler Radar
Ohata, Tomoyuki* (*The University of Electro-Communications*); Ishibashi, Koichiro (*The University of Electro-Communications*); Sun, Guanghao (*The University of Electro-Communications*)

18:00-19:30 WePOS-08.2
ITERATOR: A 3D Gait Identification from IR-UWB Technology
Rana, Soumya Prakash* (*London South Bank University*); Dey, Maitreyee (*London South Bank University*); Ghavami, Mohammad (*London South Bank University*); Dudley, Sandra (*London South Bank University*)

18:00-19:30 WePOS-08.3
Precise Heart Rate Measurement using Non-Contact Doppler Radar Assisted by Machine-Learning-Based Sleep Posture Estimation
Higashi, Kotaro* (*The University of Electro-Communications*); Sun, Guanghao (*The University of Electro-Communications*); Ishibashi, Koichiro (*The University of Electro-Communications*)

18:00-19:30 WePOS-08.4
Non-Contact Apnea-Hypopnea Index Estimation using Near Infrared Video
Zhu, Kaiyin (*Toronto Rehab-University Health Network*); Yadollahi, Azadeh (*University of Toronto*); Taati, Babak* (*Toronto Rehabilitation Institute & University of Toronto*)

18:00-19:30 WePOS-08.5
Novel CA-CFAR Approach for Improvement of Doppler Sensor-Based Heart Rate Variability Estimation
Hiromatsu, Ryosuke* (*Keio University*); Yamamoto, Kohei (*Keio University*); Toyoda, Kentaroh (*Keio University*); Ohtsuki, Tomoaki (*Keio University*)

WePOS-09: 18:00-19:30 Hall B
Brain Imaging and Image Analysis – Poster (Poster Session)

18:00-19:30 WePOS-09.1
Investigations on the Functional Connectivity Disruptive Patterns of Progressive Neurodegenerative Disorders
 A, Kavitha* (*SSN College of Engineering*); S Prakash, Sucharitha (*SSN College of Engineering*); P, Sreeja (*SSN College of Engineering*); S, Ancy Carshia (*SSN College of Engineering*)

18:00-19:30 WePOS-09.2
A Feature Ranking and Selection Algorithm for Brain Tumor Segmentation in Multi-Spectral Magnetic Resonance Image Data
 Gyorfi, Agnes* (*Sapientia Hungarian University of Transylvania*); Kovacs, Levente (*Obuda University*); Szilagy, Laszlo (*Budapest Univ. of Tech & Economics*)

18:00-19:30 WePOS-09.3
On the use of Linear-Modelling-Based Algorithms for Physiological Noise Correction in fMRI Studies of the Central Breathing Control
 Cauzzo, Simone* (*Scuola Superiore Sant'Anna*); Callara, Alejandro Luis (*Dipartimento di Ingegneria dell'Informazione, University of Pisa*); Morelli, Maria Sole (*Scuola Superiore Sant'Anna (Pisa)*); Hartwig, Valentina (*CNR*); Montanaro, Domenico (*Fondazione Toscana "G. Monasterio", National Research Council, P*); Passino, Claudio (*Fondazione Gabriele Monasterio, Pisa*); Emdin, Michele (*Fondazione Gabriele Monasterio, Pisa*); Giannoni, Alberto (*Fondazione Gabriele Monasterio, Pisa*); Vanello, Nicola (*University of Pisa*)

18:00-19:30 WePOS-09.4
Automatic Classification of Alzheimer's Disease based on CPD Brain Point Cloud Registration for Feature Extraction
 Perez-Gonzalez, Jorge* (*Univ. Nacional Autonoma de Mexico*); Azamar, Cristian (*Univ. Autonoma Metropolitana*); Pina-Ramirez, Omar (*Univ. Autonoma Metropolitana*)

WePOS-10: 18:00-19:30 Hall B
Cardiac Imaging and Image Analysis – Poster (Poster Session)

18:00-19:30 WePOS-10.1
Coronary Artery Vascular Segmentation on Limited Data via Pseudo-Precise Label
 Zhai, Mo (*Beijing Univ. of Posts & Telecommunications*); Du, Tianming (*Beijing Univ. of Posts & Telecommunications*); Yang, Ruolin (*Beijing Univ. of Posts & Telecommunications*); Zhang, Honggang* (*Beijing Univ. of Posts & Telecommunications*)

18:00-19:30 WePOS-10.2
Elevated Right Atrial Pressure Associated with Alteration of Left Ventricular Contractility and Ventricular-Arterial Coupling in Pulmonary Artery Hypertension
 Zhao, Xiaodan (*National Heart Centre Singapore*); Tan, Ru-San (*National Heart Centre Singapore*); Tan, Ju Le (*National Heart Centre Singapore*); Chai, Ping (*National Univ. Heart Centre Singapore*); Teo, Lynette Li San (*National Univ. Hospital*); Fortier, Marielle V (*KK Women's & Children's Hospital*); Tan, Teng Hong (*KK Women's & Children's Hospital*); Leng, Shuang (*National Heart Centre Singapore*); Ruan, Wen (*National Heart Centre Singapore*); Zhang, Jun-Mei (*National Heart Center*); Bryant, Jennifer (*NHCS*); Yap, Jonathan (*NHCS*); Ong, Ching Ching (*National Univ. Hospital*); Singh, Devinder (*National Univ. Hospital*); Lim, Soo Teik (*National Heart Centre Singapore*); Yip, James Wei Luen (*National Univ. Hospital*); Chen, Yucheng (*West China Hospital, Sichuan Univ., Chengdu, China*); Zhong, Liang* (*Duke-Duke Medical School, National Univ. of Singapore*)

18:00-19:30 WePOS-10.3
Deep CNN with LM Learning based Myocardial Ischemia Detection in Cardiac Magnetic Resonance Images
 Muthunayagam, Muthulakshmi (*MIT Campus, Anna Univ.,*); Ganesan, Kavitha* (*MIT Campus, Anna Univ.,*)

18:00-19:30 WePOS-10.4
Detection and Classification of Chronic Total Occlusion Lesions using Deep Learning
 Liu, Xuqing (*Beijing Univ. of Posts & Telecommunications*); Du, Tianming (*Beijing Univ. of Posts & Telecommunications*); Zhang, Honggang* (*Beijing Univ. of Posts & Telecommunications*); Sun, Chunlei (*Beijing Univ. of Posts & Telecommunications*)

18:00-19:30 WePOS-10.5
Kernel-Based Reconstruction of C-11-Hydroxyephedrine Cardiac PET Images of the Sympathetic Nervous System
 Ashouri, Zahra* (*Carleton University*); Hunter, Chad (*University of Ottawa Heart Institute*); Spencer, Benjamin (*UC Davis Medical Center*); Wang, Guobao (*Univ. of California – Davis*); Dansereau, Richard (*Carleton University*); deKemp, Robert (*uOttawa Heart Institute*)

18:00-19:30 WePOS-10.6
Automatic Assessment of 3D Coronary Artery Distensibility from Time-Resolved Coronary CT Angiography
 Ghanem, Ahmed (*NIH*); Hamimi, Ahmed (*NIH*); Gharib, Ahmed (*NIH*); Abd-Elmoniem, Khaled* (*NIH*)

WePOS-11: 18:00-19:30 Hall B
Image Analysis and Classification – Machine Learning / Deep Learning Approaches – Poster (Poster Session)

18:00-19:30 WePOS-11.1
Assessment of Data Augmentation Strategies Toward Performance Improvement of Abnormality Classification in Chest Radiographs
 Ganesan, Prasanth (*Florida Atlantic Univ.*); Rajaraman, Sivaramakrishnan (*National Library of Medicine*); Long, L. Rodney (*National Library of Medicine*); Ghoraani, Behnaz (*Florida Atlantic Univ.*); Antani, Sameer* (*National Library of Medicine*)

18:00-19:30 WePOS-11.2
Comparison and Analyzation of Different Feature Parameters for Alzheimer's Disease Identification
 Liu, Yan (*University of Chinese Academy of Sciences*); Zeng, Xiangzhu (*Peking University Third Hospital, Beijing, China*); Wang, Ling* (*University of Electronic Science & Technology of China*); Wang, Zheng (*Capital University of Medical Sciences*); Wang, Qiang (*Beijing Union University*)

18:00-19:30 WePOS-11.3
Anterior Chamber Angles Classification in Anterior Segment OCT Images via Multi-Scale Regions Convolutional Neural Networks
 Hao, Huaying (*Ningbo University*); Zhao, Yitian* (*Chinese Academy of Sciences*); Fu, Huazhu (*Inception Institute of Artificial Intelligence*); Shang, Qiaoling (*Shenyang Jianzhu University*); Chen, Zhili (*Shenyang Jianzhu University*); Li, Fei (*Zhongshan Ophthalmic Center, State Key Laboratory of Ophthalmology*); Zhang, Xiulan (*Zhongshan Ophthalmic Center, State Key Laboratory of Ophthalmology*); Liu, Jiang (*Ningbo Institute of Materials Technology & Engineering, CAS*)

18:00-19:30 WePOS-11.4
Improving the Malignancy Characterization of Hepatocellular Carcinoma using Deeply Supervised Cross Modal Transfer Learning for Non-Enhanced MR
 Jian, Wanwei (*Guangzhou Univ. of Chinese Medicine*); Ju, HanQiu (*Guangzhou Univ. of Chinese Medicine*); Cen, Xiaoping (*Guangzhou Univ. of Chinese Medicine*); Cui, Manman (*Guangzhou Univ. of Chinese Medicine*); Zhang, Honglai (*Guangzhou Univ. of Chinese Medicine*); Wang, Guangyi (*Guangdong General Hospital*); Zhang, Lijuan (*Shenzhen Institute of Advanced Technology*); Gu, Lin (*National Institute of Informatics (NII)*); Zhou, Wu* (*Guangzhou Univ. of Chinese Medicine*)

18:00-19:30 WePOS-11.5
Understanding Deep Convolutional Networks for Biomedical Imaging: A Tutorial
 Ng, Dianwen (*National University of Singapore*); Feng, Mengling* (*Massachusetts Institute of Technology*)

- 18:00-19:30 WePOS-11.6
Monitoring of Patient Blanket Coverage using 3D Camera Data
 Vaughn, Julie (MIT); Milosevic, Miladen (Philips Research North America); Parvaneh, Saman* (Philips Research North America)
- 18:00-19:30 WePOS-11.7
Deep Learning based Dosimetry Evaluation at Organs-at-Risk in Esophageal Radiation Treatment Planning
 Jiang, Dashan (Electrical Engineering & Automation, Anhui University); Li, Teng* (Anhui University); Mao, Ronghu (Dept. of Radiation Oncology, The Affiliated Cancer Hospital); Du, Chi (Cancer Center, The Second People's Hospital of Neijiang, Neijiang); Liu, Jianfei (Anhui University)
- 18:00-19:30 WePOS-11.8
Automatic Detection of Focal Liver Lesions in Multi-Phase CT Images using a Multi-Channel and Multi-Scale CNN
 Todoroki, Yoshihiro* (Ritsumeikan Univ.); Iwamoto, Yutaro (Ritsumeikan Univ.); Chen, Yen-Wei (Ritsumeikan Univ.)
- 18:00-19:30 WePOS-11.9
Convolutional Neural Network-Based Regression for Biomarker Estimation in Corneal Endothelium Microscopy Images
 Viguera-Guillén, Juan P.* (Rotterdam Eye Hospital); van Rooij, Jeroen (Rotterdam Eye Hospital); Lemij, Hans G. (Glaucoma Service, Rotterdam Eye Hospital); Vermeer, Koenraad A. (Rotterdam Ophthalmic Institute, Rotterdam Eye Hospital); van Vliet, Lucas (TU Delft)
- 18:00-19:30 WePOS-11.10
Mild Cognitive Impairment Diagnosis using Extreme Learning Machine Combined with Multivoxel Pattern Analysis on Multi-Biomarker Resting-State fMRI
 Nguyen, Thanh Duc (Gwangju Institute of Science & Technology); Ryu, Seungjun (Gist); Choi, Min (Gwangju Institute of Science & Technology); Qureshi, Muhammad Naveed Iqbal (Gwangju Institute of Science & Technology, Gwangju); Lee, Boreom* (Gwangju Institute of Science & Technology (GIST))
- 18:00-19:30 WePOS-11.11
Improving CNN Training using Disentanglement for Liver Lesion Classification in CT
 Ben-Cohen, Avi (Tel Aviv Univ.); Mechrez, Roey (Technion); Yedidia, Noa (Tel-Aviv Univ.); Greenspan, Hayit K.* (Tel Aviv Univ.)
- 18:00-19:30 WePOS-11.12
Variations on Branding with Text Occurrence for Optimized Body Parts Classification
 Pelka, Obioma (Univ. of Applied Sciences & Arts Dortmund); Nensa, Felix (Univ. Hospital Essen); Friedrich, Christoph M.* (Univ. of Applied Sciences & Arts Dortmund; Dept. of)
- 18:00-19:30 WePOS-11.13
Hierarchical Fine-Tuning for Joint Liver Lesion Segmentation and Lesion Classification in CT
 Heker, Michal* (Tel-Aviv University); Ben-Cohen, Avi (Tel Aviv University); Greenspan, Hayit K. (Tel Aviv University)
- 18:00-19:30 WePOS-11.14
Hybrid Unified Deep Learning Network for Highly Precise Gleason Grading of Prostate Cancer
 Sharma, Shanker Lal (Omart Technologies); Uthappa, Poojitha* (Indian Institute of Technology)
- 18:00-19:30 WePOS-11.15
Automated Glaucoma Screening from Retinal Fundus Image using Deep Learning
 Phasuk, Siriporn (Thammasat Univ.); Pooprasert, Pakinee (Cardiff Univ. School of Medicine); Yaemsuk, Akarachai (Thammasat Univ.); Suvannachart, Pukkapol (Chulalongkorn Univ.); Itthipanichpong, Rath (Chulalongkorn Univ.); Chansangpetch, Sunee (Chulalongkorn Univ.); Manassakorn, Anita (Chulalongkorn Univ. & King Chulalongkorn Memorial Hospital); Tantisevi, Visanee (Chulalongkorn Univ.); Rojanapongpun, Prin (Chulalongkorn Univ.); Tantibundhit, Charturong* (Thammasat Univ.)
- 18:00-19:30 WePOS-11.16
Pattern Detection from Seating Pressure Distribution during Wheelchair Motion using Deep Embedded Clustering
 Noguchi, Hiroshi* (The Univ. of Tokyo); Maeda, Tomonori (The Univ. of Tokyo); Tamai, Nao (The Univ. of Tokyo); Minematsu, Takeo (The Univ. of Tokyo); Sanada, Hiromi (The Univ. of Tokyo); Mori, Taketoshi (The Univ. of Tokyo)
- 18:00-19:30 WePOS-11.17
A Random Initialization Deep Neural Network for Discriminating Malignant Breast Cancer Lesions
 Duggento, Andrea* (University of Rome "Tor Vergata"); Scimeca, Manuel (University of Rome Tor Vergata); Urbano, Nicoletta (University of Rome Tor Vergata); Bonanno, Elena (University of Rome Tor Vergata); Aiello, Marco (IRCCS SDN, Naples, Italy); Cavaliere, Carlo (IRCCS SDN, Naples, Italy); Cascella, Giuseppe L. (Politecnico di Bari); Cascella, Davide (GEM ICT); Conte, Giovanni (GEM ICT); Guerrisi, Maria (University of Rome "Tor Vergata"); Toschi, Nicola (University of Rome "Tor Vergata", Faculty of Medicine)
- 18:00-19:30 WePOS-11.18
Skin Lesion Classification using GAN based Data Augmentation
 Rashid, Haroon (National Univ. of Sciences & Tech.); Tanveer, M. Asjid (National Univ. of Sciences & Tech.); Khan, Hassan Aqeel* (National Univ. of Sciences & Tech.)
- 18:00-19:30 WePOS-11.19
Predicting Human Embryos' Implantation Outcome from a Single Blastocyst Image
 Moradi Rad, Reza* (Simon Fraser University); Saeedi, Parvaneh (Simon Fraser University); Au, Jason Ka Man (Pacific Center for Reproductive Medicine); Havelock, Jon (Pacific Centre for Reproductive Medicine)
- 18:00-19:30 WePOS-11.20
Detection of Rapid Mouse's Scratching Behavior based on Shape and Motion Features
 Akita, Shingo* (Tokyo Univ. of Science); Tsuichihara, Satoki (Tokyo Univ. of Science); Takemura, Hiroshi (Tokyo Univ. of Science)
- 18:00-19:30 WePOS-11.21
An End-to-End Deep Learning Pipeline for Emphysema Quantification using Multi-Label Learning
 Negahdar, Mohammadreza* (IBM); Coy, Adam (University of California San Francisco); Beymer, David (IBM Almaden Research Center)
- 18:00-19:30 WePOS-11.22
Ultrasound-Based Diagnosis of Breast Tumor with Parameter Transfer Multilayer Kernel Extreme Learning Machine
 Fei, Xiaoyan (Shanghai University); Zhou, Weijun (First Affiliated Hospital of USTC); Shen, Lu (Shanghai University); Chang, Cai (Fudan University); Zhou, Shichong (Fudan University); Shi, Jun* (Shanghai University)
- 18:00-19:30 WePOS-11.23
Driver Drowsiness Estimation by Parallel Linked Time-Domain CNN with Novel Temporal Measures on Eye States
 Shiau, Jia-Yau (National Taiwan University); Nishiyuki, Kenta* (Omron Corporation); Nagae, Shigenori (Omron Corporation); Yabuuchi, Tomohiro (Omron Corporation); Kinoshita, Koichi (Omron Corporation); Hasegawa, Yuki (Omron Corporation)
- 18:00-19:30 WePOS-11.24
Analysis of Carotid Plaque using Multifractal Method in Ultrasound Images
 B., Smitha* (National Institute of Technology, Calicut); Joseph, Paul (National Institute of Technology Calicut)
- 18:00-19:30 WePOS-11.25
Boundary-Aware Semi-Supervised Deep Learning for Breast Ultrasound Computer-Aided Diagnosis
 Zhang, Erlei (Univ. of Texas Southwestern Medical Center); Seiler, Stephen (Univ. of Texas Southwestern Medical Center); Chen, Mingli (Univ. of Texas Southwestern Medical Center); Lu, Weiguo* (Univ. of Texas Southwestern Medical Center); Gu, Xuejun (Univ. of Texas Southwestern Medical Center)

- 18:00-19:30 WePOS-11.26
Deep Neural Network for Automatic Characterization of Lesions on 68Ga-PSMA PET/CT Images
 Zhao, Yu* (*Technische Universität München*); Tetteh, Giles (*Technische Universität München (TUM)*); Menze, Bjoern (*TU Munich*); Eiber, Matthias (*Klinikum Rechts der Isar, Technische Universität München*); Shi, Kuangyu (*University of Bern*)
- 18:00-19:30 WePOS-11.27
Semantic Segmentation of Microengineered Neural Tissues
 Karimian, Hamid R.* (*Tulane University*); Pollard, Kevin (*Tulane University*); Moore, Michael J. (*Tulane University*); Kordjamshidi, Parisa (*Tulane University*)
- 18:00-19:30 WePOS-11.28
Machine Learning for Computer-Aided Polyp Detection using Wavelets and Content-Based Image
 Viscaino Sarango, Michelle Estefania* (*Universidad Técnica Federico Santa María*); Auat Cheein, Fernando A. (*National University of San Juan*)
- 18:00-19:30 WePOS-11.29
Segmentation of Femoral Cartilage from Knee Ultrasound Images using Mask R-CNN
 Kompella, Gayatri* (*Indian Institute of Technology, Madras*); Antico, Maria (*Queensland Univ. of Technology*); Sasazawa, Fumio (*Queensland Univ. of Technology*); Singarayan, Jeevakala (*Healthcare Technology & Innovation Center*); Ram, Keerthi (*IIT Madras*); Fontanarosa, Davide (*Queensland Univ. of Technology*); Pandey, Ajay K (*Queensland Univ. of Technology, Australia*); Sivaprakasam, Mohanasankar (*Indian Institute of Technology Madras*)
- 18:00-19:30 WePOS-11.30
Hierarchical Pruning for Simplification of Convolutional Neural Networks in Diabetic Retinopathy Classification
 Hajabdollahi, Mohsen (*Isfahan Univ. of Technology*); Esfandiarpour, Reza (*Isfahan Univ. of Technology*); Najarian, Kayvan (*Univ. of Michigan – Ann Arbor*); Karimi, Nader (*Isfahan Univ. of Technology*); Samavi, Shadrokh (*McMaster Univ.*); Soroushmehr, S.M.Reza* (*Univ. of Michigan, Ann Arbor*)
- WePOS-12: 18:00-19:30 Hall B
Image Registration, Segmentation, Compression and Visualization – Machine Learning / Deep Learning Approaches – Poster (Poster Session)
- 18:00-19:30 WePOS-12.1
Fully Automatic White Matter Hyperintensity Segmentation using U-Net and Skip Connection
 Zhang, Yue (*Southern University of Science & Technology*); Wu, Jiong (*Sun Yat-Sen University*); Chen, Wanli (*Southern University of Science & Technology of China*); Liu, Yilong (*The University of Hong Kong*); Lyu, Junyan (*Southern University of Science & Technology*); Shi, Hongjian (*Southern University of Science & Technology*); Chen, Yifan (*The University of Waikato*); Wu, Ed X. (*The University of Hong Kong*); Tang, Xiaoying* (*Southern University of Science & Technology*)
- 18:00-19:30 WePOS-12.2
Deep Learning based Sub-Retinal Fluid Segmentation in Central Serous Chorioretinopathy Optical Coherence Tomography Scans
 Rao T J, Narendra (*National Institute of Technology Karnataka, Surathkal*); Girish, GN* (*National Institute of Technology Karnataka, Surathkal*); R Kothari, Abhishek (*Dr. Agarwal's Eye Hospital, Jaipur, India*); Rajan, Jeny (*Dept. of Computer Science & Engineering, National Institutu*)
- 18:00-19:30 WePOS-12.3
OpenArm 2.0: Automated Segmentation of 3D Tissue Structures for Multi-Subject Study of Muscle Deformation Dynamics
 Nozik, Yonatan (*UC Berkeley*); Hallock, Laura* (*UC Berkeley*); Ho, Daniel (*UC Berkeley*); Mandava, Sai (*UC Berkeley*); Mitchell, Chris (*UC Berkeley*); Li, Thomas Hui (*UC Berkeley*); Bajcsy, Ruzena (*UC Berkeley, CITRIS*)
- 18:00-19:30 WePOS-12.4
Data Representations for Segmentation of Vascular Structures using Convolutional Neural Networks with U-Net Architecture
 Bargsten, Lennart* (*Hamburg University of Technology*); Wendebourg, Mareike (*Hamburg University of Technology*); Schlaefer, Alexander (*Hamburg University of Technology*)
- 18:00-19:30 WePOS-12.5
Deep Learning-Based Automatic Endometrium Segmentation and Thickness Measurement for 2D Transvaginal Ultrasound
 Hu, Szu-Yeu (*Massachusetts General Hospital*); Xu, Hong (*MGH*); Li, Qian (*Massachusetts General Hospital*); Telfer, Brian (*MIT Lincoln Laboratory*); Brattain, Laura* (*MIT Lincoln Laboratory*); Samir, Anthony Edward (*Harvard Medical School, Massachusetts General Hospital*)
- 18:00-19:30 WePOS-12.6
Automatic Brain Tumor Segmentation Method based on Modified Convolutional Neural Network
 Yang, Chushu (*Harbin Institute of Technology*); Xutao, Guo (*HIT*); Wang, Tong (*Harbin Institute of Technology, Shenzhen*); Yang, Yanwu (*Harbin Institute of Technology Shenzhen Graduate School*); Ji, Nan (*Dept. of Neurosurgery, China National Clinical Research Cen*); Li, Deling (*Beijing Tiantan Hospital*); Lv, Haiyan (*Mindsgo Life Science Shenzhen Ltd.*); Ma, Ting* (*Harbin Institute of Technology at Shenzhen*)
- 18:00-19:30 WePOS-12.7
Diabetic Wound Segmentation using Convolutional Neural Networks
 Cui, Can (*University of Michigan*); Thurnhofer-Hemsi, Karl (*University of Málaga*); Soroushmehr, S.M.Reza (*University of Michigan, Ann Arbor*); Mishra, Abinash (*University of Michigan*); Gryak, Jonathan* (*University of Michigan*); Dominguez, Enrique (*University of Malaga*); Wrobel, James (*University of Michigan*); Najarian, Kayvan (*University of Michigan – Ann Arbor*); Lopez-Rubio, Ezequiel (*University of Malaga*)
- 18:00-19:30 WePOS-12.8
Adrenal Tumor Vessels Segmentation using Convolutional Neural Network in Computed Tomography Angiography
 Zhao, Wangyuan (*Shanghai Jiao Tong University*); He, Hongchao (*Shanghai Ruijin Hospital, Shanghai Jiao Tong University School of*); Zhao, Jun (*Shanghai Jiao Tong University*); Sun, Jianqi* (*Shanghai Jiao Tong University*)
- 18:00-19:30 WePOS-12.9
Adversarially Trained Convolutional Neural Networks for Semantic Segmentation of Ischaemic Stroke Lesion using Multisequence Magnetic Resonance Imaging
 Sathish, Rachana (*Indian Institute of Tech. Kharagpur*); Rajan, Ronnie* (*Indian Institute of Tech. Kharagpur*); Vupputuri, Anusha (*Indian Institute of Tech. Kharagpur*); Ghosh, Nirmalya (*Indian Institute of Tech. (IIT), Kharagpur*); Sheet, Debdoot (*Indian Institute of Tech. Kharagpur*)
- 18:00-19:30 WePOS-12.10
Brain-Vascular Segmentation for SEEG Planning via a 3D Fully-Convolutional Neural Network
 El Hadji, Sara* (*Politecnico di Milano*); Moccia, Sara (*Unviuersità Politecnica delle Marche*); Scorza, Davide (*Vicomtech Foundation*); Rizzi, Michele (*Ospedale Niguarda, Milano*); Cardinale, Francesco (*Niguarda Hospital*); Baselli, Giuseppe (*Politecnico di Milano*); De Momi, Elena (*Politecnico di Milano*)
- 18:00-19:30 WePOS-12.11
Automatic Sternum Segmentation in Thoracic MRI
 Ribeiro Dias, Mariana (*Univ. of Porto*); Rocha, Beatriz (*Univ. of Porto*); João, F. Teixeira* (*INESCTEC*); Oliveira, Hélder P. (*INESC TEC, Faculdade de Ciências, Universidade do Porto*)
- 18:00-19:30 WePOS-12.12
An MR Radiomics Framework for Predicting the Outcome of Stereotactic Radiation Therapy in Brain Metastasis
 Karami, Elham (*Sunnybrook Research Institute, Univ. of Toronto*); Ruschin, Mark (*Sunnybrook Health Sciences Centre, Univ. of Toronto*); Soliman, Hany (*Univ. of Toronto, Sunnybrook Health Sciences Centre*); Sahgal, Arjun (*Sunnybrook Health Sciences Centre, Univ. of Toronto*); Stanisz, Greg (*Sunnybrook Research Institute, Univ. of Toronto*); Sadeghi-Naini, Ali* (*York Univ.*)

- 18:00-19:30 WePOS-12.13
Scribbles for Metric Learning in Histological Image Segmentation
 Harada, Daisuke (*Kyushu University*); Bise, Ryoma* (*Kyushu University*); Tokunaga, Hiroki (*Kyushu University*); Ohyama, Wataru (*Kyushu University*); Oka, Sanae (*National Institute for Basic Biology*); Fujimori, Toshihiko (*National Institute for Basic Biology*); Uchida, Seiichi (*Kyushu University*)
- 18:00-19:30 WePOS-12.14
Gland Segmentation in Histopathology Images based on Deep Networks and Handcrafted Features
 Rezaei, Safiyeh (*Isfahan University of Technology, Iran*); Emami, Ali (*Isfahan University of Technology*); Zarrabi, Hamidreza (*Isfahan University of Technology*); Rafiei, Shima (*IUT*); Najarian, Kayvan (*University of Michigan – Ann Arbor*); Karimi, Nader (*Isfahan University of Technology*); Samavi, Shadrokh (*McMaster University*); Soroushmehr, S.M.Reza* (*University of Michigan, Ann Arbor*)
- 18:00-19:30 WePOS-12.15
Volume Visualization for Improving CT Lung Nodule Detection
 Huang, Adam* (*National Central University*); Lee, Chung-Wei (*National Taiwan University Hospital*); Yang, Chung-Yi (*E-Da Hospital*); Liu, Hon-Man (*Fu Jen Catholic University Hospital*)
- WePOS-13: 18:00-19:30 Hall B
Micro/Nano-Bioengineering; Cellular/Tissue Engineering and Biomaterials (I) – Poster (Poster Session)
- 18:00-19:30 WePOS-13.1
Influence of Substrate Stiffness on Human Induced Pluripotent Stem Cells: Preliminary Results
 Iberite, Federica* (*Scuola Superiore Sant'Anna*); Salerno, Marco (*Istituto Italiano di Tecnologia*); Canale, Claudio (*Dept. of Physics, Univ. of Genoa*); Rosa, Alessandro (*Sapienza Univ. of Rome*); Ricotti, Leonardo (*Scuola Superiore Sant'Anna*)
- 18:00-19:30 WePOS-13.2
Microdevice for Evaluating Ion Channel Expression by Axon-Targeted Recording to Cultured Neurons
 Shimba, Kenta* (*The University of Tokyo*); Sakai, Koji (*University of Tokyo*); Kotani, Kiyoshi (*University of Tokyo*); Jimbo, Yasuhiko (*University of Tokyo*)
- 18:00-19:30 WePOS-13.3
Pilot Study on Fibrin for Chronic Wound Healing
 Fernandes, Beatriz* (*Pontificia Univ. Católica do Paraná*); Moreschi, Maria Eduarda (*Pontificia Univ. Católica do Paraná*); dos Santos, Romilda Prado (*Pontifical Catholic Univ. of Paraná*); Sellmer, Danielle (*Pontifical Catholic Univ. of Paraná*)
- 18:00-19:30 WePOS-13.4
Nanocomposite Thin Films based on Polyethylene Vinyl Acetate and Piezoelectric Nanomaterials
 Vannozzi, Lorenzo* (*Scuola Superiore Sant'Anna*); Mariotti, Giulia (*Scuola Superiore Sant'Anna*); Ricotti, Leonardo (*Scuola Superiore Sant'Anna*)
- 18:00-19:30 WePOS-13.5
A Scalable Random Access Membrane Displacement Traps Array for Selective Capture and Release of Individual Droplets
 Babahosseini, Hesam* (*National Institutes of Health*); Padmanabhan, Supriya (*University of Maryland*); Misteli, Tom (*National Cancer Institute, National Institutes of Health*); DeVoe, Don L. (*University of Maryland*)
- 18:00-19:30 WePOS-13.6
A Compact Visible Light Spectrometer for Molecular Detection with Spherical Gold Nanoparticles
 Niyonambaza, Shimwe Dominique* (*Univ. Laval*); Boisselier, Elodie (*Univ. Laval*); Boukadoum, Mounir (*Univ. of Quebec at Montréal*); Miled, Amine (*Laval Univ.*)
- 18:00-19:30 WePOS-13.7
High-Performance Nanocrystal Platinum on Hierarchical Microelectrode for Biochemical Sensing
 Zeng, Qi (*Shenzhen Institutes of Advanced Technology, Chinese Academy of S*); Zhang, Yi (*University of Southern California & Doheny Eye Institute*); Wu, Tianzhun* (*Shenzhen Institutes of Advanced Technology (SIAT), Chinese Acade*)
- 18:00-19:30 WePOS-13.8
Growth Factor Releasing Core-Shell Polymeric Scaffolds for Tissue Engineering Applications
 Augustine, Robin (*Qatar University, Doha*); Zahid, Alap Ali (*Qatar University*); Mian, Wang (*Northeastern University*); Thomas, Webster (*Northeastern University*); Anwarul, Hasan* (*Qatar University, Doha*)
- 18:00-19:30 WePOS-13.9
Effects of Hydrogel-Fiber on Cystic Cavity after Spinal Cord Injury
 Xijie, Zhou (*Dept. of Neurosurgery, University of Maryland School of Med*); Du, Jian (*University of Maryland School of Medicine*); Jia, Xiaofeng* (*University of Maryland School of Medicine, Johns Hopkins University*)
- WePOS-14: 18:00-19:30 Hall B
Micro/Nano-Bioengineering; Cellular/Tissue Engineering and Biomaterials (II) – Poster (Poster Session)
- 18:00-19:30 WePOS-14.1
High-Throughput Droplet Array Generated by Roller Nanoimprint Lithography with Biomimetic Surfaces
 Peng, Zhiting (*Chinese Academy of Sciences*); Wu, Tianzhun* (*Shenzhen Institutes of Advanced Tech. (SIAT), Chinese Academy*)
- 18:00-19:30 WePOS-14.2
Optimization of the Single Emulsion Method for Encapsulation of a Cancer Drug in Nanoparticles
 Holley, Claire (*Univ. of Houston*); Sinquefield, Bridgett (*Univ. of Houston*); Majd, Sheereen* (*Univ. of Houston*)
- 18:00-19:30 WePOS-14.3
Requirements for Documenting Electrical Cell Stimulation Experiments for Replicability and Numerical Modeling
 Budde, Kai* (*University of Rostock*); Zimmermann, Julius (*University of Rostock*); Neuhaus, Elisa (*University of Rostock*); Schröder, Max (*University of Rostock*); Uhrmacher, Adelinde (*Institute of Computer Science, University of Rostock*); van Rienen, Ursula (*University of Rostock*)
- 18:00-19:30 WePOS-14.4
Azopolymer based Nanoparticles for Phototriggered Drug Delivery
 Perez-Buitrago, Sandra* (*Pontificia Universidad Católica del Perú*); Mena-Giraldo, Pedro (*Max Planck Tandem Group in Nanobioengineering, Universidad de An*); Pinal, Rodolfo (*Industrial & Physical Pharmacy Dept., Purdue University*); Hoyos, Lina M. (*Universidad Pontificia Bolivariana*)
- 18:00-19:30 WePOS-14.5
Biocompatibility and Thermodynamic Properties of PEGDA and Two of Its Co-Polymers
 Rekowski, Natalia* (*Rostock University Medical Centre*); Arbeiter, Daniela (*Rostock University Medical Centre*); Brietzke, Andreas (*Rostock University Medical Centre*); Konasch, Jan (*Rostock University*); Riess, Alexander (*University of Rostock*); Mau, Robert (*Rostock University*); Eickner, Thomas (*Rostock University Medical Centre*); Seitz, Hermann (*University of Rostock*); Grabow, Niels (*Rostock University Medical Centre*); Teske, Michael (*Rostock University Medical Centre*)
- 18:00-19:30 WePOS-14.6
Investigation of Bifurcation Effect on Various Microfluidic Designs for Blood Separation
 Hamad, Eyad* (*German Jordanian Univ.*); Sawalmeh, Basil (*German Jordanian Univ.*); Al Mhawsh, Abdulrahman (*German Jordan Univ.*); Mansour, Maher (*German Jordan Univ.*); Awad, Mohamad (*German Jordan Univ.*); Al-Halhouli, Alaalden (*German Jordan Univ.*); Al-Gharabli, Samer (*Pharmaceutical & Chemical Engineering Dept., German Jorda*)
- 18:00-19:30 WePOS-14.7
Mechanical Properties of Double Network Poly (Acrylic Acid) based Hydrogels for Potential use as a Biomaterial
 Udayanandana, Ruwan* (*University of Moratuwa*); Silva, Pujitha (*University of Moratuwa, Kairos Sensing*); Mudiyanse, Thilini Kuruwita (*University of Sri Jayewardenepura*)

18:00-19:30 WePOS-14.8
Long-Term Safety of the Carbon Fiber as an Implant Scaffold Material
 Baba, Kazutomo* (*Univ. of Tsukuba*); Mikhailov, Andrey (*Univ. of Tsukuba*); Sankai, Yoshiyuki (*Univ. of Tsukuba*)

18:00-19:30 WePOS-14.9
EEG-Hat with Candle-Like Microneedle Electrode
 Kawana, Takumi* (*Keio Univ.*); Yoshida, Yuri (*Keio Univ.*); Kudo, Yuta (*Keio Univ.*); Miki, Norihisa (*Univ.*)

WePOS-15: 18:00-19:30 Hall B
Bio-Electric Sensor Systems – Poster (Poster Session)

18:00-19:30 WePOS-15.1
Portable Device based on Microwave Resonator for Noninvasive Blood Glucose Monitoring
 Garcia Martinez, Hector (*Miguel Hernández University of Elche*); Juan, Carlos G.* (*Miguel Hernandez University*); Avila-Navarro, Ernesto (*Miguel Hernandez University*); Bronchalo, Enrique (*Miguel Hernandez University*); Sabater-Navarro, Jose Maria (*Universidad Miguel Hernandez*)

18:00-19:30 WePOS-15.2
Sensitivity Enhancement of Point-of-Care for Cardiac Markers Detection using Micro-Impedimetric Immunosensor Arrays
 Hamad, Eyad* (*German Jordanian University*); Al-Gharabli, Samer (*Pharmaceutical & Chemical Engineering Dept., German Jorda*); McLaughlin, James (*University of Ulster*)

18:00-19:30 WePOS-15.3
The Optimization of Analog Front-End for Fully Integrated Wearable Sweat Sensor
 Kim, Ikhwan (*Fudan University*); Jin, Han (*Fudan University*); Jiang, Yizhou (*Fudan University*); Qin, Yajie* (*Fudan University*)

18:00-19:30 WePOS-15.4
Monitoring and Modulating the Gastrointestinal Activity: A Wirelessly Programmable System with Impedance Measurement Capability
 Javan-Khoshkholgh, Amir (*New York Institute of Technology*); Kang, Qi (*New York Institute of Technology*); Abumahfouz, Nadi (*New York Institute of Technology*); Farajidavar, Aydin* (*New York Institute of Technology*)

18:00-19:30 WePOS-15.5
Development of a Biosensor based on Graphene for Detection of Physiological Signals
 Zi, Xingyu (*Northeastern Univ.*); Xie, Liping (*Northeastern Univ.*); Meng, Qingshi (*Shenyang Aerospace Univ.*); Liu, Zhiwen (*Shenyang Aerospace Univ.*); Xu, Lisheng* (*Northeastern Univ.*)

18:00-19:30 WePOS-15.6
Design and Characterisation of a Graphene-Based FET for Ultrasensitive Detection of Clinical Biomarkers
 Santos, Simão (*University Southeast Norway*); Yang, Shuai (*Congqing Technology & Business University*); Pires, Nuno M. M. (*University of Southeast Norway and Institute of Applied Micr*); Yang, Zhaochu (*University of Southeast Norway*); Dong, Tao* (*University Southeast Norway – HSN, TekMar*)

18:00-19:30 WePOS-15.7
Optical Fiber Sensors for Monitoring in Critical Care
 Morgan, Stephen Peter* (*Univ. of Nottingham*); Korposh, Serhiy (*Univ. of Nottingham*); Liu, LiangLiang (*Univ. of Nottingham*); Hernandez, Francisco Ulises (*Univ. of Nottingham*); Correia, Ricardo (*Univ. of Nottingham*); Norris, Andrew (*Nottingham Univ. Hospitals Trust*); Sinha, Rishie (*Nottingham Univ. Hospitals Trust*); Hayes-Gill, Barrie (*Univ. of Nottingham*); Piletsky, Sergey (*Univ. of Leicester*); Canfarotta, Francesco (*MIP Diagnostics*); Piletska, Elena (*Univ. of Leicester*); Grillo, Fabiana (*Univ. of Leicester*)

18:00-19:30 WePOS-15.8
Continuous ECG Monitoring Trial for Outpatient – Patient Receptiveness and Signal Accuracy
 Wong, David Liang Tai (*National University of Singapore*); Sathappan, Selva Muthu Kumaran (*NUS*); Yu, Jufeng (*National University of Singapore*); Heng, Chun Huat (*National University of Singapore*); Kojodojo, Pipin (*National University Hospital*); Feng, Mengling* (*Massachusetts Institute of Technology*)

18:00-19:30 WePOS-15.9
A Simple and Stable Load Control Algorithm for Time-Varying Harvested Energy in Miniaturized Implantable Devices
 Bae, ChiSung* (*Samsung Advanced Institute of Technology*)

18:00-19:30 WePOS-15.10
Non-Contact Capacitive Ballistocardiogram Measurements using In-Bed Fabric Sheet Electrode for Blood Pressure Estimation
 Sakajiri, Yuichiro* (*Tokyo Denki Univ.*); Nakamura, Hajime (*Tokyo Denki Univ.*); Ueno, Akinori (*Tokyo Denki Univ.*)

WePOS-16: 18:00-19:30 Hall B
Chemical and Biological Sensors – Poster (Poster Session)

18:00-19:30 WePOS-16.1
A Biosensor for the Detection of Acetylcholine and Diazinon
 Herrera, Elisa G (*Univ. of Pisa, Dept. of Chemistry & Industrial Chemis*); Bonini, Andrea (*Univ. of Pisa, Dept. of Chemistry & Industrial Chemi*); Vivaldi, Federico (*Univ. of Pisa, Dept. of Chemistry & Industrial Chemis*); Melai, Bernardo (*Dept. of Chemistry & Industrial Chemistry, Univ. of*); Salvo, Pietro* (*National Research Council*); Poma, Noemi (*Univ. of Pisa, Dept. of Chemistry & Industrial Chemis*); Santalucia, Delio (*Univ. of Pisa, Dept. of Chemistry & Industrial Chemis*); Kirchhain, Arno (*Univ. of Pisa, Dept. of Chemistry & Industrial Chemis*); Di Francesco, Fabio (*Univ. of Pisa*)

18:00-19:30 WePOS-16.2
A Single-Chain Templated Polymer-Based Target Receptor as a New Platform for Label-Free Selective Electrochemical Sensing
 Dutta, Gaurab (*University of New Hampshire*); Yang, Rongfang (*University of New Hampshire*); Ahmad, Habib (*University of New Hampshire*); Si, Bo (*University of New Hampshire*); Csoros, John (*University of New Hampshire*); Ren, Tianyu (*University of New Hampshire*); Halpern, Jeffrey (*University of New Hampshire*); Seitz, W. Rudolf (*University of New Hampshire*); Song, Edward* (*University of New Hampshire*)

18:00-19:30 WePOS-16.3
A Hybrid Glucose Fuel Cell based on Electrodeposited Carbon Nanotubes and Platinized Carbon
 Slaughter, Gymama* (*Univ. of Maryland Baltimore County*); Kulkarni, Tanmay (*Univ. of Maryland Baltimore County*)

18:00-19:30 WePOS-16.4
Computational Evaluation of Suspended Microcantilever and Microfluidic Channel
 Gavalas, Iakovos (*Unit of Medical Technology & Intelligent Information Systems*); Fotiadis, Dimitrios I.* (*Univ. of Ioannina*)

18:00-19:30 WePOS-16.5
Low Cost Wavelength Specific Water Quality Measurement Technique
 Nayeem, Huzaifa (*International Institute of Information Technology, Hyderabad*); Syed, Azeemuddin* (*International Institute of Information & Technology, Hyderabad*); Mohammed, Zafar Ali Khan (*Indian Institute of Technology Hyderabad*)

18:00-19:30 WePOS-16.6
Non-Invasive Blood Glucose Sensor: A Feasibility Study
 Lopez Albalat, Alvaro (*Univ. Politècnica de València*); Sanz Alaman, Maria Begoña (*Univ. Politècnica de València*); Dejoz Diez, Maria Cristina (*Univ. Politècnica de València*); Martinez-Millana, Antonio* (*Univ. Politècnica de València*); Traver, Vicente (*ITACA – Univ. Politècnica de València*)

18:00-19:30 WePOS-16.7
Dielectric Permittivity of Human Blood of Different Lactate Levels Measured at Millimeter Waves
 Koutsoupidou, Maria (*King's College London*); Cano-Garcia, Helena* (*King's College London, Medical Wireless Sensing Ltd.*); Pricci, Roberto L. (*MediWise, Medical Wireless Sensing Ltd.*); Saha, Shimul C. (*MediWise, Medical Wireless Sensing Ltd.*); Rana, Srinivas (*King's College London*); Ancu, Oana (*Institute of life Sciences, Roehampton University*); Draicchio, Fulvia (*Institute of life Sciences, Roehampton University*); Mackenzie, Richard (*Institute of life Sciences, Roehampton University*); Kosmas, Panagiotis (*Kings College London*); Kallos, Efthymios (*MediWise, Medical Wireless Sensing Ltd.*)

WePOS-17: 18:00-19:30 Hall B
Instrumentation for Physiological Monitoring – Poster (Poster Session)

18:00-19:30 WePOS-17.1
Wireless Low-Cost Bioimpedance Measurement Device for Lung Capacity Screening
 Pino, Esteban J* (*Universidad de Concepcion*); Gomez, Britam (*Universidad de Concepcion*); Monsalve, Emyrna (*Universidad de Concepción*); Aqueveque, Pablo (*University of Concepcion*)

18:00-19:30 WePOS-17.2
Application of Signed Distance Function Neural Network in Real-Time Feet Tracking
 Foo, Ming Jeat* (*Nanyang Technological Univ.*); Tiseo, Carlo (*Univ. of Edinburgh*); Ang, Wei Tech (*Nanyang Technological Univ.*)

18:00-19:30 WePOS-17.3
Pitfall of Heart Rate Variability Analyses for Autonomic Nervous System Activity with Photoplethysmography
 Nakamura, Hideo* (*Osaka Electro-Communication Univ.*); Tagawa, Munenori (*Osaka electro-communication University*)

18:00-19:30 WePOS-17.4
Emotion Classification in Response to Tactile Enhanced Multimedia using Frequency Domain Features of Brain Signals
 Raheel, Aasim (*Univ. of Engineering & Technology Taxila*); Majid, Muhammad (*Univ. of Engineering & Technology, Taxila*); Anwar, Syed* (*Univ. of Central Florida*); Bagci, Ulas (*Univ. of Central Florida*)

18:00-19:30 WePOS-17.5
In Vitro Quantification of Lactate in Phosphate Buffer Saline (PBS) Samples
 Budidha, Karthik* (*City, Univ. of London*); Mamouei, MohammadHossein (*City, Univ. of London*); Baishya, Nystha (*City, Univ. of London*); Vadgama, Pankaj (*Queen Mary Univ. of London*); Kyriacou, Panayiotis (*City Univ. London*)

18:00-19:30 WePOS-17.6
EEG-Based Emotion Recognition with Similarity Learning Network
 Wang, Yixin (*Institute of Automation, Chinese Academy of Science*); Qiu, Shuang (*Institute of Automation, Chinese Academy of Science*); Li, Jinpeng (*Research Center for Brain-inspired Intelligence, Institute of Au*); Ma, Xuelin (*Institute of Automation, Chinese Academy of Sciences*); Liang, Zhiyue (*Capital Normal University*); Li, Hui (*Dept. of Educational technology, Capital Normal University*); He, Huiguang* (*Institute of Automation, Chinese Academy of Sciences*)

18:00-19:30 WePOS-17.7
UKF Magnetometer-Free Sensor Fusion for Pelvis Pose Estimation during Treadmill Walking
 Cardarelli, Stefano* (*Univ. Politecnica delle Marche*); Mengarelli, Alessandro (*Univ. Politecnica delle Marche*); Tigrini, Andrea (*Univ. Politecnica delle Marche*); Strazza, Annachiara (*Univ. Politecnica delle Marche*); Di Nardo, Francesco (*Polytechnic University of Marche*); Verdini, Federica (*Univ. Politecnica delle Marche*); Fioretti, Sandro (*Univ. Politecnica delle Marche*)

18:00-19:30 WePOS-17.8
A Wearable RF Sensor for Monitoring Respiratory Patterns
 Sharma, Pragya* (*Cornell University*); Hui, Xiaonan (*Cornell University*); Kan, Edwin (*Cornell University*)

WePOS-18: 18:00-19:30 Hall B
Modeling and Analysis in Sensors and Wearable Systems – Poster (Poster Session)

18:00-19:30 WePOS-18.1
Wearable-Based Temporal Parameters of Gait in Circuitous Routes under Dual-Task Conditions
 Caramia, Carlotta (*Roma Tre Univ.*); Bibbo, Daniele (*Universita' degli Studi Roma TRE*); D'Anna, Carmen (*Roma TRE Univ. – Engineering Dept.*); De Marchis, Cristiano (*Università degli Studi Roma Tre*); Ranaldi, Simone (*Roma Tre Univ.*); Varrecchia, Tiwana (*Roma Tre Univ.*); Conforto, Silvia (*Univ. Roma TRE*); Schmid, Maurizio* (*Roma Tre Univ.*)

18:00-19:30 WePOS-18.2
A Pilot Study on Continuous Breaststroke Phase Recognition with Fast Training based on Lower-Limb Inertial Signals
 Zheng, Enhao* (*Institute of Automation, Chinese Academy of Sciences*); Zhang, Zhendong (*Peking University*); Mai, Jingeng (*Peking University*); Wang, Qining (*Peking University*); Qiao, Hong (*Institute of Automation, Chinese Academy of Sciences*)

18:00-19:30 WePOS-18.3
Magnetometer-Free Realtime Inertial Motion Tracking by Exploitation of Kinematic Constraints in 2-DoF Joints
 Laidig, Daniel* (*TU Berlin*); Lehmann, Dustin (*TU Berlin*); Begin, Marc-Andre (*Sherbrooke University*); Seel, Thomas (*Technische Universität Berlin*)

18:00-19:30 WePOS-18.4
Turning the Finger into a Writing Tool
 Sakuma, Katsuyuki* (*IBM T.J. Watson Research Center*); Blumrosen, Gaddi (*Hebrew University*); Rice, John J (*IBM T.J. Watson Research Center*); Rogers, Jeff (*IBM T.J. Watson Research Center*); Knickerbocker, John (*IBM T.J. Watson Research Center*)

18:00-19:30 WePOS-18.5
Hierarchical Classification Scheme for Real-Time Recognition of Physical Activities and Postural Transitions using Smartphone Inertial Sensors
 Talha, Sid Ahmed Walid* (*IMT Lille Douai*); Fleury, Anthony (*IMT Lille Douai*); Lecoeuche, Stéphane (*IMT Lille Douai*)

18:00-19:30 WePOS-18.6
Classification of Perceived Human Stress using Physiological Signals
 Arsalan, Aamir (*University of Engineering & Technology, Taxila*); Majid, Muhammad (*University of Engineering & Technology, Taxila*); Anwar, Syed* (*University of Central Florida*); Bagci, Ulas (*University of Central Florida*)

18:00-19:30 WePOS-18.7
Physical Activity based Classification of Serious Mental Illness Group Participants in the UK Biobank using Ensemble Dense Neural Networks
 Zebin, Tahmina (*Univ. of Manchester*); Peek, Niels (*Univ. of Manchester*); Casson, Alexander James* (*Univ. of Manchester*)

18:00-19:30 WePOS-18.8
Exploring Cortex Connectivity Signal in Sensory Response to Odors
 Zhang, Zhuo (*A*STAR*); Zhang, Haihong (*Institute for Infocomm Research*); Zhang, Lu (*Procter & Gamble International Operations SA SG Branch*); Guan, Cuntai* (*Nanyang Technological Univ.*)

WePOS-19: 18:00-19:30 Hall B
New Sensing Technologies – Poster (Poster Session)

18:00-19:30 WePOS-19.1
Improved Acquisition of Vibroarthrographic Signals of the Knee Joint
 Klemm, Lisa (*Otto-von-Guericke Univ.*); Sühn, Thomas* (*Otto-von-Guericke-Universität Magdeburg*); Spiller, Moritz (*Otto-von-Guericke Univ. Magdeburg*); Illanes, Alfredo (*Otto-von-Guericke Univ. of Magdeburg*); Boese, Axel (*Dept. of Medical Engineering, Otto-von-Guericke-Universität*); Friebe, Michael (*Otto-von-Guericke-Universität*)

18:00-19:30 WePOS-19.2

Comparison of Silence Removal Methods for the Identification of Audio Cough Events

Cohen-McFarlane, Madison* (*Carleton University*); Goubran, Rafik A. (*Carleton University*); Knoefel, Frank-Dietrich (*Bruyere Continuing Care, University of Ottawa, Carleton University*)

18:00-19:30 WePOS-19.3

A Wearable Daily Respiration Monitoring System using PDMS-Graphene Compound Tensile Sensor for Adult

Chen, Hongyu (*Technische Univ. Eindhoven – TU/e*); Bao, Shenjie (*Fudan Univ.*); Ma, Jianhua (*Molecular Engineering of Polymers, Dept. of Macromolecular*); Peng, Wang (*Molecular Engineering of Polymers, Dept. of Macromolecular*); Hongbin, Lu (*Molecular Engineering of Polymers, Dept. of Macromolecular*); Bambang Oetomo, Sidarto (*Máxima Medical Center*); Chen, Wei* (*Fudan Univ.*)

18:00-19:30 WePOS-19.4

Respiratory Signal of Bathing Person – Preliminary Study

Bujnowski, Adam* (*Gdansk University of Technology*); Osiński, Kamil (*Gdansk University of Technology*); Przystup, Piotr (*Gdansk University of Technology*); Wtorek, Jerzy (*Gdansk University of Technology*)

18:00-19:30 WePOS-19.5

Balanced Adjustable Mirrored Current Source with Common Mode Feedback and Output Measurement for Bioimpedance Applications

Klum, Michael* (*Technische Universität Berlin*); Schmidt, Malte (*Technische Universität Berlin*); Klapproth, Joel (*Technische Universität Berlin*); Pielmus, Alexandru Gabriel (*Technische Universität Berlin*); Tigges, Timo (*Technical University Berlin*); Orglmeister, Reinhold (*Technische Universität Berlin*)

18:00-19:30 WePOS-19.6

Stretchability Enhancement of Electronics According to Three Shapes of Substrate Fabricated by Thermal Reflow Process

Lee, Ho Jin* (*Seoul National Univ.*); Seo, Min-won (*Seoul National Univ.*); Yi, Jungho (*Seoul National Univ.*); Seo, Jong Mo (*Seoul National Univ., School of Engineering*)

18:00-19:30 WePOS-19.7

Electrode Design on Plastic Substrates using Laser Patterned Double-Sided Tape and Gold Leaf

Jeong, Hyunbeen* (*Seoul National University*); Seo, Jong Mo (*Seoul National University, School of Engineering*)

18:00-19:30 WePOS-19.8

Nightingale V2: Low-Power Compact-Sized Multi-Sensor Platform for Wearable Health Monitoring

Lee, Seulki* (*imec*); Grundlehner, Bernard (*Holst Centre*); Garcia Van der Westen, Roberto (*imec / Holst Centre*); Polito, Salvatore (*Holst Centre/imec*); Van Hoof, Chris (*imec*)

18:00-19:30 WePOS-19.9

Wireless Sensor Platform for Detection of Vital Parameters of Bats

Duda, Niklas* (*Friedrich-Alexander-Univ. Erlangen-Nuremberg*); Ripperger, Simon (*Museum fuer Naturkunde – Leibniz Institute for Evolution & Bio*); Tschapka, Marco (*Univ. of Ulm, Institute of Evolutionary Ecology & Conserv*); Mayer, Frieder (*Museum fuer Naturkunde – Leibniz Institute for Evolution & Bio*); Weigel, Robert (*Univ. of Erlangen Nuremberg*); Koelpin, Alexander (*Chair for Electronics & Sensor Systems, Brandenburg Univ.*)

18:00-19:30 WePOS-19.10

Development of an Electrostatic Oral Cavity Generator Driven by Occlusal Force

Ichikawa, Kenta* (*Tokyo Institute of Technology*); Hijikata, Wataru (*Tokyo Institute of Technology*)

WePOS-20: 18:00-19:30 Hall B

Assistive Technologies for Aging, Rehabilitation, and Disabilities – Poster (Poster Session)

18:00-19:30 WePOS-20.1

Improving Accessibility for People with Disabilities: A Case Study on Inclusive Beach Tourism

Mayordomo-Martínez, Diego (*Technical Univ. of Cartagena*); Sánchez-Aarnoutse, Juan-Carlos (*Technical Univ. of Cartagena*); Merzoukid, Khalil (*Technical Univ. of Cartagena*); García-Hernández, Manuel (*FAMDIF*); Carrillo de Gea, Juan Manuel* (*Univ. of Murcia*); García-Berná, José Alberto (*Univ. of Murcia*); Fernández Aleman, Jose Luis (*Univ. of Murcia*); Idri, Ali (*Mohammed V Univ. Rabat*); García-Mateos, Ginés (*Univ. of Murcia*)

18:00-19:30 WePOS-20.2

A Multiscript Gaze-Based Assistive Virtual Keyboard

Cecotti, Hubert* (*California State University Fresno*); Meena, Yogesh Kumar (*Ulster University*); Bhushan, Braj (*IIT Kanpur*); Dutta, Ashish (*Indian Institute of Technology Kanpur*); Prasad, Girijesh (*University of Ulster*)

18:00-19:30 WePOS-20.3

Eye Gaze-Based Early Intent Prediction Utilizing CNN-LSTM

Koochaki, Fatemeh (*Rutgers University*); Najafizadeh, Laleh* (*Rutgers University*)

18:00-19:30 WePOS-20.4

Evaluation of a Mental Care System for Patients Recuperating in a Sterile Room after Hematopoietic Cell Transplantation

Joko, Shihō* (*Graduate School of Robotics & Design, Osaka Institute of Techno*); Ohsuga, Mieko (*Osaka Institute of Technology*); Tada, Yuma (*Dept. of Hematology, Osaka International Cancer Institute*); Ishihara, Jun (*Dept. of Hematology, Osaka International Cancer Institute*)

WePOS-21: 18:00-19:30 Hall B

Behavioral Health Informatics – Poster (Poster Session)

18:00-19:30 WePOS-21.1

Effect and Safety Evaluation of XETHRU X4 Radar Radiation on Sexual Hormone Levels in Mice

Yaolei, Zhang (*Center Laboratory, The General Hospital of Western Theater Comma*); Xin, Guo (*Center Laboratory, The General Hospital of Western Theater Comma*); Ting, Li (*Center Laboratory, The General Hospital of Western Theater Comma*); Zhang, Ming (*Center Laboratory, The General Hospital of Western Theater Comma*); Feng, yaxing (*Center Laboratory, The General Hospital of Western Theater Comma*); Li, Wei (*Center Laboratory, The General Hospital of Western Theater Comma*); Zhu, Xiaoyan (*Center Laboratory, The General Hospital of Western Theater Comma*); Gu, Rui (*Center Laboratory, The General Hospital of Western Theater Comma*); Zhou, Longfu* (*The General Hospital of Western Theater Command*)

18:00-19:30 WePOS-21.2

A Sensor-Enabled Digital Trier Social Stress Test in an Enterprise Context

Gavas, Rahul (*TCS Research & Innovation, Tata Consultancy Services Ltd.*); Das, Deepan (*TATA Consultancy Services*); Bhattacharjee, Tanuka (*Research & Innovation, TATA Consultancy Services, India*); Basaralu Sheshachala, Mithun (*Tata Consultancy Services*); Kumar Hissaria, Lalit (*Manhattan Associates*); Vempada, Ramu Reddy (*TCS Research & Innovation Lab*); Viraraghavan, Venkata Subramanian* (*Tata Consultancy Services Limited*); Dutta Choudhury, Anirban (*Tata Consultancy Services Ltd.*); Muralidharan, Kartik (*Tata Consultancy Services Limited*); Ramakrishnan, Ramesh Kumar (*TATA Consultancy Services*); P, Balamuralidhar (*TATA Consultancy Services*); Pal, Arpan (*Tata Consultancy Services*)

18:00-19:30 WePOS-21.3

An Unobtrusive Stress Recognition System for the Smart Office

Yu, Bin* (*Eindhoven Univ. of Tech.*); Zhang, Biyong (*BOBO Tech. Ltd.*); An, Pengcheng (*Eindhoven Univ. of Tech.*); Xu, Lisheng (*Northeastern Univ.*); Xue, Mengru (*Eindhoven Univ. of Tech.*); Hu, Jun (*Eindhoven Univ. of Tech.*)

18:00-19:30 WePOS-21.4
Multiple-Instance Learning for Sparse Behavior Modeling from Wearables: Toward Dementia-Related Agitation Prediction
Alam, Ridwan* (*Univ. of Virginia*); Bankole, Azziza (*Virginia Tech Carilion School of Medicine*); Anderson, Martha (*Virginia Tech Carilion School of Medicine*); Lach, John (*Univ. of Virginia*)

18:00-19:30 WePOS-21.5
Portable, Low Cost Smartphone-Based Potentiostat System for the Salivary α -Amylase Detection in Stress Paradigm
Ma, Lei (*Nantong Univ.*); Ju, Feng (*Nantong Univ.*); Tao, Chunling (*Nantong Univ.*); Shen, Xiaoyan* (*Nantong Univ.*)

18:00-19:30 WePOS-21.6
Cluster Analysis of Alcohol Consumption during Pregnancy in the Safe Passage Study
Pini, Nicolò* (*Politecnico di Milano*); Shuffrey, Lauren C. (*Columbia Univ. Medical Center*); Lucchini, Maristella (*Politecnico di Milano*); Sania, Ayesha (*Dept. of Psychiatry & Pediatrics, Columbia Univ. Col.*); Nelson, Morgan (*Avera Research Institute*); Nugent, J. David (*New York State Psychiatric Institute, Teachers College, Columbia*); Ochoa, Timothy (*New York State Psychiatric Institute*); Odendaal, Hein (*Stellenbosch Univ.*); Fifer, William P. (*Dept. of Psychiatry & Pediatrics, Columbia Univ. Col.*); Myers, Michael (*Columbia Univ. Medical Center*); Elliott, Amy (*Avera Research Institute*)

WePOS-22: 18:00-19:30 Hall B
Bioinformatics – Poster (Poster Session)

18:00-19:30 WePOS-22.1
The "Prisoner's Dilemma" in the Tumor Biology Context: The Warburg Effect, Proliferation Dynamics and Equilibria
Lambrou, George I. (*National & Kapodistrian Univ. of Athens*); Sarafidis, Michail* (*National Technical Univ. of Athens*); Bizopoulos, Paschalis (*National Technical Univ. of Athens*); Iliopoulou, Dimitra (*National Technical Univ. of Athens*); Paidi, Anna (*National Technical Univ. of Athens*); Koutsouris, Dimitrios (*Biomedical Engineering Laboratory, School of Electrical & Comp*)

18:00-19:30 WePOS-22.2
Bioinformatics Analysis Reveals Ki-67 Specific microRNA Functions in Pediatric Embryonal Tumors
Braoudaki, Maria (*National & Kapodistrian Univ. of Athens, First Dept.*); Sarafidis, Michail* (*National Technical Univ. of Athens*); Koutsouris, Dimitrios (*Biomedical Engineering Laboratory, School of Electrical & Comp*); Koutsouri, Georgia (*Biomedical Engineering Laboratory, National Technical Univ.*); Lambrou, George I. (*National & Kapodistrian Univ. of Athens*)

18:00-19:30 WePOS-22.3
Multi-Omic Pathway and Network Analysis to Identify Biomarkers for Hepatocellular Carcinoma
Barefoot, Megan (*Georgetown University Medical Center*); Varghese, Rency (*Georgetown University Medical Center*); Zhou, Yuan (*Georgetown University*); Di Poto, Cristina (*Georgetown University*); Ferrarini, Alessia (*Georgetown University*); Resson, Habtom* (*Georgetown University*)

18:00-19:30 WePOS-22.4
Protein Subcellular Localization Prediction based on Internal Micro-Similarities of Markov Chains
Alaa, Asem* (*Cairo Univ., Faculty of Engineering*); Eldeib, Ayman M. (*Cairo Univ.*); Metwally, Ahmed (*Stanford Univ.*)

WePOS-23: 18:00-19:30 Hall B
Clinical Information and Decision Support Methods and Systems – Poster (Poster Session)

18:00-19:30 WePOS-23.1
Characterization of Physicians Workload in a Reference Center for the Treatment of Thrombotic and Bleeding Disorders
Rosati, Samanta (*Politecnico di Torino*); Valeri, Federica (*Città della Salute e della Scienza di Torino*); Borchellini, Alessandra (*Città della Salute e della Scienza di Torino*); Gianfreda, Claudia Maria (*Politecnico di Torino*); Balestra, Gabriella* (*Politecnico di Torino*)

18:00-19:30 WePOS-23.2
Nutrition Adherence in Critically Ill Patients; How is Nutritional Intake within the 1st Week of Hospitalization Affecting the Patient's Outcome?
Chytas, Achilleas (*Lab of Medical Informatics, Medical School, Aristotle Univ.*); Vaporidi, Katerina (*Medical School, Univ. of Crete*); Soundoulounaki, Stella (*Medical School, Univ. of Crete*); Georgopoulos, Dimitris (*Dept. of Intensive Care Medicine, Univ. Hospital of He*); Maglaveras, Nikolaos (*Aristotle Univ. of Thessaloniki*); Chouvarda, Ioanna* (*Aristotle Univ.*)

18:00-19:30 WePOS-23.3
Using Ensemble Classification Methods in Lung Cancer Disease
Hosni, Mohamed (*ENSIAS, Mohammed V Univ.*); Carrillo de Gea, Juan Manuel* (*Univ. of Murcia*); Idri, Ali (*Mohammed V Univ. Rabat*); Fernandez Aleman, Jose Luis (*Univ. of Murcia*); García-Berná, José Alberto (*Univ. of Murcia*)

18:00-19:30 WePOS-23.4
An Accurate Data Preparation Approach for the Prediction of Mortality in ACLF Patients using the CANONIC Dataset
Sanchez Garcia, Moises Noe* (*IBM*); Doyle, Gordon (*IBM*); Ranco, Gabriele (*IBM*); Agarwal, Banwari (*Royal Free Hospital*); Arroyo, Vicente (*EF Clif*); Saliba, Faouzi (*Hospital paul Brousse*); Garcia Lopez, Elisabet (*EFClif*); Pavesi, Marco (*European Foundation for the Study of Chronic Liver Failure (EF-C)*); Jalan, Rajiv (*UCL*); Fernandez, Javier (*Liver ICU, Hospital Clinic Barcelona, Catalonia*); Bañares, Rafael (*Hospital General Univ. Gregorio Marañón*); Mookerjee, Rajeshwar Prosad (*Univ. College London*)

18:00-19:30 WePOS-23.5
Detection of Abnormal Segments in Finger Tapping Waveform using One-Class SVM
Sano, Yuko* (*Hitachi Co. Ltd.*); Yin, Ying (*Hitachi China R&D*); Mizuguchi, Tomohiko (*Maxell, Ltd.*); Kandori, Akihiko (*Hitachi Ltd.*)

18:00-19:30 WePOS-23.6
KardiaSoft Architecture – A Software Supporting Diagnosis and Therapy Monitoring of Heart Failure Patients Exploiting Saliva Biomarkers
Tripoliti, Evanthia (*Univ. of Ioannina*); Ioannidou, Pinelopi (*Dept. of Biomedical Research, Institute of Molecular Biolog*); Toumpanianis, Petros (*National Technical Univ. of Athens*); Bechlioulis, Aris (*Michaelidion Cardiac Center, Univ. of Ioannina, & 2nd Dep*); Rammos, Aidonis (*2nd Dept. of Cardiology, Univ. of Ioannina*); Gallagher, Joseph (*Univ. College Dublin, National Univ. of Ireland, Belf*); Salvo, Pietro (*National Research Council*); Goletsis, Yorgos (*Univ. of Ioannina*); Naka, Katerina (*Univ. of Ioannina*); Abdelhamid, Errachid (*Université de Lyon, Institut de Sciences Analytiques (ISA)*); Fotiadis, Dimitrios I.* (*Univ. of Ioannina*)

18:00-19:30 WePOS-23.7
Using Machine Learning Models to Classify Stroke Risk Level based on National Screening Data
Li, XueMeng (*Academy of Military Medical Sciences*); Bian, Di (*Xi'an University of Science & Technology*); Yu, Jinghui (*Academy of Military Medical Sciences*); Mao, Huajian (*Academy of Military Medical Sciences of Chinese PLA*); Li, Mei (*China Stroke Data Center*); Zhao, Dongsheng* (*Institute of Health Service & Medical Information, Academy of*)

18:00-19:30 WePOS-23.8
Development of Objective Evidence in Rorschach Ink Blot Test: An Eye Tracking Study
Roy, Anup Kumar* (*IIT Kharagpur*); Nasreen, Shazia (*IIT Kharagpur*); Majumder, Debabrata (*IIT Kharagpur*); Mahadevappa, Manjunatha (*Indian Institute of Technology Kharagpur*); Guha, Rajlakshmi (*IIT Kharagpur*); Mukhopadhyay, Jayanta (*Dept. of Computer Science & Engineering, IIT Kharagpur*)

18:00-19:30 WePOS-23.9
SmartHypnos: Developing a Toolbox for Polysomnographic Data Visualization and Analysis
Chriskos, Panteleimon* (*Aristotle Univ. of Thessaloniki*); Frantzidis, Christos (*Aristotle Univ. of Thessaloniki*); Gkivogkli, Polyxeni (*Aristotle Univ. of Thessaloniki*); Papanastasiou, Emmanouil (*Aristotle Univ. of Thessaloniki*); Kourtidou-Papadeli, Chrysoula (*Greek Aerospace Medical Association*); Bamidis, Panagiotis (*Aristotle Univ.*)

18:00-19:30 WePOS-23.10
Architecture for a Multimodal and Domain-Independent Clinical Decision Support System Software Development Kit
 Muro, Naiara* (*Vicomtech*); Larburu, Nekane (*Vicomtech*); Torres, Jordi (*Vicomtech*); Kerexeta, Jon (*Vicomtech*); Artola, Garazi (*Vicomtech*); Arrúe, Mónica (*Vicomtech*); Macía, Iván (*Vicomtech-Ik4*); Seroussi, Brigitte (*LIMICS*)

WePOS-24: 18:00-19:30 Hall B
eHealth, Games, and Education – Poster (Poster Session)

18:00-19:30 WePOS-24.1
An Ontology-Based Serious Game Design for the Development of Nutrition and Food Literacy Skills
 Mitsis, Konstantinos* (*National Technical University of Athens*); Zarkogianni, Konstantia (*National Technical University of Athens*); Bountouni, Nefeli (*Biomedical Simulations & Imaging Laboratory, National Technical*); Athanasiou, Maria (*National Technical University of Athens*); Nikita, Konstantina (*National Technical University of Athens*)

18:00-19:30 WePOS-24.2
Methodology for Assessing End-User Requirements in the Ella4Life Project: Elders' Perspectives about Self-Monitoring
 Kaczmarek, Mariusz* (*Gdansk University of Technology*); Velciu, Magdalena (*Foundation Ana Aslan International*); Spiru, Luiza (*Foundation Ana Aslan International*); Bujnowski, Adam (*Gdansk University of Technology*); Andrushevich, Alexey (*iHomeLab, Lucerne University of Applied Sciences & Arts*); Birrer, Edith (*Lucerne University of Applied Sciences & Arts*)

18:00-19:30 WePOS-24.3
Software Code Complexity Assessment using EEG Features
 Medeiros, Julio (*University of Coimbra*); Couceiro, Ricardo (*University of Coimbra*); Castelhana, João (*ICNAS, University of Coimbra*); Castelo-Branco, Miguel (*University of Coimbra*); Duarte, Gonçalo (*CISUC, University of Coimbra*); Duarte, Catarina (*Institute of Nuclear Sciences Applied to Health, University of C*); Durães, João (*Polytechnic Institute of Coimbra*); Madeira, Henrique (*Centre for Informatics & Systems of The University of Coimbra*); de Carvalho, Paulo* (*University of Coimbra*); Teixeira, César (*University of Coimbra*)

WePOS-25: 18:00-19:30 Hall B
General and Theoretical Informatics for Pediatric Health Applications – Poster (Poster Session)

18:00-19:30 WePOS-25.1
Learning Clusters in Autism Spectrum Disorder: Image-Based Clustering of Eye-Tracking Scanpaths with Deep Autoencoder
 Elbattah, Mahmoud* (*Université de Picardie Jules Verne*); Carette, Romuald (*Romuald Carette*); Dequen, Gilles (*University of Picardie Jules Verne*); Guérin, Jean-Luc (*Université de Picardie Jules Verne*); Cilia, Federica (*Université de Picardie Jules Verne*)

18:00-19:30 WePOS-25.2
Kinematic Features of a Simple and Short Movement Task to Predict Autism Diagnosis
 Vabalas, Andrius* (*The University of Manchester*); Gowen, Emma (*The University of Manchester*); Poliakoff, Ellen (*The University of Manchester*); Casson, Alexander James (*The University of Manchester*)

18:00-19:30 WePOS-25.3
Identifying Optimal Features from Heart Rate Variability for Early Detection of Sepsis in Pediatric Intensive Care
 Amiri, Paria* (*Tehran University of Medical Sciences*); Derakhshan, Amin (*Shahed University*); Gharib, Behdad (*Tehran University of Medical Sciences*); Liu, Ying-Hsang (*The Australian National University*); Mirzaaghayan, Mohamadreza (*Tehran University of Medical Sciences*)

18:00-19:30 WePOS-25.4
Asthma Device Calibrator (ADC)
 Sassiya, Bedouin (*Notre Dame University-louaize*); Chaaya, Pamela (*Notre Dame University-Louaize*); Ghnatios, Chady (*Notre Dame University-Louaize*); Kassem, Abdallah* (*Notre Dame University-Louaize*)

WePOS-26: 18:00-19:30 Hall B
Education and Simulation – Poster (Poster Session)

18:00-19:30 WePOS-26.1
Legal Issues in Implantable Medical Devices: Liability and Hedge
 Yi, Jungho* (*Seoul National University*); Seo, Jong Mo (*Seoul National University, School of Engineering*); Lee, Sang-Won (*Seoul National University*)

18:00-19:30 WePOS-26.2
Supervision of M.Sc. Theses using the Writing of a Scientific Article as a Framework to Increase Efficiency and Quality of Research Outcomes
 Ortiz-Catalan, Max* (*Chalmers University of Technology*); Middleton, Alexandra (*Princeton University*); Gustafsson, Magnus (*Chalmers University of Technology*)

WePOS-27: 18:00-19:30 Hall B
Translational Engineering for Healthcare Innovation and Commercialization – Poster (Poster Session)

18:00-19:30 WePOS-27.1
Realtime Indoor Workout Analysis using Machine Learning and Computer Vision
 Nagarkoti, Amit* (*Samsung R&D Bangalore*); Teotia, Revant (*Samsung R&D Bangalore*); Das, Pankaj Kumar (*Samsung R&D Bangalore*); Mahale, Amith Kumar (*Samsung R&D Bangalore*)

18:00-19:30 WePOS-27.2
PANDAS: Paediatric Attention-Deficit/Hyperactivity Disorder Application Software
 Mwamba, Hervé Mukenya* (*Stellenbosch University*); Fourie, Pieter Rousseau (*Stellenbosch University*); Van Den Heever, Dawie (*Stellenbosch University*)

18:00-19:30 WePOS-27.3
Cloud Database Construction for the Expressway Design by the use of the Medical Information
 Yambe, Tomoyuki* (*Tohoku Univ*)

18:00-19:30 WePOS-27.4
Research Platform for Medical Device Development to Simplify Translation to the Market
 Somerlik-Fuchs, Karin H* (*inomed Medizintechnik GmbH*); Uecker, Florian Cornelius (*Charité Universitätsmedizin Berlin*); Reich, Uta (*Charité Universitätsmedizin Berlin*); Kogut, Andreas (*Spinal Cord Injury Center, Heidelberg University Hospital*); Schiemer, Jonas (*Universitätsmedizin Mainz*); Olze, Heidi (*Charité Universitätsmedizin Berlin*); Rupp, Rüdiger (*Heidelberg University Hospital*); Kneist, Werner (*AVTC Unimedizin Mainz*); Hoffmann, Klaus-Peter (*Fraunhofer Institut für Biomedizinische Technik*); Krueger, Thilo B (*inomed Medizintechnik GmbH*)

18:00-19:30 WePOS-27.5
An Exploration of Form Factors for Sleep-Olfactory Interfaces
 Amores Fernandez, Judith* (*MIT Media Lab*); Maes, Pattie (*MIT Media Lab*); Dotan, Mae (*MIT Media Lab*)

18:00-19:30 WePOS-27.6
Non Invasive Brain Stimulation (NIBS) Study based on Ischemic Stroke Patients
 Sharma, Gaurav (*Indian Institute of Technology Mandi*); Karwal, Om (*Indian Institute of Technology Mandi*); Roy Chowdhury, Shubhajit* (*Indian Institute of Technology Mandi*)

- 18:00-19:30 WePOS-27.7
A Comparative Evaluation of SteamVR Tracking and the OptiTrack System for Medical Device Tracking
 Ameler, Tim (*Univ. of Applied Sciences & Arts (FH Dortmund)*); Blohme, Kai (*Univ. of Applied Sciences & Arts Dortmund (FH Dortmund)*); Brandt, Lilith (*Univ. of Applied Sciences & Arts Dortmund (FH Dortmund)*); Brüngel, Raphael (*Univ. of Applied Sciences & Arts Dortmund (FH Dortmund)*); Hensel, Alice (*Univ. of Applied Sciences & Arts Dortmund (FH Dortmund)*); Huber, Lisa (*Univ. of Applied Sciences & Arts (FH Dortmund)*); Kuper, Francis (*Univ. of Applied Sciences & Arts (FH Dortmund)*); Swoboda, Jessica (*Univ. of Applied Sciences & Arts Dortmund (FH Dortmund)*); Warnecke, Maren (*Univ. of applied Sciences & Arts (FH Dortmund)*); Warzecha, Michaela (*Univ. of Applied Sciences & Arts Dortmund (FH Dortmund)*); Froemke, Johannes (*Univ. of Applied Sciences & Arts Dortmund (FH Dortmund)*); Hess, Daniel (*Fachhochschule Dortmund – Univ. of Applied Sciences & Art*); Schmitz-Stolbrink, Annette (*Klinikum Dortmund*); Friedrich, Christoph M.* (*Univ. of Applied Sciences & Arts Dortmund; Dept. of*)
- 18:00-19:30 WePOS-27.8
Gait Analysis using Stereo Camera in Daily Environment
 Li, Yuan* (*Hitachi Ltd. Research & Development Group*); Zhang, Pan (*Hitachi (China) Research & Development Corporation*); Zhang, Yang (*Hitachi (China) Research & Development Corporation*); Miyazaki, Kunihiko (*Hitachi (China) Research & Development Corporation*)
- 18:00-19:30 WePOS-27.9
Development and Evaluation of a Customized Wrist-Hand Orthosis using 3D Technology for a Child with Cerebral Palsy – A Case Study
 Schmitz, Cristiane (*Federal Univ. of Technology – Paraná (UTFPR)*); Mori, Ivy Tiemi (*Federal Univ. of Technology Paraná*); Gamba, Humberto (*Federal Univ. of Technology UTFPR- C.N.P.J.*); Nohama, Percy (*Pontificia Universidade Católica do Paraná*); Abreu de Souza, Mauren* (*Pontifical Catholic Univ. of Paraná – PUCPR*)
- WePOS-28: 18:00-19:30 Hall B
Smart Implants – Poster (Poster Session)
- 18:00-19:30 WePOS-28.1
General Voltage Injection Device for Immunity Test of Active Implantable Neurostimulators to Electromagnetic Fields Over the Frequency Range 16.6Hz to 80MHz
 Li, Bing* (*Tsinghua University*); Wang, Weiming (*Tsinghua University*); Wu, Feng (*Beijing PINS medical Co., Ltd*); Hu, Chunhua (*Tsinghua University*); Liu, FangJun (*Tsinghua University*); Li, Luming (*Tsinghua University*)
- 18:00-19:30 WePOS-28.2
Technical, Medical and Ethical Challenges in Networks of Smart Active Implants
 Hoffmann, Klaus-Peter* (*Fraunhofer Institut für Biomedizinische Technik*); Olze, Heidi (*Charité Univ. Berlin*); Kneist, Werner (*AVTC Unimedizin Mainz*); Schiemer, Jonas (*Univ. Mainz*); Krueger, Thilo B (*inomed Medizintechnik GmbH*); Somerlik-Fuchs, Karin H (*Albert-Ludwigs-Univ. Freiburg*); Gottschalk, Michael (*VARTA Microbattery GmbH*); Kostelnik, Jan (*Würth Elektronik GmbH & Co. KG*); Schreivogel, Alina (*Würth Elektronik GmbH & Co. KG*); Ruff, Roman (*Fraunhofer Institut für Biomedizinische Technik*); Droste, Wiebke (*Institute for German, European & International Medical Law, Pu*); Rupp, Rüdiger (*Heidelberg Univ. Hospital*)
- WePOS-29: 18:00-19:30 Hall B
Research-Poster-1-Page We A (Poster Session)
- 18:00-19:30 WePOS-29.1
Using On-Demand, Multi-Sensor Wearable 3D-Printed Medical Device for Hemodialysis Patient Care
 Chen, Wei Ling (*Kaohsiung Veterans General Hospital*); Kan, Chung-Dann* (*National Cheng Kung University Hospital, Dept. of Surgery, Ta*)
- 18:00-19:30 WePOS-29.2
Coupled Active, Artificial Hair Cells for Enhanced Sound Detection
 Lenk, Claudia* (*TU Ilmenau*); Seeber, Lars (*Technische Universität Ilmenau*); Gutschmidt, Stefanie (*University of Canterbury*); Ziegler, Martin (*Technische Universität Ilmenau*)
- 18:00-19:30 WePOS-29.3
Adaptive Signal Processing Algorithm for Estimating Respiratory and Heart Rate by UWB Radar Technology
 Xu, Shengqian* (*Zhejiang Univ.*); Li, Peilun (*Zhejiang Univ.*); Karumudi, Rambabu (*Univ. of Alberta, ECE Dept.*); Chen, Gary C.-Y. (*Univ. of Alberta*); Ning, Gangmin (*Zhejiang Univ.*)
- 18:00-19:30 WePOS-29.4
Automated Stimulus Artefact Removal for the Clinical S1-S2 Pacing Protocol
 Nothstein, Mark* (*Karlsruhe Institute of Technology (KIT)*); Luik, Armin (*Staedtisches Klinikum Karlsruhe*); Wülfers, Eike Moritz (*Universitäts-Herzzentrum Freiburg – Bad Krozingen*); Jadidi, Amir (*Universitäts-Herzzentrum Freiburg – Bad Krozingen*); Doessel, Olaf (*Karlsruhe Institute of Technology (KIT)*); Schmitt, Claus (*Staedtisches Klinikum Karlsruhe*); Seemann, Gunnar (*University Heart Center Freiburg – Bad Krozingen*); Loewe, Axel (*Karlsruhe Institute of Technology (KIT)*)
- 18:00-19:30 WePOS-29.5
Development of a Wireless Tactile Measurement System for Quantitative Sensory Testing in Plantar Skin
 Ino, Shuichi* (*National Institute of Advanced Industrial Science & Technology*); Chikai, Manabu (*National Institute of Advanced Industrial Science & Technology*); Nomura, Yoshihiro (*Univ. of Tsukuba*); Doi, Kouki (*National Institute of Special Needs Education*); Nunokawa, Kiyohiko (*Tokyo International Univ.*); Honda, Tetsumi (*Hanno Seiya Hospital Rehabilitation Center*)
- 18:00-19:30 WePOS-29.6
The Importance of Biomarker Stability and Sampling Procedures of Saliva for the Design of Point-of-Care and Lab-on-Chip Devices
 Bellagambi, Francesca (*Univ. of Pisa, Dept. of Chemistry & Industrial*); Salvo, Pietro* (*National Research Council*); Lomonaco, Tommaso (*Univ. of Pisa, Dept. of Chemistry & Industrial*); Ghimenti, Silvia (*Univ. of Pisa, Dept. of Chemistry & Industrial*); Biagini, Denise (*Univ. of Pisa, Dept. of Chemistry & Industrial*); Trivella, Maria G. (*Istituto di Fisiologia Clinica-CNR, Pisa*); Di Francesco, Fabio (*Univ. of Pisa*); Fuoco, Roger (*Univ. of Pisa, Dept. of Chemistry & Industrial*)
- 18:00-19:30 WePOS-29.7
Label-Free Plasmonic Biosensor for Detection of Parkinson's Disease Biomarkers
 Robles, Denise* (*Rutgers University*); Lechuga, Laura (*Catalan Institute of Nanoscience & Nanotechnology*)
- 18:00-19:30 WePOS-29.8
NIR Spectroscopic Prediction of Urinary Components for Management of Protein and Salt Intake
 Suzuki, Ikuto* (*Graduate School of Natural Science & Technology, Kanazawa Univer*); Tsuruda, Takahiro (*Graduate School of Natural Science & Technology, Kanazawa Univ*); Nogawa, Masamichi (*Kanazawa Univ.*); Naito, Hisashi (*Kanazawa Univ.*); Ikarashi, Akira (*Aino Univ.*); Ogawa, Mitsuhiro (*Teikyo Univ.*); Yamakoshi, Ken-ichi (*Kanazawa Univ.*); Tanaka, Shinobu (*Kanazawa Univ.*)
- 18:00-19:30 WePOS-29.9
EMG Biofeedback Aided Rehabilitation Game for Patients with Oropharyngeal Dysphagia
 Mathew James, Nisanth* (*Anhalt Univ. of Applied Sciences*); Shaji, Ashly (*Anhalt Univ. of Applied Sciences*); Bracio, Boris Romanus (*Univ. of Applied Science Anhalt*); Pannier, Judith (*Städtisches Klinikum Dessau*)
- 18:00-19:30 WePOS-29.10
A Model Predictive Control Algorithm for Joint Insulin Infusion and Carbohydrates Intake Suggestion in Type 1 Diabetes
 Pavan, Jacopo (*Univ. of Padova*); Facchinetti, Andrea (*Univ. of Padova*); Sparacino, Giovanni (*Univ. of Padova*); Del Favero, Simone* (*Univ. of Padova, Padova, Italy*)

- 18:00-19:30 WePOS-29.11
Next-Generation Wheelchairs Will Incorporate Brain-Controlled Exoskeleton Robotic Arms
 Catalán Orts, José María* (*Univ. Miguel Hernandez de Elche*); Díez Pomares, Jorge (*Univ. Miguel Hernández de Elche*); Blanco Ivorra, Andrea (*Univ. Miguel Hernandez de Elche*); Bertomeu-Motos, Arturo (*Univ. Miguel Hernandez de Elche*); García Perez, José Vicente (*Univ. Miguel Hernandez de Elche*); Lopez-Perez, David (*Univ. Miguel Hernandez*); Garcia-Aracil, Nicolas (*Univ. Miguel Hernandez*)
- 18:00-19:30 WePOS-29.12
Dot Code Activation Area for Braille-to-Voice Function in Braille Learning Materials
 Doi, Kouki* (*National Institute of Special Needs Education*); Nishimura, Takahiro (*National Institute of Special Needs Education*); Fujimoto, Hiroshi (*Waseda University*)
- 18:00-19:30 WePOS-29.13
Elderly Care Robot to Recognize and Alert Emergency Situation
 Lee, Deok-Won (*Gwangju Institute of Science & Technology*); Elsharkawy, Ahmed (*Gwangju Institute of Science & Technology*); Lee, Yun-dong (*Gwangju Institute of Science & Technology (GIST)*); Kim, SeungJun (*Gwangju Institute of Science & Technology*); Jun, Kooksung (*Gwangju Institute of Science & Technology*); Naheem, Khawar (*Gwangju Institute of Science & Technology (GIST)*); Kim, Mun Sang* (*Gwangju Institute of Science & Technology*)
- 18:00-19:30 WePOS-29.14
Muscle Force Estimation for Upper Limb Assistive Device for Home Setting
 Muhamad, Fadzli* (*Shibaura Institute of Technology*); Hanafusa, Akihiko (*Shibaura Institute of Technology*); Kubota, Yuji (*Shibaura Institute of Technology*); Nishimori, Daigo (*Shibaura Institute of Technology*)
- 18:00-19:30 WePOS-29.15
Evaluation of Sucking Ability in Infants by using a Portable Tongue Movement Detection Device
 Nishi, Eri* (*Setsunan Univ.*); Okuda, Ryousuke (*Setsunan Univ.*); Niikawa, Takuya (*Osaka Electro-Communication Univ.*)
- 18:00-19:30 WePOS-29.16
Development of a Skin Patch Biophotonic Sensor using Impedance Elasticity for Simultaneous Diagnosis and Treatment of Pressure Ulcers
 Park, Eun-Bin (*Keimyung University*); Kim, Chan-Il (*Keimyung University*); Hwang, Seokmin (*Keimyung*); Lee, Jong-Ha* (*Keimyung University, School of Medicine*)
- 18:00-19:30 WePOS-29.17
Long-Term Heart Rate Variability in Bovines
 Yuda, Emi* (*Tohoku Univ. Graduate School of Engineering*); Yayo, Ken-ichi (*National Agriculture & Food Research Organization*); Hayano, Junichiro (*Nagoya City Univ.*)
- 18:00-19:30 WePOS-29.18
Pulsation Measurement via Wearable Devices based on Bioelectromagnetic Responses
 Muramatsu, Dairoku* (*Tokyo University of Science*); Nakada, Yuno (*Tokyo University of Science*)
- 18:00-19:30 WePOS-29.19
Design and Simulation of Optimum Interdigitated Electrode Structure
 Tamilselvi, Munusamy (*National Central Univ.*); Settu, Kalpana (*National Taipei Univ.*); Tsai, Jang-Zern* (*National Central Univ.*)
- 18:00-19:30 WePOS-29.20
Forearm is a Suitable Part of Exerciser for a Wireless Vital Sensor Node in Terms of Accurate Vital Sensing and Reliable Data Transmission
 Maruo, Hiroto (*Osaka City Univ.*); Shimazaki, Takunori (*Osaka City Univ.*); Hara, Shinsuke* (*Osaka City Univ.*)
- 18:00-19:30 WePOS-29.21
Deep Learning Algorithm for Preterm Birth Monitoring using STFT Images of Segmented Uterine EHG Data
 Jo, Young Chang* (*Korea Electronics Technology Institute*); Hong, Hyuckki (*Korea Electronics Technology Institute*); Hwang, Won Hee (*Korea Electronics Technology Institute*); Hwang, Dong Hyun (*Korea Electronics Technology Institute*); Jeong, Chan Hee (*Korea Electronics Technology Institute*); Choi, Yeon Shik (*Korea Electronics Technology Institute*); Jung, Suk Won (*Korea Electronics Technology Institute*)
- 18:00-19:30 WePOS-29.22
Design of an Electrocardiogram Measurement System using a Capacitively Coupled Electrode Array Capable of Posture Tracking
 Arima, Yuto* (*Hosei University*); Suzuki, Shuhei (*Hosei University*); Nakamura, Tetsuo (*Meisei University*); Nakamura, Sousuke (*Hosei University*)
- 18:00-19:30 WePOS-29.23
Detection of Cell Attachment on Interdigitated Electrodes by Means of Impedance Spectroscopy
 Mojena Medina, Dahiana* (*Universidad Carlos III de Madrid*); Quevedo de Cea, Rosario (*Universidad Carlos III de Madrid*); López-Ruiz, Nuria (*Universidad Carlos III de Madrid*); Acedo Gallardo, Pablo (*Universidad Carlos III de Madrid*)
- 18:00-19:30 WePOS-29.24
Implementation of the Recurrent Neural Networks onto the Remote Photoplethysmography-Based Heart Rate Monitoring
 Woo, Jong-Hyuk (*Seoul National Univ., Samsung Electronics*); Choi, Seung-Won (*Seoul National Univ.*); Park, Yong-In (*Samsung Electronics Co., Ltd.*); Kim, Joon-Seok (*Samsung Electronics Co., Ltd.*); Kim, Seong-Woo (*Seoul National Univ.*); Seo, Jong Mo* (*Seoul National Univ., School of Engineering*)
- 18:00-19:30 WePOS-29.25
An Adaptive Bladder Volume Estimation Model for Wearable Electrical Impedance Measurement
 Noyori, Shuhei* (*The University of Tokyo*); Noguchi, Hiroshi (*The University of Tokyo*); Mori, Taketoshi (*The University of Tokyo*); Sanada, Hiromi (*The University of Tokyo*)
- 18:00-19:30 WePOS-29.26
Multimodal Colon Cancer Imaging Database for Disease Modeling
 Credi, Caterina (*Univ. of Florence*); Bocchi, Leonardo* (*Università degli Studi di Firenze, Firenze, Italy*); Picon, Artzai (*Tecnalia Research & Innovation*); L. Saratxaga, Cristina (*Tecnalia Research & Innovation*); Sánchez-Peralta, Luisa Fernanda (*Centro de Cirugía de Mínima Invasión Jesús Usón*); Ortega-Morán, Juan Francisco (*Centro de Cirugía de Mínima Invasión Jesús Usón*); Bote Chacón, Jorge (*Centro de Cirugía de Mínima Invasión Jesús Usón*); Azpeitia Garcia, Agueda (*Biobanco Vasco, Fundación Vasca de Innovación e Investigación Sa*); Egia Bizkarralegorra, Ainara (*Biobanco Vasco, Fundación Vasca de Innovación e Investigación Sa*); Glover, Ben (*Imperial College*); Sorelli, Michele (*Univ. of Florence*); Pavone, Francesco Saverio (*LENS – Univ. of Florence*); Cicchi, Riccardo (*National Institute of Optics, National Research Council. LENS, E*)
- 18:00-19:30 WePOS-29.27
Preliminary Investigation on 3D-Printed Ti6Al4V Scaffolds with a Bioactive and Electrically Conductive Polymer Coating
 Polley, Christian* (*University of Rostock*); Distler, Thomas (*Friedrich Alexander University Erlangen Nuremberg*); Weizel, Alina (*University of Rostock*); Detsch, Rainer (*Friedrich Alexander University Erlangen Nuremberg*); Boccaccini, Aldo R. (*Friedrich Alexander University Erlangen Nuremberg*); Seitz, Hermann (*University of Rostock*)
- 18:00-19:30 WePOS-29.28
Influence of Applied Magnetic Field on Cultured Muscle Cells in Differentiation
 Uto, Sadahito* (*Osaka Institute of Technology*)
- 18:00-19:30 WePOS-29.29
Anti-Inflammatory Coating of Melanin by Layer-by-Layer Assembly
 Eom, Taesik (*Inha Univ.*); Shim, Bong Sup* (*Inha Univ.*)

18:00-19:30	WePOS-29.30	A Diffusion Gradient Generator to Maintain Stable Concentration Gradients within Agarose and/or Agarose-Collagen Scaffolds Dravid, Anusha* (<i>Univ. of Auckland</i>); Aqrawe, Zaid (<i>Univ. of Auckland</i>); Parittotokkaporn, Tassanai (<i>Univ. of Auckland</i>); Raos, Brad J (<i>Univ. of Auckland</i>); O'Carroll, Simon (<i>Univ. of Auckland</i>); Svirskis, Darren (<i>Univ. of Auckland, School of Pharmacy</i>)	18:00-19:30	WePOS-30.2	EEG Functional Network in Oddball Paradigm: Connectivity Estimation based on ERP Waveforms Kim, Minju (<i>Ulsan National Institute of Science & Technology</i>); Lee, Jongmin (<i>UNIST</i>); Lee, Taejun (<i>UNIST</i>); Kim, Sung-Phil* (<i>Ulsan National Institute of Science & Technology</i>)
18:00-19:30	WePOS-29.31	Jerk Components are Dependent on Movement Size during Arm Cranking Zsenák, István (<i>University of Pécs</i>); Botzheim, Lilla (<i>Pazmany Peter Catholic University</i>); Laczko, Jozsef* (<i>Wigner Res. Ctr. for Physics, Univ. of Pazmany Peter Cath. Univ.</i>); Piovesan, Davide (<i>Gannon University</i>)	18:00-19:30	WePOS-30.3	A System to Record EEG from Multiple Adult Zebrafish Lee, Yuhyun* (<i>Dept. of Robotics Engineering, Daegu Gyeongbuk Institute of</i>); Kim, Sohee (<i>Daegu Gyeongbuk Institute of Science & Technology (DGIST)</i>)
18:00-19:30	WePOS-29.32	Passive Knee Exoskeleton Reduces Quadriceps Muscle Activation during Downhill Skiing: A Pilot Study Azocar, Alejandro* (<i>University of Michigan</i>); Leestma, Jennifer (<i>Georgia Institute of Technology</i>); Kudzia, Pawel (<i>Simon Fraser University</i>); Lazzaroni, Maria (<i>Istituto Italiano di Tecnologia</i>); Liu, Yixing (<i>KTH Royal Institute of Technology</i>); Bayon, Cristina (<i>University of Twente</i>); Rampeltshammer, Wolfgang (<i>University of Twente</i>); van Asseldonk, Edwin h.f. (<i>University of Twente</i>)	18:00-19:30	WePOS-30.4	Analysis of EEG Signal Changes during Attention Training Game Contents Park, Jung-Hyun (<i>Korea Polytechnic University</i>); Shin, Sung-Wook (<i>Korea Polytechnic University</i>); Chung, Sung-Taek* (<i>Korea Polytechnic University</i>)
18:00-19:30	WePOS-29.33	Natural Dynamics of Spring-Like Running with Asymmetric Legs Zhang, Zhiqiang* (<i>National Research Center for Rehab. Technical Aids</i>); Guo, JunChao (<i>National Research Center for Rehab. Technical Aids</i>); Yang, Jiemeng (<i>National Research Center for Rehab. Technical Aids</i>); Wang, Zhenze (<i>National Research Center for Rehab. Technical Aids</i>)	18:00-19:30	WePOS-30.5	Prediction of Reaching Direction from EEG Signal in a Reaction Task Yoshino, Koya* (<i>Nagaoka University of Technology</i>); Nambu, Isao (<i>Nagaoka University of Technology</i>); Wada, Yasuhiro (<i>Nagaoka University of Technology</i>)
18:00-19:30	WePOS-29.34	Smart Maltose Microneedle for Blood Sampling Fabricated by Stepwise Controlled Drawing Puttaswamy, Srinivasu Valagerahally* (<i>Ulster Univ.</i>); Fishlock, Sam (<i>Ulster Univ.</i>); Steele, David (<i>Ulster Univ.</i>); Navarro, Cesar Oswaldo (<i>Ulster Univ.</i>); Lubarsky, Gennady (<i>Ulster Univ.</i>); Raj, Shasidran (<i>Ulster Univ.</i>); Lee, Chengkuo (<i>National Univ. of Singapore</i>); McLaughlin, James (<i>Univ. of Ulster</i>)	18:00-19:30	WePOS-30.6	Resynchronizing Recordings using Fixation-Related Potentials Wobrock, Dennis* (<i>Bielefeld University</i>); Finke, Andrea (<i>Bielefeld University, Bielefeld, Germany</i>); Ritter, Helge (<i>CITEC, CoR-Lab, Bielefeld University, Bielefeld, Germany</i>); Schack, Thomas (<i>CITEC, Bielefeld University</i>)
18:00-19:30	WePOS-29.35	High Throughput Generation of Calcium-Alginate Micro-Particles using Centrifugal Force-Based Device Le, Thi Huong* (<i>University of Ulsan</i>); Duong, Thuy (<i>University of Ulsan</i>); Phan, Huu Lam (<i>Ulsan University</i>); Nguyen, Trung (<i>University of Ulsan</i>); Nguyen, Hang Phuong (<i>University of Ulsan</i>); Son, Hyewon (<i>University of Ulsan, Ulsan</i>); Oh, Seok (<i>University of Ulsan</i>); Lee, HyoSeok (<i>University of Ulsan</i>); Lee, Suwon (<i>University of Ulsan</i>); Hwang, Changho (<i>Ulsan University Hospital</i>); Koo, Kyoin (<i>University of Ulsan</i>)	18:00-19:30	WePOS-30.7	Emotional Modulation of Late Positive Potentials Elicited by Dynamic Facial Expressions Momose, Keiko* (<i>Waseda University</i>)
18:00-19:30	WePOS-29.36	Distance-Preserving Speech Visualization for the Hearing Impaired Pok, Gouchol* (<i>PaiChai University</i>)	18:00-19:30	WePOS-30.8	Basal Ganglia Adaptability Reduced in Diabetic Peripheral Neuropathy Patients with Impaired Balance Control Zheng, Yijia* (<i>Peking University</i>); Yuan, Geheng (<i>Peking University First Hospital</i>); Wang, Ye (<i>Communication University of China</i>); Zhang, Jue (<i>Peking University</i>)
18:00-19:30	WePOS-29.37	Cyber Physical CPR Training System with Physiological Feedback Kesavadas, Mrinali (<i>Mahomet-Seymour High School</i>); Rajeswaran, Pavithra* (<i>Univ. of Illinois at Urbana Champaign</i>)	18:00-19:30	WePOS-30.9	The Effect of Additional Cognitive Tasks on Balance in the Elderly: A Preliminary GFT-fMRI Study Guo, Wenyu* (<i>Peking Univ., Shandong Univ.</i>); Wang, Ye (<i>Communication Univ. of China</i>); Zheng, Yijia (<i>Peking Univ.</i>); Yue, Zhuang (<i>Peking Univ.</i>); Zhang, Jue (<i>Peking Univ.</i>)
WePOS-30: 18:00-19:30		Hall B	18:00-19:30		
Research-Poster-1-Page We B (Poster Session)			18:00-19:30		
18:00-19:30	WePOS-30.1	Tracking Functional Connectivity Dynamics across Intrinsic Connectivity Networks from Resting-State EEG Shou, Guofa* (<i>Univ. of Oklahoma</i>); Ding, Lei (<i>Univ. of Oklahoma</i>)	18:00-19:30	WePOS-30.10	Alteration of Middle-Frequency Components in Patients with Diabetic Peripheral Neuropathy using Graph Signal Processing Zheng, Yijia* (<i>Peking Univ.</i>); Wang, Ye (<i>Communication Univ. of China</i>); Yue, Zhuang (<i>Peking Univ.</i>); Guo, Wenyu (<i>Peking Univ., Shandong Univ.</i>); Zhang, Jue (<i>Peking Univ.</i>)
			18:00-19:30	WePOS-30.11	Frequency Component Differences in Plantar Stimulation Task using GSP: A fMRI Comparison Study of the Young and the Elderly Yue, Zhuang* (<i>Peking University</i>); Zheng, Yijia (<i>Peking University</i>); Wang, Ye (<i>Communication University of China</i>); Zhang, Jue (<i>Peking University</i>)
			18:00-19:30	WePOS-30.12	A Magnetoencephalographic Hyperscanning System Enabling Natural Face-to-Face Communication Yokosawa, Koichi* (<i>Hokkaido Univ.</i>); Shimoyjo, Atsushi (<i>Hokkaido Univ.</i>); Watanabe, Hayato (<i>Hokkaido Univ.</i>); Yagyu, Kazuyori (<i>Hokkaido Univ.</i>); Sonehara, Tsuyoshi (<i>Hitachi Ltd.</i>); Boasen, Jared (<i>Hokkaido Univ.</i>); Shiraishi, Hideaki (<i>Hokkaido Univ.</i>); Saito, Takuya (<i>Hokkaido Univ.</i>)

- 18:00-19:30 WePOS-30.13
Evaluation of Auditory Information Processing using a Dichotic Listening Test with Frequency Tagging
 Asami, Nao* (*Tokyo Denki University*);
 Tanaka, Keita (*Tokyo Denki University*)
- 18:00-19:30 WePOS-30.14
Measurements of MEG with a Superconducting Self-Shield and Zero Boil-Off System
 Tanaka, Keita* (*Tokyo Denki University*); Tsukahara, Akihiko (*Tokyo Denki University*); Uchikawa, Yoshinori (*Tokyo Denki University*); Hornberger, Erik (*Sumitomo Heavy Industries, Ltd.*); Mizutani, Shouhei (*Sumitomo Heavy Industries, Ltd.*); Yokoyama, Kazuhiro (*Sumitomo Heavy Industries, Ltd.*); Yamaguchi, Takashi (*Sumitomo Heavy Industries, Ltd.*); Tsunematsu, Shoji (*Sumitomo Heavy Industries, Ltd.*); Kato, Takanori (*Sumitomo Heavy Industries, Ltd.*); Narasaki, Katsuhiko (*Sumitomo Heavy Industries, Ltd.*)
- 18:00-19:30 WePOS-30.15
Neural Processing of Octave Illusion Revealed by Frequency Tagging
 Aizawa, Yoshiaki* (*Tokyo Denki University*);
 Tanaka, Keita (*Tokyo Denki University*)
- 18:00-19:30 WePOS-30.16
Automated Drosophila Brain Functional Area Delineation
 Chang, Wei (*National Tsing Hua Univ.*); Hsiao, Ching-Chun (*National Tsing Hua Univ.*); Hsiao, Jyun-Ya (*National Tsing Hua Univ.*); Chu, Li-An (*National Tsing Hua Univ.*); Swindlehurst, A. Lee (*Univ. of California, Irvine*); Chu, Shi-Wei (*National Taiwan Univ.*); Chiang, AnnShyn (*National Tsing Hua Univ.*); Wu, Shun Chi* (*National Tsing Hua Univ.*)
- 18:00-19:30 WePOS-30.17
Analysis of Brain Shift Transformation in Closed Cranium using MR Volume Images Acquired in Different Body Positions
 Kumamoto, Etsuko* (*Kobe University*); Hayashi, Shigeto (*Hyogo Emergency Medical Center, Kobe Red Cross Hospital*); Kyotani, Katsusuke (*Dept. of Radiology, Kobe University Hospital*); Matsuda, Kento (*Kobe University*); Nakai, Tomoaki (*Dept. of Neurosurgery, Kobe University Graduate School of M*); Nishino, Takashi (*Dept. of Chemical Science & Engineering Faculty of Engine*); Kohmura, Eiji (*Dept. of Neurosurgery, Kobe University Graduate School of M*)
- 18:00-19:30 WePOS-30.18
Estimating Active Brain Region of MRI from EEG
 Nakayama, Koharu* (*Doshisha Univ.*); Okuya, Teruhisa (*Panasonic Corporation, Eco Solutions Company*); Iwakawa, Mikio (*Panasonic Corporation, Eco Solutions Company*); Sasabe, Kohji (*Panasonic Corporation*); Uegaki, Yuriko (*Panasonic Corporation, Eco Solutions Company*); Akiyama, Iwaki (*Doshisha Univ.*); Watanabe, Yoshiaki (*Doshisha Univ.*)
- 18:00-19:30 WePOS-30.19
Changes in Brain Temperature when Applying Thermal Stimulus Measured by Magnetic Resonance Images
 Mikami, Kanako* (*Kokushikan University*);
 Oura, Kunihiko (*Kokushikan University*)
- 18:00-19:30 WePOS-30.20
Development of Continuous Speech-Evoked Electroencephalography to Predict Speech Intelligibility
 Na, Youngmin (*University of Ulsan*); Choi, Inyong (*University of Iowa*); Woo, Jihwan* (*University of Ulsan*)
- 18:00-19:30 WePOS-30.21
A Novel Approach to Quantification of Mental Effort
 Greene, Patrick* (*Johns Hopkins University*);
 Sarma, Sridevi V. (*Johns Hopkins University*)
- 18:00-19:30 WePOS-30.22
Anatomically Accurate Brain Phantom for Transcranial Magnetic Stimulation
 Magsood, Hamzah* (*Mechanical & Nuclear Engineering Dept. College of Engineering.*); Hadimani, Ravi L. (*Virginia Commonwealth University*)
- 18:00-19:30 WePOS-30.23
Feasibility of Detecting Steady-State Visual Evoked Potentials Contaminated by Intensity-Manipulated Muscular Artifacts
 Kanoga, Suguru* (*National Institute of Advanced Industrial Science & Technology*); Nakanishi, Masaki (*Univ. of California San Diego*); Murai, Akihiko (*National Institute of Advanced Industrial Science & Technology*); Tada, Mitsunori (*National Institute of Advanced Industrial Science & Technology*); Kanemura, Atsunori (*National Institute of Advanced Industrial Science & Technology*)
- 18:00-19:30 WePOS-30.24
Classification of Motor-Imagery EEG Considering Task Complexity
 Hori, Junichi* (*Niigata University*)
- 18:00-19:30 WePOS-30.25
Development of an Online Home Appliance Control System using Augmented Reality and an SSVEP-Based Brain-Computer Interface
 Park, Seonghun (*Hanyang University*); Choi, Kang-Min (*Hanyang University*); Im, Chang-Hwan* (*Hanyang University*)
- 18:00-19:30 WePOS-30.26
Performance Enhancement of Near-Infrared Spectroscopy-Based Brain-Computer Interfaces using Transcranial Near-Infrared Photobiomodulation of Prefrontal Cortex
 Kwon, Jinuk (*Hanyang Univ.*); Im, Chang-Hwan* (*Hanyang Univ.*)
- 18:00-19:30 WePOS-30.27
Comparison of Visual Stimuli for Steady-State Visual Evoked Potential-Based Brain-Computer Interfaces in VR Environment in Terms of Classification Accuracy and Visual Comfort
 Choi, Kang-Min (*Hanyang University*); Park, Seonghun (*Hanyang University*); Im, Chang-Hwan* (*Hanyang University*)
- 18:00-19:30 WePOS-30.28
Virtual Hand Rehabilitation with Force Guidance Adaptable to Mental States using Brain-Computer Interface
 Choi, Kup-Sze* (*Centre for Smart Health, School of Nursing, The Hong Kong Polyte*); Liang, Shuang (*Chinese Academy of Sciences*)
- 18:00-19:30 WePOS-30.29
Onset Detection of a Hybrid EEG-NIRS Brain-Computer Interface
 Han, Chang-Hee (*Technical University of Berlin*); Hwang, Han-Jeong* (*Kumoh National Institute of Technology*)
- 18:00-19:30 WePOS-30.30
Multidimensional Scaling Analysis of Natural Sounds for Inducing High Auditory Response Amplitude
 Ogino, Mikito* (*Dentsu ScienceJam Inc.*); Kanoga, Suguru (*National Institute of Advanced Industrial Science & Technology*); Tsuchiya, Yasuhiro (*Dentsu Inc.*); Mitsukura, Yasue (*Keio University*)
- 18:00-19:30 WePOS-30.31
An Optimal Re-Referencing Method for Ear-EEG-Based Endogenous Brain Computer Interfaces
 Choi, Soo-In (*Kumoh National Institute of Technology*);
 Choi, Ga-Young (*Kumoh National Institute of Technology*);
 Hwang, Han-Jeong* (*Kumoh National Institute of Technology*)
- 18:00-19:30 WePOS-30.32
The Interference of Cognitive-Motor Dual-Task on Walking Speed and Brain Activity in Young Adults: 3D Motion Analysis-fNIRS Study
 Huang, Xin* (*Dept. of Rehabilitation Medicine, The First Affiliated Hosp*); Lin, Chuang (*Shenzhen Institutes of Advanced Technology, Chinese Academy of S*); Li, Le (*The First Affiliated Hospital, Sun Yat-Sen University*)
- 18:00-19:30 WePOS-30.33
Suppression of Low Beta by the Action Observation Game Program based BCI (Brain computer interface) with FES (Functional Electrical Stimulation)
 Son, JiEun (*Keimyung Univ.*); Ku, Jeonghun* (*Keimyung Univ.*)

- 18:00-19:30 WePOS-30.34
Asynchronous Decoding of P300 Potentials for Self-Paced BCI Control
 Will, Matthias* (*Otto-von-Guericke Univ. Magdeburg*); Reichert, Christoph (*Leibniz Institute for Neurobiology Magdeburg*); Rose, Georg (*Otto-von-Guericke Univ., Magdeburg*)
- 18:00-19:30 WePOS-30.35
A Novel Multi-Class Visual Stimuli for Steady-State Visual Evoked Potential based Brain-Computer Interfaces
 Kim, Sang-Su* (*Chonnam National University*); Kim, Do-Won (*Chonnam National University*)
- 18:00-19:30 WePOS-30.36
Four-Class MI EEG Complexity Classification for ALS Patients
 Huang, Tsai Hsun (*National Taipei University of Technology*); Yang, Shang-Qing (*National Taipei University of Technology*); Liu, Yi-Hung* (*National Taipei University of Technology*)
- 18:00-19:30 WePOS-30.37
Possibility of Bone-Conductive Earphones for Electroencephalogram Experiments
 Lee, Juok (*Chonnam National University*); Kim, Do-Won* (*Chonnam National University*)
- 18:00-19:30 WePOS-30.38
Neuron-Type Utility in a Brain-Machine Interface
 Garcia-Garcia, Martha G.* (*University of Toronto*); Marquez-Chin, Cesar (*Toronto Rehabilitation Institute*); Popovic, Milos R. (*University of Toronto*)
- 18:00-19:30 WePOS-30.39
Low-Cost and Open-Source Semi-Dry Electrodes for Assistive BCIs
 Malvicino, Selene (*University of Genoa*); Schiatti, Lucia* (*Istituto Italiano di Tecnologia*); Tessadori, Jacopo (*IIT – Italian Institute of Technology*); Barresi, Giacinto (*Istituto Italiano di Tecnologia*); Casadio, Maura (*University of Genoa*); Mattos, Leonardo (*Istituto Italiano di Tecnologia*)
- 18:00-19:30 WePOS-30.40
Gaze and Attention Shifts as the Source of Human Error in P300 BCI: A Pilot Study
 Pronina, Anna* (*Lomonosov Moscow State University*)
- 18:00-19:30 WePOS-30.41
Computational Study to Derive the Stochastic Model for Estimation of Mechanical Behavior during Ventricular Tachyarrhythmia
 Jeong, Da Un (*Kumoh National Institute of Technology*); Lim, Ki Moo* (*Kumoh National Institute of Technology*)
- 18:00-19:30 WePOS-30.42
Millisecond Optogenetic Cardioversion of Murine Hearts using Global Illumination
 Quiñonez Uribe, Raul Alejandro* (*Max Planck Institute for Dynamics & Self-Organization*); Luther, Stefan (*Max Planck Institute for Dynamics & Self-Organization*); Richter, Claudia (*Max Planck Institute for Dynamics & Self-Organization*)
- 18:00-19:30 WePOS-30.43
Evaluation of Real Time Catheter Tissue Contact using Unipolar Intracardiac Signal Morphology
 Jovicic, Ivana* (*BioSig Technologies Inc*); Padmanabhan, Deepak (*Mayo Clinic*); Yasin, Omar (*Mayo Clinic*); Foxall, Tom (*BioSig Technologies Inc*); Fakhari, Sina (*BioSig Technologies Inc*); Krstic, Djordje (*BioSig Technologies Inc*); Vlajinic, Branislav (*BioSig Technologies Inc*); Mikolaitis, Lora (*BioSig Technologies Inc*); Drakulic, Budimir (*BioSig Technologies Inc*); Venkatachalam, K.L. (*Mayo Clinic*); Asirvatham, Samuel (*Mayo Clinic*)
- 18:00-19:30 WePOS-30.44
Computational Prediction of Cardiac Electromechanical Delay under Normal Sinus Rhythm and Arrhythmia Conditions
 Heikhmakhtiar, Aulia Khamas (*Kumoh National Institute of Tech.*); Jeong, Da Un (*Kumoh National Institute of Tech.*); Lim, Ki Moo* (*Kumoh National Institute of Tech.*)
- 18:00-19:30 WePOS-30.45
A Paced QRS Detector for Automatic Identification of Catheter Ablation Targets in Ventricular Arrhythmias
 Hoyland, Philip* (*Université de Lorraine*); Battaglia, Alberto (*Université de Lorraine*); de Chillou, Christian (*IADI, Inserm & Université de Lorraine & with Pôle Cardiologie*); Felblinger, Jacques (*IADI, UHP-Inserm ERI 13*); Odille, Freddy (*IADI, Inserm, Université de Lorraine & with CIC-IT 1433, Inser*)
- 18:00-19:30 WePOS-30.46
Non-Contact Cardiac Beat Detection using Dot-Line based Oneshot Scanner
 Nagamatsu, Genki* (*Kyushu Univ.*); Furukawa, Ryo (*Hiroshima City Univ.*); Kawasaki, Hiroshi (*Kyushu Univ.*)
- 18:00-19:30 WePOS-30.47
Transcutaneous Energy Transmission System for Ventricular Assist Device with Transmission Distance of Two Cm: Analysis of Power Consumption using Equivalent Circuit
 Miura, Daiki* (*Tokyo University of Science*); Shiba, Kenji (*Tokyo University of Science*)
- 18:00-19:30 WePOS-30.48
Analysis of High-Frequency Leakage Current from an Air-Core Transcutaneous Transformer to Ground through the Human Body
 Shiba, Kenji* (*Tokyo University of Science*)
- 18:00-19:30 WePOS-30.49
Couette Shearing Device for the Investigation of Shear-Induced Damage of the Primary Hemostasis by Left Ventricular Assist Devices
 Lommel, Michael* (*Charité — Universitätsmedizin Berlin*); Goubergrits, Leonid (*Institute for Imaging Science & Computational Modelling in Car*); Affeld, Klaus (*Biofluid Mechanics Laboratory, Institute for Imaging Science and*); Kertzschner, Ulrich (*Biofluid Mechanics Laboratory, Institute for Imaging Science and*)
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- WePOS-31: 18:00-19:30 Hall B
Research-Poster-1-Page We C (Poster Session)
- 18:00-19:30 WePOS-31.1
Determination of Ejection Duration based on a Finger Pulse Waveform: Methodology and Feasibility
 Hametner, Bernhard* (*AIT Austrian Institute of Technology*); Mayer, Christopher (*AIT Austrian Institute of Technology*); Chorherr, Philipp (*TU Wien*); Bachler, Martin (*AIT Austrian Institute of Technology*); Kaniusas, Eugenijus (*Vienna Univ. of Technology*); sehnert, Walter (*Clinical Research Institute Dortmund*); Mikisek, Ines (*ines mikisek coaching*); Mengden, Thomas (*Kerckhoff Clinic*); Wassertheurer, Siegfried (*AIT Austrian Institute of Technology, Health & Environment Dept.*)
- 18:00-19:30 WePOS-31.2
A Study of the Frequency Band of Filter for High Accuracy Detection of the R-Peak Wave from Head Electrocardiogram
 Kihara, Hiromu (*Fukuoka Institute of Technology*); Lee, Jihyoung* (*Fukuoka Institute of Technology*); Kusaba, Shihori (*Fukuoka Institute of Technology*); Fukumoto, Yuto (*Fukuoka Institute of Technology*); Ikejiri, Kouki (*Fukuoka Institute of Technology*); Isizaki, Shouta (*Fukuoka Institute of Technology*); Yamakoshi, Takehiro (*Fukuoka Institute of Technology*)
- 18:00-19:30 WePOS-31.3
Reduce Error and Update Time of Continuous Cardiac Output
 Moon, Sang-Hyub (*Dongguk University*); Nam, Ki Chang* (*Dongguk University College of Medicine*)
- 18:00-19:30 WePOS-31.4
Detection of Atrial Fibrillation using a Wrist Device
 Solosenko, Andrius* (*Kaunas University of Technology*); Petrenas, Andrius (*Kaunas University of Technology*); Paliakaite, Birute (*Kaunas University of Technology, Biomedical Engineering Institut*); Sornmo, Leif (*Lund University*); Marozas, Vaidotas (*Kaunas University of Technology*)

- 18:00-19:30 WePOS-31.5
Resecure Quantification Analysis Applied to Cardiac and Respiratory Signals of Patients on Weaning Process
 Giraldo, Beatriz* (*Univ. Politècnica de Catalunya*); Garriga, Pau (*Univ. Politècnica de Catalunya*); Diaz, Ivan (*Hospital de la Santa Creu i Sant Pau*); Benito, Salvador (*Hospital de la Santa Creu i Sant Pau*)
- 18:00-19:30 WePOS-31.6
Comparison of Validity of Blood Pressure Estimation Parameters between Blood Pressure Change Patterns
 Yang, Seungman (*Seoul National University*); Kim, Hee Chan* (*Seoul National University*)
- 18:00-19:30 WePOS-31.7
Analysis of the Influence of Cuff Blood Pressure on the Prediction of Non-Invasive Fractional Flow Reserve from CTCA and Reduced Order CFD
 Zhang, Jun-Mei (*National Heart Center*); Chandola, Gaurav (*National Heart Center Singapore*); Low, Ris (*National Heart Center Singapore*); Tan, Ru-San (*National Heart Centre Singapore*); Wong, Aaron Sung Lung (*National Heart Centre Singapore*); Tan, Jack Wei Chieh (*National Heart Centre Singapore*); Yeo, Khung Keong (*National Heart Centre Singapore*); Chai, Ping (*National University Heart Centre Singapore*); Teo, Lynette Li San (*National University Hospital*); Ong, Ching Ching (*National University Hospital*); Low, Adrian F (*National University Hospital*); Baskaran, Lohendran (*National Heart Centre Singapore*); Chua, Terrance (*National Heart Centre*); Koh, Tian Hai (*National Heart Centre Singapore*); Tan, Swee Yaw (*National Heart Center*); Lim, Soo Teik (*National Heart Centre Singapore*); Zhong, Liang* (*National Heart Centre Singapore, Duke-NUS Medical School, Nation*)
- 18:00-19:30 WePOS-31.8
Pressure Wave Propagation in the Artificial Artery Model with Stenosis
 Shimizu, Hiroto* (*Doshisha Univ.*); Fumiaki, Iwase (*Doshisha Univ.*); Matsukawa, Mami (*Doshisha Univ.*); Ventre, Jeanne (*Univ. Paris 1 Panthéon-Sorbonne*); Lagrée, Pierre-Yves (*UPMC*)
- 18:00-19:30 WePOS-31.9
Influence of Exercise on the Modified Blalock-Taussig Shunt: Patient-Specific Hemodynamic Analysis
 Liu, Jinlong (*Shanghai Children's Medical Center, Shanghai Jiao Tong Univ.*); Xiong, Jiwen (*Shanghai Children's Medical Center, Shanghai Jiao Tong Univ.*); Qian, Yi (*Macquarie Univ.*); Huang, Jihong (*Shanghai Children's Medical Center, Shanghai Jiao Tong Univ.*); Sun, Qi* (*Shanghai Children's Medical Center, Shanghai Jiao Tong Univ.*); Liu, Jinfen (*Shanghai Children's Medical Center, Shanghai Jiao Tong Univ.*)
- 18:00-19:30 WePOS-31.10
Unsuccessful Flow-Diverter Treatment of Intracranial Aneurysms – An Academic In-Silico Study
 Berg, Philipp* (*University of Magdeburg*); Roloff, Christoph (*University of Magdeburg*); Janiga, Gabor (*University of Magdeburg*); Beuing, Oliver (*University Hospital Magdeburg*)
- 18:00-19:30 WePOS-31.11
Computational Simulation of Mechanically Ventilated Neonatal Patients in the Intensive Care Unit
 Saffaran, Sina* (*The Univ. of Warwick*); Das, Anup (*Univ. of Warwick*); Algarni, Saleh (*Univ. of Nottingham*); Laviola, Marianna (*Univ. of Nottingham*); Niklas, Christian (*Univ. of Nottingham*); Hardman, Jonathan G. (*Univ. of Nottingham*); Sharkey, Don (*Univ. of Nottingham*); Bates, Declan Gerard (*Univ. of Warwick*)
- 18:00-19:30 WePOS-31.12
Cardiopulmonary Coupling as a New Parameter for Non-Intrusive Sleep Staging based on Polyvinylidene Fluoride Sensor
 Kwon, Hyunbin (*Seoul National University*); Choi, Sang Ho (*Seoul National University*); Jin, Hyungwon (*Seoul National University*); Lee, Yujin (*Seoul National University Hospital*); Park, Kwang S.* (*Seoul National University*)
- 18:00-19:30 WePOS-31.13
Design of ECG Sensor for Fatigue Detection
 Salb, David Julian (*Reutlingen University*); Gromer, Markus Elia (*Reutlingen University*); Walzer, Thomas (*Reutlingen University*); Martinez Madrid, Natividad* (*Reutlingen University*); Seepold, Ralf (*HTWG Konstanz*)
- 18:00-19:30 WePOS-31.14
Development of Evaluation System for Von Willebrand Factor Degradation by Mechanical Stress of Blood Pump
 Inoue, Yusuke* (*Institute of Development, Aging & Cancer, Tohoku Univ.*); Hayakawa, Masaki (*Nara Medical Univ.*); Yamada, Akihiro (*Tohoku Univ.*); Matsumoto, Masanori (*Nara Medical Univ.*); Horiuchi, Hisanori (*Tohoku Univ.*); Shiraishi, Yasuyuki (*Tohoku Univ.*); Tachizaki, Yuma (*Tohoku Univ.*); Sahara, Genta (*Tohoku Univ.*); Fukaya, Aoi (*Tohoku Univ.*); Iwamoto, Naoki (*Tohoku Univ.*); Morita, Ryosuke (*Tohoku Univ.*); Yambe, Tomoyuki (*Tohoku Univ.*)
- 18:00-19:30 WePOS-31.15
A Multi-Objective Optimisation of Stent Geometries
 Wright, Heidi (*UNSW*); Khullar, Somesh (*University of New South Wales*); Jinbo, Liu (*University of New South Wales*); Ray, Tapabrata (*University of New South Wales*); Beier, Susann* (*University of New South Wales*)
- 18:00-19:30 WePOS-31.16
Age Related Correlation of Short-Term RR Interval Means and HRV Measures based on Holter Data in Normal People
 Pan, Yue (*Institute of Basic Medical Sciences, Chinese Academy of Medical*); Wang, Zhigang (*Peking Union Medical College*); Peng, Yi* (*Institute of Basic Medical Sciences, Chinese Academy of Medical*)
- 18:00-19:30 WePOS-31.17
Portable Nitric Oxide Generator for Intravascular Catheters
 Novak, Ondrej* (*University of Utah*); Konopinska, Kamila K. (*University of Michigan*); Meyerhoff, Mark E. (*University of Michigan*); Brown, Richard (*University of Utah*)
- 18:00-19:30 WePOS-31.18
Robust Conditional Granger Causality Analysis
 Zheng, Yu (*Michigan State University*); Li, Tongtong* (*Michigan State University*)
- 18:00-19:30 WePOS-31.19
Decreased Motor Control of the Core Muscles in Osteoarthritis Patients
 Wang, Hanbin* (*Peking Univ.*); Lin, Chutong (*Peking Univ. People's hospital*); Yue, Zhuang (*Peking Univ.*); Lin, Jianhao (*Peking Univ. People's hospital*); Zhang, Jue (*Peking Univ.*)
- 18:00-19:30 WePOS-31.20
Evaluation of Cardiac Fibroblast Activation by Traction Force Microscopy
 Zancla, Andrea* (*Università Roma Tre*); Mozetic, Pamela (*St. Ann's University Hospital, International Clinical Research C*); Orsini, Monica (*University of Roma Tre*); Forte, Giancarlo (*St. Anne's University Hospital, International Clinical Research*); Rainer, Alberto (*Campus Bio-Medico University of Rome*)
- 18:00-19:30 WePOS-31.21
Detaching RAW264.7 Macrophages from a Culture Dish using Ultrasound Excited by Langevin Transducer
 Kuriyama, Takuma (*Keio Univ.*); Fukuma, Yuki (*Keio Univ.*); Imashiro, Chikahiro (*Keio Univ.*); Kabayama, Kazuya (*Osaka Univ.*); Takemura, Kenjiro* (*Keio Univ.*)
- 18:00-19:30 WePOS-31.22
Regulating Cell Migration by Horizontal Vibration of a Clinically Ubiquitous Cell Culture Dish
 Enomoto, Umi (*Keio University*); Imashiro, Chikahiro (*Keio University*); Takemura, Kenjiro* (*Keio University*)
- 18:00-19:30 WePOS-31.23
High-Throughput Magnetic Actuation Platform to Induce Biomimetic Mechanical Cues on 3D Cell Culture
 Enriquez, Angel* (*Purdue University*); Libring, Sarah (*Purdue University*); Park, Hyunsu (*Purdue University*); Solorio, Luis (*Purdue University*); Lee, Hyowon (*Purdue University*)

- 18:00-19:30 WePOS-31.24
Development of the Sensing and Monitoring System for Obstructive Sleep Apnea Diagnosis
 Jang, Won Ick* (*ETRI*); Ryu, Jin Hwa (*ETRI*); Jang, Yongwon (*Electronics & Telecom Research Inst.*)
- 18:00-19:30 WePOS-31.26
Development of a Handheld Instrument with O-Phthalaldehyde Sensor Strip for Concentration Verification of Clinical Disinfectant
 Cheng, Tzong-Jih* (*National Taiwan University*)
- 18:00-19:30 WePOS-31.27
Laparoscopic Renal Denervation as a Novel Therapeutic Approach of Resistant Hypertension: Simulation and Safety Validation
 Baik, Jinhwan (*POSTECH*); Song, Won Hoon (*Seoul National University Hospital*); Yim, Donghyun (*POSTECH*); Ye, Eunbi (*Postech*); Yang, Sunchoel (*Osong Medical Innovation Foundation*); Jeong, Chang Wook (*Seoul National University Hospital*); Park, Sung-Min* (*POSTECH*)
- 18:00-19:30 WePOS-31.28
Trace Elemental Profile in Oral Precancer and Cancer
 Sharma, Neha* (*Indian Institute of Tech. Kharagpur*); Naik, Akash (*Indian Institute of Tech. Kharagpur*); Shome, Sayani (*Guru Nanak Institute of Dental Sciences & Research*); Biswas, Karabi (*Indian Institute of Tech. Kharagpur*); Pal, Mousumi (*Guru Nanak Institute of Dental Science & Research*); Paul, Rashmi Ranjan (*Guru Nanak Institute of Dental Science & Research*); Chatterjee, Jyotirmoy (*Indian Institute of Tech. Kharagpur*)
- 18:00-19:30 WePOS-31.29
Biosensor for Rapid Detection of Influenza with High Sensitivity
 Vasadi, Lukas James (*University of Cambridge*); Wang, Ruizhi (*University of Cambridge*); Danner, Patrick (*University of Cambridge*); Hofmann, Stephan* (*University of Cambridge*)
- 18:00-19:30 WePOS-31.30
MRI-Targeted Placement of Handheld Raman Spectroscopy Probe in Prostate Tumor
 Shono, Naoyuki* (*Brigham & Women's Hospital*); Picot, Fabien (*Polytechnique Montreal*); Leblond, Frederic (*Advanced Research Technologies Inc.*); Kadoury, Samuel (*Polytechnique Montreal*); Hata, Nobuhiko (*Brigham & Women's Hospital & Harvard Medical School*)
- 18:00-19:30 WePOS-31.31
A New Device to Predict the Evolution of Antibiotic Resistance
 Froese, Vera* (*Charité Universitätsmedizin Berlin*); Mütter, Malte (*Evolutionary Biology, Institute of Biology, Freie Universität Be*); Jonuzi, Shpetime (*Evolutionary Biology, Institute of Biology, Freie Universität Be*); Kertzsch, Ulrich (*Biofluid Mechanics Laboratory, Institute for Imaging Science and*); Affeld, Klaus (*Biofluid Mechanics Laboratory, Institute for Imaging Science and*); Rolff, Jens (*Evolutionary Biology, Institute of Biology, Freie Universität Be*)
- 18:00-19:30 WePOS-31.32
Numerical Investigation of the Heat Transfer Effects of Ingestion of Cold Water after a Hot Meal
 Hosseini, Saeed* (*Auckland Bioengineering Institute, Univ. of Auckland, New Z*); Paskaranandavivel, Niranchan (*The Univ. of Auckland*); Avci, Recep (*Univ. of Auckland*); Suresh, Vinod (*Univ. of Auckland*); Cheng, Leo K (*The Univ. of Auckland*)
- 18:00-19:30 WePOS-31.33
Prediction of Susceptible Sites to Plaque Depositions in Coronary Arteries by using Virtual Stenosis Method
 Lee, Kyung Eun* (*Korea Institute of Industrial Technology*); Shim, Eun Bo (*Kangwon National University*)
- 18:00-19:30 WePOS-31.34
Numerical Simulation of Electro-Active Hydrogels to be used for Cartilage Tissue Engineering
 Farooqi, Abdul Razzaq* (*University of Rostock*); Zimmermann, Julius (*University of Rostock*); Bader, Rainer (*University Medicine of Rostock, Dept. of Orthopaedics*); van Rienen, Ursula (*University of Rostock*)
- 18:00-19:30 WePOS-31.35
Human Upper Limb Heat Transfer: Effect of Thermal Properties
 Ghadam Soltani, Elias* (*The University of Auckland*); Safaei, Soroush (*University of Auckland*); Bradley, Chris (*The University of Auckland*); Hunter, Peter (*University of Auckland*); Mithraratne, Kumar (*University of Auckland*)
- 18:00-19:30 WePOS-31.36
Human Upper Limb Heat Transfer: Effect of Geometry
 Ghadam Soltani, Elias* (*The University of Auckland*); Safaei, Soroush (*University of Auckland*); Bradley, Chris (*The University of Auckland*); Hunter, Peter (*University of Auckland*); Mithraratne, Kumar (*University of Auckland*)
- 18:00-19:30 WePOS-31.37
Inhibition of Protein Aggregation by Small Molecules: Experimental and Molecular Docking Approaches
 Al Adem, Kenana* (*Khalifa Univ. of Science & Technology*); Lee, Sungmun (*Khalifa Univ. of Science & Technology*)
- 18:00-19:30 WePOS-31.38
InSil: An in Silico Clinical Trials Cloud Platform for Bioresorbable Vascular Scaffolds
 Karanasiou, Georgia (*Institute of Molecular Biology & Biotechnology, FORTH, Ioannina*); Rigas, Georgios (*Univ. of Ioannina*); Tachos, Nikolaos (*Unit of Medical Technology & Intelligent Information Systems.*); Fotiadis, Dimitrios I.* (*Univ. of Ioannina*)
- 18:00-19:30 WePOS-31.39
Non-Invasive Assessment of Coronary Stenosis using Mean Age Theory
 Hashemi, Javad (*University of Louisville*); Rai, Shesh (*University of Louisville*); Ghafghazi, Shahab (*University of Louisville*); Berson, Eric* (*University of Louisville*)
- 18:00-19:30 WePOS-31.40
Connectivity Assessment in the Human Temporal Lobe by Cortico-Cortical Evoked Potentials and Granger Causality
 Dümpelmann, Matthias* (*University Medical Center Freiburg*); Novitskaya, Yulia (*Epilepsy Center, Medical Center – University of Freiburg, Fac*); Schulze-Bonhage, Andreas (*University Hospital Freiburg*)
- 18:00-19:30 WePOS-31.41
Fading Effect Analysis in Time-Varying Functional Connectivity for AD, MCI and NC based on Resting-State fMRI Data
 Renli, Brighty (*Okemos High School*); Zheng, Yu (*Michigan State University*); Zhu, David (*Michigan State University*); Li, Tongtong* (*Michigan State University*)
- 18:00-19:30 WePOS-31.42
Changes in Prefrontal Cortex's EEG based Functional Connectivity during Laparoscopic Simulation Training
 Keskin, Seda (*Acibadem Mehmet Ali Aydınlar Univ.*); Aksoy, Mehmet Emin (*Acibadem Mehmet Ali Aydınlar Univ. – Dept. of Biomed*); Ucrak, Fuat (*Bogazici Univ.*); Bayram, Mehmed Bugrahan (*Acibadem Mehmet Ali Aydınlar Univ.*); Ozcan, Alpay* (*Acibadem Mehmet Ali Aydınlar Univ.*)
- 18:00-19:30 WePOS-31.43
Study of the Influence of a Segmentation Threshold in the FFRCT
 Agujetas, Rafael (*Univ. of Extremadura*); Montanero, José María (*Univ. of Extremadura*); Ferrera, Conrado* (*Univ. of Extremadura*)
- 18:00-19:30 WePOS-31.44
Asymmetric Multifractal Detrended Cross-Correlation Analysis of EEG and sEMG in the Processes of Force Changes
 Chen, Xiaobi (*Xi'an Jiao Tong University*); Xu, Guanghua* (*Xi'an Jiao Tong University*); Zhang, Kai (*Xi'an Jiao Tong University*); Zhang, Sicong (*Xi'an Jiao Tong University*)
- 18:00-19:30 WePOS-31.45
Development of an Omni-Directional Intraoperative Computed Tomography using Mecanum Wheel
 Jonghyun, Ryu (*Wonkwang Univ. Hospital*); Jeong, Kilhwan (*Wonkwang Univ.*); Kim, Tae-Hoon (*Wonkwang Univ.*); Jeong, Chang Won (*Wonkwang Univ.*); Yoon, Kwon-Ha (*Wonkwang Univ. School of Medicine*); Kim, Dae Won (*Wonkwang Univ. Hospital*); Kim, Kou Gyeom* (*Wonkwang Univ.*)

18:00-19:30	WePOS-31.46	18:00-19:30	WePOS-32.6
Electrical Impedance Tomography with Planar Electrode Arrangement Osakada, Yuki* (<i>Osaka Institute of Technology</i>); Uto, Sadahito (<i>Osaka Institute of Technology</i>)		Feature Selection using Kullback-Leibler Divergence for Emotion Classification Lee, JeeEun (<i>YonSei University</i>); Yoo, Sun K.* (<i>Yonsei University Health System</i>)	
18:00-19:30	WePOS-31.47	18:00-19:30	WePOS-32.7
BronchoNav: Haptic based Preoperative Planning Tool for Virtual Bronchoscopy Shaji, Ashly* (<i>Anhalt University of Applied Sciences</i>); Mathew James, Nisanth (<i>Anhalt University of Applied Sciences</i>); Bracio, Boris Romanus (<i>University of Applied Science Anhalt</i>); Xhoxhaj, Festim (<i>Anhalt University of Applied Sciences</i>); Pannier, Judith (<i>Städtisches Klinikum Dessau</i>)		Presence of Atrial and Ventricular Extrasystoles during Intervals of Moderate Physical Activity in Healthy Subjects Pérez López, Nancy Gabriela* (<i>Instituto Politécnico Nacional- Unidad Profesional Interdiscipli</i>); Muñoz-Diosdado, Alejandro (<i>UPIBI, Instituto Politécnico Nacional, Mexico</i>)	
18:00-19:30	WePOS-31.48	18:00-19:30	WePOS-32.8
Synthesis of Pediatric Computed Tomography Scans with Deep Convolutional Generative Adversarial Networks Kan, Chi Nok Enoch (<i>University of Minnesota, Twin Cities</i>); Ye, Dong Hye* (<i>Marquette University</i>)		Automatic Classification of Non-Snore, Simple Snore and OSA Related Snore using Audio Signal Sebastian, Arun* (<i>University of Sydney</i>); de Chazal, Philip (<i>University of Sydney</i>)	
18:00-19:30	WePOS-31.49	18:00-19:30	WePOS-32.9
Deep Learning Segmentation Performance Analysis on Pediatric Computed Tomography Scans Maheen Aboobacker, Najib Akram (<i>Marquette University</i>); Ye, Dong Hye* (<i>Marquette University</i>)		Predicting Future Falls of Parkinsonians using Posturography and Random Forest Bargiotas, Ioannis* (<i>Univ. Paris Saclay – ENS Cachan</i>); Moreau, Albane (<i>COGNACG, CNRS/SSA UMR 8257, Univ. Paris Descartes</i>); Vayatis, Nicolas (<i>Centre de Mathématiques et Leurs Applications, ENS Cachan, CNRS.</i>); Ricard, Damien (<i>COGNACG, CNRS/SSA UMR 8257, Univ. Paris Descartes</i>)	
WePOS-32: 18:00-19:30 Hall B Research-Poster-1-Page We D (Poster Session)		18:00-19:30	WePOS-32.10
18:00-19:30	WePOS-32.1	Integrating Real Patient's Data into Force Simulation Wang, Kuocheng (<i>UIUC/HCESC</i>); Kesavadas, Thenkurussi* (<i>UIUC/HCESC</i>); Sankaran, Naveen Kumar (<i>University of Illinois at Urbana-Champaign</i>)	
Identification of Parkinson's Disease from Scarce Data using Learning Vector Quantization Manome, Nobuhito* (<i>SoftBank Robotics Corp. / The University of Tokyo</i>); Shinohara, Shuji (<i>The University of Tokyo</i>); Suzuki, Kouta (<i>SoftBank Robotics Corp. / The University of Tokyo</i>); Omiya, Yasuhiro (<i>PST Inc.</i>); Higuchi, Masakazu (<i>The University of Tokyo</i>); Mitsuyoshi, Shunji (<i>Dept. of Verbal Analysis of Pathophysiology Graduate School of M</i>)		18:00-19:30	WePOS-32.11
18:00-19:30	WePOS-32.2	A System of Estimation on Optical Properties of Biological Tissue using Inverse Monte Carlo Method Suzuki, Shiho* (<i>Tokyo Denki Univ.</i>); Washio, Toshiyatsu (<i>National Institute of Advanced Industrial Science & Technology, Tokai Univ.</i>); Matsumae, Mitsunori (<i>School of Medicine, Tokai Univ.</i>); Arafune, Tatsuhiko (<i>Tokyo Denki Univ.</i>)	
Time Delays in Higher Language Areas during Language Activities Annovazzi, Valerio (<i>Univ. of Pavia</i>); Aromataris, Giuseppe (<i>Dept. of Electrical, Computer, & Biomedical Engineering, Univ.</i>); Cabrini, Alessandro (<i>Dept. of Electrical, Computer, & Biomedical Engineering, Univ.</i>); Carone Fabiani, Filippo* (<i>Università degli Studi di Bergamo</i>); Leporini, Roberto (<i>Università di Bergamo</i>); Moro, Andrea (<i>Institute of Advanced Study IUSS, Pavia</i>); Magrassi, Lorenzo (<i>Fondazione IRCCS Policlinico S. Matteo</i>)		18:00-19:30	WePOS-32.12
18:00-19:30	WePOS-32.3	Design Method for Robots for Overground Physical Interaction Regmi, Sambad (<i>Missouri Univ. of Science & Technology</i>); Song, Yun Seong* (<i>Missouri Univ. of Science & Technology</i>)	
Using Linear and Non-Linear Acoustic Parameters to Assess Vocal Status after Phonomicrosurgery in Reinke's Edema Perez, Carlos J.* (<i>Universidad de Extremadura</i>); Paniagua Vivas, M. Sandra (<i>Universidad de Extremadura</i>); Madruga, Mario (<i>Universidad de Extremadura</i>); De la O, Esther (<i>Hospital San Pedro de Alcántara</i>)		18:00-19:30	WePOS-32.13
18:00-19:30	WePOS-32.4	Movement Analysis of Shoulder Musculoskeletal Disorders Mangal, Naveen Kumar* (<i>IIT JODHPUR</i>); Tiwari, Anil Kumar (<i>IIT Jodhpur</i>)	
Feature Quantities of EEG for a Model to Estimate Human Internal States of Concentration and Relaxation Sazuka, Naoya* (<i>Sony Corporation</i>); Komoriya, Yota (<i>Sony Corporation</i>); Ezaki, Takayuki (<i>Sony Corporation</i>); Oba, Takeyuki (<i>Nagoya Univ.</i>); Ohira, Hideki (<i>Nagoya Univ.</i>)		18:00-19:30	WePOS-32.14
18:00-19:30	WePOS-32.5	Contribution of the Quadriceps Femoris Muscle for Recumbent Bicycle Pedaling, Evaluated by an MMG/EMG Hybrid Transducer Oka, Hisao* (<i>Okayama University</i>); Fukuhara, Shinichi (<i>Kawasaki University of Medical Welfare</i>)	
Parkinson's Disease Detection based on LightGBM Suzuki, Kouta* (<i>SoftBank Robotics Corp. / The University of Tokyo</i>); Shinohara, Shuji (<i>The University of Tokyo</i>); Higuchi, Masakazu (<i>The University of Tokyo</i>); Manome, Nobuhito (<i>SoftBank Robotics Corp. / The University of Tokyo</i>); Omiya, Yasuhiro (<i>PST Inc.</i>); Mitsuyoshi, Shunji (<i>Dept. of Verbal Analysis of Pathophysiology Graduate School of M</i>)		18:00-19:30	WePOS-32.15
		Mechanomyogram and Electromyogram Measurement during Isometric Contraction of a Biceps Brachii Muscle Oka, Hisao* (<i>Okayama University</i>); Fukuhara, Shinichi (<i>Kawasaki University of Medical Welfare</i>)	
		18:00-19:30	WePOS-32.16
		Hidden Object Test [HOT]: A Memory Test that Can Detect Early Stage Dementia using Virtual Reality Technology Choi, Jongdoo* (<i>Samsung Medical Center</i>); Kim, Eun Ji (<i>Samsung Medical Center</i>)	
		18:00-19:30	WePOS-32.17
		A Brief Version of Social Event Memory Test (BSEMT): A Sensitive Cognitive Test that can Detect Early Stage Dementia Kim, Eun Ji* (<i>Samsung Medical Center</i>); Choi, Jongdoo (<i>Samsung Medical Center</i>)	

- 18:00-19:30 WePOS-32.18
Low-Cost System for Experimental Manometry
 Díez de los Ríos, Iván (*Univ. of Seville*); Barriga-Rivera, Alejandro* (*Univ. Pablo de Olavide*); Elena, Mar (*Univ. de Sevilla*)
- 18:00-19:30 WePOS-32.19
Non-Invasive Ring-Type Electroceuticals for Treatment of Preterm Labor
 Lee, Yi Jae (*Korea Institute of Science & Technology*); Kotov, Dmytro (*Korea Institute of Science & Technology*); Lee, Changhyuk (*Korea Institute of Science & Technology*); Hwang, Jung-ho (*Korea Institute of Toxicology*); Ahn, Ki Hoon (*Dept. of Obstetrics & Gynecology, Korea University Medical*); Lee, Soo Hyun* (*Korea Institute of Science & Technology*)
- 18:00-19:30 WePOS-32.20
Sleep Apnea/Hypopnea Causes an Anterior to Posterior Information Flow Increase in EEG
 Zhou, Guolin* (*Sun Yat-Sen University*); Liao, Yuanyuan (*Sun Yat-Sen University, Guangzhou City, Guangdong Prov, China*); Luo, Yu-Xi (*Sun Yat-Sen University*)
- 18:00-19:30 WePOS-32.21
Comparisons of the Delivery Efficiency of Salbutamol with Jet and Mesh Nebulizer
 Chang, Kyung Hwa (*Dongguk University College of Medicine*); Moon, Sang-Hyub (*Dongguk University*); Park, Hyun Mok (*Dongguk University*); Lee, Ye Jin (*Dongguk University*); Park, Bong Joo (*Kwangwoon University*); Nam, Ki Chang* (*Dongguk University College of Medicine*)
- 18:00-19:30 WePOS-32.22
Enhancement of Nebulization Output Rate for Viscous Solution
 Moon, Sang-Hyub (*Dongguk University*); Chang, Kyung Hwa (*Dongguk University College of Medicine*); Lee, Ye Jin (*Dongguk University*); Park, Hyun Mok (*Dongguk University*); Park, Bong Joo (*Kwangwoon University*); Nam, Ki Chang* (*Dongguk University College of Medicine*)
- 18:00-19:30 WePOS-32.23
Performance Testing Method for Needle Free Injector
 Lee, Ye Jin (*Dongguk University*); Kwon, Bumsun (*Dongguk University Hospital*); Park, Sukang (*Korea Testing Certification*); Park, ByungEun (*Korea Testing Certification*); Kim, Ho Chul (*Eulji University*); Chang, Kyung Hwa (*Dongguk University College of Medicine*); Moon, Sang-Hyub (*Dongguk University*); Nam, Ki Chang* (*Dongguk University College of Medicine*)
- 18:00-19:30 WePOS-32.24
Alternating Magnetic Field Induced Drug Release in Erythromycin Nano-Vesicles Encapsulating Magnetic Nanoparticles
 Serag El Din, Nermeen* (*German Univ. in Cairo*); Hassan, Mai (*German Univ. in Cairo*); Salah, Bassant (*German Univ. in Cairo*); Abdel Halim, Mohammed (*German Univ. in Cairo*)
- 18:00-19:30 WePOS-32.25
Antifungal Plasma Activated Hydrogels
 Liu, Zhengxin* (*Peking University*); Dang, Jie (*Peking University*); Zhang, Jue (*Peking University*)
- 18:00-19:30 WePOS-32.26
Heat Generation of Magnetic Nanoparticles Vibrated by Alternative Magnetic Field for Targeted Drug Release
 Phan, Huu Lam* (*Ulsan Univ.*); Anh Le, Tuan (*Gyeongang National Univ.*); Le, Thi Huong (*Univ. of Ulsan*); Nguyen, Hang Phuong (*Univ. of Ulsan*); Duong, Thuy (*Univ. of Ulsan*); Nguyen, Trung (*Univ. of Ulsan*); Lee, HyoSeok (*Univ. of Ulsan*); Oh, Seok (*Univ. of Ulsan*); Lee, Suwon (*Univ. of Ulsan*); Son, Hyewon (*Univ. of Ulsan, Ulsan*); Hwang, Changho (*Ulsan Univ. Hospital*); Yoon, Jungwon (*Gyeongang National Univ.*); Koo, Kyoin (*Univ. of Ulsan*)
- 18:00-19:30 WePOS-32.27
Substrate Characterization with Local Impedance Mapping
 Unger, Laura Anna* (*Institute of Biomedical Engineering, Karlsruhe Institute of Tech*); Doessel, Olaf (*Karlsruhe Institute of Technology (KIT)*); Schmitt, Claus (*Staedtisches Klinikum Karlsruhe*); Luik, Armin (*Staedtisches Klinikum Karlsruhe*)
- 18:00-19:30 WePOS-32.28
Application of a Decision Tree Algorithm to Predict the Rehabilitation Duration of Gait-Related Dysfunctions: A Proof of Concept
 Caldas, Rafael* (*RWTH Aachen Univ.*); Campos, Mariana (*Univ. of Pernambuco*); Buarque de Lima Neto, Fernando (*Univ. of Pernambuco*); Markert, Bernd (*IAM – RWTH Aachen Univ.*)
- 18:00-19:30 WePOS-32.29
Interactive Process Mining: Training Health Care Professionals towards a Sustainable Value based Health Care System
 Traver, Vicente* (*ITACA – Univ. Politècnica de València*); Ibañez, Gema (*ITACA-TSB Univ. Politècnica de Valencia*); de Carvalho, Paulo (*Univ. of Coimbra*); Rodríguez, Blanca (*Atos Spain, S.A.*); Posada, Jorge (*Medtronic*); Seoane, Fernando (*Karolinska Institutet*); Gonçalves, Lino (*Centro Hospitalar de Coimbra*); Santos, Manuel (*Centro Hospitalar e Universitário de Coimbra*); Sala, Pilar (*Institute ITACA*); Fernandez-Llatas, Carlos (*Univ. Politècnica de Valencia*)
- 18:00-19:30 WePOS-32.30
Use of Granger Causality from fMRI as a Biomarker for Body Mass Index
 Byeon, Kyoungseob (*Sungkyunkwan University*); Park, Hyunjin* (*Sungkyunkwan University*)
- 18:00-19:30 WePOS-32.31
Evaluation of Experimental Task with fMRI Measurement for Applying NIRS Measurement
 Fukuda, Keiko* (*Tokyo Metropolitan College of Industrial Tech.*); Seki, Shun (*Tokyo Metropolitan College of Industrial Tech.*); Kunii, Ren (*Tokyo Metropolitan College of Industrial Tech.*); Wang, Li-qun (*Tokyo Denki Univ.*); Kuriki, Shinya (*Tokyo Denki Univ.*); Tanaka, Keita (*Tokyo Denki Univ.*)
- 18:00-19:30 WePOS-32.32
Ultrafast Ultrasound Imaging of Motor Units in Skeletal Muscle during Voluntary Contractions – A Pilot Validation Study by using Needle-EMG
 Rohlén, Robin* (*Umeå University*); Stålberg, Erik (*Uppsala University*); Grönlund, Christer (*Umeå University*)
- 18:00-19:30 WePOS-32.33
A Magnetic Cell-Based Theranostic Microrobot for Anticancer Therapy: A Preliminary Study
 Nguyen, Van Du* (*Chonnam National Univ.*); Min, Hyun-Ki (*Chonnam National Univ.*); Kim, Ho Yong (*Chonnam National Univ.*); Kim, Chang-Sei (*Chonnam National Univ.*); Han, Jiwon (*Chonnam National Univ.*); Park, Jongoh (*Chonnam National Univ.*); Choi, Eunpyo (*Chonnam National Univ.*)
- 18:00-19:30 WePOS-32.34
Controlled Release of Doxorubicin from Polyethylene Glycol Functionalized Melanin Nanoparticles for Breast Cancer Therapy
 Ozlu, Busra (*Inha Univ.*); Shim, Bong Sup* (*Inha Univ.*)
- WePOS-33: 18:00-19:30 Hall B
Research-Poster-1-Page We E (Poster Session)
- 18:00-19:30 WePOS-33.1
An Experiment to Distinguish Major Depression and Dementia with Lewy Bodies from Healthy Participants using Voice
 Uruguchi, Tomotaka* (*PST Inc.*); Omiya, Yasuhiro (*PST Inc.*); Shinohara, Shuji (*Univ. of Tokyo*); Manome, Nobuhito (*SoftBank Robotics Corp. / Univ. of Tokyo*); Suzuki, Kouta (*SoftBank Robotics Corp. / Univ. of Tokyo*); Kumamoto, Yorio (*Life Science Institute Inc.*); Tokuno, Shinichi (*Univ. of Tokyo*)
- 18:00-19:30 WePOS-33.2
Constructing Artificial Microvascular Trees by Generative Adversarial Networks
 Jiang, Akang (*Zhejiang University of Technology*); Fang, Luping (*Zhejiang University of Technology*); Ning, Gangmin (*Zhejiang University*); Pan, Qing* (*Zhejiang University of Technology*)

- 18:00-19:30 WePOS-33.3
Discriminative Model based on Recurrent Neural Network Architecture for Recognition of Abnormal Gait Patterns
 Jun, Kooksung (*Gwangju Institute of Science & Technology*); Lee, Deok-Won (*Gwangju Institute of Science & Technology*); Lee, Sanghyub (*Gwangju Institute of Science & Technology*); Kim, Mun Sang* (*Gwangju Institute of Science & Technology*)
- 18:00-19:30 WePOS-33.4
Postoperative Pain Assessment using Convolutional Neural Network
 Shin, Hangsik* (*Chonnam National University*); Park, Junyung (*Chonnam National University*); Seok, HyeonSeok (*Chonnam National University*); Yun, Yonghyeon (*Daelim University*)
- 18:00-19:30 WePOS-33.5
Text Field Analysis of 'Big Data' – 14, 000 24hr ECG Recordings
 Khamis, Heba* (*UNSW Sydney*); Fulthorp, Elias Joseph (*Central Sydney Cardiology*); Schindhelm, Klaus (*University of New South Wales*); Lovell, Nigel H. (*University of New South Wales*); Wilcox, Ian (*University of New South Wales*)
- 18:00-19:30 WePOS-33.6
Association Between Blood Pressure Classification and Incident Proteinuria Risk – 2017 American College of Cardiology/American Heart Association Guidelines
 Park, Yujin (*Seoul National Univ. College of Medicine*); Park, Minseon (*Seoul National Univ. Hospital*); Seo, Seungmin (*Seoul National Univ. Hospital*); Hong, Yoonjung (*Seoul National Univ. Hospital*); Yoon, Hyung-Jin* (*Seoul National Univ.*)
- 18:00-19:30 WePOS-33.7
Analysis and Classification of Urinary Stones based on Radiology_CDM for Machine Learning
 Noh, SiHyeong (*Wonkwang Univ.*); Kim, SeungJin (*Wonkwang Univ.*); Kim, Tae-Hoon (*Wonkwang Univ.*); Jun, Hong Young (*Wonkwang Univ. Hospital*); Lee, Chung Sub (*Wonkwang Univ.*); Jeong, Chang Won* (*Wonkwang Univ.*); Yoon, Kwon-Ha (*Wonkwang Univ. School of Medicine*)
- 18:00-19:30 WePOS-33.8
Bayesian Estimation of Prevalence of Interstitial Pneumonia by Two-Sources Phenotyping Method
 Nohara, Yasunobu* (*Kyushu University Hospital*); Izukura, Rieko (*Kyushu University Hospital*); Nojiri, Chinatsu (*Care Four Inc.*); Yamashita, Takanori (*Kyushu University Hospital*); Nakashima, Naoki (*Kyushu University Hospital*)
- 18:00-19:30 WePOS-33.9
An Experiment to Detect Laryngomalacia using Baby's Crying Voice
 Omiya, Yasuhiro* (*PST Inc.*); Nakamura, Mitsuteru (*The University of Tokyo*); Shinohara, Shuji (*The University of Tokyo*); Higuchi, Masakazu (*The University of Tokyo*); Suzuki, Kouta (*SoftBank Robotics Corp. / The University of Tokyo*); Manome, Nobuhito (*SoftBank Robotics Corp. / The University of Tokyo*); Mitsuyoshi, Shunji (*Dept. of Verbal Analysis of Pathophysiology Graduate School of M*); Yamamoto, Isao (*Kanagawa Dental University*); Mukai, Susumu (*Mukai Clinic*); Tokuno, Shinichi (*The University of Tokyo*)
- 18:00-19:30 WePOS-33.10
Forecasting of Disease Progression: Hidden Markov Models vs. Recurrent Neural Networks
 Baucum, Matthew* (*University of Tennessee, Knoxville*); Khojandi, Anahita (*University of Tennessee*)
- 18:00-19:30 WePOS-33.11
Multiclass Classification of Arrhythmia based on Convolutional Neural Network
 Yoon-Ji, Kim (*Yonsei University*); Urtnasan, Erdenebayar (*Yonsei University*); Park, Jonguk (*Yonsei University*); Lee, Kyoung Joung* (*Yonsei University*)
- 18:00-19:30 WePOS-33.12
Service for Digital Annotation of Scientific Data
 Kulhanek, Tomas* (*E-Science Data Factory*); Le Franc, Yann (*E-Science Data Factory*)
- 18:00-19:30 WePOS-33.13
Validation of Machine Learning Algorithms to Predict Proteinuria
 Kwak, Jin Seul (*Seoul National Univ.*); Yu, Mi-Yeon (*Hanyang Univ. Guri Hospital*); Lee, Hajeong (*Seoul National Univ. Hospital*); Kang, Hee Gyung (*Seoul National Univ. College of Medicine*); Yoon, Hyung-Jin* (*Seoul National Univ.*)
- 18:00-19:30 WePOS-33.14
A Machine Learning Approach to Investigate the Predictive Value of Pulse Pressure in ICU Mortality-Risk
 Youssef Ali Amer, Ahmed* (*KU Leuven*); Vranken, Julie (*Hasselt Univ., Faculty of Medicine & Life Sciences; Zieke*); Mesotten, Dieter (*Hasselt Univ., Faculty of Medicine & Life Sciences, Limbu*); Vandervoort, Pieter (*Dept. of Cardiology, Ziekenhuis Oost-Limburg, Genk*); Storms, Valerie (*Hasselt Univ., Faculty of Medicine & Life Sciences, Limbu*); Luca, Stijn (*KU Leuven Technology Campus Geel, Adv/Se*); Vanrumste, Bart (*Katholieke Univ. Leuven*); Aerts, Jean-Marie (*KU Leuven*)
- 18:00-19:30 WePOS-33.15
A New Formula for the Estimation of Meal Insulin-Bolus in Type 1 Diabetes Therapy Accounting for Glucose Rate of Change
 Noaro, Giulia (*University of Padova*); Cappon, Giacomo* (*University of Padova*); Del Favero, Simone (*University of Padova, Padova, Italy*); Sparacino, Giovanni (*University of Padova*); Facchinetti, Andrea (*University of Padova*)
- 18:00-19:30 WePOS-33.16
Obstructive Sleep Apnea Detection in General Population
 Chen, Gengbo* (*Biofourmis*); Xie, Jiecheng (*Biofourmis*)
- 18:00-19:30 WePOS-33.17
Deep ConvNets for Multivariate Time Series Classification with Application to Healthcare
 Viton, Fabien* (*University of Picardie Jules Verne*); Elbattah, Mahmoud (*Université de Picardie Jules Verne*); Dequen, Gilles (*University of Picardie Jules Verne*); Guérin, Jean-Luc (*Université de Picardie Jules Verne*)
- 18:00-19:30 WePOS-33.18
Near-Infrared Spectrum Features of Different Water Samples and Temperature Changes
 Sumali, Brian (*Keio University*); Mitsukura, Yasue* (*Keio University*); Tsenkova, Roumiana (*Kobe University*); Hamada, Nozomu (*Keio University*)
- 18:00-19:30 WePOS-33.19
Recognition of Basic Driving Scenarios
 Doniec, Rafal* (*Silesian University of Technology*); Mocny-Pachońska, Katarzyna (*Medical University of Silesia*); Piaseczna, Natalia (*Silesian University of Technology*); Siecinski, Szymon (*Silesian University of Technology, Faculty of Biomedical Engineer*); Szymczyk, Jacek (*Silesian University of Technology (Politechnika Śląska)*); Wadas, Marta (*Silesian University of Technology, Gliwice, Poland*)
- 18:00-19:30 WePOS-33.20
Liver Fibrosis Classified by Quantitative Ultrasound Parameters and Deep Convolutional Neural Networks
 Lin, Huang-Chen (*National Cheng Kung University*); Wu, Ting-An (*National Cheng Kung University*); Wang, Shyh-Hau* (*National Cheng Kung University*)
- 18:00-19:30 WePOS-33.21
Modeling the Carb-Counting Error in Type 1 Diabetes Management
 Roversi, Chiara (*University of Padova*); Vettoretti, Martina* (*University of Padova*); Facchinetti, Andrea (*University of Padova*); Del Favero, Simone (*University of Padova, Padova, Italy*); Sparacino, Giovanni (*University of Padova*)
- 18:00-19:30 WePOS-33.22
Joint 3D CNN Prediction Framework of AHI using Physiological Indicators and CT Images
 Ning, Guochen (*Tsinghua Univ.*); He, Mu (*Dept. of Otolaryngology, Head & Neck Surgery, Beijing Tsj*); You, Jingyuan (*Tsinghua Univ., School of Medicine*); Zhang, Xinran (*Tsinghua Univ.*); Liao, Hongen (*Tsinghua Univ.*); Ye, Jingying* (*Beijing Tsinghua Changgung Hospital*)

- 18:00-19:30 WePOS-33.23
Manual Dexterity Assessment for Stroke Patients by using Fuzzy C-Means Clustering Algorithm
 Lin, Bor-Shing (*National Taipei University*); Lee, I-Jung* (*National Taipei University*); Hsiao, Pei-Chi (*Dept. of Physical Medicine & Rehabilitation, Chi-Mei Medi*); Yang, Shu-Yu (*Dept. of Physical Medicine & Rehabilitation, Chi-Mei Medi*); Lin, Bor-Shyh (*National Chiao Tung University*)
- 18:00-19:30 WePOS-33.24
Treadmill-to-Overground Mapping of Marker Trajectory for Treadmill-Based Gait Analysis
 Jung, Woo Chang (*Hankyong National University*); Lee, Jung Keun* (*Hankyong National University*)
- 18:00-19:30 WePOS-33.25
Transition Characteristics Analysis of Muscle Activity Patterns for Firefighters
 Isezaki, Takashi* (*NTT Service Evolution Labs*); Aoki, Ryosuke (*NTT Corp.*); Indo, Takuya (*NTT*); Deshpande, Sameer (*IISRI, Deakin Univ.*); Tamir, Levin (*Dimension Data Australia*)
- 18:00-19:30 WePOS-33.26
Identification System for Surgical Instruments on Metal Tray using UHF Band RFID and Low-Intensity Antennae
 Hosaka, Ryosuke* (*Shonan Institute of Technology*)
- 18:00-19:30 WePOS-33.27
Trilhar – The Mobile App for Speech Therapy Support
 E. C. Silva, Samuel* (*UFRN*); S. Silva, Raul (*UFRN*); de Araújo Barbosa, Alexandre Lucas (*Federal Univ. Rio Grande do Norte*); Alves Salgado Azoni, Cíntia (*Federal Univ. Rio Grande do Norte*); Stransky, Beatriz (*Federal Univ. Rio Grande do Norte*); Bezerra Soares, Heliana (*Federal Univ. of Rio Grande do Norte*)
- 18:00-19:30 WePOS-33.28
Portuguese Haemophilia Registry: A First Characterization of Patients based on a Web-Based Application
 Teixeira, Leonor (*Aveiro Univ.*); Ferreira, Carlos Manuel Santos (*Aveiro Univ.*); Sousa Santos, Beatriz* (*Aveiro Univ.*)
- 18:00-19:30 WePOS-33.29
Automatic Classification of Sleep Stages based on Conventional Neural Network using an Electrocardiogram
 Urtnasan, Erdenebayar (*Yonsei University*); Yoon-Ji, Kim (*Yonsei University*); Park, Jonguk (*Yonsei University*); Lee, Kyoung Joung* (*Yonsei University*)
- 18:00-19:30 WePOS-33.30
Odontofile Application for Personalized Treatment in Oral Health
 Pereira da Cunha, Ana Julia* (*UFRN*); B. e Silva, Ana Luíza (*UFRN*); B. Fernandes, João Paulo (*UFRN*); Bezerra Soares, Heliana (*Federal Univ. of Rio Grande do Norte*); Ribeiro, Anna Giselle (*Univ. Federal do Rio Grande do Norte*); D. Vilar Wanderley, Caroline (*Univ. Federal do Rio Grande do Norte (UFRN)*)
- 18:00-19:30 WePOS-33.31
Heart Rate Rhythm based Psychological Flow Frequency Prediction
 Shibui, Toyohito* (*Graduate School of Engineering, Hosei University*); Yajima, Tomoaki (*Hosei University*); Momoi, Emi (*University of Electro-Communications*); Yana, Kazuo (*Hosei University*); Asakawa, Kiyoshi (*Hosei University*)
- 18:00-19:30 WePOS-33.32
Flow Related State Classification based on the Experience Sampling Method
 Yoshikawa, Reina (*Hosei Univ.*); Yana, Kazuo* (*Hosei Univ.*); Asakawa, Kiyoshi (*Hosei Univ.*); Hirahara, Makoto (*Hosei Univ.*)
- 18:00-19:30 WePOS-33.33
App to Measure the Degree of Patient Satisfaction in the Clinical Dentistry School of UFRN
 Beatriz Cavalcante Souza, Flavia (*UFRN*); Pereira da Cunha, Ana Julia (*UFRN*); Goulart, Leonardo* (*Federal Univ. of Rio Grande do Norte*); Larissa Pereira da Cunha, Mariana (*UFRN*); Bezerra Soares, Heliana (*Federal Univ. of Rio Grande do Norte*); Ribeiro, Anna Giselle (*Univ. Federal do Rio Grande do Norte*); D. Vilar Wanderley, Caroline (*Univ. Federal do Rio Grande do Norte (UFRN)*)
- 18:00-19:30 WePOS-33.34
Decentralized Framework for Medical Images based on Blockchain and Inter Planetary File System
 Jabarulla, Mohamed Yaseen (*Gwangju Institute of Science & Tech.*); Jung, GilJun (*Gwangju Institute of Science & Tech.*); Lee, Heung-No* (*Gwangju Institute of Science & Tech. (GIST)*)
- 18:00-19:30 WePOS-33.35
eHealth4Ageing: Electronic Health Record for the Elderly
 Eliadou, Eliana (*Archaggelos Michael Elderly Center*); Panayides, Andreas* (*Univ. of Cyprus*); Antoniou, Zinonas (*Univ. of Cyprus*); Constantinou, Ioannis (*Univ. of Cyprus*); Neokleous, Kleanthis (*Univ. of Cyprus*); Christodoulou, Costas (*3AeHealth LTD*); Kouyoumdjian, Maria (*Archaggelos Michael Elderly Center*); Papayianni, Ersi (*Archaggelos Michael Elderly Center*); Neofytou, Marios (*Univ. of Cyprus*)
- 18:00-19:30 WePOS-33.36
A Novel Approach towards Human Posture Estimation to Review Lumbar Lordosis
 K, Veena Divya (*Rastreeya Vidyalyaya College of Engineering, Bengaluru*); Mukherjee, Devanshu* (*RVCE*); Roy, Somali (*RV College of Engineering*); Shree, Vidhya (*RV College of Engineering*); P M, Rajasree (*R.V. College of Engineering, Bengaluru*)
- 18:00-19:30 WePOS-33.37
Heart Rate Respiratory Rhythm Cancellation via Acceleration Signals
 Kaseda, Yuto (*Hosei Univ.*); Shibui, Toyohito (*Graduate School of Engineering, Hosei Univ.*); Yana, Kazuo* (*Hosei Univ.*)
- 18:00-19:30 WePOS-33.38
Gait Data Collecting and Analyzing System based on Skeleton Data Obtained by using Multiple Kinect Sensors
 Lee, Sanghyub (*Gwangju Institute of Science & Technology*); Lee, Deok-Won (*Gwangju Institute of Science & Technology*); Jun, Kooksung (*Gwangju Institute of Science & Technology*); Ko, Joong-Kwang (*GIST*); Kim, Mun Sang* (*Gwangju Institute of Science & Technology*)
- 18:00-19:30 WePOS-33.39
Effectiveness of Voice Biomarker in Detecting Bipolar Disorder
 Higuchi, Masakazu* (*The Univ. of Tokyo*); Nakamura, Mitsuteru (*The Univ. of Tokyo*); Shinohara, Shuji (*The Univ. of Tokyo*); Omiya, Yasuhiro (*PST Inc.*); Takano, Takeshi (*PST Inc.*); Suzuki, Kouta (*SoftBank Robotics Corp. / The Univ. of Tokyo*); Manome, Nobuhito (*SoftBank Robotics Corp. / The Univ. of Tokyo*); Toda, Hiroyuki (*National Defense Medical College*); Saito, Taku (*National Defense Medical College*); Yoshino, Aihide (*National Defense Medical College*); Mitsuyoshi, Shunji (*Dept. of Verbal Analysis of Pathophysiology Graduate School of M*); Tokuno, Shinichi (*The Univ. of Tokyo*)
- 18:00-19:30 WePOS-33.40
Sliding Window Sampling (SWS): A Strategy to Improve RNN based Cuffless Blood Pressure Estimation
 Tan, Daxin* (*The Chinese Univ. of Hong Kong*); Su, Peng (*The Chinese Univ. of Hong Kong*); Liu, Jing (*The Chinese Univ. of Hong Kong*); Zhang, Yuan-Ting (*The Chinese Univ. of Hong Kong*); Zhao, Ni (*The Chinese Univ. of Hong Kong*)
- 18:00-19:30 WePOS-33.41
Performance Comparison of Serialization Libraries using FHIR Resources
 Lee, Ah Ra (*KyungPook National Univ.*); Kim, Min Gyu (*Kyungpook National Univ.*); Won, Kyung Jae (*KyungPook National Univ.*); Kim, Il Kon* (*Kyungpook National Univ.*)
- 18:00-19:30 WePOS-33.42
A Pilot Study of Predicting CPAP Adherence based on the Statistical Values of Previous CPAP Usage Duration and Related Parameters
 Eguchi, Kana* (*NTT Corporation*); Azuma, Shozo (*Nippon Telegraph & Telephone Corporation*); Indo, Takuya (*NTT*); Takeyama, Hirofumi (*Dept. of Respiratory Care & Sleep Control Medicine, Gradu*); Chin, Kazuo (*Univ.*); Nambu, Masayuki (*Kyoto Univ. Hospital*); Kuroda, Tomohiro (*Kyoto Univ.*)

- 18:00-19:30 WePOS-33.43
Linear Data-Driven Models for Real-Time Prediction of Hypo/Hyperglycemic Events using Continuous Glucose Sensor Data Only
 Prendin, Francesco (*University of Padova*); Del Favero, Simone* (*University of Padova, Padova, Italy*); Vettoretti, Martina (*University of Padova*); Sparacino, Giovanni (*University of Padova*); Facchinetti, Andrea (*University of Padova*)
- 18:00-19:30 WePOS-33.44
A Comparison between Measured Values and Estimated Values of Resting Metabolic Rate in Spinal Cord Injured Patients
 Kang, Jungsun* (*Rehabilitation Engineering Research Institute*); Chang, Yunhee (*Rehabilitation Engineering Research Institute*); Kim, Gyuseok (*Rehabilitation Engineering Research Institute*); Hong, Engpyo (*Rehabilitation Engineering Research Institute*)
- 18:00-19:30 WePOS-33.45
Measurement of Energy Expenditure According to Changes in Wheelchair Driving Speed for SCI
 Chang, Yunhee* (*Rehab. Engineering Research Institute*); Kang, Jungsun (*Rehab. Engineering Research Institute*); Hong, Engpyo (*Rehab. Engineering Research Institute*); Kim, Gyuseok (*Rehab. Engineering Research Institute*)
- 18:00-19:30 WePOS-33.46
Respiration and Pulse Variability Analyses in Patient with Spinal Cord Injury using a Less-Burden Monitoring System in Bed and Its Application to Management of Secretions in Airways
 Motoi, Kosuke* (*Shizuoka Institute of Science & Technology*); Suganuma, Miki (*Shizuoka Institute of Science & Technology*); Yamakoshi, Yasuhiro (*Showa University School of Medicine*); Kuga, Yusuke (*Spinal Injuries Center*); Ehara, Yoshito (*Spinal Injuries Center*); Tanaka, Naoto (*Kanazawa University*); Sakai, Hiroaki (*Spinal Injuries Center*); Yamakoshi, Ken-ichi (*Kanazawa University*)
- 18:00-19:30 WePOS-33.47
Design and Implementation of a Biosensing Microsystem for Non-Invasive Estimation of NIR-Visible Spectrum
 Sen, Prasanta Kr* (*IIT Kharagpur*); Das Mandal, Shyamal Kumar (*IIT Kharagpur*); Laskar, Mostafizur Rahaman (*IIT Kharagpur*)
- 18:00-19:30 WePOS-33.48
VR-Based Multiplayer Game Contents for Upper Limb Rehabilitation
 Shin, Sung-Wook (*Korea Polytechnic Univ.*); Lee, HyeokMin (*Korea Polytechnic Univ.*); Moon, Ho-Sang (*Korea Polytechnic Univ.*); Chung, Sung-Taek* (*Korea Polytechnic Univ.*)
- 18:00-19:30 WePOS-33.49
Toward the Development of a System that Facilitates Continuous Exercise for Middle-Aged and Elderly People
 Arai, Ryota* (*Osaka Institute of Technology*); Ohsuga, Mieko (*Osaka Institute of Technology*)
- WePOS-34: 18:00-19:30 Hall B
Research-Poster-1-Page We F (Poster Session)
- 18:00-19:30 WePOS-34.1
The Battle of Codecs in the Healthcare Domain: VVC or AV1?
 Panayides, Andreas* (*Univ. of Cyprus*); Loizou, Christos (*Cyprus Univ. of Technology*); Pattichis, Marios (*Univ. of New Mexico*); Pantziaris, Marios (*The Cyprus Institute of Neurology & Genetics*); Pattichis, Constantinos (*Univ. of Cyprus*)
- 18:00-19:30 WePOS-34.2
VitalsAssist: A Usability Study on mHealth Application to Monitor Vital Signs in Acute Care Settings
 Baig, Mirza Mansoor* (*Orion Health*); GholamHosseini, Hamid (*Auckland University of Technology*); Ahmad, Farhan (*VitalsAssist*); Abdul Moqem, Aasia (*Auckland University of Technology*); Mirza, Farhaan (*Auckland University of Technology*); Ullah, Ehsan (*Auckland District Health Board*)
- 18:00-19:30 WePOS-34.3
Implementing Mobile Healthcare Apps through Usability Evaluations from an Elderly Perspective
 Won, Kyung Jae (*KyungPook National Univ.*); Lee, Ah Ra (*KyungPook National Univ.*); Kim, Min Gyu (*Kyungpook National Univ.*); Kim, Il Kon* (*Kyungpook National Univ.*)
- 18:00-19:30 WePOS-34.4
Blockchain-Based Personal Health Record Transaction: Proof of Concept
 Lee, Joonnyong (*Seoul National Univ. Hospital*); Ko, Taehoon (*Seoul National Univ. Hospital*); Lee, Saram (*Seoul National Univ. Hospital*); Choi, Saewon (*Seoul National Univ. Hospital*); Lee, Eunsol (*Medibloc Inc*); Kim, Kang San (*Seoul National Univ. Hospital*); Yoon, Hyung-Jin* (*Seoul National Univ.*)
- 18:00-19:30 WePOS-34.5
On the Accurate Vessel Age Estimation based on the Second Derivative of Photoplethysmogram
 Hirose, Kumi (*Hosei Univ.*); Hama, Kengo (*Hosei Univ.*); Yana, Kazuo* (*Hosei Univ.*); Wakabayashi, Satoshi (*Hosei Univ.*)
- 18:00-19:30 WePOS-34.6
Heartrate Measurement Accuracy of Consumer Wrist Devices
 Hama, Kengo (*Hosei Univ.*); Shibui, Toyohito (*Graduate School of Engineering, Hosei Univ.*); Yana, Kazuo* (*Hosei Univ.*)
- 18:00-19:30 WePOS-34.7
Relation between Stress Estimated by Voice Analysis and Blood Interleukin-1 Receptor Antagonist in High-Intensity Training
 Nakamura, Mitsuteru* (*The Univ. of Tokyo*); Suzuki, Go (*Japan Self Defense Force Central Hospital*); Shinohara, Shuji (*The Univ. of Tokyo*); Omiya, Yasuhiro (*PST Inc.*); Higuchi, Masakazu (*The Univ. of Tokyo*); Takano, Takeshi (*PST Inc.*); Mitsuyoshi, Shunji (*Dept. of Verbal Analysis of Pathophysiology Graduate School of M*); Kobayashi, Nobuhisa (*Japan Self Defense Force Central Hospital*); Tokuno, Shinichi (*The Univ. of Tokyo*)
- 18:00-19:30 WePOS-34.8
Classification of the Elderly's ADL (Activities of Daily Living) using IMU Sensor
 Jaesoo, Hong* (*Korea Institute of Industrial Technology*)
- 18:00-19:30 WePOS-34.9
Lying Posture Analytics using Convolutional Neural Network from Pressure Distribution Data for Pressure Ulcer Prevention
 Kang, Sooln* (*The Univ. of Tokyo*); Noguchi, Hiroshi (*The Univ. of Tokyo*); Araki, Daichi (*The Univ. of Tokyo*); Takahashi, Toshiaki (*The Univ. of Tokyo*); Sanada, Hiromi (*The Univ. of Tokyo*); Mori, Taketoshi (*The Univ. of Tokyo*)
- 18:00-19:30 WePOS-34.10
Investigation of Regression Model by Multivariate Regression Analysis to Relate Answers of the Japanese Orthopaedic Association Back Pain Evaluation Questionnaire (JOABPEQ) and Physical Findings
 Ishitani, Hayato* (*Nara Institute of Science & Tech., Graduate School of Inf*); Tamura, Toshiyo (*Waseda Univ.*); Kanaya, Shigehiko (*Nara Institute of Science & Tech.*); Kurokawa, Jun (*Funabashi Orthopedic Hospital Nishifuna Clinic*)
- 18:00-19:30 WePOS-34.11
Comparison between Four Devices for Focal Muscle Vibration
 Botter, Alberto (*Politecnico di Torino*); Cerone, Giacinto Luigi* (*Politecnico di Torino*); Saggini, R (*Univers*); Minetto, Marco Alessandro (*Division of Physical Medicine & Rehab., Dept. of*)
- 18:00-19:30 WePOS-34.12
Investigation on the Radial Augmentation Index and Radial-Carotid Pulse Wave Velocity using a Three-Axis Tactile Force Sensor
 Yoo, Sunyoung* (*Seoul National Univ.*); Wang, Zihuan (*Seoul National Univ.*); Cserey, György (*Pázmány Péter Catholic Univ.*); Lee, Hae-Young (*Seoul National Univ. Hospital*); Seo, Jong Mo (*Seoul National Univ., School of Engineering*)

- 18:00-19:30 WePOS-34.13
Assessment of Non-Contact Respiration during Pedaling Motion using RealSense
 Aoki, Hirooki* (*Chitose Institute of Science & Technology*); Majima, Mitsuru (*Saitama Medical University*); Takayama, Eri (*Saitama Medical University*); Naka, Hiroyuki (*Saitama Medical University*); Miura, Saori (*Saitama Medical University*); Akagami, Tomoe (*Saitama Medical University*); Nakamura, Hidetoshi (*Saitama Medical University*)
- 18:00-19:30 WePOS-34.14
Driving Situation Recognition System for Elderly
 Hyun Seo, Cho (*SKTelecom*); Kim, Il Kon* (*Kyungpook National University*); Lee, Eunjoo (*Kyungpook National University*)
- 18:00-19:30 WePOS-34.15
Effect of Slider Thumb/Finger Movement Ratio on Drag Operability of Slider in Touch Screen
 Nishimura, Takahiro (*National Institute of Special Needs Education*); Doi, Kouki* (*National Institute of Special Needs Education*); Fujimoto, Hiroshi (*Waseda University*)
- 18:00-19:30 WePOS-34.16
Machine Learning Algorithms Could be used to Detect Postural Control Patterns for Individuals with Parkinson's Disease
 Li, Yumeng* (*California State University*)
- 18:00-19:30 WePOS-34.17
Modulation of Feedback Negativity Caused by Events in Virtual Reality Shooting Game
 Yokota, Yusuke* (*National Institute of Information & Communications Technology*); Naruse, Yasushi (*National Institute of Information & Communications Technology*)
- 18:00-19:30 WePOS-34.18
Study of Relationship between Motor Function of Inpatients with Hemiparesis and their Daily Posture in Rehabilitation Ward
 Ogasawara, Takayuki* (*NTT Device Innovation Center*); Mukaino, Masahiko (*Asahikawa Medical University*); Matsuura, Hirota (*Fujita Health University*); Matsunaga, Kenichi (*NTT Corporation*); Togo, Hiroyoshi (*NTT Device Innovation Center*); Saitoh, Eiichi (*Fujita Health University*)
- 18:00-19:30 WePOS-34.19
Basic Study on Development of the Grip Training Device which used the EAM Brake
 Kawashima, Motoki* (*Tokyo Denki University*); Nagatsuma, Akemi (*Fujikurakasei Co., Ltd.*); Anzai, Hidenobu (*Fujikura Kasei Co. Ltd*); Mitsui, Kazuyuki (*Tokyo Denki University*)
- 18:00-19:30 WePOS-34.20
A Relation between Error-Related Negativity and Player's Skill on TV Game
 Osugi, Kiyoyuki (*Osaka Univ., National Institute of Information & Communicic*); Yokota, Yusuke (*National Institute of Information & Communications Technology*); Naruse, Yasushi* (*National Institute of Information & Communications Technology*)
- 18:00-19:30 WePOS-34.21
Adaptive Neuro-Learning: A New Education Strategy using EEG-Based Passive Brain-Computer Interfaces
 Chae, Younsoo (*Hanyang University*); Kim, Hodam (*Hanyang University*); Im, Chang-Hwan* (*Hanyang University*)
- 18:00-19:30 WePOS-34.22
Lambda Response as an Attention Indicator during Visual Inspection
 Saga, Takuma (*Osaka University*); Nakajima, Kae (*National Institute of Information & Communications Technology*); Osugi, Kiyoyuki (*Osaka University, National Institute of Information & Communicic*); Yokota, Yusuke (*National Institute of Information & Communications Technology*); Higashi, Yuichiro (*Omron Corporation*); Nakajima, Hiroshi (*Omron Corporation*); Kotake, Yasuyo (*Omron Corporation*); Naruse, Yasushi* (*National Institute of Information & Communications Technology*)
- 18:00-19:30 WePOS-34.23
A Study on the Facial Temperature Variations of the Elderly by the Emotional State Induced during Video Watching
 Shin, Young Seok (*Eulji Univ.*); Kim, Wooseop (*The Seongnam Senior Experience Complex, Eulji Univ.*); Jung, Duk Young* (*The Seongnam Senior Experience Complex, Eulji Univ.*)
- 18:00-19:30 WePOS-34.24
Biomechanical Evaluation of the Patient with Hallux Valgus Wearing Three-Dimensional Printed Orthosis
 Chen, You-Yu (*National Yang Ming University*); Chen, Chen-Sheng* (*National Yang Ming University*)
- 18:00-19:30 WePOS-34.25
Development of a Motion Improvement Support System for Baton Twirling Players
 Fujiwara, Daichi* (*Osaka Institute of Technology*); Ohsuga, Mieko (*Osaka Institute of Technology*)
- 18:00-19:30 WePOS-34.26
Assistive Device for Freezing of Gait Symptoms in Parkinson Patients
 Piccinini, David Jesús (*UTN Fac Reg San Nicolas*); Antonelli, Sofia Lara (*University*); Rodriguez, Hernan Atilio (*National Technology University – San Nicolás*); López, Natalia M* (*Universidad Nacional de San Juan*); Mercado, Federico Gustavo (*Universidad Nacional de San Juan*); Ponce, Sergio Damian (*Universidad Tecnológica Nacional*)
- 18:00-19:30 WePOS-34.27
The Effects of the Angle of an Elbow Joint on the Latency and Duration When Tendon Vibration Evoke the Motion Illusion
 Ohshima, Hiroyuki* (*Tokyo Metropolitan Industrial Technology Research Institute*); Shimada, Shigenobu (*Tokyo Metropolitan Industrial Technology Research Institute*)
- 18:00-19:30 WePOS-34.28
Estimating Otolith Function from Reflexive Eye Movements during the Head Impulse Test
 Sugawara, Tomoko* (*Toyota Central R&D Labs.*); Ito, Taeko (*Nara Medical University*); Wada, Yoshiro (*Nara Medical University*); Sakai, Hiroyuki (*Toyota Central R&D Laboratories*)

ThA01: 08:30-10:00 Hall A6+A7 – Level 1
Transcranial Direct Current Stimulation in Adolescents and Adults: Towards a Precision Medicine Approach based on Numerical Models (Invited Session)
Chair: Thielscher, Axel (*Copenhagen University Hospital Hvidovre, Denmark & Biomedical Engineering Section*)

08:30-08:45 ThA01.1
Individual Targeting and Optimization of Multi-Channel Transcranial Electric Stimulation of the Human Primary Somatosensory Cortex
 Antonakakis, Marios* (*Univ. of Muenster*); Khan, Asad (*Universität Klinikum Münster, Univ. of Münster*); Wollbrink, Andreas (*Univ. of Muenster*); Zervakis, Michalis (*Technical Univ. of Crete, Greece*); Paulus, Walter (*Georg-August-Univ., Goettingen*); Nitsche, Michael A. (*Georg-August-Univ., Goettingen*); Lencer, Rebekka (*Univ. of Muenster, Dept. of Psychiatry & Psychothera*); Suntrup-Krueger, Sonja (*Univ. Hospital of Muenster, Dept. of Neurology*); Schneider, Till (*Dept. of Neurophysiology & Pathophysiology, Univ. Me*); Herrmann, Christoph (*Research Center Neurosensory Science, European Medical School, U*); Hauelsen, Jens (*Technical Univ. Ilmenau*); Wolters, Carsten (*Univ. of Muenster*)

08:45-09:00 ThA01.2
Automated and Robust Segmentation of the Human Head Anatomy
 Puonti, Oula* (*Copenhagen Univ. Hospital Hvidovre, Denmark*); Van Leemput, Koen (*Massachusetts General Hospital, Harvard Medical School*); Nielsen, Jesper D. (*Copenhagen Univ. Hospital Hvidovre, Denmark & Dept. of Appl*); Madsen, Kristoffer H. (*Copenhagen Univ. Hospital Hvidovre, Denmark & Dept. of Appl*); Thielscher, Axel (*Copenhagen Univ. Hospital Hvidovre, Denmark & Biomedical En*)

09:00-09:15 ThA01.3
From Model to Montage: Importance of Personalization of Multi-Electrode Setups in TCS
 Salvador, Ricardo* (*Neuroelectronics*); Biagi, Maria Chiara (*Neuroelectronics*); Puonti, Oula (*Copenhagen University Hospital Hvidovre, Denmark & Dept. of Elec*); Thielscher, Axel (*Copenhagen University Hospital Hvidovre, Denmark & Biomedical En*); Ruffini, Giulio (*Starlab Barcelona SL*)

09:15-09:30 ThA01.4
TDCS Modeling with Boundary Element Fast Multipole Method: Accuracy and Speed
 Makarov, Sergey* (*Electrical & Computer Engineering, Worcester Polytechnic Instit*); Noetscher, Gregory (*Worcester Polytechnic Institute*); Pham, Dung (*Worcester Polytechnic Institute*); Nummenmaa, Aapo (*Massachusetts General Hospital*); Deng, Zhi-De (*National Institute of Mental Health*)

09:30-09:45 ThA01.5
Modelling Studies of Transcutaneous Spinal Cord Direct Current Stimulation
 Miranda, Pedro Cavaleiro* (*Faculdade de Ciências, Univ. de Lisboa*); Fernandes, Sofia Rita (*Faculdade de Ciências e Faculdade de Medicina da Univ. de*); de Carvalho, Mamede (*IMM Molecular Medicine Institute, Faculty of Medicine, Univ.*)

ThA02: 08:30-10:00 Hall A8 – Level 1
Photoplethysmography Measurements, Advanced Signal Processing and Cardiovascular Applications (Minisymposium)
Chair: Allen, John (*Freeman Hospital*)
Co-Chair: Zheng, Dingchang (*Anglia Ruskin University*)

08:30-08:45 ThA02.1
Photoplethysmography in Solid and Hollow Organs
 Kyriacou, Panayiotis* (*City University London*)

08:45-09:00 ThA02.2
Significantly Greater Effect of Aging on Peripheral Arterial Volume Distensibility Measured with Applied External Cuff Pressure
 Zheng, Dingchang* (*Anglia Ruskin University*); Liu, Haipeng (*Anglia Ruskin University*)

09:00-09:15 ThA02.3
Effect of Measurement Site on the Accuracy of Respiration Rate Estimation from PPG Signal
 Liu, Haipeng* (*Anglia Ruskin Univ.*); Hartmann, Vera (*Anglia Ruskin Univ.*); Zheng, Dingchang (*Anglia Ruskin Univ.*)

09:15-09:30 ThA02.4
Multi-Site Photoplethysmography: Offering Great Potential in Cardiovascular Assessment
 Allen, John* (*Freeman Hospital*)

09:30-09:45 ThA02.5
Effects of Aging on the Characteristics of Arterial Pulse Waveform
 Li, Mingtao (*Southern University of Science & Technology*); Chen, Fei* (*Southern University of Science & Technology*)

09:45-10:00 ThA02.6
Gaussian Modelling Characteristics of Peripheral Arterial Pulse Difference between Measurements from the Three Trimesters of Healthy Pregnancy
 Li, Kunyan (*Beijing Univ. of Technology*); Zhang, Song (*Beijing Univ. of Technology*); Yang, Lin* (*Beijing Univ. of Technology*); Jiang, Hongqing (*Haidian Maternal & Child Health Hospital*); Hao, Dongmei (*Beijing Univ. of Technology*)

ThA03: 08:30-10:00 Hall A3 – Level 1
Magnetic Particle Imaging (Invited Session)
Chair: Buzug, Thorsten M. (*Univ. of Luebeck*)
Co-Chair: Knopp, Tobias (*Univ. Medical Center Hamburg-Eppendorf*)

08:30-08:45 ThA03.1
MPI Meets CT – Simultaneous Acquisition of MPI and CT Images
 Vogel, Patrick (*Experimental Physics 5, Univ. of Würzburg*); Markert, Jonathan (*Institute of Medical Engineering, Univ. of Applied Sciences*); Rückert, Martin A. (*Experimental Physics 5, Univ. of Würzburg*); Herz, Stefan (*Diagnostic & Interventional Radiology, Univ. Hospital Wür*); Keßler, Benedikt (*Institute of Medical Engineering, Univ. of Applied Sciences*); Dremel, Kilian (*Fraunhofer Development Center X-ray Tech. EZRT*); Althoff, Daniel (*Fraunhofer Development Center X-ray Tech. EZRT*); Weber, Matthias (*Institute of Medical Engineering, Univ. of Würzburg*); Buzug, Thorsten M. (*Univ. of Luebeck*); Bley, Thorsten A. (*Diagnostic & Interventional Radiology, Univ. Hospital Wür*); Kullmann, Walter H. (*Fachhochschule Wuerzburg-Schweinfurt, Univ. of Applied Scien*); Hanke, Randolf (*Dept. of Experimental Physics (X-Ray Microscopy), Univ.*); Zabler, Simon (*Dept. of Experimental Physics (X-Ray Microscopy), Univ.*); Behr, Volker Christian* (*Univ. of Würzburg*)

08:45-09:00 ThA03.2
Halbach-Based Field-Free Line MPI Scanner
 Beuke, Jonas (*University of Lübeck*); Weber, Matthias (*Institute of Medical Engineering, University of Lübeck*); von Gladiss, Anselm (*University of Lübeck*); Vogel, Patrick (*Experimental Physics 5, University of Würzburg*); Behr, Volker Christian (*University of Würzburg*); Gräfe, Ksenija (*Universität zu Lübeck*); Buzug, Thorsten M.* (*University of Luebeck*)

09:00-09:15 ThA03.3
Conditions and Possibilities for Quantitative Magnetic Particle Imaging
 Wells, James* (*Physikalisch-Technische Bundesanstalt*); Paysen, Hendrik (*Physikalisch-Technische Bundesanstalt*); Kosch, Olaf (*Physikalisch-Technische Bundesanstalt*); Wiekhorst, Frank (*Physikalisch-Technische Bundesanstalt*)

09:15-09:30 ThA03.4
An Algorithmic Approach for Increasing the Dynamic Range of Magnetic Particle Imaging
 Knopp, Tobias* (*University Medical Center Hamburg-Eppendorf*); Werner, Franziska (*University Medical Center Hamburg-Eppendorf*); Möddel, Martin (*University Medical Center Hamburg-Eppendorf*); Gdaniec, Nadine (*University Medical Center Hamburg-Eppendorf*)

ThA04: 08:30-10:00 Hall A1 – Level 1
Individualized Magnetoencephalography with Multichannel Devices (Invited Session)
Chair: Sander-Thömmes, Tilmann H. (*Physikalisch-Technische Bundesanstalt*)
Co-Chair: Labyt, Etienne (*CEA/LETI*)

08:30-08:45 ThA04.1
Microfabricated Optically-Pumped Magnetometer Array for Conformal Pediatric MEG
Korenko, Branislav (*Univ. of Colorado*); Li, Linfeng (*Univ. of Colorado*); Romanov, Gleb (*Univ. of Colorado*); Gerginov, Marja (*Univ. of Colorado*); Gerginov, Vladislav (*Univ. of Colorado*); Hughes, Jeramy (*Univ. of Colorado*); Alem, Orang (*Univ. of Colorado*); Knappe, Svenja* (*Univ. of Colorado*)

08:45-09:00 ThA04.2
Optically Pumped 4He Magnetometers for on Scalp MEG Recordings at Ambient Temperature
Labyt, Etienne* (*CEA/LETI*); Tong, Longzheng (*Capital Medical University China*); Edward, Deepak (*Summa*)

09:00-09:15 ThA04.3
Individualized Magnetoencephalography using MRI-Derived Helm Shaped OPM Sensor Holders
Jodko-Władzińska, Anna* (*Warsaw University of Technology, Faculty of Mechatronics*); Brühl, Rüdiger (*Physikalisch-Technische Bundesanstalt*); Sander-Thömmes, Tilmann H. (*Physikalisch-Technische Bundesanstalt*)

09:15-09:30 ThA04.4
On-Scalp Magnetoencephalography with High-Tc SQUIDS
Pfeiffer, Christoph* (*Chalmers Univ. of Technology*); Ruffieux, Silvia (*Chalmers Univ. of Technology*); Andersen, Lau Moller (*NatMEG, Dept. of Clinical Neuroscience, Karolinska Institutet*); Lundqvist, Daniel (*NatMEG, Dept. of Clinical Neuroscience, Karolinska Institutet*); Orekhova, Elena (*MedTech West & the Institute of Neuroscience & Physiology, S*); Kalaboukhov, Alexei (*Dept. of Microtechnology & Nanoscience – MC2, Chalmers Un*); Winkler, Dag (*Dept. of Microtechnology & Nanoscience – MC2, Chalmers Un*); Schneiderman, Justin F. (*MedTech West & the Institute of Neuroscience & Physiology, S*)

09:30-09:45 ThA04.5
Multichannel Optically Pumped Magnetometers with a K-Rb Hybrid Cell for High-Resolution Magnetoencephalography
Ito, Yosuke* (*Kyoto University*); Nishi, Kazumasa (*Kyoto University*); Kobayashi, Tetsuo (*Kyoto University*)

ThA05: 08:30-10:00 Hall A2 – Level 1
Pattern Detection and Classification in Cardiovascular Signals (Oral Session)
Chair: Barbieri, Riccardo (*Politecnico di Milano*)
Co-Chair: Glos, Martin (*Charité-Universitaetsmedizin Berlin*)

08:30-08:45 ThA05.1
Markov Models for Detection of Ventricular Arrhythmia
Li, Zhi* (*Univ. of Michigan*); Derksen, Harm (*Univ. of Michigan, Ann Arbor*); Gryak, Jonathan (*Univ. of Michigan*); Hooshmand, Mohsen (*Univ. of Michigan*); Wood, Alexander (*Univ. of Michigan*); Ghanbari, Hamid (*Univ. of Michigan*); Gunaratne, Pujitha (*Toyota Motor North America*); Najarian, Kayvan (*Univ. of Michigan – Ann Arbor*)

08:45-09:00 ThA05.2
Deterministic Learning-Based Methodology for Detecting Abnormal Dynamics of Cardiac Repolarization during Ischemia
Deng, Muqing* (*Hangzhou Dianzi University*); Wu, Weiming (*South China University of Technology*); Cao, Jiuwen (*School of Automation Hangzhou Dianzi University / COGNACG, CNRS*); Tang, Min (*Peking Union Medical College*); Wang, Cong (*South China University of Technology*)

09:00-09:15 ThA05.3
Detection of Myocardial Infarction from Multi-Lead ECG using Dual-Q Tunable Q-Factor Wavelet Transform
Liu, Jia* (*University of Jyväskylä*); Zhang, Chi (*Dalian University of Technology*); Ristaniemi, Tapani (*University of Jyväskylä*); Cong, Fengyu (*Dalian University of Technology*)

09:15-09:30 ThA05.4
Deep Learning based Patient-Specific Classification of Arrhythmia on ECG Signal
Zhao, Wei* (*Guangzhou Shiyuan Electronics Co., Ltd*); Hu, Jing (*Guangzhou Shiyuan Electronic Technology Co., Ltd.*); Jia, Dongya (*CVTE, Guangdong Province, China*); Wang, Hongmei (*Guangzhou Shiyuan Electronics Co., Ltd*); Li, Zhenqi (*Guangzhou Shiyuan Electronics Co., Ltd*); Yan, Cong (*Guangzhou Shiyuan Electronics Co., Ltd*); You, Tianyuan (*Guangzhou Shiyuan Electronics Co., Ltd.*)

09:30-09:45 ThA05.5
ECG-Based Random Forest Classifier for Cardiac Arrest Rhythms
Manibardo, Eric (*UPV/EHU*); Irusta, Unai* (*UPV/EHU*); Del Ser, Javier (*Tecnalia*); Aramendi, Elisabete (*University of the Basque Country*); Isasi Liñero, Iraia (*UPV/EHU*); Olbarria, Mikel (*Emergentziak Osakidetza*); Corcuera, Carlos (*Emergentziak Osakidetza*); Veintemillas, Jose (*Emergentziak Osakidetza*); Larrea, Andima (*Emergentziak Osakidetza*)

09:45-10:00 ThA05.6
A Simple Unsupervised, Real-Time Clustering Method for Arterial Blood Pressure Signal Classification
Holland, Alex* (*Edwards Lifesciences*); Asgari, Shadnaz (*California State University, Long Beach*)

ThA06: 08:30-10:00 Hall A5 – Level 1
Neuromuscular Systems (I) (Oral Session)

08:30-08:45 ThA06.1
A Technique for Measuring Visuomotor Feedback Contributions to the Control of an Inverted Pendulum
Franklin, David W.* (*Technical University of Munich*); Cesonis, Justinas (*Technical University of Munich*); Franklin, Sae (*Institute for Cognitive Systems, Technical University of Munich*); Leib, Raz (*Technical University of Munich*)

08:45-09:00 ThA06.2
Feedback Delay Changes the Control of an Inverted Pendulum
Franklin, Sae* (*Institute for Cognitive Systems, Technical University of Munich*); Cesonis, Justinas (*Technical University of Munich*); Leib, Raz (*Technical University of Munich*); Franklin, David W. (*Technical University of Munich*)

09:00-09:15 ThA06.3
A Method to Quantify Multi-Degree-of-Freedom Lower Limb Isometric Joint Torques in Children with Hemiplegia
Goyal, Vatsala* (*Northwestern Univ.*); Sukal, Theresa (*Northwestern Univ.*); Dewald, Julius P. A. (*Northwestern Univ.*)

09:15-09:30 ThA06.4
How to Improve Robustness in Muscle Synergy Extraction
Ghislieri, Marco* (*Politecnico di Torino*); Agostini, Valentina (*Politecnico di Torino*); Knaflitz, Marco (*Politecnico di Torino*)

09:30-09:45 ThA06.5
Error Augmentation Improves Visuomotor Adaptation during a Full-Body Balance Task
Fasola, Jemina* (*EPFL – LNCO*); Kannape, Oliver Alan (*Swiss Institute of Technology Lausanne (EPFL)*); Bouri, Mohamed (*EPFL*); Bleuler, Hannes (*EPFL*); Blanke, Olaf (*LNCO, EPFL*)

09:45-10:00 ThA06.6
Modeling Expected Reaching Error and Behaviors for Motor Adaptation
Earley, Eric J* (*Northwestern University*); Hargrove, Levi (*Rehabilitation Institute of Chicago*)

ThA08: 08:30-10:00 M8 – Level 3
Time-Series Modelling of Physiology: Inference, Implementation, and Interpretability (Invited Session)
Chair: Colopy, Glen Wright (*University of Oxford*)
Co-Chair: Casson, Alexander James (*University of Manchester*)

08:30-08:45 ThA08.1
Predicting On-Field Recovery Rates of Athletes to Inform Athletic Management
Bergmann, Jeroen* (*University of Oxford*); Milnthorpe, William Robert Fenton (*University of Oxford*)

08:45-09:00	ThA08.2	Signal Quality Index based Adaptive Algorithms to Reduce Alarm Fatigue Moreland, Samuel A* (<i>Current Health</i>); Courty, Justine (<i>Current Health</i>); Kramer, Annabel (<i>Current Health</i>); Colopy, Glen Wright (<i>University of Oxford</i>); Whiting, Stewart (<i>Current Health</i>)	09:00-09:15	ThA10.3	Validation of Time Domain and Spatial Domain Diffuse Optical Methods for the Estimation of Tissue Optical Properties Grosenick, Dirk* (<i>Physikalisch-Technische Bundesanstalt (PTB)</i>); Gladysz, Thomas (<i>Physikalisch-Technische Bundesanstalt (PTB)</i>); Cantow, Kathleen (<i>Charité – Univ. Berlin</i>); Seeliger, Erdmann (<i>Charité – Univ. Berlin</i>)
09:00-09:15	ThA08.3	Adaptive Personalized Vital Sign Inference: From Data Acquisition to Algorithms Kramer, Annabel (<i>Current Health</i>); Courty, Justine (<i>Current Health</i>); Moreland, Samuel A (<i>Current Health</i>); Whiting, Stewart (<i>Current Health</i>); Colopy, Glen Wright* (<i>University of Oxford</i>)	09:15-09:30	ThA10.4	Assessing Tissue Oximeter Performance in Blood-Lipid Phantoms Kleiser, Stefan* (<i>Biomedical Optics Research Laboratory, University & University</i>); Ostojic, Daniel (<i>University of Zurich</i>); Isler, Helene (<i>Biomedical Optics Research Laboratory, University & University</i>); Wolf, Martin (<i>University of Zurich</i>)
ThA09: 08:30-10:00		M1 – Level 3	09:30-09:45		
Computational Models of Neuromodulation (Invited Session) Chair: Dokos, Socrates (<i>University of New South Wales</i>) Co-Chair: Shils, Jay (<i>Rush University Medical Center</i>)			Notes on Modeling and Validation in Biomedical Optics Verkruyse, Wim* (<i>Philips Innovation Group, Philips Research, Eindhoven</i>)		
08:30-08:45	ThA09.1	Functional Requirements of Small and Large-Scale Neural Circuitry Connectome Models Carlson, Kris* (<i>BIDMC/Harvard Medical School</i>); Shils, Jay (<i>Rush University Medical Center</i>); Arle, Jeffrey (<i>Beth Israel Deaconess Medical Center</i>)	ThA10.5		
08:45-09:00	ThA09.2	Modeling Spectral Energy Differences in the Sub-Thalamic Nucleus and Cortex between Parkinson's Disease Patients "ON" and "OFF" Stimulation Shils, Jay* (<i>Rush University Medical Center</i>); Mei, Longzhi (<i>BIDMC</i>); Carlson, Kris (<i>BIDMC/Harvard Medical School</i>); Arle, Jeffrey (<i>Beth Israel Deaconess Medical Center</i>)	ThA10.5		
09:00-09:15	ThA09.3	Stability in Complex and Recurrent Neural Systems Arle, Jeffrey* (<i>Beth Israel Deaconess Medical Center</i>)	ThA10.5		
09:15-09:30	ThA09.4	Selective Stimulation of Retinal Ganglion Cells Dokos, Socrates* (<i>Univ. of New South Wales</i>); Guo, Tianruo (<i>Univ. of New South Wales</i>); Li, Liming (<i>Shanghai Jiao Tong Univ.</i>); Lovell, Nigel H. (<i>Univ. of New South Wales</i>)	ThA10.5		
09:30-09:45	ThA09.5	Finding Optimal Stimulus Waveforms with Intelligent Algorithms Chang, Joshua* (<i>Dell Medical School, The University of Texas at Austin</i>); Paydarfar, David (<i>The University of Texas at Austin, Dell Medical School</i>)	ThA10.5		
09:45-10:00	ThA09.6	Computational Models of Compound Action Potentials Recorded during Spinal Cord Stimulation for Pain Relief Parker, John* (<i>Saluda Medical Pty Ltd</i>)	ThA10.5		
ThA10: 08:30-10:00		M2 – Level 3	08:30-08:45		
Phantoms and Models for Performance Assessment and Validation in Biomedical Optics (Minisymposium) Chair: Nahm, Werner (<i>Karlsruhe Institute of Technology</i>) Co-Chair: Hornberger, Christoph (<i>Wismar University of Applied Sciences, Technology, Business and Design</i>)			Virtual Patients for Managing Mechanical Ventilation in the ICU Chase, J. Geoffrey* (<i>Univ. of Canterbury</i>); Morton, Sophie E. (<i>Univ. of Canterbury</i>); Knopp, Jennifer L. (<i>Univ. of Canterbury</i>)		
08:30-08:45	ThA10.1	Accurate Determination of the Optical Properties of Tissue Phantoms Kienle, Alwin* (<i>Institute of Laser Technologies in Medicine & Metrologie</i>); Foschum, Florian (<i>Institute of Laser Technologies & Metrologie</i>)	08:45-09:00		
08:45-09:00	ThA10.2	Multi-Laboratory Efforts for Performance Assessment of Diffuse Optics Instruments Pifferi, Antonio* (<i>Politecnico di Milano</i>); Lanka, Pranav (<i>Politecnico di Milano</i>); Spinelli, Lorenzo (<i>IFN-CNR</i>); Torricelli, Alessandro (<i>Politecnico di Milano</i>); Wabnitz, Heidrun (<i>Physikalisch-Technische Bundesanstalt (PTB)</i>)	Model-Based Research in Mechanical Ventilation Treatment: The Development and Introduction to CURE Trial Chiew, Yeong Shiong* (<i>Monash Univ. Malaysia</i>); Tan, Chee Pin (<i>Monash Univ. Malaysia</i>); Chase, J. Geoffrey (<i>Univ. of Canterbury</i>)		
			09:00-09:15		
			Electrical Impedance Tomography in Mechanical Ventilation Frerichs, I.* (<i>University Medical Centre Schleswig-Holstein, Campus Kiel, Dept.</i>); Moeller, Knut (<i>Furtwangen University</i>)		
			09:15-09:30		
			Absolute EIT -- New Chances for Ventilation Support? Lima, Raul Gonzalez* (<i>Escola Politecnica da Universidade de Sao Paulo</i>); Martins, Thiago de Castro (<i>Escola Politecnica da Universidade de Sao Paulo</i>); Sato, André Kubagawa (<i>Escola Politecnica da Universidade de Sao Paulo</i>); Moura, Fernando Silva de (<i>Federal University of ABC</i>); Camargo, Erick Dario Leon Bueno (<i>Federal University of ABC (UFABC)</i>); Silva, Olavo Luppi (<i>Universidade Federal do ABC</i>); Rattis Santos, Talles Batista (<i>Escola Politecnica da Universidade de São Paulo</i>); Nakanishi, Rafael Mikio (<i>Escola Politecnica da Universidade de São Paulo</i>); Mueller, Jennifer (<i>Colorado State University</i>); Tsuzuki, Marcos de Sales Guerra (<i>Escola Politecnica da Universidade de Sao Paulo</i>); Amato, Marcelo Brito Passos (<i>Hospital da Clinicas da Universidade de Sao Paulo</i>)		
			09:30-09:45		
			Integrative Models of the Respiratory System for Patient-Device Interaction Tawhai, Merryn* (<i>The University of Auckland</i>); Chase, J. Geoffrey (<i>University of Canterbury</i>)		
			09:45-10:00		
			EIT: Algorithms and Methods for Clinical Applications Gong, Bo (<i>Furtwangen Univ.</i>); Krueger-Ziolek, Sabine (<i>Furtwangen Univ.</i>); Moeller, Knut* (<i>Furtwangen Univ.</i>)		

ThA12: 08:30-10:00 M6 – Level 3
EEG and Electrical Impedance Imaging (Oral Session)
Chair: Ding, Lei (*University of Oklahoma*)
Co-Chair: Doessel, Olaf (*Karlsruhe Institute of Technology (KIT)*)

08:30-08:45 ThA12.1
Cortical Theta Activity and Postural Control in Non-Visual and High Cognitive Load Tasks: Impact for Clinical Studies
Carro Dominguez, Manuel* (*Trinity Centre for Bioengineering*); O'Keeffe, Clodagh (*Trinity College Dublin*); O'Rourke, Eugene (*Trinity Centre of Bioengineering, Trinity College Dublin.*); Feerick, Niamh (*Trinity Centre of Bioengineering, Trinity College Dublin.*); Reilly, Richard (*Trinity College Dublin*)

08:45-09:00 ThA12.2
Altered Cortical and Postural Response to Balance Perturbation in Traumatic Brain Injury – An EEG Pilot Study
Allexandre, Didier* (*Kessler Foundation*); Hoxha, Armand (*Kessler Foundation*); Shenoy Handiru, Vikram (*Kessler Foundation*); Saleh, Soha (*Kessler Foundation*); Suviseshamuthu, Easter (*Kessler Foundation*); Yue, Guang (*Kessler Foundation*)

09:00-09:15 ThA12.3
Influence of Background Lung Tissue Conductivity on the Cardiosynchronous EIT Signal Components: A Sensitivity Study
Kircher, Michael* (*Karlsruhe Institute of Technology*); Hattiangdi, Rohit (*Institute of Biomedical Engineering, Karlsruhe Institute of Tech*); Menges, Robert (*Institute of Biomedical Engineering, Karlsruhe Institute of Tech*); Doessel, Olaf (*Karlsruhe Institute of Technology (KIT)*)

09:15-09:30 ThA12.4
Improved Imaging Resolution of Electrical Impedance Tomography using Artificial Neural Networks for Image Reconstruction
Huang, Shu-Wei (*National Chiao Tung University*); Cheng, Hao-Min (*Taipei Veterans General Hospital*); Lin, Shien-Fong* (*National Chiao Tung University*)

09:30-09:45 ThA12.5
Noninvasive Localization of High-Frequency Oscillations in Children with Epilepsy: Validation against Intracranial Gold-Standard
Dirodi, Matilde* (*Unit of Biomedical Robotics & Biomicrosystems, Engineering Dep*); Tamilia, Eleonora (*Harvard Medical School / Boston Children's Hospital*); Grant, Patricia Ellen (*Boston Children's Hospital, Harvard Medical School*); Madsen, Joseph (*Children's Hospital Boston, Harvard Medical School*); Stufflebeam, Steve (*Athinoula A. Martinos Center for Biomedical Imaging, Massachusetts*); Pearl, Philip (*Division of Epilepsy & Clinical Neurophysiology, Dept. of*); Papadelis, Christos (*Harvard Medical School*)

09:45-10:00 ThA12.6
Using a Spatio-Temporal Basis for ECG Imaging of Ventricular Pacings: Insights from Simulations and First Application to Clinical Data
Schuler, Steffen* (*Karlsruhe Institute of Technology (KIT)*); Potyagaylo, Danila (*EP Solutions SA*); Doessel, Olaf (*Karlsruhe Institute of Technology (KIT)*)

ThA13: 08:30-10:00 R2 – Level 3
Chemical and Biological Sensing (Oral Session)
Co-Chair: Mainardi, Luca (*Politecnico di Milano*)

08:30-08:45 ThA13.1
A Graphene-Based pH Sensor on Paper for Human Plasma and Seawater
Vivaldi, Federico (*University of Pisa, Dept. of Chemistry & Industrial Chemis*); Bonini, Andrea (*University of Pisa, Dept. of Chemistry & Industrial Chemi*); Melai, Bernardo (*Dept. of Chemistry & Industrial Chemistry, University of*); Poma, Noemi (*University of Pisa, Dept. of Chemistry & Industrial Chemis*); Kirchhain, Arno (*University of Pisa, Dept. of Chemistry & Industrial Chemis*); Santalucia, Delio (*University of Pisa, Dept. of Chemistry & Industrial Chemis*); Salvo, Pietro* (*National Research Council*); Di Francesco, Fabio (*University of Pisa*)

08:45-09:00 ThA13.2
Wireless Bipotentostat Circuit for Glucose and H2O2 Interrogation
Slaughter, Gymama* (*Univ. of Maryland Baltimore County*); Annamalai, Priyanka (*Univ. of Maryland Baltimore County*)

09:00-09:15 ThA13.3
An Integrated and Automated Electronic System for Point-of-Care Protein Testing
Wu, Dan (*Massachusetts Institute of Technology*); voldman, Joel* (*Massachusetts Institute of Technology*)

09:15-09:30 ThA13.4
On-Chip Multiwell Plate Impedance Analysis of Microwell Array Sensor for Label-Free Detection of Cytokines in Rat Serum
Mahmoodi, Seyed Reza* (*Rutgers University*); Xie, Pengfei (*Rutgers University*); Javanmard, Mehdi (*Rutgers University*)

09:30-09:45 ThA13.5
Design and Development of a Disposable Lab-on-a-Chip for Prostate Cancer Detection
Farazmand, Meer* (*University of Warwick*); Rodrigues, Rui (*University of Warwick, WMG*); Gardner, Julian (*University of Warwick*); Charmet, Jerome (*University of Warwick*)

09:45-10:00 ThA13.6
A Metal Oxide Gas Sensors Array for Lung Cancer Diagnosis through Exhaled Breath Analysis
Marzorati, Davide* (*Politecnico di Milano*); Mainardi, Luca (*Politecnico di Milano*); Sedda, Giulia (*IEO European Institute of Oncology IRCCS*); Gasparri, Roberto (*IEO European Institute of Oncology IRCCS*); Spaggiari, Lorenzo (*IEO European Institute of Oncology IRCCS*); Cerveri, Pietro (*Politecnico di Milano*)

ThA14: 08:30-10:00 R3 – Level 3
Signal Processing and Classification for Sleep Apnea (Oral Session)
Chair: Bailon, Raquel (*University of Zaragoza*)
Co-Chair: de Chazal, Philip (*University of Sydney*)

08:30-08:45 ThA14.1
Evaluation of Methods to Characterize the Change of the Respiratory Sinus Arrhythmia with Age in Sleep Apnea Patients
Morales Tellez, John Fredy* (*KU Leuven*); Deviaene, Margot (*KU Leuven*); Milagro, Javier (*University of Zaragoza*); Testelmans, Dries (*Universitair Ziekenhuis Gasthuisberg*); Buyse, Bertien (*Katholieke Universiteit Leuven*); Willems, Rik (*KU Leuven*); Orini, Michele (*University College London*); Van Huffel, Sabine (*KU Leuven*); Bailon, Raquel (*University of Zaragoza*); Varon, Carolina (*Katholieke Universiteit Leuven*)

08:45-09:00 ThA14.2
A Preliminary Study of the Automatic Classification of the Site of Airway Collapse in OSA Patients using Snoring Signals
Sebastian, Arun* (*University of Sydney*); de Chazal, Philip (*University of Sydney*); Cistulli, Peter (*University of Sydney*)

09:00-09:15 ThA14.3
AI vs Humans for the Diagnosis of Sleep Apnea
Thorey, Valentin* (*Dreem, Paris*); Bou i Hernandez, Albert (*Algorithms Team, Dreem*); Arnal, Pierrick Jacques (*Research Team, Dreem, New York City, USA*); During, Emmanuel Hossein (*Center for Sleep Sciences & Medicine, Stanford University, Sta*)

09:15-09:30 ThA14.4
Sleep Apnea Severity Estimation from Respiratory Related Movements using Deep Learning
Hafezi, Maziar (*Toronto Rehabilitation Institute, University Health Network*); Montazeri Ghahjaverestan, Nasim (*Institute of Biomaterial & Biomedical Engineering, University of*); Zhu, Kaiyin (*Toronto Rehab-University Health Network*); Alshaer, Hisham (*Toronto Rehabilitation Inst, UHN*); Yadollahi, Azadeh (*University of Toronto*); Taati, Babak* (*Toronto Rehabilitation Institute & University of Toronto*)

09:30-09:45 ThA14.5
Diagnosis of Obstructive Sleep Apnea during Wakefulness using Upper Airway Negative Pressure and Machine Learning
 Lim, Jan (*Toronto Rehabilitation Institute*); Khan, Shehroz (*Toronto Rehabilitation Institute*); Pandya, Aditya (*Ryerson Univ.*); Ryan, Clodagh (*Toronto General Hospital, Univ. Health Network, Toronto, ON*); Ul Haq, Mohammad Adnan (*Toronto Rehabilitation Institute, Univ. Health Network, Tor*); Macarthur, Kori (*Toronto Rehabilitation Institute*); Haleem, Ahmed (*UHN Toronto Rehabilitation Institute*); Sivakulam, Niveca (*Toronto Rehabilitation Institute*); Sahak, Hosna (*Univ. of Toronto*); Alshaer, Hisham* (*Toronto Rehabilitation Inst, UHN*)

09:45-10:00 ThA14.6
Non-Invasive Diagnosis of Sleep Apnoea using ECG and Respiratory Bands
 Sadr, Nadi* (*Univ. of Sydney*); de Chazal, Philip (*Univ. of Sydney*)

ThA15: 08:30-10:00 M3 – Level 3
Image Analysis and Classification – Machine Learning Approaches (I) (Oral Session)
 Chair: Wang, Wenjin (*Eindhoven Engineering*)
 Co-Chair: Wang, Haifeng (*Shenzhen Institutes of Advanced Technology, Chinese Academy of Science*)

08:30-08:45 ThA15.1
MelanomaNet: An Effective Network for Melanoma Detection
 Huang, Rian (*Shenzhen Univ.*); Liang, Jiajun (*Shenzhen Univ.*); Jiang, Feng (*Shenzhen Univ.*); Zhou, Feng (*The Univ. of Michigan*); Cheng, Nina (*Shenzhen Univ.*); Wang, Tianfu (*Shenzhen Univ.*); Lei, Baiying* (*Shenzhen Univ.*)

08:45-09:00 ThA15.2
Recognizing Occlusal Caries in Dental Intraoral Images using Deep Learning
 Moutselos, Konstantinos (*Univ. of Piraeus*); Berdouses, Elias (*Dept. of Paediatric Dentistry, Dental School, National & Kapod*); Oulis, Constantine (*Dept. of Paediatric Dentistry, Dental School, National & Kapod*); Maglogiannis, Ilias* (*Univ. of Piraeus*)

09:00-09:15 ThA15.3
Unsupervised Face Anti-Spoofing using Dual Cameras based Feature Matching
 Shen, Wang (*Hunan University*); Liu, Jie (*Hunan University*); He, Min (*Hunan University*); Wang, Wenjin* (*Eindhoven University of Technology*)

09:15-09:30 ThA15.4
Vision-Based Mouth Motion Analysis in Epilepsy: A 3D Perspective
 Ahmedt-Aristizabal, David* (*Queensland Univ. of Technology*); Nguyen, Kien (*Queensland Univ. of Technology*); Denman, Simon (*Queensland Univ. of Technology*); Sarfraz, Muhammad Saquib (*Karlsruhe Institute of Technology*); Sridharan, Sridha (*Queensland Univ. of Technology*); Dionisio, Sasha (*Mater Hospital*); Fookes, Clinton (*Queensland Univ. of Technology*)

09:30-09:45 ThA15.5
Tournament based Ranking CNN for the Cataract Grading
 Kim, Dohyeun* (*Electronics & Telecommunications Research Institute*); Jun, Tae Joon (*KAIST*); Eom, Youngsub (*Korea University College of Medicine*); Kim, Cherry (*Korea University College of Medicine*); Kim, Daeyoung (*KAIST*)

09:45-10:00 ThA15.6
Real-Time Detection of Ureteral Orifice in Urinary Endoscopy Videos based on Deep Learning
 Peng, Xin (*Shanghai Jiao Tong University*); Liu, Dingyi (*Dept. of Urology, Shanghai Punan Hospital of Pudong New Dis*); Li, Yiming (*Deepwise Artificial Intelligence Laboratory*); Xue, Wei (*Dept. of Urology, Ren Ji Hospital affiliated to Shanghai Ji*); Qian, Dahong* (*Shanghai Jiao Tong University*)

ThA16: 08:30-10:00 M5 – Level 3
Human-Robot Interaction: Systems and Controls (Oral Session)
 Chair: Desai, Jaydip (*Wichita State University*)
 Co-Chair: Yano, Kenichi (*Mie University*)

08:30-08:45 ThA16.1
Design and Validation of Two Embodied Mirroring Setups for Interactive Games with Autistic Children using the NAO Humanoid Robot
 Geminiani, Alice* (*Politecnico di Milano*); Santos, Laura (*Politecnico di Milano*); Casellato, Claudia (*Politecnico di Milano*); Farabbi, Andrea (*Politecnico di Milano*); Farella, Nicola (*Politecnico di Milano*); Santos-Victor, Jose (*Technical University of Lisbon*); Olivieri, Ivana (*IRCCS Fondazione Don Carlo Gnocchi*); Pedrocchi, Alessandra (*Politecnico di Milano*)

08:45-09:00 ThA16.2
Development of Cybernic Robot Arm to Realize Support Action Cooperated with Hemiplegic Person's Arm
 Toyama, Hiroaki* (*Univ. of Tsukuba*); Kawamoto, Hiroaki (*Univ. of Tsukuba*); Sankai, Yoshiyuki (*Univ. of Tsukuba*)

09:00-09:15 ThA16.3
Detection of Stressful Situations using GSR While Driving a BCI-Controlled Wheelchair
 Cruz, Aniana* (*University of Coimbra*); Pires, Gabriel (*University of Coimbra*); Lopes, Ana (*Instituto Politécnico de Tomar*); Nunes, Urbano (*University of Coimbra*)

09:15-09:30 ThA16.4
Bio-Compatible Piezoresistive Pressure Sensing Skin Sleeve for Millimetre-Scale Flexible Robots: Design, Manufacturing and Pitfalls
 Wasylczyk, Piotr (*King's College London*); Ozimek, Filip (*University College London*); Tiwari, Manish (*University College London*); da Cruz, Lyndon (*Moorfields Eye Hospital*); Bergeles, Christos* (*King's College London*)

09:30-09:45 ThA16.5
Artificial Neural Network to Detect Human Hand Gestures for a Robotic Arm Control
 Schabron, Bridget (*Wichita State Univ.*); Alashqar, Zaid (*Wichita State Univ.*); Fuhrman, Nicole (*Wichita State Univ.*); Jibbe, Khaled (*Wichita State Univ.*); Desai, Jaydip* (*Wichita State Univ.*)

09:45-10:00 ThA16.6
Joystick Grip for Electric Wheelchair for Tension-Athetosis-Type Cerebral Palsy
 Ogata, Yuto* (*Mie Univ.*); Katsumura, Motoyu (*Mie Univ.*); Yano, Kenichi (*Mie Univ.*); Nakao, Tomoyuki (*Imasen Engineering Corp.*); Hamada, Atsushi (*Imasen Engineering Corp.*); Torii, Katsuhiko (*Imasen Engineering Corp.*)

ThA17: 08:30-10:00 R12 – Level 3
Pharmaceutical Engineering and Drug Delivery Systems (Oral Session)
 Chair: Oh, Yu-Kyoung (*Seoul National University*)
 Co-Chair: Kurose, Hitoshi (*Kyushu University, Graduate School of Pharmaceutical Sciences*)

08:30-08:45 ThA17.1
in-Vivo Intradermal Delivery of Co-57 Labeled Vitamin B-12, and Subsequent Comparison with Standard Subcutaneous Administration
 Paul Chaudhuri, Buddhadev* (*Biolinq, Inc.*); Ceysens, Frederik (*ESAT, Catholic Univ., Leuven, Belgium*); Celen, Sofie (*Radiopharmacy Research, KU Leuven*); Bormans, Guy (*Radiopharmacy Research, KU Leuven*); Kraft, Michael (*Univ. of Liege*); Puers, Robert (*Catholic Univ. of Leuven*)

08:45-09:00 ThA17.2
Magnetic Stimulus Responsive DDS based on Chitosan Microbeads Embedded with Magnetic Nanoparticles
 Mohapatra, Ankita* (*California State Univ. Fullerton*); Harris, Michael (*Univ. of Memphis*); Levine, David (*Univ. of Memphis*); Ghimire, Madhav (*Univ. of Memphis*); Morshed, Bashir (*The Univ. of Memphis*); Jennings, Jessica (*Univ. of Memphis*); Bumgardner, Joel (*Univ. of Memphis*); Haggard, Warren (*Univ. of Memphis*); Mishra, Sanjay (*Univ. of Memphis*); Fujiwara, Tomoko (*Univ. of Memphis*)

09:00-09:15	ThA17.3	Feasibility of Drug Delivery Mediated by Ultra-Short and Intense Pulsed Electric Fields Caramazza, Laura* (<i>ICeMB@La Sapienza, University of Rome</i>); Nardoni, Martina (<i>Sapienza University of Rome</i>); De Angelis, Annalisa (<i>ICeMB@La Sapienza University Rome</i>); della Valle, Elena (<i>University of Michigan</i>); Denzi, Agnese (<i>Istituto Italiano di Tecnologia (IIT@Sapienza)</i>); Paolicelli, Patrizia (<i>Sapienza University of Rome</i>); Merla, Caterina (<i>ENEA</i>); Liberti, Micaela (<i>ICeMB at Sapienza University of Rome</i>); Apollonio, Francesca (<i>ICeMB@La Sapienza Univ. Rome</i>); Petralito, Stefania (<i>Sapienza University of Rome</i>)	ThA19: 08:30-10:00	R4 – Level 3	General and Theoretical Informatics – Machine Learning (I) (Oral Session) Chair: Najarian, Kayvan (<i>University of Michigan – Ann Arbor</i>) Co-Chair: Bianchi, Anna Maria (<i>Politecnico di Milano</i>)
09:15-09:30	ThA17.4	A Finite Element Model for Insulin Adsorption in ICU Infusion Sets Knopp, Jennifer L.* (<i>Univ. of Canterbury</i>); Bishop, Kaia (<i>Univ. of Canterbury</i>); Chase, J. Geoffrey (<i>Univ. of Canterbury</i>)	08:30-08:45	ThA19.1	Detection of Acute Respiratory Distress Syndrome by Incorporation of Label Uncertainty and Partially Available Privileged Information Sabeti, Elyas* (<i>Univ. of Michigan, Ann Arbor</i>); Drews, Joshua (<i>Univ. of Michigan, Ann Arbor</i>); Reamaroon, Narathip (<i>Univ. of Michigan, Ann Arbor</i>); Gryak, Jonathan (<i>Univ. of Michigan</i>); Sjoding, Michael (<i>Univ. of Michigan, Ann Arbor</i>); Najarian, Kayvan (<i>Univ. of Michigan – Ann Arbor</i>)
09:30-09:45	ThA17.5	Laterally Dispersing Nozzles for Needle-Assisted Jet Injection Mckeage, James William* (<i>Auckland Bioengineering Institute</i>); Abeysekera, Nandoun (<i>Auckland Bioengineering Institute</i>); Ruddy, Bryan (<i>Univ. of Auckland</i>); Nielsen, Poul (<i>The Univ. of Auckland</i>); Taberner, Andrew (<i>The Univ. of Auckland</i>)	08:45-09:00	ThA19.2	Prediction of Patient Evolution in Terms of Clinical Risk Groups Form Routinely Collected Data using Machine Learning de Toledo, Paula* (<i>Univ. Carlos III de Madrid</i>); Pérez-Rodríguez, Rodrigo (<i>Biomedical Research Foundation – Getafe Univ. Hospital</i>); de Miguel, Pablo (<i>Hospital Univ. de Fuenlabrada</i>); Sanchis, Araceli (<i>Univ. Carlos III de Madrid</i>); Serrano Balazote, Pablo (<i>Hospital Univ. 12 de Octubre. Madrid</i>)
ThA18: 08:30-10:00	R13 – Level 3	Brain Functional Imaging (Oral Session)	09:00-09:15	ThA19.3	Domain Adaptation in Children Activity Recognition Hosseini, Anahita (<i>Dept. of Computer Science, Univ. of California, Los An</i>); Zamanzadeh, Davina* (<i>Univ. of California Los Angeles</i>); Valencia, Lisa (<i>Univ. of Southern California – Los Angeles</i>); Habre, Rima (<i>Univ. of Southern California – Los Angeles</i>); Bui, Alex (<i>Univ. of California, Los Angeles</i>); Sarrafzadeh, Majid (<i>Univ. of California Los Angeles</i>)
08:30-08:45	ThA18.1	Higher Resolution sLORETA (HR-sLORETA) in EEG Source Imaging Sadat-Nejad, Younes* (<i>Ryerson University</i>); Beheshti, Soosan (<i>Ryerson University</i>)	09:15-09:30	ThA19.4	A Novel Hybrid Model for Visceral Adipose Tissue Prediction using Shape Descriptors Wang, Qiyue* (<i>George Washington Univ.</i>); Lu, Yao (<i>George Washington Univ.</i>); Zhang, Xiaoke (<i>George Washington Univ.</i>); Hahn, James (<i>George Washington Univ.</i>)
08:45-09:00	ThA18.2	Characterising Brain Network Topology in Cervical Dystonia Patients and Unaffected Relatives via Graph Theory Narasimham, Shruti* (<i>Trinity College Dublin</i>); Sundararajan, Vikram (<i>Trinity College Dublin</i>); McGovern, Eavan (<i>St. Vincent's Univ. Hospital</i>); Quinlivan, Brendan (<i>Trinity College Dublin</i>); Killian, Owen (<i>Trinity College Dublin</i>); O'Riordan, Sean (<i>St. Vincent's Univ. Hospital</i>); Hutchinson, Michael (<i>St. Vincent's Univ. Hospital Dublin</i>); Reilly, Richard (<i>Trinity College Dublin</i>)	09:30-09:45	ThA19.5	Learning a Cytometric Deep Phenotype Embedding for Automatic Hematological Malignancies Classification Li, Jeng-Lin (<i>Dept. of Electrical Engineering, National Tsing Hua Univ.</i>); Wang, Yu-Fen (<i>Tai-Cheng Stem Cell Therapy Center, National Taiwan Univ.</i>); Ko, Bor-Sheng (<i>Dept. of Internal Medicine, National Taiwan Univ. Hosp</i>); Li, Chi-Cheng (<i>Center of Stem Cell & Precision Medicine, Buddhist Tzu Chi Gen</i>); Tang, Jih-Luh (<i>Dept. of Internal Medicine, National Taiwan Univ. Hosp</i>); Lee, Chi-Chun* (<i>National Tsing Hua Univ.</i>)
09:00-09:15	ThA18.3	Reconstructing Cortical Intrinsic Connectivity Networks using a Regression Method Combining EEG Data from Sensor and Source Levels Shou, Guofa* (<i>Univ. of Oklahoma</i>); Ding, Lei (<i>Univ. of Oklahoma</i>)	09:45-10:00	ThA19.6	A Thermal Imaging Solution for Early Detection of Pre-Ulcerative Diabetic Hotspots Quinn, Susan* (<i>Ulster Univ.</i>); Saunders, Catherine (<i>Ulster Univ.</i>); Cleland, Ian (<i>Univ. of Ulster</i>); Nugent, Chris (<i>Univ. of Ulster</i>); Garcia-Constantino, Matias Fernando (<i>Ulster Univ.</i>); Cundell, Jill (<i>Ulster Univ.</i>); Madill, Godfrey (<i>Prosthetic Forum NI</i>); Morrison, Gareth (<i>The Lava Group</i>)
09:15-09:30	ThA18.4	AttentivU: A Biofeedback Device to Monitor and Improve Engagement in the Workplace Kosmyrna, Nataliya* (<i>MIT Media Lab</i>); Maes, Pattie (<i>MIT Media Lab</i>)	ThA20: 08:30-10:00	R5 – Level 3	Smart Textiles (Oral Session) Chair: Paradiso, Rita (<i>Smartex srl</i>) Co-Chair: Lendaro, Eva (<i>Chalmers University of Technology</i>)
09:30-09:45	ThA18.5	Characteristic Changes in the EEG Signals between Microsleeps and Preceding Responsive States Venkatasubramanian, Umamaheswari* (<i>Univ. of Otago</i>); Pearson, John (<i>Univ. of Otago</i>); Beckert, Lutz (<i>Univ. of Otago</i>); Jones, Richard D. (<i>New Zealand Brain Research Institute</i>)	08:30-08:45	ThA20.1	An Ecological Study based on Textile Sensory Platforms to Improve Safety and Well-Being at Work Paradiso, Rita* (<i>Smartex srl</i>); Crupi, Riccardo (<i>Smartex s.r.l.</i>); Pacelli, Maria (<i>Smartex s.r.l.</i>); Cuervo, Gabriel (<i>Ferrovial</i>); Saunder, Mark (<i>Ferrovial</i>)
09:45-10:00	ThA18.6	Different Roles for Theta and Alpha-Band Brain Rhythms during Sequential Memory Takase, Ryoken (<i>Hokkaido University</i>); Boasen, Jared (<i>Hokkaido University</i>); Yokosawa, Koichi* (<i>Hokkaido University</i>)			

- 08:45-09:00 ThA20.2
A Comparative Characterization of Smart Textile Pressure Sensors
 Kamara, Vanessa L* (*University of Rhode Island, Electrical, Computer & Biomedical*); Kargwal, Sahil (*Dept. of Textile Technology, Indian Institute of Technology*); Constant, Nicholas (*Dept. of Electrical, Computer & Biomedical Engineering, U*); Gordon, Renee (*University of Rhode Island, Electrical, Computer & Biomedical*); Humphreys, George (*University of Rhode Island*); Mankodiya, Kunal (*University of Rhode Island*)
- 09:00-09:15 ThA20.3
Development of a Prototype E-Textile Sock
 D'Addio, Giovanni (*ICS Maugeri Institute of Care & Scientific Research of Telese*); Evangelista, Simone (*ICS Maugeri Institute of Care & Scientific Research of Telese*); Donisi, Leandro* (*Electrical & ICT Engineering Dept. of University Federico*); Biancardi, Arcangelo (*ICS Maugeri Institute of Care & Scientific Research of Telese*); Andreozzi, Emilio (*University of Naples Federico II*); Pagano, Gaetano (*ICS Maugeri Institute of Care & Scientific Research of Telese*); Pasquale, Arpaia (*Electrical & ICT Engineering Dept. of University Federico*); Cesarelli, Mario (*University "Federico II", Naples, Italy.*)
- 09:15-09:30 ThA20.4
Seamless Integrated Textrode-Band for Real-Time Lower Limb Movements Classification to Facilitate Self-Administrated Phantom Limb Pain Treatment
 Lendaro, Eva* (*Chalmers University of Technology*); Guo, Li (*University of Borås*); Muñoz, María Jose (*Chalmers University of Technology*); Sandsjö, Leif (*University of Borås*); Ortiz-Catalan, Max (*Chalmers University of Technology*)
- 09:30-09:45 ThA20.5
A Pilot Study on an Integrated Service based on Wearable Textile Platforms to Promote Workers Wellness at Workplace
 De Toma, Gianluca (*Smartex S.r.l.*); Pacelli, Maria (*Smartex s.r.l.*); Paradiso, Rita* (*Smartex srl*); Ana Rosa, Victoria (*Reale Seguros Generales S.A.*); Saunder, Mark (*Ferrovial*); Cuervo, Gabriel (*Ferrovial*)
- 09:45-10:00 ThA20.6
An Improved Liquid Metal Mask Printing Enabled Fast Fabrication of Wearable Electronics on Fabrics
 Guo, Rui (*Tsinghua Univ.*); Yao, Siyuan (*Chinese Academy of Sciences*); Sun, Xuyang (*Technical Institute of Physics & Chemistry, Chinese Academy of*); Liu, Jing* (*Tsinghua Univ.*)
- ThA21: 08:30-10:00 R8 – level 3
Cardiovascular Assessment and Diagnostic Technologies (Oral Session)
Chair: Friebe, Michael (*Otto-von-Guericke-University*)
Co-Chair: Panescu, Dorin (*Zidan Medical, Inc.*)
- 08:30-08:45 ThA21.1
Operation Stability of Chitosan and Nafion-Chitosan Coatings on Bioelectrodes in Enzymatic Glucose Biofuel Cells
 Kuis, Robinson (*University of Maryland Baltimore County*); Hasan, Md Qumrul (*University of Maryland Baltimore County*); Slaughter, Gymama* (*University of Maryland Baltimore County*)
- 08:45-09:00 ThA21.2
High Impedance Electrical Accidents: Importance of Source and Subject Impedance
 Kroll, Mark William (*University of Minnesota*); Kroll, Lori (*Independent Consultant*); Panescu, Dorin* (*Advanced Cardiac Therapeutics*); Perkins, Pete (*Safety Engineering*); Andrews, Chris (*University of Queensland*)
- 09:00-09:15 ThA21.3
Design of an Auscultation System for Phonoangiography and Monitoring of Carotid Artery Diseases
 Sühn, Thomas* (*Otto-von-Guericke-University of Magdeburg*); Sreenivas, Arathi (*Otto-von-Guericke-University of Magdeburg*); Mahmoodian, Naghmeh (*Otto-von-Guericke-Universität Magdeburg*); Maldonado, Ivan (*OVGU, INKA*); Boese, Axel (*Dept. of Medical Engineering, Otto-von-Guericke-University*); Illanes, Alfredo (*Otto-von-Guericke University of Magdeburg*); Bloxton, Michael (*Bloxton Investment Group, LLC*); Friebe, Michael (*Otto-von-Guericke-University*)
- 09:15-09:30 ThA21.4
Deep Learning Approach for Highly Specific Atrial Fibrillation and Flutter Detection based on RR Intervals
 Ivanovic, Marija* (*Vinca Institute of Nuclear Sciences*); Atanasoski, Vladimir (*University of Belgrade*); Shvilkin, Alexei (*Beth Israel Deaconess Medical Center; Harvard Medical School*); Hadzievski, Ljupco (*Vinca Institute of Nuclear Sciences*); Maluckov, Aleksandra (*Vinca Institute of Nuclear Sciences*)
- 09:30-09:45 ThA21.5
Effect of Beta-Blocker on Maternal-Fetal Heart Rates and Coupling in Pregnant Mice and Fetuses
 Khandoker, Ahsan H* (*Khalifa Univ. of Science, Technology & Research*); Yoshida, Chihiro (*Tohoku Univ.*); Kasahara, Yoshiyuki (*Tohoku Univ.*); Funamoto, Kiyoe (*Tohoku Univ.*); Nakanishi, Kana (*Tohoku Univ.*); Kanda, Keiichi (*Tohoku Univ.*); Fukase, Miyabi (*Tohoku Univ.*); Niizeki, Kyuichi (*Yamagata Univ.*); Kimura, Yoshitaka (*Tohoku Univ.*)
- 09:45-10:00 ThA21.6
Dosimetry for Ventricular Fibrillation Risk with Short Electrical Pulses: History and Future
 Kroll, Mark William (*University of Minnesota*); Panescu, Dorin* (*Advanced Cardiac Therapeutics*); Hirtler, Reinhard (*Elektroschutz Gemeinnützige Privatstiftung*); Koch, Michael (*Eaton GmbH*); Andrews, Chris (*University of Queensland*)
- ThB01: 10:30-12:00 Hall A6+A7 – Level 1
Sensory Neuroprosthesis (Oral Session)
Chair: Suaning, Gregg (*The University of Sydney*)
- 10:30-10:45 ThB01.1
The Effects of Phase Durations on the Spatial Responses of Retinal Ganglion Cells to EPI and Sub-Retinal Electrical Stimulation
 Tong, Wei* (*Univ. of Melbourne*); Stamp, Melanie (*Univ. of Melbourne*); Hejazi, Maryam (*Univ. of Melbourne*); Garrett, David J. (*Univ. of Melbourne*); Prawer, Steven (*Univ. of Melbourne*); Ibbotson, Michael R (*Australian College of Optometry*)
- 10:45-11:00 ThB01.2
An Investigation of Audibility Effects on Cochlear Implant Speech Perception Prediction
 Watkins, Gregory Douglas* (*The University of Sydney*); Swanson, Brett Anthony (*Cochlear Limited*); Suaning, Gregg (*The University of Sydney*)
- 11:00-11:15 ThB01.3
Electrotactile Feedback with Spatial and Mixed Coding for Object Identification and Closed-Loop Control of Grasping Force in Myoelectric Prostheses
 Chai, Guohong* (*Shanghai Jiao Tong Univ.*); Briand, Josselin (*Shanghai Jiao Tong Univ.*); Su, Shiyong (*Shanghai Jiao Tong Univ.*); Sheng, Xinjun (*Shanghai Jiao Tong Univ.*); Zhu, Xiangyang (*Shanghai Jiao Tong Univ.*)
- 11:15-11:30 ThB01.4
Somatosensory Cortex Microstimulation: Behavioral Effects of Phase Duration and Asymmetric Waveforms
 Urdaneta, Morgan* (*Univ. of Florida*); Kung'N, Nicolas (*Univ. of Florida*); Delgado, Francisco (*Dr.*); Otto, Kevin (*Univ. of Florida*)

11:30-11:45	ThB01.5	Comparison of Electrically Elicited Responses in Rabbit and Mouse Retinal Ganglion Cells Werginz, Paul* (<i>Massachusetts General Hospital / Harvard Medical School</i>); Fried, Shelley (<i>Massachusetts General Hospital / Harvard Medical School</i>)	11:00-11:15	ThB03.3	Magnetoencephalographic Recordings of Pelvic Floor Activity during Pregnancy and Postpartum: A Novel Non-Invasive Approach Escalona-Vargas, Diana* (<i>University of Arkansas for Medical Sciences</i>); Oliphant, Sallie (<i>University of Arkansas for Medical Sciences</i>); Eswaran, Hari (<i>Univ. of Arkansas for Medical Sci</i>)
11:45-12:00	ThB01.6	Effect of Interphase Gap Duration and Stimulus Rate on Threshold of Visual Cortical Neurons in the Rat Xie, Hui (<i>City University of Hong Kong</i>); Shek, Chi Ho (<i>City University of Hong Kong</i>); Wang, Yi (<i>City University of Hong Kong</i>); Chan, Leanne LH* (<i>City University of Hong Kong</i>)	11:15-11:30	ThB03.4	An Air-Operated Bistatic System for Breast Microwave Radar Imaging: Pre-Clinical Validation Solis-Nepote, Mario (<i>Research Institute in Oncology & Hematology, Winnipeg, MB.</i>); Reimer, Tyson (<i>University of Manitoba</i>); Pistorius, Stephen* (<i>University of Manitoba</i>)
ThB02: 10:30-12:00		Hall A8 – Level 1	11:30-11:45		
ThB02: 10:30-12:00		Hall A8 – Level 1	ThB03.5		
Deep Learning Methods in Biosignal Analysis (Oral Session)			Multi-Frequency Integration Algorithm of Contrast Source Inversion Method for Microwave Breast Tumor Detection		
Chair: Celler, Branko George (<i>University of New South Wales</i>)			Sato, Hiroki* (<i>The University of Electro-Communications</i>); Kidera, Shouhei (<i>University of Electro-Communications</i>)		
10:30-10:45	ThB02.1	Blood Pressure Estimation using Time Domain Features of Auscultatory Waveforms and Deep Learning Argha, Ahmadreza* (<i>University of New South Wales</i>); Celler, Branko George (<i>University of New South Wales</i>)	11:45-12:00	ThB03.6	Super-Resolution Radar Imaging for Breast Cancer Detection with Microwaves: The Integrated Information Selection Criteria Fasoula, Angie* (<i>Microwave Vision</i>); Moloney, Brian (<i>Lambe Institute for Translational Research, National University</i>); Duchesne, Luc (<i>Microwave Vision</i>); Gil Cano, Julio Daniel (<i>Microwave Vision</i>); Oliveira, Barbara Luz (<i>HRB Clinical Research Facility, National University of Ireland G</i>); Bernard, Jean-Gael (<i>Microwave Vision</i>); Kerin, Michael (<i>Lambe Institute for Translational Research, National University</i>)
10:45-11:00	ThB02.2	2D Wavelet Scalogram Training of Deep Convolutional Neural Network for Automatic Identification of Micro-Scale Sharp Wave Biomarkers in the Hypoxic-Ischemic EEG of Preterm Sheep Abbasi, Hamid* (<i>University of Auckland</i>); Bennet, Laura (<i>The University of Auckland</i>); Gunn, Alistair Jan (<i>University of Auckland</i>); Unsworth, Charles Peter (<i>University of Auckland</i>)	ThB04: 10:30-12:00		
11:00-11:15	ThB02.3	Fusion of End-to-End Deep Learning Models for Sequence-to-Sequence Sleep Staging Phan, Huy* (<i>University of Kent</i>); Chén, Oliver (<i>University of Oxford</i>); Koch, Philipp (<i>University of Lübeck</i>); Mertins, Alfred (<i>University of Lübeck</i>); De Vos, Maarten (<i>University of Oxford</i>)	Hall A1 – Level 1		
11:15-11:30	ThB02.4	Deep Learning Techniques for Improving Digital Gait Segmentation Gadaleta, Matteo (<i>University of Padova</i>); Cisotto, Giulia* (<i>University of Padova</i>); Rossi, Michele (<i>University of Padova</i>); Rehman, Rana Zia Ur (<i>Newcastle University</i>); Rochester, Lynn (<i>Newcastle University</i>); Del Din, Silvia (<i>Newcastle University</i>)	ThB04: 10:30-12:00		
11:30-11:45	ThB02.5	A Joint-Feature Learning-Based Voice Conversion System for Dysarthric User based on Deep Learning Technology Chen, Ko-Chiang (<i>National Yang-Ming Univ.</i>); Yeh, Hsiu – Wei (<i>Yuan Ze Univ.</i>); Han, Ji Yan (<i>Yang Ming</i>); Jhang, Sin-Hua (<i>National Yang-Ming Univ.</i>); Zheng, Wei-Zhong (<i>National Yang Ming Univ.</i>); Lai, Ying-Hui* (<i>National Yang-Ming Univ.</i>)	Modeling Cell, Tissue, and Physiology for Patient Care (Oral Session)		
11:45-12:00	ThB02.6	Improved A-Phase Detection of Cyclic Alternating Pattern using Deep Learning Hartmann, Simon* (<i>The University of Adelaide</i>); Baumert, Mathias (<i>The University of Adelaide</i>)	Chair: Marmarelis, Vasilis (<i>University of Southern California</i>)		
ThB03: 10:30-12:00		Hall A3 – Level 1	Co-Chair: Dokos, Socrates (<i>University of New South Wales</i>)		
10:30-10:45	ThB03.1	Experimental Validation for Microwave based Real-Time Monitoring for Microwave Ablation Treatment Kanazawa, Kazuki (<i>University of Electro-Communications</i>); Kidera, Shouhei* (<i>University of Electro-Communications</i>)	10:30-10:45	ThB04.1	Inter-Species Differences in the Response of Sinus Node Cellular Pacemaking to Changes of Extracellular Calcium Loewe, Axel* (<i>Karlsruhe Institute of Technology (KIT)</i>); Lutz, Yannick (<i>Karlsruhe Institute of Technology (KIT)</i>); Nagy, Norbert (<i>University of Szeged</i>); Fabbri, Alan (<i>University Medical Center Utrecht</i>); Schweda, Christoph (<i>Karlsruhe Institute of Technology (KIT)</i>); Varró, András (<i>University of Szeged</i>); Severi, Stefano (<i>University of Bologna</i>)
10:45-11:00	ThB03.2	Hyperspectral Imaging for Thermal Effect Monitoring in in-Vivo Liver during Laser Ablation De Landro, Martina* (<i>Politecnico di Milano</i>); Saccomandi, Paola (<i>Politecnico di Milano</i>); Barberio, Manuel (<i>IHU Institute of Image-Guided Surgery, Strasbourg</i>); Schena, Emiliano (<i>University of Rome Campus Bio-Medico</i>); Marescaux, Jacques (<i>IRCAD</i>); Diana, Michele (<i>IRCAD: Research Institute against Cancer of Digestive System, St</i>)	10:45-11:00	ThB04.2	Closed-Loop Modeling of the Heart-Rate Reflex for Improved Diagnosis and Monitoring of Mild Cognitive Impairment Marmarelis, Vasilis* (<i>University of Southern California</i>); Shin, Dae (<i>University of Southern California</i>); Zhang, Rong (<i>University of Texas Southwestern Medical Center at Dallas</i>)
ThB03: 10:30-12:00		Hall A3 – Level 1	11:00-11:15	ThB04.3	The Influence of Vectorcardiogram Orientation on the T/QRS Ratio Obtained via Non-Invasive Fetal ECG Keenan, Emerson* (<i>The Univ. of Melbourne</i>); Karmakar, Chandan (<i>Deakin Univ.</i>); Palaniswami, Marimuthu (<i>The Univ. of Melbourne</i>)
ThB03: 10:30-12:00		Hall A3 – Level 1	11:15-11:30	ThB04.4	XLIF Interbody Cage Reduces Stress and Strain of Fixation in Spinal Reconstructive Surgery in Comparison with TLIF Cage with Bilateral or Unilateral Fixation: A Computational Analysis Zhang, Teng* (<i>The Univ. of Hong Kong, Queen Mary Hospital</i>); Bai, Siwei (<i>Technical Univ. of Munich</i>); Dokos, Socrates (<i>Univ. of New South Wales</i>); Cheung, Jason Pui Yin (<i>The Univ. of Hong Kong</i>); Diwan, Ashish (<i>Spine Service, St George Hospital</i>)

- 11:30-11:45 ThB04.5
Identification of the Infarct Time in Patients with Acute Myocardial Infarction
 Procopio, Anna (*Univ. degli Studi Magna Graecia di Catanzaro*); De Rosa, Salvatore (*Magna Graecia Univ.*); Covello, Caterina (*Univ. degli Studi Magna Graecia di Catanzaro*); Merola, Alessio (*Univ. degli Studi Magna Graecia di Catanzaro*); Sabatino, Jolanda (*Univ. degli Studi Magna Graecia di Catanzaro*); De Luca, Alessia (*Univ. degli Studi Magna Graecia di Catanzaro*); Liebetrau, Christoph (*German Center for Cardiovascular Research (DZHK)*); Hamm, Christian W. (*German Center for Cardiovascular Research (DZHK)*); Indolfi, Ciro (*Magna Graecia Univ.*); Amato, Francesco (*Univ. degli Studi Magna Graecia di Catanzaro*); Cosentino, Carlo* (*Univ. degli Studi Magna Graecia di Catanzaro*)
- 11:45-12:00 ThB04.6
Modeling RF-Induced Power Deposition and Temperature Rise of Coaxial Leads with Helical Wires
 Kozlov, Mikhail* (*Max Planck Institute for Human Cognitive & Brain Sciences*); Horner, Marc (*ANSYS, Inc.*); Kainz, Wolfgang (*Food & Drug Administration*)
- ThB05: 10:30-12:00 Hall A2 – Level 1
Neural Networks for Cardiovascular Signal Applications (Oral Session)
Chair: Valenza, Gaetano (*University of Pisa*)
Co-Chair: Barbieri, Riccardo (*Politecnico di Milano*)
- 10:30-10:45 ThB05.1
PPGnet: Deep Network for Device Independent Heart Rate Estimation from Photoplethysmogram
 A, Shyam* (*Healthcare Technology Innovation Centre*); R, Vignesh (*Healthcare Technology Innovation Center, IIT Madras*); SP, Preejith (*Healthcare Technology Innovation Center – IIT Madras*); Joseph, Jayaraj (*HTIC, Indian Institute of Technology Madras*); Sivaprakasam, Mohanasankar (*Indian Institute of Technology Madras*)
- 10:45-11:00 ThB05.2
A Robust Machine Learning Architecture for a Reliable ECG Rhythm Analysis during CPR
 Isasi Liñero, Iraia* (*UPV/EHU*); Irusta, Unai (*UPV/EHU*); Elola, Andoni (*University of the Basque Country*); Aramendi, Elisabete (*University of the Basque Country*); Eftestøl, Trygve (*University of Stavanger*); Kramer-Johansen, Jo (*Oslo University Hospital*); Wik, Lars (*Oslo University Hospital*)
- 11:00-11:15 ThB05.3
A Deep Learning Method to Detect Atrial Fibrillation based on Continuous Wavelet Transform
 Wu, Ziqian (*Fudan University*); Feng, Xujian (*Fudan University*); Yang, Cuiwei* (*Fudan University*)
- 11:15-11:30 ThB05.4
An Electrocardiogram Delineator via Deep Segmentation Network
 Jia, Dongya* (*Guangzhou Shiyuan Electronics Co., Ltd*); Zhao, Wei (*Guangzhou Shiyuan Electronics Co., Ltd*); Li, Zhenqi (*Guangzhou Shiyuan Electronics Co., Ltd*); Hu, Jing (*Guangzhou Shiyuan Electronic Technology Co., Ltd.*); Yan, Cong (*Guangzhou Shiyuan Electronics Co., Ltd*); Wang, Hongmei (*Guangzhou Shiyuan Electronics Co., Ltd*); You, Tianyuan (*Guangzhou Shiyuan Electronics Co., Ltd.*)
- 11:30-11:45 ThB05.5
Novel Deep Convolutional Neural Network for Cuff-Less Blood Pressure Measurement using ECG and PPG Signals
 Yan, Cong* (*Guangzhou Shiyuan Electronics Co., Ltd*); Li, Zhenqi (*Guangzhou Shiyuan Electronics Co., Ltd*); Zhao, Wei (*Guangzhou Shiyuan Electronics Co., Ltd*); Hu, Jing (*Guangzhou Shiyuan Electronic Technology Co., Ltd.*); Jia, Dongya (*Guangzhou Shiyuan Electronics Co., Ltd*); Wang, Hongmei (*Guangzhou Shiyuan Electronics Co., Ltd*); You, Tianyuan (*Guangzhou Shiyuan Electronics Co., Ltd.*)
- 11:45-12:00 ThB05.6
Convolutional Recurrent Neural Networks to Characterize the Circulation Component in the Thoracic Impedance during Out-of-Hospital Cardiac Arrest
 Elola, Andoni* (*University of the Basque Country*); Aramendi, Elisabete (*University of the Basque Country*); Irusta, Unai (*UPV/EHU*); Picon, Artzai (*Tecnalia Research & Innovation*); Alonso, Erik (*University of the Basque Country*); Isasi Liñero, Iraia (*UPV/EHU*); Idris, Ahamed (*University of Texas Southwestern Medical Center*)
- ThB06: 10:30-12:00 Hall A5 – Level 1
Neuromuscular Systems (II) (Oral Session)
Chair: Perreault, Eric (*Northwestern University*)
Co-Chair: Al-Jumaily, Adel (*University of Technology Sydney*)
- 10:30-10:45 ThB06.1
Heterogeneity Counts More than Power for HD-sEMG-Based Joint Force Estimation
 Zhang, Cong (*USTC*); Chen, Xiang* (*University of Science & Technology of China*); Zhang, Xu (*University of Science & Technology of China*)
- 10:45-11:00 ThB06.2
A Wearable Neural Interface for Detecting and Decoding Attempted Hand Movements in a Person with Tetraplegia
 Ting, Jordyn* (*Univ. of Pittsburgh*); Del Vecchio, Alessandro (*Imperial College London*); Friedenber, David (*Battelle Memorial Institute*); Liu, Monica (*Univ. of Pittsburgh*); Schoenewald, Caroline (*Univ. of Pittsburgh*); Sarma, Devapratim (*Univ. of Pittsburgh*); Collinger, Jennifer (*Univ. of Pittsburgh*); Colachis, Sam (*Battelle Memorial Institute*); Sharma, Gaurav (*Battelle*); Farina, Dario (*Imperial College London*); Weber, Douglas (*Univ. of Pittsburgh*)
- 11:00-11:15 ThB06.3
Evaluation of Langevin Model for Human Stabliogram based on Reproducibility of Statistical Indicators
 Tawaki, Yuta* (*Keio Univ.*); Murakami, Toshiyuki (*Keio Univ.*)
- 11:15-11:30 ThB06.4
LQG Framework Explains Performance of Balancing Inverted Pendulum with Incongruent Visual Feedback
 Leib, Raz* (*Technical University of Munich*); Cesonis, Justinas (*Technical University of Munich*); Franklin, Sae (*Institute for Cognitive Systems, Technical University of Munich*); Franklin, David W. (*Technical University of Munich*)
- 11:30-11:45 ThB06.5
Investigation of the Neural Drive during Vibration Exercise by High-Density Surface-Electromyography
 Xu, Lin* (*Eindhoven Univ. of Technology*); Negro, Francesco (*Aalborg Univ., Aalborg, Denmark*); Rabotti, Chiara (*Eindhoven Univ. of Technology*); Farina, Dario (*Imperial College London*); Mischi, Massimo (*Eindhoven Univ. of Technology*)
- 11:45-12:00 ThB06.6
Muscle Fatigue Analysis by using a Scale Mixture-Based Stochastic Model of Surface EMG Signals
 Furui, Akira* (*Hiroshima Univ.*); Tsuji, Toshio (*Hiroshima Univ.*)
- ThB08: 10:30-12:00 M8 – Level 3
Opportunities and Challenges on the use of Data-Driven Solutions for Empowering Children with Chronic Conditions (Minisymposium)
Chair: Fernandez-Luque, Luis (*Qatar Computing Research Institute – Hamad bin Khalifa Univ.*)
Co-Chair: Traver, Vicente (*ITACA – Univ. Politècnica de València*)
- 10:30-10:45 ThB08.1
Dr Jekyll and Mr Hyde: How Human Factors Can Hinder and Support Data-Driven Solutions for Patient Empowerment in Childhood Obesity
 Fernandez-Luque, Luis* (*Qatar Computing Research Institute – Hamad bin Khalifa Universit*)

10:45-11:00	ThB08.2	10:45-11:00	ThB10.2
Achieving Adherence to Growth Hormone Therapy – How eHealth Can Help Koledova, Ekaterina* (<i>Merck KGaA</i>)		Auditory and Visual User Interface for Optical Guidance during Stereotactic Brain Tumor Biopsies Maintz, Michaela (<i>Fachhochschule Nordwestschweiz</i>); Black, David (<i>Fraunhofer MEVIS</i>); Haj-Hosseini, Neda* (<i>Univ. of Linköping</i>)	
11:00-11:15	ThB08.3	11:00-11:15	ThB10.3
Shaping the Future of Children's Health through Technology and Innovation Dimitri, Paul* (<i>Sheffield Children's NHS Foundation Trust</i>)		Remotely Actuated Needle Driving Device for MRI-Guided Percutaneous Interventions: Force and Accuracy Evaluation Wu, Di* (<i>Johns Hopkins University</i>); Li, Gang (<i>Johns Hopkins University</i>); Patel, Niravkumar (<i>Johns Hopkins University</i>); Yan, Jiawen (<i>Johns Hopkins University</i>); Kim, Gyeong Hu (<i>Johns Hopkins University</i>); Monfaredi, Reza (<i>Children's National Health System</i>); Cleary, Kevin (<i>Children's National Medical Center</i>); lordachita, Iulian (<i>Johns Hopkins University</i>)	
11:15-11:30	ThB08.4	11:15-11:30	ThB10.4
MyCyFAPP: The use of Mobile Technology to Enhance Research and Patient Support in Cystic Fibrosis Traver, Vicente* (<i>ITACA – Universitat Politècnica de València</i>)		Body-Mounted MRI-Conditional Parallel Robot for Percutaneous Interventions Structural Improvement, Calibration, and Accuracy Analysis Yan, Jiawen* (<i>Johns Hopkins Univ.</i>); Patel, Niravkumar (<i>Johns Hopkins Univ.</i>); Li, Gang (<i>Johns Hopkins Univ.</i>); Wu, Di (<i>Johns Hopkins Univ.</i>); Cleary, Kevin (<i>Children's National Medical Center</i>); lordachita, Iulian (<i>Johns Hopkins Univ.</i>)	
11:30-11:45	ThB08.5	11:30-11:45	ThB10.5
Opportunities and Challenges on the use of Data-Driven Solutions for Empowering Children with Chronic Conditions: The Care of Growth-Related Disorders Savendahl, Lars* (<i>Karolinska Institute</i>)		Primary Design Concept for Non-Metallic Needle for MRI Guided Spinal Applications Al-Maatoq, Marwah* (<i>Faculty of Electrical Engineering & Information Technology, Ot</i>); Boese, Axel (<i>Dept. of Medical Engineering, Otto-von-Guericke-University</i>); Werner Henke, Heinz (<i>Innovative Tomography Products (ITP), Bochum, Germany</i>); Friebe, Michael (<i>Otto-von-Guericke-University</i>)	
ThB09: 10:30-12:00	M1 – Level 3	11:30-11:45	ThB10.5
Modeling of Networks and Diseases (Oral Session) Chair: Bouteiller, Jean-Marie Charles (<i>Univ. of Southern California</i>) Co-Chair: Liang, Jie (<i>University of Illinois at Chicago</i>)		Quantifying Interactions between Neural Populations during Behavior using Dynamical Systems Models D'Aleo, Raina* (<i>Johns Hopkins Univ.</i>); Rouse, Adam (<i>Univ. of Rochester Medical Center</i>); Schieber, Marc (<i>Univ. of Rochester</i>); Sarma, Sridevi V. (<i>Johns Hopkins Univ.</i>)	
10:30-10:45	ThB09.1	11:45-12:00	ThB10.6
Parameter Uncertainty Analysis of a Mathematical Ion Channel Model Shimayoshi, Takao* (<i>Kyushu University</i>)		Tunability of Acoustic and Mechanical Behaviors in Breast Tissue Mimicking Materials Ng, Si Yen (<i>National Cheng Kung University</i>); Lin, Chi-Lun* (<i>National Cheng Kung University</i>)	
10:45-11:00	ThB09.2	ThB11: 10:30-12:00	M4 – Level 3
Pathogenic Processes Underlying Alzheimer's Disease: Modeling the Effects of Amyloid Beta on Synaptic Transmission Bouteiller, Jean-Marie Charles* (<i>Univ. of Southern California</i>); Mergenthal, Adam (<i>Univ. of Southern California</i>); Hu, Eric (<i>Univ. of Southern California</i>); Berger, Theodore (<i>USC</i>)		Heart Rate and Blood Pressure Variability (Oral Session) Chair: Zauneder, Sebastian (<i>Dortmund University of Applied Sciences and Arts</i>)	
11:00-11:15	ThB09.3	10:30-10:45	ThB11.1
Quantifying Interactions between Neural Populations during Behavior using Dynamical Systems Models D'Aleo, Raina* (<i>Johns Hopkins Univ.</i>); Rouse, Adam (<i>Univ. of Rochester Medical Center</i>); Schieber, Marc (<i>Univ. of Rochester</i>); Sarma, Sridevi V. (<i>Johns Hopkins Univ.</i>)		Strength and Latency of the HP-SAP Closed Loop Variability Interactions in Subjects Prone to Develop Postural Syncope Bari, Vlasta* (<i>IRCCS Policlinico San Donato</i>); Cairo, Beatrice (<i>Univ. degli Studi di Milano</i>); Vaini, Emanuele (<i>IRCCS Policlinico San Donato</i>); De Maria, Beatrice (<i>IRCCS Fondazione Salvatore Maugeri, Milano</i>); Rossato, Gianluca (<i>Sacro Cuore Hospital, Negrar (VR)</i>); Tonon, Davide (<i>IRCCS Sacro Cuore Don Calabria Hospital, Negrar, Verona, Italy</i>); Faes, Luca (<i>Univ. of Palermo</i>); Porta, Alberto (<i>Univ. degli Studi di Milano</i>)	
11:15-11:30	ThB09.4	10:45-11:00	ThB11.2
Sparse, Predictive, and Interpretable Functional Connectomics with Uoi-Lasso Sachdeva, Pratik* (<i>University of California, Berkeley</i>); Bouchard, Kristofer E. (<i>LBNL</i>); Bhattacharyya, Sharmodeep (<i>Oregon State University</i>)		Cardiovascular Coupling-Based Classification of Ischemic and Dilated Cardiomyopathy Patients Rodriguez, Javier* (<i>Institut de Bioenginyeria de Catalunya (IBEC)</i>); Schulz, Steffen (<i>University of Applied Sciences Jena</i>); Voss, Andreas (<i>University of Applied Sciences Jena</i>); Giraldo, Beatriz (<i>Universitat Politècnica de Catalunya</i>)	
11:30-11:45	ThB09.5	11:00-11:15	ThB11.3
Sensitivities of Regulation Intensities in Feed-Forward Loops with Multistability Terebus, Anna (<i>University of Illinois at Chicago</i>); Cao, Youfang (<i>Merck & Co. Inc</i>); Liang, Jie* (<i>University of Illinois at Chicago</i>)		Assessment of the Coupling Strength of Cardiovascular Control via Joint Symbolic Analysis during Postural Challenge in Recreational Athletes Martins de Abreu, Raphael* (<i>Federal University of São Carlos</i>); Catai, Aparecida (<i>Dept. of Physiotherapy, Federal University of São Carlos, S</i>); Cairo, Beatrice (<i>Universita' degli Studi di Milano</i>); Rehder-Santos, Patrícia (<i>Federal University of São Carlos</i>); De Maria, Beatrice (<i>IRCCS Fondazione Salvatore Maugeri, Milano</i>); Vaini, Emanuele (<i>IRCCS Policlinico San Donato</i>); Bari, Vlasta (<i>IRCCS Policlinico San Donato</i>); Porta, Alberto (<i>Universita' degli Studi di Milano</i>)	
11:45-12:00	ThB09.6	ThB10: 10:30-12:00	M2 – Level 3
Overcoming Channel Uncertainties in Molecular-Communication-Inspired Direct Drug Targeting Sharifi, Neda (<i>The University of Waikato</i>); Holmes, Geoffrey (<i>The University of Waikato</i>); Yu, Zhou (<i>Beijing Institute of Collaborative Innovation</i>); Ali, Muhammad (<i>University of Waikato</i>); Chen, Yifan* (<i>The University of Waikato</i>)		Image-Guided Therapies (Oral Session) Chair: Haemmerich, Dieter (<i>Medical University of South Carolina</i>) Co-Chair: Linte, Cristian A. (<i>Rochester Institute of Technology</i>)	
10:30-10:45	ThB10.1	10:30-10:45	ThB10.1
Shoulder-Mounted Robot for MRI-Guided Arthrography: Clinically Optimized System Kim, Gyeong Hu* (<i>Johns Hopkins Univ.</i>); Patel, Niravkumar (<i>Johns Hopkins Univ.</i>); Yan, Jiawen (<i>Johns Hopkins Univ.</i>); Wu, Di (<i>Johns Hopkins Univ.</i>); Li, Gang (<i>Johns Hopkins Univ.</i>); lordachita, Iulian (<i>Johns Hopkins Univ.</i>); Cleary, Kevin (<i>Children's National Medical Center</i>)		Shoulder-Mounted Robot for MRI-Guided Arthrography: Clinically Optimized System Kim, Gyeong Hu* (<i>Johns Hopkins Univ.</i>); Patel, Niravkumar (<i>Johns Hopkins Univ.</i>); Yan, Jiawen (<i>Johns Hopkins Univ.</i>); Wu, Di (<i>Johns Hopkins Univ.</i>); Li, Gang (<i>Johns Hopkins Univ.</i>); lordachita, Iulian (<i>Johns Hopkins Univ.</i>); Cleary, Kevin (<i>Children's National Medical Center</i>)	

- 11:15-11:30 ThB11.4
The Complexity of Dreams: A Multiscale Entropy Study on Cardiovascular Variability Series
 Nardelli, Mimma* (*University of Pisa*); Faraguna, Ugo (*Dept. of Translational Research & of New Surgical & Med*); Grandi, Giulia (*Dept. of Translational Research & of New Surgical & Med*); Bruno, Rosa Maria (*Dept. of Clinical & Experimental Medicine, University of*); Valenza, Gaetano (*University of Pisa*); Scilingo, Enzo Pasquale (*University of Pisa*)
- 11:30-11:45 ThB11.5
Automatic Detection of General Anesthetic-States using ECG-Derived Autonomic Nervous System Features
 Polk, Sam, L* (*Tufts University*); Kashkooli, Kimia (*Tufts University School of Medicine*)
- 11:45-12:00 ThB11.6
Heartbeat Dynamics Analysis under Cold-Pressure Test using Wavelet P-Leader Non-Gaussian Multiscale Expansions
 Catrambone, Vincenzo* (*Univ. di Pisa*); Wendt, Herwig (*CNRS, Univ. of Toulouse*); Scilingo, Enzo Pasquale (*Univ. of Pisa*); Barbieri, Riccardo (*Politecnico di Milano*); Abry, Patrice (*ENS Lyon, CNRS*); Valenza, Gaetano (*Univ. of Pisa*)
- ThB12: 10:30-12:00 M6 – Level 3
Ophthalmic Imaging and Analysis (Oral Session)
- 10:30-10:45 ThB12.1
Depthwise Separable Convolutional Neural Network Model for Intra-Retinal Cyst Segmentation
 Girish, GN* (*National Institute of Technology Karnataka, Surathkal*); Saikumar, Banoth (*Dept. of Computer Science & Engineering, National Institutu*); Roychowdhury, Sohini (*University of Washington, Bothell*); R Kothari, Abhishek (*Dr. Agarwal's Eye Hospital, Jaipur, India*); Rajan, Jeny (*Dept. of Computer Science & Engineering, National Institutu*)
- 10:45-11:00 ThB12.2
Conditional Adversarial Transfer for Glaucoma Diagnosis
 Wang, Jingwen (*South China University of Technology*); Yan, Yuguang (*South China University of Technology*); Xu, Frank Yanwu* (*Baidu*); Zhao, Wei (*Guangzhou Shiyuan Electronics Co., Ltd*); Min, Huaqing (*South China University of Technology*); Tan, Mingkui (*South China University of Technology*); Liu, Jiang (*Ningbo Institute of Materials Technology & Engineering, CAS*)
- 11:00-11:15 ThB12.3
Enhancing the Accuracy of Glaucoma Detection from OCT Probability Maps using Convolutional Neural Networks
 Thakoor, Kaveri* (*Columbia Univ.*); Li, Xinhui (*Columbia Univ.*); Tsamis, Emmanouil (*Columbia Univ.*); Sajda, Paul (*Columbia Univ.*); Hood, Donald (*Columbia Univ.*)
- 11:15-11:30 ThB12.4
Accurate Cross-Section Estimation of Blood Vessels in Choroidal Haller's Layer: An Iterative Method based on 3D Tensor Voting
 Ibrahim, Mohammed Nasar (*Indian Institute of Technology, Hyderabad*); Vupparaboina, Kiran Kumar (*Indian Institute of Technology Hyderabad*); Marupally, Abhilash Goud (*L V Prasad Eye Institute*); Bin Bashar, Sarforaz (*L V Prasad Eye Institute*); Chhablani, Jay (*L.V. Prasad Eye Institute Hyderabad*); Jana, Soumya* (*Indian Institute of Technology Hyderabad*)
- 11:30-11:45 ThB12.5
An Interpretable Ensemble Deep Learning Model for Diabetic Retinopathy Disease Classification
 Jiang, Hongyang* (*Sino-Dutch Biomedical & Information Engineering School, Northe*); Yang, Kang (*Beijing ZhiZhen Internet Technology Co., Ltd .*); Gao, Mengdi (*Sino-Dutch Biomedical & Information Engineering School, Northe*); Zhang, Dongdong (*Beijing ZhiZhen Internet Technology Co., Ltd .*); Ma, He (*Northeastern Univ.*); Qian, Wei (*Northeastern Univ.*)
- 11:45-12:00 ThB12.6
Deep Learning Classification Models Built with Two-Step Transfer Learning for Age Related Macular Degeneration Diagnosis
 An, Guangzhou* (*RIKEN*); Yokota, Hideo (*RIKEN Center for Advanced Photonics*); Motozawa, Naohiro (*Dept. of Ophthalmology, Kobe City Eye Hospital*); Takagi, Seiji (*Teikyo Univ. Mizonokuchi hospital*); Mandai, Michiko (*RIKEN BDR*); Kitahata, Shohei (*RIKEN Center for Biosystems Dynamics Research*); Hiram, Yasuhiko (*RIKEN Center for Biosystems Dynamics Research*); Takahashi, Masayo (*RIKEN*); Kurimoto, Yasuo (*Kobe City Eye Hospital*); Akiba, Masahiro (*Topcon Corp.*)
- ThB13: 10:30-12:00 R2 – Level 3
Clinical Applications of Inertial Sensors (Oral Session)
Co-Chair: Hedin, Daniel (*Advanced Medical Electronics*)
- 10:30-10:45 ThB13.1
Accuracy of the Orientation Estimate Obtained using Four Sensor Fusion Filters Applied to Recordings of Magneto-Inertial Sensors Moving at Three Rotation Rates
 Caruso, Marco* (*Politecnico di Torino*); Sabatini, Angelo Maria (*Scuola Superiore Sant'Anna*); Knaflitz, Marco (*Politecnico di Torino*); Gazzoni, Marco (*Politecnico di Torino*); Della Croce, Ugo (*Univ. of Sassari*); Cereatti, Andrea (*Univ. of Sassari*)
- 10:45-11:00 ThB13.2
Investigating Normal Day to Day Variations of Postural Control in a Healthy Young Population using Wii Balance Boards
 Johnston, William* (*University College Dublin, Insight Centre*); McGrath, Denise (*University College Dublin*); Greene, Barry R. (*Kinesio Health Technologies*); Caulfield, Brian (*UCD*)
- 11:00-11:15 ThB13.3
Capturing Concussion Related Changes in Dynamic Balance using the Quantified Y Balance Test – A Case Series of Six Elite Rugby Union Players
 Johnston, William* (*Univ. College Dublin, Insight Centre*); O'Reilly, Martin (*Insight Centre for Data Analytics, Univ. College Dublin*); Liston, Mairead (*IRFU*); McLoughlin, Rod (*IRFU*); Coughlan, Garrett (*Univ. College Dublin*); Caulfield, Brian (*UCD*)
- 11:15-11:30 ThB13.4
Laboratory and On-Field Data Collected by a Head Impact Monitoring Mouthguard
 Bartsch, Adam* (*Prevent Biometrics*); Hedin, Daniel (*Advanced Medical Electronics*); Gibson, Paul (*Advanced Medical Electronics*); Miele, Vincent (*University of Pittsburg*); Benzel, Edward (*Cleveland Clinic*); Alberts, Jay (*Cleveland Clinic*); Samorezov, Sergey (*Cleveland Clinic*); Shah, Alok (*Medical College of Wisconsin*); Stemper, Brian (*Medical College of Wisconsin*); McCrea, Michael (*Medical College of Wisconsin*)
- 11:30-11:45 ThB13.5
Predictive Control for an Active Prosthetic Socket informed by FEA-Based Tissue Damage Risk Estimation
 Mbithi, Florence M.* (*Univ. of Southampton*); Chipperfield, Andrew John (*Univ. of Southampton*); Steer, Joshua W. (*Univ. of Southampton*); Dickinson, Alexander S. (*Univ. of Southampton*)
- 11:45-12:00 ThB13.6
Portable Gait Lab: Zero Moment Point for Minimal Sensing of Gait
 Mohamed Refai, Mohamed Irfan* (*Univ. of Twente*); van Beijnum, Bert-Jan F. (*Univ. of Twente*); Buurke, Jacob Hilbert (*Roessingh Research & Development*); Saes, Mique (*Amsterdam Univ. Medical Centre*); Busmann, Hans B.J. (*Erasmus MC*); Meskers, Carel (*VU Univ. Medical Center*); Wegen, Erwin E.H. (*Dept. of Rehabilitation Medicine, VU Univ. Medical Cen*); Kwakkel, Gert (*Dept. of Rehabilitation Medicine, VU Univ. Medical Cen*); Veltink, Peter (*Univ. of Twente*)

ThB15: 10:30-12:00 M3 – Level 3
Image Analysis and Classification – Machine Learning Approaches (II) (Oral Session)
Chair: Toschi, Nicola (*Univ. of Rome "Tor Vergata", Faculty of Medicine*)
Co-Chair: Cardoso, Jaime S. (*INESC TEC and University of Porto*)

10:30-10:45 ThB15.1
Hand and Object Segmentation from Depth Image using Fully Convolutional Network

Lim, Guan Ming* (*Nanyang Technological University*); Jatesiktat, Prayook (*NTU*); Kuah, Christopher Wee Keong (*Tan Tock Seng Hospital Rehabilitation Centre*); Ang, Wei Tech (*Nanyang Technological University*)

10:45-11:00 ThB15.2
Prediction of Multiple Sclerosis Patient Disability from Structural Connectivity using Convolutional Neural Networks

Marzullo, Aldo* (*University of Calabria*); Kocevar, Gabriel (*University Claude Bernard Lyon 1*); Stamile, Claudio (*CREATIS, Université Lyon 1*); Calimeri, Francesco (*University of Calabria*); Terracina, Giorgio (*University of Calabria*); Durand-Dubief, Françoise (*Hôpital Neurologique*); Sappey-Marinière, Dominique (*Université Claude Bernard – Lyon1*)

11:00-11:15 ThB15.3
Diagnostic Quality Assessment of Ocular Fundus Photographs: Efficacy of Structure-Preserving ScatNet Features

Dev, Chander (*Indian Institute of Tech. Hyderabad*); Sriramu, Sharang (*IIT Hyderabad*); Manne, Shanmukh Reddy* (*Indian Institute of Tech. Hyderabad*); Marupally, Abhilash Goud (*L V Prasad Eye Institute*); Bin Bashir, Sarforaz (*L V Prasad Eye Institute*); Richhariya, Ashutosh (*L.V. Prasad Eye Institute Hyderabad*); Chhablani, Jay (*L.V. Prasad Eye Institute Hyderabad*); Vupparaboina, Kiran Kumar (*Indian Institute of Tech. Hyderabad*); Jana, Soumya (*Indian Institute of Tech. Hyderabad*)

11:15-11:30 ThB15.4
Differential Diagnosis for Pancreatic Cysts in CT Scans using Densely-Connected Convolutional Networks

Menze, Bjoern (*TU Munich*); Li, Hongwei* (*Technical University of Munich*); Shi, Kuangyu (*University of Bern*)

11:30-11:45 ThB15.5
Motion Signatures for the Analysis of Seizure Evolution in Epilepsy

Ahmedt-Aristizabal, David* (*Queensland Univ. of Tech.*); Sarfraz, Muhammad Saquib (*Karlsruhe Institute of Tech.*); Denman, Simon (*Queensland Univ. of Tech.*); Nguyen, Kien (*Queensland Univ. of Tech.*); Fookes, Clinton (*Queensland Univ. of Tech.*); Dionisio, Sasha (*Mater Hospital*); Stiefelhagen, Rainer (*Karlsruhe Institute of Tech.*)

11:45-12:00 ThB15.6
Weight Rotation as a Regularization Strategy in Convolutional Neural Networks

Castro, Eduardo* (*INESCTEC*); Costa Pereira, Jose (*INESCTEC / Porto University*); Cardoso, Jaime S. (*INESC TEC & University of Porto*)

ThB16: 10:30-12:00 M5 – Level 3
Joint Mechanics (Oral Session)

10:30-10:45 ThB16.1
System Identification of Ankle Joint Dynamics based on Plane-Wave Ultrasound Muscle Imaging

Ossenkoppele, Boudewine Willemine* (*TU Delft*); Daeichin, Verya (*Delft University of Technology*); Rodríguez Hernandez, Karen Elena (*TU Delft*); de Jong, Nico (*Delft University of Technology & Erasmus MC*); Verweij, Martin D. (*Delft University of Technology*); Schouten, Alfred C. (*Delft University of Technology*); Mugge, Winfred (*Delft University of Technology*)

10:45-11:00 ThB16.2
4D in-Vivo Quantification of Ankle Joint Space Width using Dynamic MRI

Makki, Karim* (*IMT Atlantique*); Borotikar, Bhushan (*University of Western Brittany*); Garetier, Marc (*Latim*); Acosta, Oscar (*Univ. Rennes, CLCC Eugène Marquis, INSERM, LTSI – UMR 1099*); Brochard, Sylvain (*CHRU Brest*); Ben Salem, Douraied (*CHRU Brest*); Rousseau, François (*Telecom Bretagne*)

11:00-11:15 ThB16.3

Estimation of Time-Varying Ankle Joint Stiffness under Dynamic Conditions via System Identification Techniques
Moya Esteban, Alejandro* (*University of Twente*); van 't Veld, Ronald C. (*University of Twente*); Cop, Christopher P. (*University of Twente*); Durandau, Guillaume (*University of Twente*); Sartori, Massimo (*University of Twente*); Schouten, Alfred C. (*Delft University of Technology*)

11:15-11:30 ThB16.4

Evaluation of Tibiofibular Joint Alignment in Ankle Osteoarthritis based on 3D Bone Thickness
Fujinuma, Takuya* (*Tokyo University of Science*); Kosugi, Shinichi (*Nara Prefectural Seiwai Medical Center*); Kurokawa, Hiroaki (*Nara Medical University*); Tanaka, Yasuhito (*Nara Medical University*); Takemura, Hiroshi (*Tokyo University of Science*); Tsuchihara, Satoki (*Tokyo University of Science*)

11:30-11:45 ThB16.5

Prediction and Visualisation of Bony Impingement for Subject Specific Total Hip Arthroplasty
Palit, Arnab* (*The Univ. of Warwick*); King, Richard (*Univ. Hospital Coventry & Warwickshire NHS Trust*); Gu, Yolanda (*Corin Group Pty Ltd*); Pierrepont, James (*Corin Group Pty Ltd*); Hart, Zoe (*Corin Group Pty Ltd*); Elliott, Mark (*IDH, WMG, Univ. of Warwick*); Williams, Mark (*WMG, The Univ. of Warwick*)

11:45-12:00 ThB16.6

Using Time-Frequency Analysis to Characterize Altered Knee Dynamics in Post ACL Reconstruction Individuals
Morgan, Kristin* (*University of Connecticut*)

ThB17: 10:30-12:00 R12 – Level 3

Novel Drug Delivery Systems (Minisymposium)
Chair: Kim, Sang Geon (*Seoul National University*)
Co-Chair: Kurose, Hitoshi (*Kyushu University, Graduate School of Pharmaceutical Sciences*)

10:30-10:45 ThB17.1

Immunological Neutralization or RNA Interference Reverses Systemic Insulin Resistance Caused by a Liver-Secreted Protein Identified by Comparative Secretome Analysis
Kim, Sang Geon* (*Seoul National Univ.*); Kim, Tae Hyun (*Seoul National Univ.*); Cho, Je-Yoel (*Seoul National Univ.*)

10:45-11:00 ThB17.2

Cardiac Fibrosis: From Target to Treatment
Kurose, Hitoshi* (*Kyushu University, Graduate School of Pharmaceutical Sciences*)

11:00-11:15 ThB17.3

Self-Adhesive Cataplasma System for Iontophoresis
Nam, Tack Soo* (*Wooshin Labottach Co.*); You, June Seok (*Wooshin Labottach Co.*)

11:15-11:30 ThB17.4

Activation of Chemo/Immunotherapy in Tumor Microenvironment
Oh, Yu-Kyoung* (*Seoul National University*)

ThB18: 10:30-12:00 R13 – Level 3

Brain Physiology and Modeling (Oral Session)
Chair: Butera, Robert (*Georgia Institute of Technology*)

10:30-10:45 ThB18.1

Evaluation of Epistemic Uncertainties for Bipolar Deep Brain Stimulation in Rodent Models
Butenko, Konstantin* (*University of Rostock*); Bahls, Christian Rüdiger (*University of Rostock, Institute of General Electrical Engineeri*); van Rienen, Ursula (*University of Rostock*)

10:45-11:00 ThB18.2

Change in Evoked Response of Mature Neuronal Network to Spatial Pattern Stimulation by Immature Neurons
Moriya, Fumika* (*The University of Tokyo*); Shimba, Kenta (*The University of Tokyo*); Kotani, Kiyoshi (*University of Tokyo*); Jimbo, Yasuhiko (*University of Tokyo*)

11:00-11:15	ThB18.3	A Thalamo-Cortex Microcircuit Model of Beta Oscillations in the Parkinsonian Motor Cortex Farokhniaee, AmirAli* (<i>University College Dublin</i>); Lowery, Madeleine (<i>University College Dublin</i>)	11:30-11:45	ThB19.5	Machine Learning-Based Risk of Hospital Readmissions: Predicting Acute Readmissions within 30 Days of Discharge Baig, Mirza Mansoor* (<i>Orion Health</i>); Hua, Ning (<i>Orion Health</i>); Zhang, Edmond (<i>Orion Health</i>); Robinson, Reece (<i>Orion Health</i>); Armstrong, Delwyn (<i>Waitemata District Health Board</i>); Whittaker, Robyn (<i>Univ. of Auckland</i>); Robinson, Tom (<i>Waitemata District Health Board</i>); Mirza, Farhaan (<i>Auckland Univ. of Technology</i>); Ullah, Ehsan (<i>Auckland District Health Board</i>)
11:15-11:30	ThB18.4	Neural Activity from Attention Networks Predicts Movement Errors Breault, Macauley S.* (<i>Johns Hopkins University</i>); Gonzalez-Martinez, Jorge (<i>Cleveland Clinic</i>); Gale, John (<i>Cleveland Clinic</i>); Sarma, Sridevi V. (<i>Johns Hopkins University</i>)	11:45-12:00	ThB19.6	A Reliable Multi-Classifer Multi-Objective Model for Predicting Recurrence in Triple Negative Breast Cancer Chen, Xi* (<i>Xi'an Jiao Tong University</i>); Zhou, Zhiguo (<i>UT Southwestern Medical Center</i>); Thomas, Kimberly (<i>Weill Cornell Medicine</i>); Folkert, Michael (<i>The University of Texas Southwestern Medical Center</i>); Kim, Nathan (<i>University of Texas Southwestern Medical Center</i>); Rahimi, Asal (<i>The University of Texas Southwestern Medical Center</i>); Wang, Jing (<i>University of Texas Southwestern Medical Center</i>)
11:30-11:45	ThB18.5	Optimal Trajectories of Brain State Transitions Indicate Motor Function Changes Associated with Aging Zhu, Hong (<i>Shanghai Jiao Tong University</i>); Zhou, Jie (<i>Shanghai Jiao Tong University</i>); Shu, Pin (<i>Shanghai Jiao Tong University</i>); Tong, Shanbao (<i>Shanghai Jiao Tong University</i>); Sun, Junfeng* (<i>Shanghai Jiao Tong University</i>)	ThB20: 10:30-12:00	R5 – Level 3	Stress Monitoring (Oral Session) Chair: Leonhardt, Steffen (<i>RWTH Aachen University</i>)
11:45-12:00	ThB18.6	Force-Temporal Characteristics of EEG-EMG Coherence during Isometric Contraction of Lateral Head of Gastrocnemius Muscle Igasaki, Tomohiko* (<i>Kumamoto Univ.</i>); Yamashita, Kento (<i>Kumamoto Univ.</i>); Ushijima, Takeshi (<i>Kumamoto Univ.</i>)	10:30-10:45	ThB20.1	Daytime Data and LSTM can Forecast Tomorrow's Stress, Health, and Happiness Umematsu, Terumi* (<i>NEC Corp.</i>); Sano, Akane (<i>Rice Univ.</i>); Picard, Rosalind (<i>Massachusetts Institute of Technology</i>)
ThB19: 10:30-12:00	R4 – Level 3	General and Theoretical Informatics – Machine Learning (II) (Oral Session) Chair: Holmes, David (<i>Mayo Clinic</i>) Co-Chair: Chouvarda, Ioanna (<i>Aristotle University</i>)	10:45-11:00	ThB20.2	Prediction of Self-Perceived Stress and Arousal based on Electrodermal Activity Pakarinen, Tomppa Oskari* (<i>Tampere Univ.</i>); Pietilä, Julia (<i>Tampere Univ. of Technology</i>); Nieminen, Hannu (<i>Tampere Univ. of Technology</i>)
10:30-10:45	ThB19.1	Machine Learning for Classification of Uterine Activity Outside Pregnancy Bakkes, Tom Hendricus Gerardus Franciscus* (<i>Eindhoven Univ. of Technology</i>); Sammali, Federica (<i>Eindhoven Univ. of Technology</i>); Kuijsters, Nienke Pertronella Maria (<i>Catharina Hospital Eindhoven</i>); Turco, Simona (<i>Eindhoven Univ. of Technology</i>); Rabotti, Chiara (<i>Eindhoven Univ. of Technology</i>); Schoot, Benedictus Christiaan (<i>Catharina Hospital Eindhoven</i>); Mischi, Massimo (<i>Eindhoven Univ. of Technology</i>)	11:00-11:15	ThB20.3	Multi-Modal Acute Stress Recognition using Off-the-Shelf Wearable Devices Montesinos, Victoriano (<i>EPFL</i>); Dell'Agnola, Fabio (<i>Ecole Polytechnique Fédérale de Lausanne (EPFL)</i>); Arza Valdés, Adriana* (<i>Ecole Polytechnique Fédérale de Lausanne EPFL</i>); Aminifar, Amir (<i>EPFL</i>); Atienza, David (<i>EPFL</i>)
10:45-11:00	ThB19.2	Predicting Lymphoma Outcomes and Risk Factors in Patients with Primary Sjögren's Syndrome using Gradient Boosting Tree Ensembles Pezoulas, Vasileios C. (<i>University of Ioannina</i>); Exarchos, Themis P. (<i>Unit of Medical Tech & Intelligent Info</i>); Tzioufas, Athanasios (<i>National & Kapodistrian University of Athens</i>); De Vita, Salvatore (<i>Udine University</i>); Fotiadis, Dimitrios I.* (<i>University of Ioannina</i>)	11:15-11:30	ThB20.4	Effect of Mental Workload on Breathing Pattern and Heart Rate for a Working Memory Task: A Pilot Study Jaiswal, Dibyanshu* (<i>TCS Research & Innovation</i>); Chowdhury, Arijit (<i>TCS Innovation Lab</i>); Banerjee, Tanushree (<i>TCS Innovation Lab</i>); Chatterjee, Debatri (<i>TCS Innovation Lab</i>)
11:00-11:15	ThB19.3	1D Convolutional Neural Networks for Estimation of Compensatory Reserve from Blood Pressure Waveforms Techentin, Robert (<i>Mayo Clinic</i>); Felton, Christopher (<i>Mayo Clinic</i>); Schlotman, Taylor (<i>US Army Institute of Surgical Research</i>); Gilbert, Barry (<i>Mayo Clinic College of Medicine</i>); Joyner, Michael (<i>Mayo Clinic</i>); Curry, Timothy (<i>Mayo Clinic</i>); Convertino, Victor (<i>U.S. Army Institute of Surgical Research</i>); Holmes, David* (<i>Mayo Clinic</i>); Haider, Clifton (<i>Mayo Clinic</i>)	11:30-11:45	ThB20.5	Evaluation and Classification of Physical and Psychological Stress in Firefighters using Heart Rate Variability Pluntke, Ulrike (<i>IBM Deutschland GmbH</i>); Gerke, Sebastian (<i>IBM Research – Zurich</i>); Sridhar, Arvind (<i>IBM Research – Zurich</i>); Weiss, Jonas (<i>IBM Research – Zurich</i>); Michel, Bruno* (<i>IBM Research – Zurich</i>)
11:15-11:30	ThB19.4	Facilitating Machine Learning on Big Health Data Networks Pitoglou, Stavros* (<i>Research & Development Dpt. Computer Solutions SA, Biomedical Eng</i>); Anastasiou, Athanasios (<i>Biomedical Engineering Laboratory, National Technical University of Athens</i>); Androutsou, Thelma (<i>National Technical University of Athens</i>); Giannouli, Dimitra (<i>Research & Development Dpt. Computer Solutions SA</i>); Kostalas, Evaggelos (<i>Research & Development Dpt. Computer Solutions SA</i>); MATSOPOULOS, GEORGE K (<i>Inst of Comm & Computer Systems</i>); Koutsouris, Dimitrios (<i>Biomedical Engineering Laboratory, School of Electrical & Comp</i>)	11:45-12:00	ThB20.6	A Comparative Study of Stress and Anxiety Estimation in Ecological Settings using a Smart-Shirt and a Smart-Bracelet Tiwari, Abhishek* (<i>Institut National de la Recherche Scientifique</i>); Cassani, Raymundo (<i>Institut National de la Recherche Scientifique</i>); Narayanan, Shrikanth (<i>University of Southern California</i>); Falk, Tiago (<i>Institut National de la Recherche Scientifique</i>)
ThB21: 10:30-12:00	R8 – level 3	Diagnostic Devices – Physiological Monitoring (Oral Session) Co-Chair: Fletcher, Richard Ribon (<i>Massachusetts Institute of Tech.</i>)	10:30-10:45	ThB21.1	A Force Line Trajectory Measuring System and Algorithms for Unicondylar Knee Replacement Surgery Su, Zhe (<i>Tsinghua University</i>); Wang, Zhihua (<i>Tsinghua University</i>); Chen, Hong* (<i>Tsinghua Univ.</i>)

10:45-11:00 ThB21.2
Methods for Visualization of Gastric Endoscopic Mapping Data from Three-Dimensional, Non-Uniform Electrode Arrays
Chan, Chih-Hsiang Alexander* (*Univ. of Auckland*); Aghababaie, Zahra (*Univ. of Auckland*); Paskaranandavadivel, Niranchan (*The Univ. of Auckland*); Cheng, Leo K (*The Univ. of Auckland*); Angeli, Timothy Robert (*Auckland Bioengineering Institute, Univ. of Auckland*)

11:00-11:15 ThB21.3
A Sampler Prototype for the Simultaneous Collection of Exhaled Air and Breath Condensate
Lomonaco, Tommaso (*University of Pisa, Dept. of Chemistry & Industrial Chemi*); Salvo, Pietro* (*National Research Council*); Ghimenti, Silvia (*University of Pisa, Dept. of Chemistry & Industrial Chemi*); Biagini, Denise (*University of Pisa, Dept. of Chemistry & Industrial Chemi*); Antoni, Shaula (*University of Pisa, Dept. of Chemistry & Industrial Chemis*); Bellagambi, Francesca (*University of Pisa, Dept. of Chemistry & Industrial Chemi*); Di Francesco, Fabio (*University of Pisa*); Fuoco, Roger (*University of Pisa, Dept. of Chemistry & Industrial Chemi*)

11:15-11:30 ThB21.4
Sleep Staging Monitoring based on Sonar Smartphone Technology
Zaffaroni, Alberto Antonio (*ResMed Inc.*); Coffey, Sam (*ResMed Inc.*); Dodd, Stephen (*ResMed Inc.*); Kilroy, Hannah (*ResMed*); Lyon, Graeme* (*ResMed Inc.*); O'Rourke, Damien (*ResMed Inc.*); Lederer, Katharina (*Advanced Sleep Research Berlin*); Fietze, Ingo (*Charité-Universitätsmedizin Berlin*); Penzel, Thomas (*Charité Universitätsmedizin Berlin*)

11:30-11:45 ThB21.5
Application of Machine Learning to Prediction of Surgical Site Infection
Fletcher, Richard Ribon* (*Massachusetts Institute of Technology*); Olubeko, Olasubomi (*MIT*); Sonthalia, Harsh (*Massachusetts Institute of Technology*); Kateera, Fredrick (*Partners In Health*); Nkurunziza, Theoneste (*Partners In Health/ Inshuti Mu Buzima*); Ashby, Joanna L. (*Program in Global Surgery & Social Change, Harvard Medical Sch*); Riviello, Robert (*Brigham & Women's Hospital/ Harvard Medical School*); Hedt-Gauthier, Bethany (*Harvard Medical School*)

11:45-12:00 ThB21.6
Assessment of Lumbar Muscles Coordinated Activity based on High-Density Surface Electromyography: A Pilot Study
Jiang, Naifu (*Shenzhen Institutes of Advanced Technology, Chinese Academy of S*); Xue, Jinwei (*Shenzhen Institutes of Advanced Technology, Chinese Academy of S*); Li, Guanglin* (*Shenzhen Institutes of Advanced Technology*)

ThC01: 14:00-15:30 Hall A6+A7 – Level 1
BCIs for Cognitive Assessment and Real-Time Decoding (Minisymposium)
Chair: Guger, Christoph (*g.tec Medical Engineering GmbH*)
Co-Chair: Rutkowski, Tomasz (*RIKEN*)

14:00-14:15 ThC01.1
Passive BCI for Task-Load and Dementia Biomarker Elucidation
Rutkowski, Tomasz* (*RIKEN*); Zhao, Qibin (*RIKEN Brain Science Institute*); Abe, Masato S. (*RIKEN AIP*); Otake-Matsuura, Mihoko (*RIKEN AIP*)

14:15-14:30 ThC01.2
Online Detection of Spontaneous Face and Kanji Characters in Human ECoG
Guger, Christoph* (*g.tec Medical Engineering GmbH*); Kapeller, Christoph (*g.tec Medical Engineering GmbH*); Gruenwald, Johannes (*Johannes Kepler University Linz*); Kamada, Kyousuke (*Asahikawa Medical University*)

14:30-14:45 ThC01.3
Estimating Cognitive Workload in a Virtual Reality Environment using EEG
Krusienski, Dean* (*Virginia Commonwealth University*); Tremmel, Christoph (*Old Dominion University*); Herff, Christian (*Maastricht University*); Rechowicz, Krzysztof (*Old Dominion University*); Yamani, Yusuke (*Old Dominion University*)

ThC02: 14:00-15:30 Hall A8 – Level 1
Data Mining for Biosignals (Oral Session)
Co-Chair: Kraemer, Jan F. (*Humboldt-Universität zu Berlin*)

14:00-14:15 ThC02.1
Facial Recognition Task for the Classification of Mild Cognitive Impairment with Ensemble Sparse Classifier
Williams, Patrick (*East Carolina Univ.*); White, Austin T. (*East Carolina Univ.*); Merino, Rubi (*East Carolina Univ.*); Hardin, Sonya (*East Carolina Univ.*); Mizelle, John Christopher (*East Carolina Univ.*); Kim, Sunghan* (*East Carolina Univ.*)

14:15-14:30 ThC02.2
Uncovering Low-Dimensional Structure in High-Dimensional Representations of Long-Term Recordings in People with Epilepsy
Rapela, Joaquin (*Brown University*); Proix, Timothée (*Université de G n ve*); Todorov, Dmitrii (*Brown University*); Truccolo, Wilson* (*Brown University*)

14:30-14:45 ThC02.3
Cigarettes and Straws: Late Positive Potential Modulation in Mental Illness and Nicotine Addiction
White, Austin T. (*East Carolina University*); Williams, Patrick (*East Carolina University*); Anand, Vivek (*East Carolina University*); Kim, Sunghan* (*East Carolina University*)

14:45-15:00 ThC02.4
Extremely Reduced Data Sets Indicate Optimal Stimulation Parameters for Classification in Brain-Computer Interfaces
Sosulski, Jan* (*University of Freiburg*); Tangermann, Michael (*University of Freiburg*)

15:00-15:15 ThC02.5
Serologic Diagnosis of Taenia Solium Cysticercosis through Linear Unmixing Analysis of Biosignals from ACEK Capacitive Sensing Method
Liang, Jia* (*University of Tennessee at Knoxville*); Wang, Fanqi (*University of Tennessee*); Lin, Xiaogang (*Chongqing University*); Qi, Hairong (*University of Tennessee*); Wu, Jayne (*The University of Tennessee*)

15:15-15:30 ThC02.6
Scalable Automatic Sleep Staging in the Era of Big Data
Nakamura, Takashi* (*Imperial College London*); Davies, Harry (*Imperial College London*); Mandic, Danilo (*Imperial College*)

ThC03: 14:00-15:30 Hall A3 – Level 1
Advanced Photoacoustic Imaging (Minisymposium)
Chair: Kim, Chulhong (*Pohang Univ. of Science and Technology*)

14:00-14:15 ThC03.1
in-Vivo Photoacoustic Imaging of Human Peripheral Vasculature
Kim, Chulhong* (*Pohang University of Science & Technology*)

14:15-14:30 ThC03.2
Analytical Photoacoustic Spectrometer
Huang, Yuanhui (*Helmholtz Zentrum M nchen – Deutsches Forschungszentrum f r Gesu*); Fuenzalida-Werner, Juan Pablo (*Helmholtz Zentrum M nchen – Deutsches Forschungszentrum f r Gesu*); Mishra, Kanuj (*Helmholtz Zentrum M nchen – Deutsches Forschungszentrum f r Gesu*); Vetschera, Paul (*Helmholtz Zentrum M nchen – Deutsches Forschungszentrum f r Gesu*); Chmyrov, Andriy (*Helmholtz Zentrum M nchen – Deutsches Forschungszentrum f r Gesu*); Ntziachristos, Vasilis (*Technische Universit t M nchen & Helmholtz Zentrum M nchen*); Stiel, Andre C.* (*Helmholtz Zentrum M nchen – Deutsches Forschungszentrum f r Gesu*)

14:30-14:45 ThC03.3
Breast Imaging using the Twente Photoacoustic Mammoscope 2
Schoustra, Sjoukje (*Univ. of Twente*); op 't Root, Tim (*PA Imaging R&D B.V.*); Alink, Laurens (*PA Imaging R&D B.V.*); Kobold, Wouter Muller (*PA Imaging R&D B.V.*); Steenbergen, Wiendelt (*Univ. of Twente*); Manohar, Srirang* (*Univ. of Twente*)

14:45-15:00	ThC03.4	Imaging of Multi-Scale in-Vivo Dynamics with Spiral Volumetric Optoacoustic Tomography (SVOT) Ron, Avihai (<i>Technical University of Munich & Helmholtz Center Munich</i>); Deán-Ben, X. Luis (<i>Biological & Medical Imaging, Technical University of Munich a</i>); Razansky, Daniel* (<i>University & ETH Zurich</i>)	14:30-14:45	ThC05.3	Recurrence Quantification Analysis for Investigating Atrial Fibrillation Dynamics in a Heterogeneous Simulation Setup Almeida, Tiago P* (<i>Instituto Tecnológico de Aeronáutica</i>); Unger, Laura Anna (<i>Institute of Biomedical Engineering, Karlsruhe Institute of Tech</i>); Soriano, Diogo Coutinho (<i>UFABC</i>); Li, Xin (<i>University of LEICESTER</i>); Doessel, Olaf (<i>Karlsruhe Institute of Technology (KIT)</i>); Yoneyama, Takashi (<i>Instituto Tecnológico de Aeronáutica</i>); Loewe, Axel (<i>Karlsruhe Institute of Technology (KIT)</i>)
ThC04: 14:00-15:30	Hall A1 – Level 1	Recent Advancements in Body Area Sensor Networks (Invited Session) Chair: Balasingham, Ilangko (<i>Oslo University Hospital and Norwegian University of Science and Technology</i>) Co-Chair: Anzai, Daisuke (<i>Nagoya Institute of Technology</i>)	14:45-15:00	ThC05.4	Attractor Reconstruction Analysis for Blood Flow Signals Thanaj, Marjola* (<i>University of Southampton</i>); Chipperfield, Andrew John (<i>University of Southampton</i>); Clough, Geraldine Frances (<i>University of Southampton</i>)
14:00-14:15	ThC04.1	Intra and Extra-Body Sensors for Monitoring Calorie Intake in Real Time Ohta, Hidetoshi* (<i>Sapporo Orthopedics & Cardiovascular Hospital</i>)	15:00-15:15	ThC05.5	The Application of Non-Linear Flow Resistance in Cerebral Artery: Compared with Windkessel Model based on Genetic Algorithm Liu, Haipeng (<i>Anglia Ruskin Univ.</i>); Wang, Li (<i>The Chinese Univ. of Hong Kong</i>); Chan, Ka Lung (<i>The Chinese Univ. of Hong Kong</i>); Xiong, Li (<i>The Chinese Univ. of Hong Kong</i>); Leng, Xinyi (<i>The Chinese Univ. of Hong Kong</i>); Shi, Lin (<i>The Chinese Univ. of Hong Kong</i>); Leung, Thomas (<i>The Chinese Univ. of Hong Kong</i>); Chen, Fei (<i>Southern Univ. of Science & Technology</i>); Zheng, Dingchang* (<i>Anglia Ruskin Univ.</i>)
14:15-14:30	ThC04.2	Optical Communications through Tissue Katsafadou, Maria (<i>University of Strathclyde</i>); Zimmermann, Melanie (<i>Ovesco Endoscopy AG</i>); Mahmood, Salman (<i>Ovesco Endoscopy AG</i>); Schostek, Sebastian (<i>Ovesco Endoscopy AG</i>); Giardini, Mario Ettore* (<i>University of Strathclyde</i>)	15:15-15:30	ThC05.6	A Method for Estimating Pulse Wave Amplitude Variability in Children with Sleep Disordered Breathing Liu, Xiao* (<i>University of Adelaide</i>); Pamula, Yvonne (<i>Adelaide Women's & Children's Hospital</i>); Kohler, Mark (<i>University of South Australia</i>); Baumert, Mathias (<i>The University of Adelaide</i>)
14:30-14:45	ThC04.3	EM Imaging-Based Multiple Implant Device Localization Enhanced by Peak-Formed Incident Fields Anzai, Daisuke* (<i>Nagoya Institute of Technology</i>); Hoshino, Junya (<i>Nagoya Institute of Technology</i>); Kobayashi, Hisato (<i>Nagoya Institute of Technology</i>); Kirchner, Jens (<i>Univ. of Erlangen-Nuremberg</i>); Fischer, Georg (<i>FAU Univ. of Erlangen-Nuremberg</i>); Wang, Jianqing (<i>Nagoya Institute of Technology</i>)	ThC06: 14:00-15:30	Hall A5 – Level 1	Neuromuscular Systems (III) (Oral Session) Co-Chair: Guiraud, David (<i>INRIA</i>)
14:45-15:00	ThC04.4	Testbeds for Artificial Molecular Communication Kirchner, Jens* (<i>University of Erlangen-Nuremberg</i>); Fischer, Georg (<i>FAU University of Erlangen-Nuremberg</i>)	14:00-14:15	ThC06.1	Investigating the Effect of Persistent Inward Currents on Motor Unit Firing Rates and Beta-Band Coherence in a Model of the First Dorsal Intersosseous Muscle Senneff, Sageanne* (<i>Univ. College Dublin</i>); McManus, Lara (<i>Univ. College Dublin</i>); Lowery, Madeleine (<i>Univ. College Dublin</i>)
15:00-15:15	ThC04.5	Battery-Free Sensing and Wireless Communication for Deep Medical Implants Khaleghi, Ali* (<i>Oslo Univ. Hospital</i>); Balasingham, Ilangko (<i>Oslo Univ. Hospital & Norwegian Univ. of Science and</i>)	14:15-14:30	ThC06.2	An Approach to Extract Nonlinear Muscle Synergies from sEMG through Multi-View Learning Dwivedi, Sanjay Kumar (<i>Kyushu Institute of Technology</i>); Shibata, Tomohiro* (<i>Kyushu Institute of Technology</i>)
15:15-15:30	ThC04.6	Miniaturized Inductive Wireless Power Transfer for Biomedical Applications Rangriz Rostami, Fazel (<i>NTNU</i>); Khaleghi, Ali* (<i>Oslo University Hospital</i>); Balasingham, Ilangko (<i>Oslo University Hospital & Norwegian University of Science and</i>)	14:30-14:45	ThC06.3	Experimentally Modifiable Parameters and their Relation to the Tonic Vibration Reflex in Chronic Hemiparetic Stroke Beauchamp, James A.* (<i>Northwestern University</i>); Patterson, Jacqueline R. (<i>Northwestern University</i>); Heckman, C.J. (<i>Feinberg School of Medicine, Northwestern University</i>); Dewald, Julius P. A. (<i>Northwestern University</i>)
ThC05: 14:00-15:30	Hall A2 – Level 1	Nonlinear Analysis of Cardiovascular Signals (Oral Session) Co-Chair: Loewe, Axel (<i>Karlsruhe Institute of Technology (KIT)</i>)	14:45-15:00	ThC06.4	A HD-sEMG Framework for the Study of Motor Neurons Controlling the Intrinsic and Extrinsic Muscles of the Hand Tanzarella, Simone* (<i>Imperial College London</i>); Muceli, Silvia (<i>Imperial College London</i>); Del Vecchio, Alessandro (<i>Imperial College London</i>); Casolo, Andrea (<i>Imperial College London</i>); Farina, Dario (<i>Imperial College London</i>)
14:00-14:15	ThC05.1	Application of Dispersion Entropy to Healthy and Pathological Heartbeat ECG Segments Kafantaris, Evangelos* (<i>University of Edinburgh</i>); Piper, Ian (<i>University of Edinburgh</i>); Lo, Tsz-Yan Milly (<i>University of Edinburgh</i>); Escudero, Javier (<i>University of Edinburgh</i>)	15:00-15:15	ThC06.5	Characterizing Strategic Contributions of Physical Therapy to Natural Standing Motion in the Muscle Synergy Space Lao, Bryan* (<i>Nara Institute of Science & Technology</i>); Tamei, Tomoya (<i>Nara Institute of Science & Technology</i>); Ikeda, Kazushi (<i>Nara Institute of Science & Technology</i>)
14:15-14:30	ThC05.2	Compressed Segmented Beat Modulation Method using Discrete Cosine Transform Nasim, Amnah (<i>Università Politecnica delle Marche</i>); Sbröllini, Agnese (<i>Università Politecnica delle Marche</i>); Marcantoni, Ilaria (<i>Università Politecnica delle Marche</i>); Morettini, Micaela (<i>Università Politecnica delle Marche</i>); Burattini, Laura* (<i>Università Politecnica delle Marche</i>)			

15:15-15:30	ThC06.6	Assessment of Postural Control after Sleep Deprivation with a Low-Cost Force Plate Umemura, Guilherme Silva* (<i>University of São Paulo</i>); Pinho, João Pedro (<i>University of São Paulo</i>); Santos, Fabia Camile (<i>University of Sao Paulo</i>); Forner-Cordero, Arturo (<i>Escola Politécnica da Universidade de Sao Paulo</i>)	15:00-15:15	ThC09.5	Source Localization for Gastric Electrical Activity using Simulated Magnetogastrographic Data Avci, Recep* (<i>University of Auckland</i>); Paskaranandavivel, Niranchan (<i>The University of Auckland</i>); Calder, Stefan (<i>Auckland Bioengineering Institute, University of Auckland</i>); Du, Peng (<i>The University of Auckland</i>); Bradshaw, Alan (<i>Vanderbilt University</i>); Cheng, Leo K (<i>The University of Auckland</i>)
ThC08: 14:00-15:30		M8 – Level 3	15:15-15:30		
ThC08: 14:00-15:30		M8 – Level 3	ThC09.6		
Digital Health for Diabetes Management: from Wearables to Big Data Analytics (Invited Session) Chair: Philip, Nada (<i>Kingston University</i>)			Mathematical Modeling of Neurostimulation for Post-Traumatic Stress Disorder: A Migration towards Multiscale Modeling to Assess Neural Response to Transcranial Direct Current Stimulation Treatments Small, Abigail* (<i>Roger Williams University</i>); Dougherty, Edward (<i>Roger Williams University</i>)		
14:00-14:15	ThC08.1	POWER2DM – Predictive Model-Based, Personalized Self-Management Support System for Type-1 and Type-2 Diabetes Patient Empowerment de Graaf, Albert* (<i>TNO</i>)	ThC11: 14:00-15:30		
14:15-14:30	ThC08.2	Diabetes Nutrition Meets AI: From Theory to Practice Mougiakakou, Stavroula* (<i>University of Bern</i>)	M4 – Level 3		
14:30-14:45	ThC08.3	The use of Technology in Diabetes Care: The Case of Non-Invasive Diabetes Detection based on Human Breath Manikandan, Suchetha* (<i>VIT Univ.</i>); Philip, Nada (<i>Kingston Univ.</i>)	Respiratory Signal Processing and Modeling (Oral Session) Chair: Chbat, Nicolas W. (<i>Quadrus Medical Technologies</i>) Co-Chair: Jané, Raimon (<i>Institut de Bioenginyeria de Catalunya (IBEC)</i>)		
14:45-15:00	ThC08.4	Big Data Analytics and Visualization for Diabetes Philip, Nada* (<i>Kingston University</i>)	14:00-14:15		
ThC09: 14:00-15:30		M1 – Level 3	ThC11.1		
ThC09: 14:00-15:30		M1 – Level 3	Neural Offset Time Evaluation in Surface Respiratory Signals during Controlled Respiration Estrada, Luis (<i>Institut de Bioenginyeria de Catalunya (IBEC)</i>); Sarlabous, Leonardo (<i>Institute for Bioengineering of Catalonia (IBEC)</i>); Lozano-García, Manuel (<i>Institute for Bioengineering of Catalonia (IBEC)</i>); The Barcelona; Jané, Raimon (<i>Institut de Bioenginyeria de Catalunya (IBEC)</i>); Torres, Abel* (<i>Institute for Bioengineering of Catalonia (IBEC) – BarcelonaTech</i>)		
Modeling Sensory and Neural Activities (Oral Session) Co-Chair: Castaneda-Villa, Norma (<i>Univ. Autónoma Metropolitana-Izt</i>)			14:15-14:30		
14:00-14:15	ThC09.1	Computational Model for Cross-Depolarization in DRG Neurons via Satellite Glial Cells using [K]_o: Role of Kir4.1 Channels and Extracellular Leakage Mandge, Darshan (<i>Indian Institute of Technology Bombay, Mumbai, India</i>); Shukla, Pooja Rajesh (<i>University of Missouri, Columbia</i>); Bhatnagar, Archit* (<i>Max Planck Institute of Cellular Biology & Genetics, Dresden</i>); Manchanda, Rohit (<i>IIT Bombay</i>)	ThC11.2		
14:15-14:30	ThC09.2	Modeling Responses to Peripheral Nerve Stimulation in the Dorsal Horn Beauchene, Christine* (<i>Johns Hopkins University</i>); Sacré, Pierre (<i>University of Liège</i>); Yang, Fei (<i>Johns Hopkins University</i>); Guan, Yun (<i>Johns Hopkins University School of Medicine</i>); Sarma, Sridevi V. (<i>Johns Hopkins University</i>)	A Pilot Bench Study of Decision Support for Proportional Assist Ventilation Karbing, Dan Stieper* (<i>Aalborg Univ.</i>); Lobo-Valbuena, Beatriz (<i>Intensive Medicine, Hospital Univ. del Henares</i>); Poulsen, Mathias Krogh (<i>Respiratory & Critical Care Group at Dept. of Health Scie</i>); Brohus, Jakob Bredal (<i>Mermaid Care A/S</i>); Abella, Ana (<i>Intensive Medicine, Hospital Univ. del Henares</i>); Gordo, Federico (<i>Intensive Medicine, Hospital Univ. del Henares</i>); Rees, Stephen Edward (<i>Aalborg Univ.</i>)		
14:30-14:45	ThC09.3	Virtual Cortical Stimulation Mapping of Epilepsy Networks to Localize the Epileptogenic Zone Li, Adam* (<i>Neuromedical Control Systems Laboratory</i>); Fitzgerald, Zachary (<i>Cleveland Clinic</i>); Hopp, Jennifer (<i>Univ. of Maryland School of Medicine</i>); Johnson, Emily (<i>Johns Hopkins Univ.</i>); Crone, Nathan E. (<i>Johns Hopkins Univ., School of Medicine</i>); Bulacio, Juan (<i>Cleveland Clinic</i>); Martinez-Gonzalez, Jorge (<i>Cleveland Clinic</i>); Inati, Sara (<i>National Institute of Health</i>); Zaghloul, Kareem (<i>National Institute of Health</i>); Sarma, Sridevi V. (<i>Johns Hopkins Univ.</i>)	14:30-14:45		
14:45-15:00	ThC09.4	Simulation of the Efficiency of Inner Hair Cell Secretion in the Auditory Pathway Soto-Bear, Jessica (<i>Universidad Autónoma Metropolitana</i>); Castaneda-Villa, Norma* (<i>Universidad Autónoma Metropolitana-Izt</i>); González-Vélez, Virginia (<i>Universidad Autónoma Metropolitana</i>); Gil, Amparo (<i>Univ. de Cantabria</i>)	ThC11.3		
			Design and Study of a Portable High-Frequency Ventilator for Clinical Applications Lu, Shao-Yung (<i>National Chiao Tung Univ.</i>); Lin, Hau (<i>National Chiao Tung Univ.</i>); Kuo, Hsu-Tah (<i>Mackay Memorial Hospital</i>); Chen, Chao-Hsien (<i>Mackay Memorial Hospital</i>); Wu, Wen-Jui (<i>Mackay Memorial Hospital</i>); Wu, Chien-Liang (<i>Mackay Memorial Hospital</i>); Liao, Yu-Te* (<i>National Chiao Tung Univ.</i>)		
			14:45-15:00		
			ThC11.4		
			High Oxygen Fraction during Airway Opening is Key to Effective Airway Rescue in Obese Subjects Laviola, Marianna* (<i>Univ. of Nottingham</i>); Niklas, Christian (<i>Univ. of Nottingham</i>); Alahmadi, Husam (<i>Univ. of Nottingham</i>); Das, Anup (<i>Univ. of Warwick</i>); Bates, Declan Gerard (<i>Univ. of Warwick</i>); Hardman, Jonathan G. (<i>Univ. of Nottingham</i>)		
			15:00-15:15		
			ThC11.5		
			Modeling of Transport Mechanisms in the Respiratory System: Validation via Congestive Heart Failure Patients Yuan, Jiayao (<i>Columbia Univ.</i>); Chiofolo, Caitlyn (<i>Quadrus Medical Technologies</i>); Czerwin, Benjamin (<i>Columbia Univ.</i>); Chbat, Nicolas W.* (<i>Quadrus Medical Technologies</i>)		
			15:15-15:30		
			ThC11.6		
			Analysis of Time Delay between Bioimpedance and Respiratory Volume Signals under Inspiratory Loaded Breathing Blanco-Almazán, Dolores* (<i>Institute for Bioengineering of Catalonia</i>); Groenendaal, Willemijn (<i>imec Netherlands</i>); Catthoor, Francky (<i>imec</i>); Jané, Raimon (<i>Institut de Bioenginyeria de Catalunya (IBEC)</i>)		

ThC12: 14:00-15:30 M6 – Level 3
Applications of Liquid Crystal Technologies in Ophthalmology (Minisymposium)
Chair: Gramatikov, Boris (*Johns Hopkins Univ. School of Medicine*)
Co-Chair: Irsch, Kristina (*Sorbonne Univ. (France)*) & *Johns Hopkins Univ. (USA)*)

14:00-14:15 ThC12.1
Using Liquid Crystal Variable Retarders as Phase Compensators in Retinal Birefringence Scanning
 Gramatikov, Boris* (*Johns Hopkins Univ. School of Medicine*)

14:15-14:30 ThC12.2
Improving the Resolution of Retinal Imaging Systems with Adaptive Optics and Liquid Crystal Lenses
 Cense, Barry* (*UWA*); Maddipatla, Reddikumar (*Indiana Univ.*)

14:30-14:45 ThC12.3
Towards Characterization and Compensation of Loss of Anterior Segment Transparency
 Badon, Amaury (*ESPCI Paris*); Barolle, Victor (*ESPCI Paris*); Boccara, Albert Claude (*ESPCI CNRS*); Fink, Mathias (*CNRS*); Irsch, Kristina* (*Sorbonne University (France)*) & *Johns Hopkins University (USA)*); Aubry, Alexandre (*Institut Langevin, ESPCI Paris, CNRS UMR 7587*)

14:45-15:00 ThC12.4
Evaluation of the Strabismus with Liquid Crystal-Based Shutter Glass
 Seo, Jong Mo* (*Seoul National Univ., School of Engineering*); Bae, So Hyun (*Hallym Univ.*); Seo, Min-won (*Seoul National Univ.*); Yi, Jungho (*Seoul National Univ.*)

ThC13: 14:00-15:30 R2 – Level 3
Current Technologies of Continuous Blood Pressure Monitoring (Minisymposium)
Chair: Park, Sung-Min (*POSTECH*)
Co-Chair: Tamura, Toshiyo (*Waseda University*)

14:00-14:15 ThC13.1
Continuous Blood Pressure Monitoring using Tonometry Technology and Clinical Value
 Yamashita, Shingo* (*Omron Healthcare Co., Ltd*)

14:15-14:30 ThC13.2
Data-Driven End-to-End Deep Learning Architecture for Long-Term Blood Pressure Estimation
 Eom, Heesang (*Kwangwoon Univ.*); Han, Seungwoo (*Kwangwoon University*); Park, Kwang S. (*Seoul National University*); Park, Cheolsoo* (*Kwangwoon University*)

14:30-14:45 ThC13.3
A Novel Smart Card with PDS Functionality: MiParu® Card
 Minami, Shigenobi* (*MIRUWS Inc.*); Tamura, Toshiyo (*Waseda University*)

14:45-15:00 ThC13.4
The Fluctuation of Pulse Transit Time in Continuous Cuff-Less Blood Pressure Monitoring
 Maeda, Yuka* (*University of Tsukuba*); Sekine, Masaki (*Osaka Electro-Communication University*); Tamura, Toshiyo (*Waseda University*); Mizutani, Koichi (*University of Tsukuba*)

ThC14: 14:00-15:30 R3 – Level 3
Novel Methods for the Detection and Prediction of Epileptic Seizures (Oral Session)
Chair: Mitsis, Georgios D. (*McGill University*)
Co-Chair: Tautan, Alexandra-Maria (*Univ. Politehnica of Bucharest*)

14:00-14:15 ThC14.1
Semi-Supervised Seizure Prediction with Generative Adversarial Networks
 Truong, Nhan, Duy* (*The University of Sydney*); Kavehei, Omid (*University of Sydney*); Zhou, Luping (*University of Sydney*)

14:15-14:30 ThC14.2
Feature Generation and Dimensionality Reduction using the Discrete Spectrum of the Schrodinger Operator for Epileptic Spikes Detection
 Chahid, Abderrazak (*King Abdullah Univ. of Science & Tech.*); Alotaiby, Turki (*KACST*); Alshebeili, Saleh (*KSU*); Laleg, Taous-Meriem* (*King Abdullah Univ. of Science & Tech. (KAUST)*)

14:30-14:45 ThC14.3
Detection of Epileptic Seizures using Unsupervised Learning Techniques for Feature Extraction
 Tautan, Alexandra-Maria (*University Politehnica of Bucharest*); Dogariu, Mihai* (*University Politehnica of Bucharest*); Ionescu, Bogdan (*Universitatea Politehnica of Bucharest*)

14:45-15:00 ThC14.4
Epileptic State Classification based on Intrinsic Mode Function and Wavelet Packet Decomposition
 Hu, Dinghan (*Hangzhou Dianzi Univ.*); Cao, Jiuwen* (*School of Automation Hangzhou Dianzi Univ. / COGNACG, CNRS*); Lai, Xiaoping (*Hangzhou Dianzi Univ.*); Liu, Junbiao (*Hangzhou Neuro Science & Technology Co. Ltd*)

15:00-15:15 ThC14.5
Ongoing Intracortical Neural Activity Predicts Upcoming Interictal Epileptiform Discharges in Human Epilepsy
 Saha, Dipta (*Brown University*); Proix, Timothée (*Université de Genève*); Cash, Sydney (*Massachusetts General Hospital*); Truccolo, Wilson* (*Brown University*)

15:15-15:30 ThC14.6
Epileptic Signal Classification with Deep Transfer Learning Feature on Mean Amplitude Spectrum
 Wang, Yaomin (*Hangzhou Dianzi Univ.*); Cao, Jiuwen* (*School of Automation Hangzhou Dianzi Univ. / COGNACG, CNRS*); Wang, Jianzhong (*Hangzhou Dianzi Univ.*); Hu, Dinghan (*Hangzhou Dianzi Univ.*); Deng, Muqing (*Hangzhou Dianzi Univ.*)

ThC15: 14:00-15:30 M3 – Level 3
Image Analysis and Classification – Machine Learning Approaches (III) (Oral Session)

14:00-14:15 ThC15.1
Classification of Alzheimer's Disease using Volumetric Features of Multiple MRI Scans
 Bloch, Louise (*Univ. of Applied Sciences & Arts*); Friedrich, Christoph M.* (*Univ. of Applied Sciences & Arts Dortmund*)

14:15-14:30 ThC15.2
Automated Detection of Non-Informative Frames for Colonoscopy through a Combination of Deep Learning and Feature Extraction
 Yao, Heming* (*University of Michigan*); Stidham, Ryan W. (*University of Michigan*); Soroushmehr, S.M.Reza (*University of Michigan, Ann Arbor*); Gryak, Jonathan (*University of Michigan*); Najarian, Kayvan (*University of Michigan – Ann Arbor*)

14:45-15:00 ThC15.4
Deep-Learning-Based Fully Automatic Spine Centreline Detection in CT Data
 Jakubicek, Roman* (*Brno University of Technology*); Chmelik, Jiri (*Brno University of Technology, Faculty of Electrical Engineering*); Ourednicek, Petr (*Philips Nederland*); Jan, Jiri (*Brno University of Technology*)

15:00-15:15 ThC15.5
Noncontact Blood Pressure Monitoring Technology using Facial Photoplethysmograms
 Adachi, Yoshihisa* (*Sharp Corporation*); Edo, Yuki (*Sharp Corporation*); Ogawa, Rieko (*Sharp Corporation*); Tomizawa, Ryota (*Sharp Corporation*); Iwai, Yoshifumi (*Sharp Corporation*); Okumura, Tetsuya (*Sharp Corporation*)

15:15-15:30	ThC15.6	Human Induced Pluripotent Stem Cell Reprogramming Prediction in Microscopy Images using LSTM based RNN Chang, Yuan-Hsiang (<i>Chung Yuan Christian Univ.</i>); Abe, Kuniya (<i>Mammalian Genome Dynamics, RIKEN BioResource Center</i>); Yokota, Hideo (<i>RIKEN Center for Advanced Photonics</i>); Sudo, Kazuhiro (<i>BioResource Center, RIKEN</i>); Nakamura, Yukio (<i>RIKEN BioResource Center</i>); Chu, Slo-Li (<i>Chung Yuan Christian Univ.</i>); Hsu, Chih-Yung (<i>Chung Yuan Christian Univ.</i>); Tsai, Ming-Dar* (<i>Chung-Yuan Christian Univ.</i>)	14:15-14:30	ThC17.2	Semi-Mechanistic Clearance Models of Oncology Biotherapeutics and Impact of Study Design Grisic, Ana-Marija* (<i>Merck KGaA</i>)
ThC16: 14:00-15:30	M5 – Level 3	Mechanics of Locomotion (Oral Session) Co-Chair: Saleh, Soha (<i>Kessler Foundation</i>)	14:30-14:45	ThC17.3	Artificial Intelligence for Identifying Novel Therapeutic Targets, Biomarkers and Drug Repositioning Opportunities Hwang, Woochang (<i>University of Cambridge</i>); Han, Namshik* (<i>University of Cambridge</i>)
14:00-14:15	ThC16.1	A PID Controller Approach to Explain Human Ankle Biomechanics across Walking Speeds Herve, Ophelie* (<i>Student at SMU</i>); Martin, Anne (<i>Pennsylvania State Univ.</i>); Villarreal, Dario Jose (<i>Southern Methodist Univ.</i>)	14:45-15:00	ThC17.4	Prediction of Postoperative Side Effects in Patients Treated with Patient Controlled Analgesia Park, Kyungsoo* (<i>Yonsei University College of Medicine</i>)
14:15-14:30	ThC16.2	Prediction of Smooth Gait Transitioning for Active Lower Limb Prosthetics Boudali, A. Mounir* (<i>The Univ. of Sydney</i>); Sinclair, Peter James (<i>The Univ. of Sydney</i>); Manchester, Ian (<i>Univ. of Sydney</i>)	ThC18: 14:00-15:30	R13 – Level 3	Trustiness between Human and Intelligent Assistive Devices (Minisymposium) Chair: Bezerianos, Anastasios (<i>National University of Singapore</i>) Co-Chair: Dragomir, Andrei (<i>National University of Singapore</i>)
14:30-14:45	ThC16.3	Pre-Impact Detection Algorithm to Identify Lack of Balance Due to Tripping-Like Perturbations Aprigliano, Federica* (<i>The BioRobotics Institute of Scuola Superiore Sant'Anna, Pisa</i>); Guaitolini, Michelangelo (<i>The BioRobotics Institute, Scuola Superiore Sant'Anna, Pi</i>); Sabatini, Angelo Maria (<i>Scuola Superiore Sant'Anna</i>); Micera, Silvestro (<i>Scuola Superiore Sant'Anna</i>); Monaco, Vito (<i>Scuola Superiore Sant'Anna, Pisa</i>)	14:00-14:15	ThC18.1	Cognitive Assessment for Trust-Based Human-Machine Collaborative Systems: A Multimodal Perspective Bezerianos, Anastasios* (<i>National University of Singapore</i>); Dragomir, Andrei (<i>National University of Singapore</i>)
14:45-15:00	ThC16.4	Evaluation of Toe Function based on the Plantar Pressure Distribution while Walking and its Relationships with General Gait Parameters Imaizumi, Kazuya* (<i>Tokyo Healthcare University</i>); Iwakami, Yumi (<i>Tokyo Healthcare University</i>); Kumamoto, Masazumi (<i>Kao Corporation</i>); Tomisaki, Masumi (<i>Kao Corporation</i>); Sudo, Motoki (<i>Kao Corporation</i>); Niki, Yoshifumi (<i>Kao Corporation</i>)	14:15-14:30	ThC18.2	Neurophysiological Analysis of the Interaction between Human and Assistive Technologies Sciaraffa, Nicolina* (<i>University of Rome Sapienza</i>); Di Flumeri, Gianluca (<i>University of Rome Sapienza</i>); Borghini, Gianluca (<i>Sapienza University of Rome</i>); Arico, Pietro (<i>Fondazione Santa Lucia</i>); Babiloni, Fabio (<i>University of Rome</i>)
15:00-15:15	ThC16.5	Singular Value Decomposition Entropy as a Measure of Ankle Dynamics Efficacy in a Y-Balance Test Following Supportive Lower Limb Taping Jelinek, Herbert Franz (<i>Charles Sturt University</i>); Donnan, Luke (<i>Charles Sturt University</i>); Khandoker, Ahsan H* (<i>Khalifa University of Science, Technology & Research</i>)	14:30-14:45	ThC18.3	Advanced Brain-Computer Interfaces for Personalized Motor Rehabilitation Chouhan, Tushar (<i>Nanyang Technological University</i>); Guan, Cuntai* (<i>Nanyang Technological University</i>)
15:15-15:30	ThC16.6	Evaluation of Time-Frequency Features as Detectors of Lack of Balance Due to Tripping-Like Perturbations Guaitolini, Michelangelo* (<i>The BioRobotics Institute, Scuola Superiore Sant'Anna, Pi</i>); Aprigliano, Federica (<i>The BioRobotics Institute of Scuola Superiore Sant'Anna, Pisa</i>); Mannini, Andrea (<i>Scuola Superiore Sant'Anna</i>); Monaco, Vito (<i>Scuola Superiore Sant'Anna, Pisa</i>); Micera, Silvestro (<i>Scuola Superiore Sant'Anna</i>); Sabatini, Angelo Maria (<i>Scuola Superiore Sant'Anna</i>)	14:45-15:00	ThC18.4	From Brain to Machine Interface (BMI) to Machine to Brain Interface (MBI) Dragomir, Andrei (<i>National University of Singapore</i>); Thakor, Nitish* (<i>Johns Hopkins University</i>)
ThC17: 14:00-15:30	R12 – Level 3	Pharmaceutical IT and Pharmacometrics in Drug Development (Minisymposium) Chair: Park, Kyungsoo (<i>Yonsei University College of Medicine</i>) Co-Chair: Hahn, Sei Kwang (<i>Pohang University of Science and Technology (POSTECH)</i>)	15:00-15:15	ThC18.5	Robot Trust Appeals and Human Decision-Making in Human-Robot Collaboration Seet, Manuel (<i>NUS</i>); Bose, Rohit (<i>National Univ. of Singapore</i>); Bezerianos, Anastasios (<i>National Univ. of Singapore</i>); Dauwels, Justin* (<i>NTU</i>); Thakor, Nitish (<i>National Univ. of Singapore</i>)
14:00-14:15	ThC17.1	Smart Contact Lens for Diagnostic and Drug Delivery Applications to Diabetes and Glaucoma Hahn, Sei Kwang* (<i>Pohang University of Science & Technology (POSTECH)</i>)	ThC19: 14:00-15:30	R4 – Level 3	General and Theoretical Informatics – Predictive Analytics (Oral Session) Chair: Reilly, Richard (<i>Trinity College Dublin</i>)
14:15-14:30	ThC19.2	Predicting States of Abstract Reasoning: EEG Connectivity Markers Miasnikova, Aleksandra* (<i>Institute of Higher Nervous Activity & Neurophysiology of RAS</i>); Troshkov, Daniil (<i>Elvees RnD Center, JSC</i>); Baklushev, Mikhail (<i>Institute of Higher Nervous Activity & Neurophysiology of RAS</i>); Perevoznyuk, Gleb (<i>Lomonosov Moscow State Univ., Faculty of Fundamental Medicine</i>)	14:00-14:15	ThC19.1	Predicting Gastrointestinal Bleeding Events from Multimodal In-Hospital Electronic Health Records using Deep Fusion Networks Hung, Chen-Ying (<i>National Tsing Hua University</i>); Lin, Ching-Heng (<i>Dept. of Medical Research, Taichung Veterans General Hospit</i>); Chang, Chi-Sen (<i>Dept. of Internal Medicine, Taichung Veterans General Hospit</i>); Li, Jeng-Lin (<i>Dept. of Electrical Engineering, National Tsing Hua Univ.</i>); Lee, Chi-Chun* (<i>National Tsing Hua University</i>)

14:30-14:45 ThC19.3
A BLSTM with Attention Network for Predicting Acute Myeloid Leukemia Patient's Prognosis using Comprehensive Clinical Parameters
 Lu, Chih-Chuan (*Dept. of Electrical Engineering, National Tsing Hua Univ.*); Li, Jeng-Lin (*Dept. of Electrical Engineering, National Tsing Hua Univ.*); Wang, Yu-Fen (*Tai-Cheng Stem Cell Therapy Center, National Taiwan Univ.*); Ko, Bor-Sheng (*Dept. of Internal Medicine, National Taiwan Univ. Hosp*); Tang, Jih-Luh (*Dept. of Internal Medicine, National Taiwan Univ. Hosp*); Lee, Chi-Chun* (*National Tsing Hua Univ.*)

14:45-15:00 ThC19.4
Model Predictive Control of Shallow Drowsiness: Improving Productivity of Office Workers
 Kogo, Takuma* (*NEC Corp.*); Tsujikawa, Masanori (*NEC Corp.*); Kiuchi, Yukihiro (*NEC Corp.*); Nishino, Atsushi (*DAIKIN Industries, LTD.*); Hashimoto, Satoshi (*DAIKIN Industries, LTD.*)

15:00-15:15 ThC19.5
Automatic Disability Categorisation based on ADLs among Older Adults in a Nationally Representative Population using Data Mining Methods
 de Melo Oliveira, Isadora* (*Trinity College Dublin*); Hernandez, Belinda (*TILDA The Irish Longitudinal Study in Ageing, Trinity College Du*); Kenny, Rose Anne (*Trinity College Dublin*); Reilly, Richard (*Trinity College Dublin*)

15:15-15:30 ThC19.6
Prediction of the Adherence to a Home-Based Cardiac Rehabilitation Program
 Claes, Jomme* (*KU Leuven*); Filos, Dimitrios (*Aristotle University o Thessaloniki*); Cornelissen, Veronique (*KU Leuven*); Chouvarda, Ioanna (*Aristotle University*)

ThC20: 14:00-15:30 R5 – Level 3
Wearable Activity Monitoring (Oral Session)
 Chair: Jovanov, Emil (*University of Alabama in Huntsville*)

14:00-14:15 ThC20.1
Development of an Automated 30 Second Chair Stand Test using Smartwatch Application
 Jovanov, Emil* (*University of Alabama in Huntsville*); Wright, Shelton (*The University of Alabama in Huntsville*); Ganegoda, Harsha (*The University of Alabama in Huntsville*)

14:15-14:30 ThC20.2
Visualizing Inertial Data for Wearable Sensor based Daily Life Activity Recognition using Convolutional Neural Network
 Huynh-The, Thien* (*Kumoh National Institute of Technology*); Hua, Cam-Hao (*Kyung Hee University*); Kim, Dong-Seong (*Kumoh National Institute of Technology*)

14:30-14:45 ThC20.3
Evaluation of Daily Walking Activity and Gait Profiles: A Novel Application of a Time Series Analysis Framework
 Buckley, Christopher* (*Newcastle University*); Mc Ardle, Riona (*Newcastle University*); Galna, Brook (*Newcastle University*); Thomas, Alan (*Newcastle University*); Rochester, Lynn (*Newcastle University*); Del Din, Silvia (*Newcastle University*)

14:45-15:00 ThC20.4
Building Robust Models for Human Activity Recognition from Raw Accelerometers Data using Gated Recurrent Units and Long Short Term Memory Neural Networks
 Okai, Jeremiah (*Univ. Leiden*); Paraschiakos, Stylianos* (*Leiden Univ. Medical Center*); Beekman, Marian (*Molecular Epidemiology, Dept. Biomedical Data Science, LUMC*); Knobbe, Arno (*Leiden Institute of Advanced Computing Science, Univ. Lei*); Rebelo de Sa, Claudio (*Data Science Group, Univ. of Twente*)

15:00-15:15 ThC20.5
Experimental Analysis of Artificial Neural Networks Performance for Home-Based Physical Activity Recognition using Belt and Wristband Devices
 Qi, Jun (*Liverpool John Moores Univ.*); Yang, Yun (*Yunnan Univ.*); Peng, XiYang (*Yunnan Univ.*); Newcombe, Lee (*Liverpool John Moores Univ.*); Simpson, Andrew (*Liverpool John Moores Univ.*); Yang, Po* (*Liverpool John Moores Univ.*)

15:15-15:30 ThC20.6
A Wearable EIT System for Detection of Muscular Activity in the Extremities
 Gibas, Christian* (*University of Siegen Institute of Medical Informatics & Micros*); Gruenewald, Armin (*University of Siegen*); Wunderlich, Hans-Werner (*University of Siegen Institute of Medical Informatics & Micros*); Marx, Philipp (*University of Siegen*); Brück, Rainer (*University of Siegen*)

ThC21: 14:00-15:30 R8 – level 3
Focused Ultrasound and Other Thermal Therapies (Oral Session)
 Chair: Gerlach, Thomas (*Otto-von-Guericke University Magdeburg*)
 Co-Chair: Holmes, David (*Mayo Clinic*)

14:00-14:15 ThC21.1
High-Intensity Focused Ultrasound Therapy in the Uterine Fibroid: A Clinical Case Study of Poor Heating Efficacy
 Suomi, Visa* (*Turku University Hospital*); Viitala, Antti (*Turku University Hospital*); Sainio, Teija (*Turku University Hospital*); Komar, Gaber (*Turku University Hospital*); Blanco, Roberto (*Turku University Hospital*)

14:15-14:30 ThC21.2
Ultrasound-Enhanced Drug Delivery for Treatment of Acanthamoeba Keratitis
 Karpinecz, Bianca* (*The George Washington University*); Edwards, Natalie (*George Washington University*); Zderic, Vesna (*The George Washington University*)

14:30-14:45 ThC21.3
Setup of an Ablation Magnetic Resonance Imaging Hybrid System: Using MR Imaging Sequences to Destroy Tissue
 Gerlach, Thomas* (*Otto-von-Guericke University Magdeburg*); Pannicke, Enrico (*Otto-von-Guericke University Magdeburg*); Prier, Marcus (*Otto-von-Guericke University Magdeburg*); Seifert, Frank (*Physikalisch-Technische Bundesanstalt Berlin-Braunschweig*); Speck, Oliver (*University of Magdeburg*); Vick, Ralf (*Otto-von-Guericke University Magdeburg*)

14:45-15:00 ThC21.4
Highly Controlled and Usable System for Low-Intensity Pulsed Ultrasound Stimulation of Cells
 Fontana, Francesco* (*The BioRobotics Institute, Sant'Anna School of Advanced Studies*); Iberite, Federica (*Scuola Superiore Sant'Anna*); Morchi, Laura (*The BioRobotics Institute, Scuola Superiore Sant'Anna*); Pratesi, Tiziano (*BAC srl*); Cafarelli, Andrea (*Scuola Superiore Sant'Anna*); Ricotti, Leonardo (*Scuola Superiore Sant'Anna*)

15:00-15:15 ThC21.5
A Pilot Study for a Quantitative Evaluation of Acoustic Coupling in US-Guided Focused Ultrasound Surgery
 Morchi, Laura* (*The BioRobotics Institute, Scuola Superiore Sant'Anna*); Mariani, Andrea (*Politecnico di Milano*); Cafarelli, Andrea (*Scuola Superiore Sant'Anna*); Diodato, Alessandro (*Scuola Superiore Sant'Anna/The BioRobotics Institute*); Tognarelli, Selene (*Scuola Superiore Sant'Anna*); Menciassi, Arianna (*Scuola Superiore Sant'Anna*)

15:15-15:30 ThC21.6
Validation of Noninvasive Ultrasound Temperature Measurement System through Experiments using Resonant Cavity Applicator
 Shindo, Yasuhiro* (*Toyo Univ.*); Kato, Kazuo (*Meiji Univ.*)

ThPOS-01: 18:00-19:30 Hall B
Signal Processing and Classification for Wearable Systems and Smartphones – Poster (Poster Session)

18:00-19:30 ThPOS-01.1
Signal Quality for RR Interval Prediction on Wearable Sensors
 Gonzalez, Laura* (*North Carolina State University*); Paniagua, Thomas (*North Carolina State University*); Starliper, Nathan (*North Carolina State University*); Lobaton, Edgar (*North Carolina State University*)

- 18:00-19:30 ThPOS-01.2
Imputing Missing Data in Large-Scale Multivariate Biomedical Wearable Recordings using Bidirectional Recurrent Neural Networks with Temporal Activation Regularization
 Feng, Tiantian* (*Signal Analysis & Interpretation Lab, USC*); Narayanan, Shrikanth (*University of Southern California*)
- 18:00-19:30 ThPOS-01.3
A Two-Stage Tremor Detection Algorithm for Wearable Inertial Sensors during Normal Daily Activities
 McNames, James* (*Portland State Univ.*); Shah, Vrutangkumar V (*Oregon Health & Science Univ.*); Mancini, Martina (*OHSU*); Curtze, Carolin (*Univ. of Nebraska at Omaha*); El-Gohary, Mahmoud (*APDM Inc*); Aboy, Mateo (*Univ. of Cambridge, UK*); Carlson-Kuhta, Patricia (*Oregon Health & Science Univ.*); Nutt, John (*Oregon Health & Science Univ.*); Horak, Fay (*Oregon Health & Science Univ.*)
- ThPOS-02: 18:00-19:30 Hall B
Signal Processing and Classification in Epilepsy – Poster (Poster Session)
- 18:00-19:30 ThPOS-02.1
Epileptic States Recognition using Transfer Learning
 Shen, Lei (*Fudan Univ.; Institute of Science & Technology for Brain-*); Geng, Xinyi (*Fudan Univ.*); Luo, Huichun (*Univ. of Science & Technology of China, Hefei*); Wang, Jingying (*Fudan Univ.*); Wang, Shouyan* (*Fudan Univ.*)
- 18:00-19:30 ThPOS-02.2
Estimation of the Epileptogenic-Zone with HFO Sub-Groups Exhibiting Various Levels of Epileptogenicity
 Lachner-Piza, Daniel* (*Univ. Medical Center Freiburg*); Jacobs, Julia (*Montreal Neurological Institute*); Schulze-Bonhage, Andreas (*Univ. Hospital Freiburg*); Stieglitz, Thomas (*Univ. of Freiburg*); Dümpelmann, Matthias (*Univ. Medical Center Freiburg*)
- 18:00-19:30 ThPOS-02.3
A Convolutional Neural Network based Framework for Classification of Seizure Types
 Raghu, Raghu* (*Maastricht University*); Natarajan, Sraaam (*M.S.Ramaiah Institute of Technology, Bangalore, India*); Yasin, Temel (*Maastricht University*); Rao, Shyam Vasudeva (*Forus Health Pvt Ltd*); Kubben, Pieter Leonard (*Maastricht University Medical Center*)
- 18:00-19:30 ThPOS-02.4
Feature Extraction of Epileptic EEG using Wavelet Power Spectra and Functional PCA
 Xie, Shengkun (*Ryerson University, Canada*); Krishnan, Sridhar* (*Ryerson University*)
- 18:00-19:30 ThPOS-02.5
Central Sulcus Is a Barrier to Causal Propagation in Epileptic Networks
 Maharathi, Biswajit* (*Univ. of Illinois at Chicago, Chicago*); Loeb, Jeffrey A. (*Univ. of Illinois at Chicago*); Patton, James (*U. Illinois at Chicago (UIC), & the Shirley Ryan Ability Lab (fo)*)
- 18:00-19:30 ThPOS-02.6
Novel Automatic Epilepsy Detection Method from EEG based on Multi-Weight Transition Network
 Li, Yang (*Univ. of Jinan*); Meng, Qingfang* (*Univ. of Jinan*); Wu, Peng (*Univ. of Jinan*); Zhang, Hanyong (*Univ. of Jinan*); Du, Lei (*Univ. of Jinan*); Jiang, Hui (*Univ. of Jinan*)
- ThPOS-03: 18:00-19:30 Hall B
Signal Processing and Classification in Sleep Studies – Poster (Poster Session)
- 18:00-19:30 ThPOS-03.1
Electroencephalographic Slow-Wave Activity during Sleep in Different Phases of Blood Pressure and Respiration Oscillations
 Forouzanfar, Mohamad* (*SRI International*); Baker, Fiona (*SRI International*); Colrain, Ian (*SRI International*); de Zambotti, Massimiliano (*SRI International*)
- 18:00-19:30 ThPOS-03.2
An Investigation of Critical Frequency Sub-Bands of Snoring Sounds for OSA Diagnosis
 Herath, Dulip (*University of Queensland*); Abeyratne, Udantha R (*University of Queensland*); Hukins, Craig (*Prince Alexandra Hospital*); Markandeya, Mrunal* (*University of Queensland*)
- 18:00-19:30 ThPOS-03.3
Airflow from Nasal Pulse Oximetry in the Screening of Obstructive Sleep Apnea
 Hoppenbrouwer, Xenia L.R.* (*Univ. of Twente*); Fabius, Timon (*Dept of Pulmonology, Medisch Spectrum Twente*); Eijsvogel, Michiel (*Medisch Spectrum Twente*); de Jongh, Frans (*Medisch Spectrum Twente*); Garde, Ainara (*Univ. of Twente*)
- 18:00-19:30 ThPOS-03.4
Sleep Apnea and Hypopnea Events Detection based on Airflow Signals using LSTM Network
 Yang, Wenming (*Tsinghua University*); Fan, Jiamin* (*Graduate School at Shenzhen, Tsinghua University, China*); Wang, Xingjun (*Graduate School at Shenzhen, Tsinghua University*); Liao, Qingmin (*Tsinghua University*)
- 18:00-19:30 ThPOS-03.5
Feature Selection Algorithm based on Random Forest Applied to Sleep Apnea Detection
 Deviaene, Margot* (*KU Leuven*); Testelmans, Dries (*Universitair Ziekenhuis Gasthuisberg*); Borzée, Pascal (*Katholieke Universiteit Leuven, University Hospitals*); Buyse, Bertien (*Katholieke Universiteit Leuven*); Van Huffel, Sabine (*KU Leuven*); Varon, Carolina (*Katholieke Universiteit Leuven*)
- ThPOS-04: 18:00-19:30 Hall B
Signal Processing and Classification of Acoustic and Auditory Signals – Poster (Poster Session)
- 18:00-19:30 ThPOS-04.1
Applying Machine Learning Algorithms for Automatic Detection of Swallowing from Sound
 Santoso, Laura Frances (*University of Texas at Austin*); Baqai, Faiz (*University of Texas at Austin*); Gwozdz, Mary (*University of Texas at Austin*); Lange, Justina (*University of Texas at Austin*); Rosenberger, Matthew (*University of Texas at Austin*); Sulzer, James (*University of Texas at Austin*); Paydarfar, David* (*The University of Texas at Austin, Dell Medical School*)
- 18:00-19:30 ThPOS-04.2
A Novel Method for Automatic Identification of Respiratory Disease from Acoustic Recordings
 Kok, Xuen Hoong* (*Imperial College London*); Imtiaz, Syed Anas (*Imperial College London*); Rodriguez-Villegas, Esther (*Imperial College London*)
- 18:00-19:30 ThPOS-04.3
Speaker Diarization during Noisy Clinical Diagnoses of Autism
 Gorodetski, Alex (*BGU*); Dinstein, Ilan (*Ben Gurion University*); Zigel, Yaniv* (*Ben-Gurion University of the Negev*)
- 18:00-19:30 ThPOS-04.4
Assessment of Sound Features for Needle Perforation Event Detection
 Renna, Francesco (*Instituto de Telecomunicações e Faculdade de Ciências da Univ.*); Illanes, Alfredo (*Otto-von-Guericke Univ. of Magdeburg*); Oliveira, Jorge (*Instituto de Telecomunicações, Faculdade de Ciências da Univ.*); Esmaeili, Nazila (*Otto-von-Guericke Univ. Magdeburg, Magdeburg, Germany*); Friebe, Michael (*Otto-von-Guericke-Univ.*); Coimbra, Miguel* (*Instituto de Telecomunicações / Univ. do Porto*)
- 18:00-19:30 ThPOS-04.5
A Comparative Study of Features for Acoustic Cough Detection using Deep Architectures
 Miranda, Igor* (*Stellenbosch Univ.*); Diacon, Andreas (*Stellenbosch Univ.*); Niesler, Thomas (*Stellenbosch Univ.*)

18:00-19:30 ThPOS-04.6
Automatic Audio-Based Classification of Patient Inhaler Use: A Pharmacy based Study
 McNulty, Johnny (*Trinity College Dublin*); Reilly, Richard (*Trinity College Dublin*); Taylor, Terence E.* (*Trinity College Dublin*); O'Dwyer, Susan M (*Boots Retail (Ireland) Limited*); Costello, Richard (*Royal College of Surgeons in Ireland (RCSI)*); Zigel, Yaniv (*Ben-Gurion University of the Negev*)

ThPOS-05: 18:00-19:30 Hall B
Signal Processing and Classification of Cardiovascular Signals – Poster (Poster Session)

18:00-19:30 ThPOS-05.1
ECG-Based Estimation of Potassium and Calcium Concentrations: Proof of Concept with Simulated Data
 Pilia, Nicolas Alessandro* (*Karlsruhe Institute of Tech. (KIT)*); Hernández Mesa, María (*Karlsruhe Institute of Tech. (KIT)*); Doessel, Olaf (*Karlsruhe Institute of Tech. (KIT)*); Loewe, Axel (*Karlsruhe Institute of Tech. (KIT)*)

18:00-19:30 ThPOS-05.2
Myocardial Infarction Detection based on Multi-Lead Ensemble Neural Network
 Wang, Hongmei* (*Guangzhou Shiyuan Electronics Co., Ltd*); Zhao, Wei (*Guangzhou Shiyuan Electronics Co., Ltd*); Jia, Dongya (*Guangzhou Shiyuan Electronics Co., Ltd*); Hu, Jing (*Guangzhou Shiyuan Electronic Technology Co., Ltd.*); Li, Zhenqi (*Guangzhou Shiyuan Electronics Co., Ltd*); Yan, Cong (*Guangzhou Shiyuan Electronics Co., Ltd*); You, Tianyuan (*Guangzhou Shiyuan Electronics Co., Ltd.*)

18:00-19:30 ThPOS-05.3
Detection of End of T-Wave in Fetal ECG Signals using Recurrence Plots
 Widatalla, Namareq* (*Tohoku Univ.*); Khandoker, Ahsan H (*Khalifa Univ. of Science, Technology & Research*); Kasahara, Yoshiyuki (*Tohoku Univ.*); Kimura, Yoshitaka (*Tohoku Univ.*)

18:00-19:30 ThPOS-05.4
Phase-Domain Deep Patient-ECG Image Learning for Zero-Effort Smart Health Security
 Zhang, Qingxue* (*Indiana Univ.-Purdue Univ. Indianapolis*)

18:00-19:30 ThPOS-05.5
Automatic Artifact Detection in Impedance Cardiogram using Pulse Similarity Index
 Forouzanfar, Mohamad* (*SRI International*); Baker, Fiona (*SRI International*); Colrain, Ian (*SRI International*); de Zambotti, Massimiliano (*SRI International*)

18:00-19:30 ThPOS-05.6
ECG Biometric Recognition: Template-Free Approaches based on Deep Learning
 Hong, Pei-Lun (*National Tsing Hua University*); Hsiao, Jyun-Ya (*National Tsing Hua University*); Chung, Chi-Hsun (*National Tsing Hua University*); Feng, Yao-Min (*National Tsing Hua University*); Wu, Shun Chi* (*National Tsing Hua University*)

ThPOS-06: 18:00-19:30 Hall B
Signal Processing and Classification of Electromyographic Signals – Poster (Poster Session)

18:00-19:30 ThPOS-06.1
Spatio-Temporal based Descriptor for Limb Movement-Intent Characterization in EMG-Pattern Recognition System
 Samuel, Oluwarotimi Williams (*Shenzhen Institutes of Advanced Tech.*); Asogbon, Mojisola Grace (*Shenzhen Institutes of Advanced Tech., Chinese Academy of S*); Geng, Yanjuan (*Shenzhen Institutes of Advanced Tech.*); Li, Xiangxin (*Shenzhen Institutes of Advanced Tech., Chinese Academy of S*); Pirbhulal, Sandeep (*Shenzhen Institutes of Advanced Tech., Chinese Academy of S*); Chen, Shixiong (*Shenzhen Institutes of Advanced Tech.*); Naik, Ganesh R (*Western Sydney Univ.*); Fang, Peng (*Shenzhen Institutes of Advanced Tech., Chinese Academy of S*); Li, Guanglin* (*Shenzhen Institutes of Advanced Tech.*)

18:00-19:30 ThPOS-06.2
Visualized Evidences for Detecting Novelty in Myoelectric Pattern Recognition using 3D Convolutional Neural Networks
 Wu, Le (*University of Science & Technology of China*); Zhang, Xu* (*University of Science & Technology of China*); Chen, Xiang (*University of Science & Technology of China*); Chen, Xun (*University of British Columbia*)

18:00-19:30 ThPOS-06.3
Investigation on the Contributions of Different Muscles to the Generated Force based on HD-sEMG and DBN
 Hu, Ruochen (*University of Science & Technology of China*); Chen, Xiang* (*University of Science & Technology of China*); Cao, Shuai (*University of Science & Technology of China*); Zhang, Xu (*University of Science & Technology of China*); Chen, Xun (*University of British Columbia*)

18:00-19:30 ThPOS-06.4
Synergy Estimation for Myoelectric Control using Regularized NMF
 Bahadur, Rabya* (*SS CASE IT, Islamabad*); Rahman, Saeed ur (*SS CASE IT, Islamabad*); Khattak, Shahid (*COMSATS University Islamabad, Abbottabad Campus*)

18:00-19:30 ThPOS-06.5
Analysis of Dynamic Contractions from Biceps Brachii Muscle using Surface Electromyography Signals and Multiscale Visibility Graph Features
 Makaram, Navaneethakrishna* (*Indian Institute of Technology Madras*); Ramakrishnan, Swaminathan (*IIT Madras, India*)

18:00-19:30 ThPOS-06.6
A Simple Method to Estimate Muscle Currents from HD-sEMG and MRI using Electrical Network and Graph Theory
 Piovanelli, Enrico* (*The University of Tokyo*); Piovesan, Davide (*Gannon University*); Shirafuji, Shouhei (*The University of Tokyo*); Ota, Jun (*The University of Tokyo*)

18:00-19:30 ThPOS-06.7
Gesture Classification from Compressed EMG based on Compressive Covariance Sensing
 Park, Chanki (*Gwangju Institute of Science & Tech.*); Yoo, Hyun-Joon (*Gwangju Institute of Science & Tech.*); Lee, Sangbaek (*Gwangju Institute of Science & Tech.*); Lee, Boreom* (*Gwangju Institute of Science & Tech. (GIST)*)

18:00-19:30 ThPOS-06.8
Identification of Neuromuscular Causal Relationship between Brain and Muscles in Limb Movement by using Ensemble Empirical Mode Decomposition based Causal Decomposition
 Zhang, Yi* (*Univ. of Electronic Science & Technology of China*); Tie, Yi (*The Univ. of Sydney*); Wang, Yingxue (*Univ. of Sydney*); Zhang, Xiabing (*Univ. of Electronic Science & Technology of China*); Cui, Yan (*Univ. of Electronic Science & Technology of China*); Hao, Jianmin (*Univ. of Electronic Science & Technology of China*); Wu, Xiaofeng (*Univ. of Sydney*); Su, Steven Weidong (*Univ. of Technology, Sydney*); Xu, Peng (*Univ. of Electronic Science & Technology of China (UESTC)*); Yao, Dezhong (*Univ. of Electronic Science & Technology of China*)

18:00-19:30 ThPOS-06.9
Spatially Filtered Low-Density EMG and Time-Domain Descriptors Improves Hand Movement Recognition
 Ahmed, Ahmed (*University of Technology Sydney*); Khushaba, Rami N. (*University of Technology, Sydney (UTS)*); Al-Jumaily, Adel* (*University of Technology Sydney*)

18:00-19:30 ThPOS-06.10
Analysis of Muscle Fatigue Conditions in Surface EMG Signal with a Novel Hilbert Marginal Spectrum Entropy Method
 Sam Jeeva Raj, Edward Jero* (*Indian Institute of Technology Madras*); Ramakrishnan, Swaminathan (*IIT Madras, India*)

ThPOS-07: 18:00-19:30 Hall B
Image Enhancement – Denoising – Poster (Poster Session)

18:00-19:30 ThPOS-07.1
OCT Image Denoising based on Asymmetric Normal Laplace Mixture Model
Jorjandi, Sahar (*Student Research Committee, School of Advanced Technologies in M*); Rabbani, Hossein* (*Isfahan Univ. of Medical Sciences*); Amini, Zahra (*MUI*); Kafieh, Raheleh (*Isfahan University of Medical Sciences*)

18:00-19:30 ThPOS-07.2
Semi-Supervised Learning for Low-Dose CT Image Restoration with Hierarchical Deep Generative Adversarial Network (HD-GAN)
Choi, Kihwan* (*Korea Institute of Science & Technology*); Malinda, Vania (*Korea Institute of Science & Technology*); Kim, Sungwon (*Yonsei University*)

18:00-19:30 ThPOS-07.3
Adaptive Weighted Nuclear Norm Minimization for Removing Speckle Noise from Optical Coherence Tomography Images
Yoo, Sunyoung* (*Seoul National University*); Wang, Zihuan (*Seoul National University*); Seo, Jong Mo (*Seoul National University, School of Engineering*)

18:00-19:30 ThPOS-07.4
Geometrical X-Lets for Image Denoising
Rabbani, Hossein* (*Isfahan Univ. of Medical Sciences*)

ThPOS-08: 18:00-19:30 Hall B
Image Feature Extraction – Poster (Poster Session)

18:00-19:30 ThPOS-08.1
Differentiating Cancerous and Non-Cancerous Prostate Tissue using Multi-Scale Texture Analysis on MRI
Alvarez-Jimenez, Charlems (*Univ. Nacional de Colombia*); Barrera, Cristian (*Univ. Nacional de Colombia*); Munera, Nicolas (*Univ. Nacional de Colombia*); Viswanath, Satish (*Case Western Reserve University*); Romero, Eduardo* (*Univ. Nacional de Colombia*)

18:00-19:30 ThPOS-08.2
Automatic Screening of Fundus Images using a Combination of Convolutional Neural Network and Hand-Crafted Features
Harangi, Balazs* (*Univ. of Debrecen*); Toth, Janos (*Univ. of Debrecen, Faculty of Informatics*); Baran, Agnes (*Faculty of Informatics, Univ. of Debrecen*); Hajdu, Andras (*Univ. of Debrecen*)

18:00-19:30 ThPOS-08.3
A Preliminary Study on Automatic Characterization and Classification of Vascular Patterns of Contact Endoscopy Images
Esmaeili, Nazila* (*Otto-von-Guericke Univ. Magdeburg, Magdeburg, Germany*); Illanes, Alfredo (*Otto-von-Guericke Univ. of Magdeburg*); Boese, Axel (*Dept. of Medical Engineering, Otto-von-Guericke-Univ.*); Davaris, Nikolaos (*Dept. of Otorhinolaryngology, Head & Neck Surgery, Magdeb*); Arens, Christoph (*Dept. of Otorhinolaryngology, Head & Neck Surgery, Magdeb*); Friebe, Michael (*Otto-von-Guericke-Univ.*)

18:00-19:30 ThPOS-08.4
Gait Estimation and Analysis from Noisy Observations
Ismail, Hafsa* (*University of Canberra*); Radwan, Ibrahim (*Australian National University*); Suominen, Hanna (*Data61/CSIRO, Australian National University*); Goecke, Roland (*University of Canberra*)

18:00-19:30 ThPOS-08.5
Waveform Analysis for Camera-Based Photoplethysmography Imaging
Paul, Michael* (*RWTH Aachen Univ.*); Yu, Xinchu (*RWTH Aachen Univ.*); Wu, Bin (*RWTH Aachen Univ.*); Weiss, Christoph (*RWTH Aachen Univ.*); Hoog Antink, Christoph (*RWTH Aachen Univ., Aachen, Germany*); Blazek, Vladimir (*Philips Chair for Medical Information Technology, RWTH Aachen Un*); Leonhardt, Steffen (*RWTH Aachen Univ.*)

ThPOS-09: 18:00-19:30 Hall B
Image Reconstruction and Enhancement – Poster (Poster Session)

18:00-19:30 ThPOS-09.2
Auditory White Noise Affects Left/Right Visual Working Memory in an Opposite Pattern
Wang, Ruimin* (*Kyushu Univ.*); Ge, Sheng (*Key Laboratory of Child Development & Learning Science, Ministr*); Zommará, Noha Mohsen (*Dept. of Human Science, Kyushu Univ.*); Zheng, WenWei (*Kyushu Univ.*); Iramina, Keiji (*Kyushu Univ., Japan*)

18:00-19:30 ThPOS-09.3
Mechanically Powered Motion Imaging Phantoms: Proof of Concept
Gomez, Alberto (*King's College London*); Schmitz, Cornelia (*King's College London*); Henningsson, Markus (*King's College London*); Housden, Richard James (*King's College London*); Noh, Yohan (*King's College London*); Zimmer, Veronika (*King's College London*); Clough, James (*Kings College London*); Oksuz, Ilkay (*King's College London*); Toussaint, Nicolas (*King's College London*); King, Andy (*King's College London*); Schnabel, Julia* (*King's College London*)

18:00-19:30 ThPOS-09.4
Lateral Resolution Improvement in Ultrasound Imaging System using Compressed Sensing: Initial Results
R, Anand R (*Indian Institute of Technology Madras, Chennai, India*); Thittai, Arun Kumar* (*IIT MADRAS*)

18:00-19:30 ThPOS-09.5
Image Reconstruction Method with Compressed Sensing for High-Speed MR Temperature Measurement of Abdominal Organs
Nakagawa, Yusuke (*Kobe Univ.*); Kokuryo, Daisuke* (*Kobe Univ.*); Kaihara, Toshiya (*Faculty of Engineering, Kobe Univ.*); Fujii, Nobutada (*Kobe Univ.*); Kumamoto, Etsuko (*Kobe Univ.*)

18:00-19:30 ThPOS-09.6
Synthetic Retinal Images from Unconditional GANs
Biswas, Sangeeta* (*Brno University of Technology*); Rohdin, Johan (*Brno University of Technology*); Drahansky, Martin (*Brno University of Technology*)

18:00-19:30 ThPOS-09.7
A Portable Ultrasound Imaging System Utilizing Deep Generative Learning-Based Compressive Sensing on Pre-Beamformed RF Signals
Gupta, Saurabh Kumar* (*Indian Institute of Science, Bangalore*); Kumar, Kundan (*Indian Institute of Science*); Seelamantula, Chandra Sekhar (*Indian Institute of Science, Bangalore*); Thakur, Chetan Singh (*Indian Institute of Science, Bangalore*)

18:00-19:30 ThPOS-09.8
Evaluating Accuracy of Respiratory Rate Estimation from Super Resolved Thermal Imagery
Kwasniewska, Alicja (*Gdansk University of Technology*); Szankin, Maciej (*Intel Corporation*); Ruminski, Jacek* (*Gdansk University of Technology*); Kaczmarek, Mariusz (*Gdansk University of Technology*)

18:00-19:30 ThPOS-09.9
Shape, Pose and Density Statistical Model for 3D Reconstruction of Articulated Structures from X-Ray Images
Tchinde Fotsin, Ted Julien* (*Laboratoire de Recherche en Imagerie et Orthopédie (LIO), École*); Vazquez, Carlos (*École de Technologie Supérieure*); Cresson, Thierry (*École de Technologie Supérieure*); de Guise, Jacques A. (*École de Technologie Supérieure*)

18:00-19:30 ThPOS-09.10
Hole Filling in 3D Scans for Digital Anthropometric Applications
Sobhiyeh, Sima (*LSU Pennington Biomedical Research Center*); Dechenaud, Marcelline* (*Louisiana State University*); Dunkel, Alexander (*Louisiana State University*); LaBorde, Margarete (*Louisiana State University*); Kennedy, Samantha (*LSU Pennington Biomedical Research Center*); Shepherd, John (*University of Hawaii Cancer Center*); Heymsfield, Steven (*Pennington Biomedical Research Center*); Wolenski, Peter (*Louisiana State University*)

ThPOS-10: 18:00-19:30 Hall B
Image Registration – Poster (Poster Session)

18:00-19:30 ThPOS-10.1
Towards CNN-Based Registration of Craniocaudal and Mediolateral Oblique 2-D X-Ray Mammographic Images
Walton, William* (*JHU/APL*); Kim, Seung-Jun (*Univ. of Maryland, Baltimore County*); Harvey, Susan (*Johns Hopkins Medicine Dept. of Radiology*); Mullen, Lisa (*JHU*); Porter, David (*JHU/APL*)

18:00-19:30 ThPOS-10.3
A Pipeline for the Registration of Calcium Transient Data to Structural Networks of the Interstitial Cells of Cajal
Qian, Anna* (*The University of Auckland*); Means, Shawn (*The University of Auckland*); Malysz, John (*University of Tennessee Health Science Center*); Farrugia, Gianrico (*Mayo Clinic College of Medicine*); Gibbons, Simon J (*Mayo Clinic College of Medicine*); Du, Peng (*The University of Auckland*)

18:00-19:30 ThPOS-10.4
Breathing Deformation Model – Application to Multi-Resolution Abdominal MRI
Sarasaen, Chompunuch* (*Otto-von-Guericke-Universität Magdeburg*); Chatterjee, Soumick (*Otto von Guericke University Magdeburg*); Breitkopf, Mario (*Otto von Guericke University Magdeburg*); Iuso, Domenico (*Otto von Guericke University Magdeburg*); Rose, Georg (*Otto-von-Guericke University, Magdeburg*); Speck, Oliver (*University of Magdeburg*)

ThPOS-11: 18:00-19:30 Hall B
Image Segmentation – Poster (Poster Session)

18:00-19:30 ThPOS-11.1
Study of Tissue Variation and Analysis of MR Brain Images using Optimized Multilevel Threshold and Deep CNN Features in Neurodegenerative Disorders
N, Ahana Priyanka (*ANNA University*); Ganesan, Kavitha* (*MIT Campus, Anna University,*)

18:00-19:30 ThPOS-11.2
Automatic Aorta and Left Ventricle Segmentation for TAVI Procedure Planning using Convolutional Neural Networks
Zlahoda-Huzior, Adriana* (*AGH University of Science & Technology, Dept. of Measurment*); Stanuch, Maciej (*AGH University of Science & Technology, Dept. of Measurment*); Witowski, Jan Sylwester (*2nd Dept. of General Surgery, Jagiellonian University Medic*); Dudek, Dariusz (*Jagiellonian University Medical College, Institute of Cardiology*)

18:00-19:30 ThPOS-11.3
A Novel Method for Retinal Vessel Segmentation and Diameter Measurement using High Speed Video
Rezaeian, Mahdieh (*Macquarie University*); Butlin, Mark (*Macquarie University*); Golzan, S.Mojtaba (*Macquarie University*); Graham, Stuart L (*Macquarie University*); Avolio, Alberto P* (*Macquarie University*)

18:00-19:30 ThPOS-11.4
Skin Lesion Segmentation with C-UNet
Wu, Junyan* (*Cleerly*); Chen, Eric Z. (*Dana-Farber Cancer Institution*); Rong, Ruichen (*UT Southwestern*); Li, Xiaoxiao (*Yale University*); Dong, Xu (*Virginia Tech*); Jiang, Hongda (*East China University of Science & Technology*)

18:00-19:30 ThPOS-11.5
Automatic Segmentation of the Paranasal Sinus from Computer Tomography Images using a Probabilistic Atlas and a Fully Convolutional Network
Xiong, Kun (*Ritsumeikan Univ.*); Chen, Yen-Wei* (*Ritsumeikan Univ.*); Iwamoto, Yutaro (*Ritsumeikan Univ.*); Han, Xian-Hua (*Ritsumeikan Univ.*); Kitamura, Takahiro (*National Hospital Organization Osaka National Hospital*); Matsushiro, Naoki (*Osaka Police Hospital*)

18:00-19:30 ThPOS-11.6
Automated Optic Nerve Sheath Diameter Measurement using Super-Pixel Analysis
Soroushmehr, S.M.Reza* (*Univ. of Michigan, Ann Arbor*); Rajajee, Krishna (*Univ. of Michigan*); Williamson, Craig (*Univ. of Michigan*); Gryak, Jonathan (*Univ. of Michigan*); Najarian, Kayvan (*Univ. of Michigan – Ann Arbor*); Ward, Kevin (*Univ. of Michigan*); Tiba, Mohamad H. (*Univ. of Michigan*)

ThPOS-12: 18:00-19:30 Hall B
Image Visualization – Poster (Poster Session)

18:00-19:30 ThPOS-12.1
What Evidence Does Deep Learning Model use to Classify Skin Lesions?
Wu, Junyan* (*Cleerly*); Li, Xiaoxiao (*Yale University*); Chen, Eric Z. (*Dana-Farber Cancer Institution*); Jiang, Hongda (*East China University of Science & Technology*)

18:00-19:30 ThPOS-12.2
Automatic Masseter Thickness Measurement and Ideal Point Localization for Botulinum Toxin Injection
Xia, Wenjin (*Shanghai Jiao Tong University*); Han, Wenqing (*Shanghai Ninth People's Hospital, Shanghai Jiao Tong University*); Zhang, Yan (*Shanghai Ninth People's Hospital, Shanghai Jiao Tong University*); Wang, Lisheng (*Shanghai Jiao Tong University*); Chai, Gang (*Shanghai Ninth People's Hospital, Shanghai Jiao Tong University*); Huang, Yi-Jie* (*Shanghai Jiao Tong University*)

18:00-19:30 ThPOS-12.3
Retinal Thickness Analysis in High Myopia based on Medial Axis Transforms
Michikawa, Takashi* (*RIKEN*); Wada, Satoshi (*RIKEN*); Yokota, Hideo (*RIKEN Center for Advanced Photonics*); An, Guangzhou (*RIKEN*); Akiba, Masahiro (*Topcon Corp.*); Omodaka, Kazuko (*Dept. of Ophthalmology, Tohoku Univ. Graduate School o*); Nakazawa, Toru (*Tohoku Univ. Graduate School of Medicine*)

18:00-19:30 ThPOS-12.4
Deep Reinforcement Learning for Task-Based Feature Learning in Prosthetic Vision
White, Jack Andrew* (*Swinburne University of Technology*); McCarthy, Chris (*Swinburne University of Technology*); Kameneva, Tatiana (*Swinburne University of Technology*)

18:00-19:30 ThPOS-12.5
FPGA Implementation and Evaluation of an Approximate Hilbert Transform-Based Envelope Detector for Ultrasound Imaging using the DSP Builder Development Tool
Assef, Amauri Amorin* (*Federal Univ. of Technology-Parana (UTFPR)*); De Oliveira, Jonathan (*UTFPR, PPGSE*); Maia, Joaquim Miguel (*Federal Univ. of Technology-Parana*); Costa, Eduardo Tavares (*State Univ. of Campinas*)

ThPOS-13: 18:00-19:30 Hall B
Infra-Red Imaging – Poster (Poster Session)

18:00-19:30 ThPOS-13.1
The Association of Temperature of Diabetic Foot Ulcers with Chronic Kidney Disorder
Rani, Priya* (*RMIT University*); Aliahmad, Behzad (*RMIT University*); Kant Kumar, Dinesh (*RMIT University*)

18:00-19:30 ThPOS-13.2
Thermal Asymmetries and Mean Foot Temperature
Zolet, Cerise M. L. S. (*Graduate Program in Biomedical Engineering of the Federal Univer*); Neves, Eduardo Borba (*Federal Technological University of Paraná (UTFPR)*); Romaneli, Eduardo F. R. (*UTFPR – Federal University of Technology – Paraná*); Ulbricht, Leandra* (*UTFPR – Federal University of Technology – Paraná*)

ThPOS-14: 18:00-19:30 Hall B
Magnetic Resonance Imaging – Poster (Poster Session)

18:00-19:30 ThPOS-14.1

The Effect of the Number of Fibers in Tractography Reconstruction of White Matter Bundles

Román, Claudio* (*Universidad de Concepción*); Cárdenas, Nicolás (*Universidad de Concepción*); Poupon, Cyril (*CEA I2BM NeuroSpin*); Mangin, Jean-François (*CEA I2BM NeuroSpin*); Guevara, Pamela (*Universidad de Concepción*)

18:00-19:30 ThPOS-14.2

Super-Resolution Diffusion Tensor Imaging using SRCNN: A Feasibility Study

Elsaid, Nahla M H* (*Indiana University School of Medicine*); Wu, Yu-Chien (*Indiana University School of Medicine*)

18:00-19:30 ThPOS-14.3

Towards the Precise Microstructural Mapping. Testing New Anisotropic Phantoms with Layered and Capillary Geometries

Mazur, Weronika* (*AGH Univ. of Science & Technology*); Krzyzak, Artur, Tadeusz (*AGH Univ. of Science & Technology, Faculty of Geology, G*); Raszewski, Zbigniew (*Military Univ. of Technology, Faculty of Advanced Technology*)

18:00-19:30 ThPOS-14.4

On Single-Image Super-Resolution in 3D Brain Magnetic Resonance Imaging

Bazzi, Farah* (*University of Toulouse 3, Paul Sabatier, IRIT*); Mescam, Muriel (*CNRS – University of Toulouse 3*); Basarab, Adrian (*Université de Toulouse*); Kouamé, Denis (*Université de Toulouse III, IRIT UMR CNRS*)

18:00-19:30 ThPOS-14.5

Altered Cortical Morphometry in Pre-Manifest Huntington's Disease: Cross-Sectional Data from the IMAGE-HD Study

Shishegar, Rosita* (*Monash Univ.*); Rajapakse, Sudeshna (*Monash Univ.*); Georgiou-Karistianis, Nellie (*Monash Univ.*)

18:00-19:30 ThPOS-14.6

in-Vivo Cortical Thickness Estimation from High-Resolution T1w MRI Scans in Healthy and Mucopolysaccharidosis Affected Dogs

Labounek, Rene (*Univ. of Minnesota*); Mai, Khoi (*Univ. of Minnesota*); Mueller, Bryon (*Univ. of Minnesota*); Ellinwood, Matthew (*Iowa State Univ.*); Dickson, Patricia (*Harbor-UCLA Medical Center*); Nestrasil, Igor* (*Univ. of Minnesota*)

ThPOS-15: 18:00-19:30 Hall B
Cell, Tissue, and Organ Modeling – Poster (Poster Session)

18:00-19:30 ThPOS-15.1

Development of a Physiologically-Based Mathematical Model for Quantifying Nanoparticle Distribution in Tumors

Dogra, Prashant (*Houston Methodist Research Institute*); Chuang, Yao-Li (*University of New Mexico*); Butner, Joseph (*University of New Mexico*); Cristini, Vittorio (*University of New Mexico*); Wang, Zhihui* (*Houston Methodist Research Institute*)

18:00-19:30 ThPOS-15.2

Pharmacotherapeutic Effects of Quinidine on Short QT Syndrome by using Purkinje-Ventricle Model: A Simulation Study

Luo, Cunjin* (*Key Lab of Medical Electrophysiology, Ministry of Education, Ins*); Whittaker, Dominic G (*Univ. of Leeds*); Liu, Tong (*Tianjin Medical Univ.*); Wang, Kuanquan (*Harbin Institute of Technology*); Li, Yacong (*Harbin Institute of Technology*); He, Ying (*De Montfort Univ.*); Zhang, Henggui (*Harbin Institute of Technology, School of Computer Science & T*)

18:00-19:30 ThPOS-15.3

Experimental Mechanical Examination of Artificial 3D Printed and Post Processed Vascular Silicone Models

Riedle, Hannah* (*Friedrich-Alexander-University of Erlangen-Nuremberg*); Braunias, Kim (*Friedrich-Alexander-University of Erlangen-Nuremberg*); Mukai, Barbara (*Friedrich-Alexander-University of Erlangen-Nuremberg*); Franke, Jörg (*Friedrich-Alexander-University of Erlangen-Nuremberg*)

18:00-19:30 ThPOS-15.4

3D-Printed Whole Prostate Models with Tumor Hotspots using Dual-Extruder Printer

Liimatainen, Kaisa Maria* (*Tampere University of Technology*); Latonen, Leena (*University of Tampere*); Kartasalo, Kimmo (*Faculty of Medicine & Health Technology, Tampere University, F*); Ruusuvoori, Pekka (*Tampere University of Technology*)

18:00-19:30 ThPOS-15.5

Optimizing Stimulation Strategies for Retinal Electrical Stimulation: A Modelling Study

Alqahtani, Abdulrahman* (*Univ. of New South Wales*); Al Abed, Amr (*Univ. of New South Wales*); Lovell, Nigel H. (*Univ. of New South Wales*); Dokos, Socrates (*Univ. of New South Wales*)

18:00-19:30 ThPOS-15.6

A Soliton-Based Model Mimics the Arterial Pulse Propagation as Much as a Widely Used 1D Model

Manuel, Alfonso (*Buenos Aires Regional Faculty, National Technological Univ.*); Gabaldon, Felipe (*Technical Univ. of Madrid*); Cymberknop, Leandro Javier* (*Universidad Tecnológica Nacional*); Armentano, Ricardo Luis (*Republic Univ.*); Legnani, Walter (*Universidad Tecnológica Nacional*)

18:00-19:30 ThPOS-15.7

On a Novel, Simplified Model Framework Describing Ascorbic Acid Concentration Dynamics

Nygaard, Gerhard* (*Western Norway Univ. of Applied Sciences*)

18:00-19:30 ThPOS-15.8

A Numerical Study on the No-Touch Bipolar Radiofrequency Ablation

Yap, Shelley* (*Monash University Malaysia*); Cheong, Jason Kin Kit (*Monash University Malaysia*); Ooi, Ean Hin (*Monash University Malaysia*); Liao, Iman Yi (*University of Nottingham Malaysia Campus*); Foo, Ji Jinn (*Monash University Malaysia*); Nair, Shalini R (*National Cancer Institute*); Mohd Ali, Ahmad Faizal (*Universiti Malaysia Sarawak*)

18:00-19:30 ThPOS-15.9

Possibility of Acoustic Resonance in Hair Cells in Human's Auditory System

Hong, Wenjia (*Kansai University*); Tamaki, Airi (*Kansai University*); Kitamura, Toshiaki (*Kansai University*); Horii, Yasushi* (*Kansai University*)

ThPOS-16: 18:00-19:30 Hall B
Model Construction: Algorithms, Parameters, and Sensitivity – Poster (Poster Session)

18:00-19:30 ThPOS-16.1

A Faster DiSH: Hardware Implementation of a Discrete Cell Signaling Simulator

Gilboy, Kevin (*University of Pittsburgh*); Sayed, Khaled* (*University of Pittsburgh*); Sundaram, Niteesh (*University of Pittsburgh*); Bocan, Kara (*University of Pittsburgh*); Miskov-Zivanov, Natasa (*University of Pittsburgh*)

18:00-19:30 ThPOS-16.2

A Simulated Environment for Early Development Stages of Reinforcement Learning Algorithms for Closed-Loop Deep Brain Stimulation

Castaño-Candamil, Sebastián* (*Univ. of Freiburg*); Vaihinger, Mara (*Univ. of Freiburg*); Tangermann, Michael (*Univ. of Freiburg*)

18:00-19:30 ThPOS-16.3

Identification of a Neural Mass Model of Burst Suppression

Jafarian, Amirhossein* (*Univ. Collage London*); Freestone, Dean Robert (*The Univ. of Melbourne*); Nestic, Dragan (*The Univ. of Melbourne*); Grayden, David B. (*The Univ. of Melbourne*)

18:00-19:30 ThPOS-16.4

EEG Complexity and Functional Connectivity during Precise Timing Prediction

Meng, Jiayuan* (*Tianjin Univ.*); Xu, Minpeng (*Tianjin Univ.*); Zhou, Peng (*Tianjin Univ.*); He, Feng (*Tianjin Univ.*); Ming, Dong (*Tianjin Univ.*)

- 18:00-19:30 ThPOS-16.5
Sensitivity Analysis of a Model of Human Papillomavirus Late Promoter Regulation
 Giaretta, Alberto* (*University of Padova, Dept. of Information Engineering*); Toffolo, Gianna (*University of Padova*)
- 18:00-19:30 ThPOS-16.6
Influence of Anatomical Model and Skin Conductivity on the Electric Field Induced in the Head by Transcranial Magnetic Stimulation
 Colella, Micol* (*Univ. of Rome "Sapienza"*); Paffi, Alessandra (*ICEmB@La Sapienza Univ. Rome*); Fontana, Sara (*Dept. of Information Engineering, Electronics & Telecommu*); Rossano, Federico (*Dept. of Information Engineering, Electronics & Telecommu*); De Santis, Valerio (*Univ. of L'Aquila*); Apollonio, Francesca (*ICEmB@La Sapienza Univ. Rome*); Liberti, Micaela (*ICEmB at Sapienza Univ. of Rome*)
- ThPOS-17: 18:00-19:30 Hall B
Systems Biology and Systems Biomedicine – Poster (Poster Session)
- 18:00-19:30 ThPOS-17.1
Influence of Tissue Anisotropy on Molecular Communication
 Al-Zu'bi, Muneer (*University of Technology Sydney*); Sanagavarapu, Ananda Mohan* (*University of Technology Sydney*); Ling, Sai Ho, Steve (*University of Technology Sydney*)
- 18:00-19:30 ThPOS-17.2
Human Papillomavirus Early Promoter Regulatory Core as a Bistable Switch
 Giaretta, Alberto* (*Univ. of Padova, Dept. of Information Eng.*)
- 18:00-19:30 ThPOS-17.3
Measurement and Analysis of Complex Permittivity of Breast Cancer in Microwave Band
 Kuwahara, Yoshihiko* (*Shizuoka University*); Nakada, Yuuji (*Shizuoka University*); Nozaki, Akira (*Shizuoka University*); Fujii, Kimihito (*Aichi Medical University*)
- 18:00-19:30 ThPOS-17.4
Continuous Prediction of Cognitive State using a Marked-Point Process Modeling Framework
 Amidi, Yalda* (*Isfahan University of Technology*); Paulk, Angelique C (*Massachusetts General Hospital*); Dougherty, Darin (*Massachusetts General Hospital*); Cash, Sydney (*Massachusetts General Hospital*); Widge, Alik (*Massachusetts General Hospital*); Eden, Uri (*Boston University*); Yousefi, Ali (*Massachusetts General Hospital & Harvard Medical School*)
- 18:00-19:30 ThPOS-17.5
Modeling and Analysis of Gab1 Mediated Feedback Loops to Understand Gab's Role in Erk-Akt Signaling and Cancer
 Arkun, Yaman* (*Koc University*)
- 18:00-19:30 ThPOS-17.6
Determining the Effects of Insulin Detemir on Endogenous Secretion of Insulin
 Klenner, Jacob B. (*Univ. of Canterbury*); Van Noorden, Benjamin A. (*Univ. of Canterbury*); Knopp, Jennifer L.* (*Univ. of Canterbury*); Holder Pearson, Lui R. (*Univ. of Canterbury*); Hardy, Anna R. (*Univ. of Canterbury*); Vergeer, Sarah L. (*Univ. of Canterbury*); Shaw, Geoffrey M (*Christchurch Hospital*); Chase, J. Geoffrey (*Univ. of Canterbury*)
- 18:00-19:30 ThPOS-17.7
Effect of Two Different Pose Estimation Approaches on Lower Extremity Biomechanics in Professional Dancers
 Azevedo, Ana* (*George Mason Univ.*); Wei, Qi (*George Mason Univ.*); Oliveira, Raul (*Faculty of Human Kinetics*); Vaz, Joao (*Universidade Europeia*); Cortes, Nelson (*George Mason Univ.*)
- 18:00-19:30 ThPOS-17.8
State Analysis of Total Stressed Blood Volume and Arterial Elastance during Induced Sepsis
 Murphy, Liam (*Univ. of Canterbury*); Davidson, Shaun* (*Univ. of Oxford*); Knopp, Jennifer L. (*Univ. of Canterbury*); Chase, J. Geoffrey (*Univ. of Canterbury*); Zhou, Tony (*Univ. of Canterbury*); Desai, Thomas (*Univ. of Liege*)
- 18:00-19:30 ThPOS-17.9
A Minimal-Model Approach to Analyze Neuronal Circuit Dynamics from Multifocal ERG (mERG)
 Schröder, Pascal* (*Dept. of Human Sciences, University of Osnabrück, Osnabrück*); Martinez-Canada, Pablo (*CITIC-UGR, University of Granada, Granada*); Amorim, André (*Clinical & Experimental Optometry Research Lab-CEORLab, Center o*); Fernandes, Paulo (*Clinical & Experimental Optometry Research Lab-CEORLab, Center o*); Amorim-de-Sousa, Ana (*Clinical & Experimental Optometry Research Lab-CEORLab, Center o*); González-Méijome, José Manuel (*Clinical & Experimental Optometry Research Lab-CEORLab, Center o*)
- 18:00-19:30 ThPOS-17.10
Alzheimer's Disease Brain Network Classification using Improved Transfer Feature Learning with Joint Distribution Adaptation
 Wang, Binglin (*Huazhong University of Science & Technology*); Li, Wei (*Huazhong University of Science & Technology*); Fan, Wenliang (*Huazhong University of Science & Technology*); Chen, Xi (*Hua Zhong University of Science & Technology*); Wu, Dongrui* (*Huazhong University of Science & Technology*)
- 18:00-19:30 ThPOS-17.11
A Predictive Coding Model for Evoked and Spontaneous Pain Perception
 Song, Yuru (*Univ. of Science & Technology of China*); Kemprecos, Helen (*New York Univ.*); Wang, Jing (*New York Univ. School of Medicine*); Chen, Zhe* (*New York Univ. School of Medicine*)
- 18:00-19:30 ThPOS-17.12
Comprehensive Fully Automated Left-Ventricular Ejection and Contractility Analysis
 Baldwin, Bryant* (*Univ. of South Alabama*); Figarola, Maria (*Univ. of South Alabama*); Kar, Julia (*Univ. of South Alabama*)
- 18:00-19:30 ThPOS-17.13
Estimation of Dispersive Properties of Encapsulation Tissue Surrounding Deep Brain Stimulation Electrodes in the Rat
 Sridhar, Karthik* (*University College Dublin*); Evers, Judith (*University College Dublin*); Pereira Botelho, Diego (*University College Dublin*); Lowery, Madeleine (*University College Dublin*)
- 18:00-19:30 ThPOS-17.14
Network Activity Due to Topographic Organization of Schaffer Collaterals in a Large-Scale Model of Rat CA1
 Yu, Gene* (*University of Southern California*); Feng, Zhicheng (*University of Southern California*); Berger, Theodore (*USC*)
- ThPOS-18: 18:00-19:30 Hall B
Brain Functional Imaging – Poster (Poster Session)
- 18:00-19:30 ThPOS-18.1
Lateralization of Processing Spectrally-Degraded Music in the Auditory Cortex: An fNIRS Study
 Guo, Zengzhi (*Southern University of Science & Technology*); Ma, Ting (*Harbin Institute of Technology at Shenzhen*); Chen, Fei* (*Southern University of Science & Technology*)
- 18:00-19:30 ThPOS-18.2
Directed Connectivity in Large-Scale Brain Networks for Precision Grip Force Control
 Lv, Yadong (*Shandong University*); Wei, Na (*Qilu Hospital, Shandong University*); Li, Ke* (*Shandong University*)
- ThPOS-19: 18:00-19:30 Hall B
Brain Physiology and Modeling – Poster (Poster Session)
- 18:00-19:30 ThPOS-19.1
Identification of Midbrain Dopamine Neurons using Features from Spontaneous Spike Activity Patterns
 Ishikawa, Tsuyoshi* (*Kwansei Gakuin Univ.*); Miura, Keiji (*Kwansei Gakuin Univ.*); Matsumoto, Hideyuki (*Osaka City Univ.*)
- 18:00-19:30 ThPOS-19.2
Deriving Functional Astrocytes from Mouse Embryonic Stem Cells with a Fast and Efficient Protocol
 Juneja, Deppo (*Univ. of Reading*); Nasuto, Slawomir (*Univ. of Reading*); Delivopoulos, Evangelos* (*Univ. of Reading*)

- 18:00-19:30 ThPOS-19.3
Effect of Topology and Time Window on Probability Distribution Underlying Baclofen Induced Ca²⁺ Response in Hippocampal Neurons
 Saxena, Abha* (*Indian Institute of Technology Hyderabad*); Dhyani, Vaibhav (*Indian Institute of Technology Hyderabad*); Gare, Suman (*Indian Institute of Technology Hyderabad*); Giri, Lopamudra (*Indian Institute of Technology Hyderabad*)
- 18:00-19:30 ThPOS-19.4
Simulation Study of Intermittent Responses of Neuronal Populations to Axonal High-Frequency Stimulation
 Zheng, Lvpio (*Zhejiang Univ.*); Feng, Zhouyan* (*Zhejiang Univ.*); Guo, Zheshan (*Zhejiang Univ.*); Huang, Lu (*Zhejiang Univ.*)
- 18:00-19:30 ThPOS-19.5
Implementation of an Advanced Frequency-Based Hebbian Spike Timing Dependent Plasticity
 Antonietti, Alberto (*Politecnico di Milano*); Orza, Vasco (*Politecnico di Milano*); Casellato, Claudia (*Politecnico di Milano*); D'Angelo, Egidio (*University of Pavia*); Pedrocchi, Alessandra* (*Politecnico di Milano*)
- 18:00-19:30 ThPOS-19.6
Difference in Cortical Modulation of Walking between Persons with Multiple Sclerosis and Healthy Controls: An EEG Pilot Study
 Hoxha, Armand (*Kessler Foundation*); Glassen, Michael (*Kessler Foundation*); DeLuca, John (*Kessler Foundation*); Kwasnica, Marek (*Kessler Foundation*); Yue, Guang (*Kessler Foundation*); Saleh, Soha* (*Kessler Foundation*)
- ThPOS-20: 18:00-19:30 Hall B
Brain-Computer Interface – Poster (Poster Session)
- 18:00-19:30 ThPOS-20.1
Reconstructing Degree of Forearm Rotation from Imagined Movements for BCI-Based Robot Hand Control
 Yun, Yong-Deok (*Korea University*); Jeong, Ji-Hoon (*Korea University*); Cho, Jeong-Hyun (*Korea University*); Kim, Dong-Joo (*Korea University*); Lee, Seong-Whan* (*Korea University*)
- 18:00-19:30 ThPOS-20.2
Two Player Online Brain-Controlled Chess
 Hübner, David (*Albert-Ludwigs Universität Freiburg*); Schall, Albrecht (*University of Freiburg*); Tangermann, Michael* (*University of Freiburg*)
- 18:00-19:30 ThPOS-20.3
A Cross-Subject SSVEP-BCI based on Task Related Component Analysis
 Liu, Wentao* (*Tianjin Univ.*); Ke, Yufeng (*Tianjin Univ.*); Liu, Pengxiao (*Tianjin Univ.*); Du, Jiale (*Tianjin Univ.*); Kong, Linghan (*Tianjin Univ.*); Liu, Shuang (*Tianjin Univ.*); An, Xingwei (*Tianjin Univ.*); Ming, Dong (*Tianjin Univ.*)
- 18:00-19:30 ThPOS-20.4
SLES: A Novel CNN-Based Method for Sensor Reduction in P300 Speller
 Shan, Hongchang* (*Leiden Univ.*); Stefanov, Todor (*Leiden Univ.*)
- 18:00-19:30 ThPOS-20.5
A Comparison of Classification Methods for Recognizing Single-Trial P300 in Brain-Computer Interfaces
 Xiao, Xiaolin* (*Tianjin University*); Xu, Minpeng (*Tianjin University*); Wang, Yijun (*Institute of Semiconductors, Chinese Academy of Sciences*); Jung, Tzzy-Ping (*University of California San Diego*); Ming, Dong (*Tianjin University*)
- 18:00-19:30 ThPOS-20.6
Combining Frequency and Time-Domain EEG Features for Classification of Self-Paced Reach-and-Grasp Actions
 Schwarz, Andreas* (*Graz, Univ. of Technology*); Pereira, Joana (*Graz Univ. of Technology*); Lindner, Lydia (*Graz Univ. of Technology*); Müller-Putz, Gernot (*Graz Univ. of Technology*)
- 18:00-19:30 ThPOS-20.7
Study on Brain Computer Interface Combined Tactile Enhancement and Time-Varying Features
 Zhang, Lei (*Tianjin University*); Chen, Long (*Tianjin University*); Wang, Zhongpeng (*Tianjin University*); Liu, Shuang (*Tianjin University*); Wang, Mengya (*Tianjin University*); Chen, Shanguang (*China Astronaut Research & Training Center*); Ming, Dong* (*Tianjin University*)
- 18:00-19:30 ThPOS-20.8
Classification and Transfer Learning of EEG during a Kinesthetic Motor Imagery Task using Deep Convolutional Neural Networks
 Craik, Alexander (*Univ. of Houston*); Contreras-Vidal, José (*Univ. of Houston*); Kilicarslan, Atilla* (*Univ. of Houston*)
- 18:00-19:30 ThPOS-20.9
A Novel EEG-Based Four-Class Linguistic BCI
 Jahangiri, Amir* (*University of Essex*); Achanccaray, David (*Tohoku University*); Sepulveda, Francisco (*University of Essex*)
- 18:00-19:30 ThPOS-20.10
Decoding with Calcium Signals from Layer 2/3 Motor Cortex during a Pressing Movement
 Wang, Ruixue (*Qiushi Academy for Advanced Studies, Zhejiang Univ.*); Han, Jiawei (*Zhejiang Univ.*); Chen, Jing (*Qiushi Academy of Advanced Studies & College of Biomedical Eng*); Li, Mingkang (*Zhejiang Univ.*); Feng, Linqing (*Korea Institute of Science & Technology*); Zhang, Shaomin* (*Zhejiang Univ.*)
- 18:00-19:30 ThPOS-20.11
A Fast Brain Switch based on Multi-Class Code-Modulated VEPs
 Zheng, Li (*Institute of Semiconductors, Chinese Academy of Sciences*); Wang, Yijun* (*Institute of Semiconductors, Chinese Academy of Sciences*); Pei, Weihua (*Institute of Semiconductors, CAS*); Chen, Hongda (*Institute of Semiconductors, CAS*)
- 18:00-19:30 ThPOS-20.12
A P300-Based Brain Computer Interface using Stereo-Electroencephalography Signals
 Huang, Weichen (*South China Univ. of Technology*); Yu, Tianyou (*South China Univ. of Technology, Chinese*); Jing, Xiao (*South China Univ. of Technology*); Guo, Qiang (*Guangdong 999 Brain Hospital*); Li, Yuanqing* (*South China Univ. of Technology*)
- 18:00-19:30 ThPOS-20.13
Stereoscopic Motion Perception Research based on Steady-State Visual Motion Evoked Potential
 Han, Chengcheng (*Xi'an Jiao Tong Univ.*); Xu, Guanghua* (*Xi'an Jiao Tong Univ.*); Jiang, Yimin (*Xi'an Jiao Tong Univ.*); Wang, Haochong (*Xi'an Jiao Tong Univ.*); Chen, Xiaobi (*Xi'an Jiao Tong Univ.*); Zhang, Kai (*Xi'an Jiao Tong Univ.*); Xie, Jun (*Xi'an Jiao Tong Univ.*); Liu, Fei (*Xi'an Jiao Tong Univ.*)
- 18:00-19:30 ThPOS-20.14
Multimodal Emotion Recognition from Eye Image, Eye Movement and EEG using Deep Neural Networks
 Guo, Jiangjian (*Shanghai Jiao Tong Univ.*); Zhou, Rong (*Shanghai Jiao Tong Univ.*); Zhao, Li-Ming* (*Shanghai Jiao Tong Univ.*); Lu, Bao-Liang (*Shanghai Jiao Tong Univ.*)
- 18:00-19:30 ThPOS-20.15
Improving the Performance of Motor Imagery based Brain Computer Interface using Phase Space Reconstruction
 Bagh, Niraj* (*Indian Institute of Technology, Madras*); M, Ramasubba Reddy (*Indian Institute of Technology Madras*)
- 18:00-19:30 ThPOS-20.16
Adaptive Learning in the Detection of Movement Related Cortical Potentials Improves usability of Associative Brain-Computer Interfaces
 Colamarino, Emma* (*Sapienza University of Rome*); Muceli, Silvia (*Imperial College London*); Ibáñez, Jaime (*Institute of Neurology, University College London*); Mrachacz-Kersting, Natalie (*the Center for Sensory-Motor Intraction, Dept. of Health Sc*); Mattia, Donatella (*Fondazione Santa Lucia IRCCS*); Cincotti, Febo (*Sapienza University of Rome*); Farina, Dario (*Imperial College London*)

- 18:00-19:30 ThPOS-20.17
Motor Imagery Classification with Covariance Matrices and Non-Negative Matrix Factorization
 Gurve, Dharmendra* (*Ryerson University*); Delisle-Rodriguez, Denis (*Federal University of Espirito Santo, UFES*); Bastos, Teodiano (*Universidade Federal do Espirito Santo*); Krishnan, Sridhar (*Ryerson University*)
- 18:00-19:30 ThPOS-20.18
Deep Learning of Motor Imagery EEG Classification for Brain-Computer Interface Illiterate Subject
 Zhang, Rui* (*Zhengzhou Univ.*); Wang, Yinwang (*Zhengzhou Univ.*); Li, Xianpeng (*Industrial Technology Research Institute, Zhengzhou Univ.*); Liu, Bo (*Zhengzhou Univ.*); Zhang, Lipeng (*Zhengzhou Univ.*); Chen, Mingming (*Zhengzhou Univ.*); Hu, Yuxia (*Zhengzhou Univ.*)
- 18:00-19:30 ThPOS-20.19
Towards a Fully Spatially Coded Brain-Computer Interface: Simultaneous Decoding of Visual Eccentricity and Direction
 Chen, Jingjing (*Tsinghua University*); Hong, Bo (*Tsinghua University*); Wang, Yijun (*Institute of Semiconductors, Chinese Academy of Sciences*); Gao, Xiaorong (*Tsinghua University*); Zhang, Dan* (*Tsinghua University*)
- 18:00-19:30 ThPOS-20.20
A Two-Step Idle-State Detection Method for SSVEP BCI
 Du, Jiale* (*Tianjin University*); Ke, Yufeng (*Tianjin University*); Liu, Pengxiao (*Tianjin University*); Liu, Wentao (*Tianjin University*); Kong, Linghan (*Tianjin University*); Wang, Ningci (*Tianjin University*); Xu, Minpeng (*Tianjin University*); An, Xingwei (*Tianjin University*); Ming, Dong (*Tianjin University*)
- 18:00-19:30 ThPOS-20.21
Collaborative Brain-Computer Interfaces to Enhance Group Decisions in an Outpost Surveillance Task
 Bhattacharyya, Saugat* (*University of Essex*); Valeriani, Davide (*Massachusetts Eye & Ear, Harvard Medical School*); Cinel, Caterina (*University of Essex*); Citi, Luca (*University of Essex*); Poli, Riccardo (*University of Essex*)
- 18:00-19:30 ThPOS-20.22
Decoding Mental Workload in Virtual Environments: A fNIRS Study using an Immersive N-Back Task
 Putze, Felix* (*University of Bremen*); Herff, Christian (*Maastricht University*); Tremmel, Christoph (*Old Dominion University*); Schultz, Tanja (*University of Bremen*); Krusienski, Dean (*Virginia Commonwealth University*)
- 18:00-19:30 ThPOS-20.23
Classification of Movement Direction from Electroencephalogram during Working Memory Time
 Fukuda, Naoki* (*Nagaoka University of Technology*); Nambu, Isao (*Nagaoka University of Technology*); Wada, Yasuhiro (*Nagaoka University of Technology*)
- 18:00-19:30 ThPOS-20.24
Towards Restoration of Articulatory Movements: Functional Electrical Stimulation of Orofacial Muscles
 Schultz, Tanja* (*University of Bremen*); Angrick, Miguel (*University of Bremen, Cognitive Systems Lab*); Diener, Lorenz (*Universität Bremen*); Küster, Dennis (*University of Bremen, Cognitive Systems Lab*); Meier, Moritz (*University of Bremen, Cognitive Systems Lab*); Krusienski, Dean (*Virginia Commonwealth University*); Herff, Christian (*Maastricht University*); Brumberg, Jonathan (*Boston University*)
- 18:00-19:30 ThPOS-21.2
The Effect of Perceived Sound Quality of Speech in Noisy Speech Perception by Normal Hearing and Hearing Impaired Listeners
 Akbarzadeh, Sara* (*Univ. of Texas at Dallas*); Lee, Sungmin (*Univ. of Texas at Dallas*); Chen, Fei (*Southern Univ. of Science & Technology*); Tan, Chin-Tuan (*Univ. of Texas, Dallas*)
- 18:00-19:30 ThPOS-21.3
Respiration Rate Change Induced by Controlling the Phasic Relationship between Melodic Sound and Respiration
 Sato, G Takashi* (*NTT Communication Science Laboratories*); Moriya, Takehiro (*NTT Communication Science Laboratories*)
- 18:00-19:30 ThPOS-21.4
Research of the Regulation Effect of Cooling Stimulation on Vigilance
 Zhou, Linying (*School of Precision Instrument & Optoelectronics Engineering.*); Cao, Hongbao (*NIH*); An, Xingwei (*Tianjin University*); Liu, Shuang (*Tianjin University*); Qi, Hongzhi (*Tianjin University*); Ming, Dong (*Tianjin University*); Jiao, Xuejun (*China Astronaut Research & Training Center*); Wu, Meng (*Tianjin University*); Zhou, Peng* (*Tianjin University*)
- 18:00-19:30 ThPOS-21.5
Validation of a Low-Cost EEG Device in Detecting Neural Correlates of Social Conformity
 Pierguidi, Lapu (*University of Florence*); Guazzini, Andrea (*University of Florence*); Imbimbo, Enrico (*University of Florence*); Righi, Stefania (*University of Florence*); Sorelli, Michele (*University of Florence*); Bocchi, Leonardo* (*Università degli Studi di Firenze, Firenze, Italy*)
- 18:00-19:30 ThPOS-21.6
Correlation Between Gait Perception and Autistic Traits in the General Population: A Study on Event-Related Evoked Potentials
 Ichikawa, Taichi* (*Tokyo Univ. of Science*); Shigeta, Masahiro (*Tokyo Univ. of Science*); Tomokazu, Urakawa (*Tokyo Univ. of Science*); Sawatome, Akira (*Tokyo Univ. of Science*); Tanaka, Motoyoshi (*Tokyo Univ. of Science*); Kurita, Yuki (*Tokyo Univ. of Science*); Araki, Osamu (*Tokyo Univ. of Science*); Ichikawa, Hiroko (*Tokyo Univ. of Science*); Takemura, Hiroshi (*Tokyo Univ. of Science*)
- 18:00-19:30 ThPOS-21.7
Using Passive BCI to Online Control the Air Conditioner for Obtaining the Individual Specific Thermal Comfort
 Wu, Meng* (*Tianjin University*); Qi, Hongzhi (*Tianjin University*)
- 18:00-19:30 ThPOS-21.8
A Surface Electromyogram Evaluation of the Postural Freedom Effects in Laparoscopic Surgery
 Pace-Bedetti, Horacio M. (*Univ. Politècnica de Valencia*); Martinez-de-Juan, Jose Luis* (*Centro de investigación e Innovación*); Conejero, Andres (*Univ. Politècnica de Valencia*); Prats-Boluda, Gema (*Univ. Politècnica de València*)
- 18:00-19:30 ThPOS-21.9
Evaluation of the Walking-Emotion Relationship for Applying to an Assistive Walking Device
 Zhuang, Junrong* (*Waseda Univ.*); Wu, Guanyu (*Waseda Univ.*); Lee, Heehyol (*Waseda Univ.*); Tanaka, Eiichiro (*Waseda Univ.*)
- 18:00-19:30 ThPOS-21.10
A Basic Study on Detection of Movement State in Stride by Artificial Neural Network for Estimating Stride Length of Hemiplegic Gait using IMU
 Nozaki, Yoshitaka* (*Tohoku University*); Watanabe, Takashi (*Tohoku University*)
- 18:00-19:30 ThPOS-21.11
Quantifying Functional Difference in Centre of Pressure Post Achilles Tendon Rupture using Sensor Insoles
 Walsh, Lorcan* (*Novartis*); Muaremi, Amir (*Novartis*); Stanton, Tom (*Novartis*); Blauth, Michael (*Dept. for Trauma Surgery, Medical Univ. Innsbruck*); Clay, Ieuan (*Novartis Institutes for Biomedical Research*); Schieker, Matthias (*Novartis Institutes for Biomedical Research*); Laurent, Didier (*Novartis Institutes for Biomedical Research*)

ThPOS-21: 18:00-19:30	Hall B
Human Performance – Poster (Poster Session)	

18:00-19:30 ThPOS-21.12
Fractal Analysis of Motor Control in Knee Arthroplasty Patients
Mengarelli, Alessandro* (*Università Politecnica delle Marche*); Cardarelli, Stefano (*Università Politecnica delle Marche*); Tigrini, Andrea (*Università Politecnica delle Marche*); Strazza, Annachiara (*Università Politecnica delle Marche*); Di Nardo, Francesco (*Polytechnic University of Marche*); Marchesini, Lorenzo (*Dept. of Information Engineering, Università Politecnica de*); Fioretti, Sandro (*Università Politecnica delle Marche*); Verdini, Federica (*Università Politecnica delle Marche*)

18:00-19:30 ThPOS-21.13
Gaze Fixation Comparisons between Amputees and Able-Bodied Individuals in Approaching Stairs and Level-Ground Transitions: A Pilot Study
Li, Minhan (*North Carolina State Univ. & Univ. of North Carolina*); Zhong, Boxuan (*North Carolina State Univ.*); Liu, Ziwei (*NC State Univ.*); Lee, I-Chieh (*UNC/NC State Joint Dept. of Biomedical Engineering*); Fylstra, Bretta (*North Carolina State Univ. & Univ. of North Carolina*); Lobaton, Edgar (*North Carolina State Univ.*); Huang, He* (*North Carolina State Univ. & Univ. of North Carolina*)

18:00-19:30 ThPOS-21.14
Studying the Effect of Carrier Type on the Perception of Vocoded Stimuli via Mismatch Negativity
Xu, Danying (*Southern University of Science & Technology*); Zheng, Dingchang (*Anglia Ruskin University*); Chen, Fei* (*Southern University of Science & Technology*)

18:00-19:30 ThPOS-21.15
Development of a Quantitative Measurement System for Three-Dimensional Analysis of Foot Morphology using a Smartphone
Yamashita, Kazuhiko* (*Ryotokuji Univ.*); Yamashita, Tomoko (*Takase Clinic*); Sato, Mitsuru (*Showa Univ.*); Masashi, Kawasumi (*Tokyo Denki Univ.*); Yoshimasa, Takase (*Takase Clinic*)

18:00-19:30 ThPOS-21.16
A Case Study Comparing Running Metrics Determined from Unshod and Various Shod Running Events
Petroff, Neil* (*Tarleton State University*)

ThPOS-22: 18:00-19:30 Hall B
Non-Contact Monitoring – Poster (Poster Session)

18:00-19:30 ThPOS-22.1
Pulse Decomposition Analysis in Camera-Based Photoplethysmography
Sorelli, Michele (*University of Florence*); Kopietz, Carlotta (*TU Dresden*); Zaunseder, Sebastian (*Dortmund University of Applied Sciences & Arts*); Bocchi, Leonardo* (*Università degli Studi di Firenze, Firenze, Italy*)

18:00-19:30 ThPOS-22.2
Infection Screening System using Thermography and CCD Camera with Good Stability and Swiftness for Non-Contact Vital-Signs Measurement by Feature Matching and MUSIC Algorithm
Negishi, Toshiaki* (*The Univ. of Electro-Communications*); Sun, Guanghao (*The Univ. of Electro-Communications*); Sato, Shohei (*Huawei Technologies Japan K.K.*); Liu, He (*Harbin Univ. of Science & Technology*); Matsui, Takemi (*Tokyo Metropolitan Univ.*); Abe, Shigeto (*Takasaka Clinic*); Nishimura, Hidekazu (*Virus Research Center, Sendai Medical Center*); Kirimoto, Tetsuo (*The Univ. of Electro-Communications*)

18:00-19:30 ThPOS-22.3
Use of Wearable Technology to Quantify Fall Risk in Psychogeriatric Environments: A Feasibility Study
Mertens, Marc* (*Thomas More Univ. College, Geel, Belgium*); Raepsaet, Julie (*OPZ Geel, Belgium*); Debard, Glen (*Thomas More Kempen*); Mondelaers, Mieke (*OPZ Geel, Belgium*); Vanrumste, Bart (*Katholieke Universiteit Leuven*); Davis, Jesse (*KU Leuven, Dept. of Computer Sciences, Leuven, Belgium*)

18:00-19:30 ThPOS-22.4
Microwave Radar for Breast Screening: Initial Clinical Data with Suspicious-Lesion Patients
Kranold, Lena (*McGill Univ.*); Quintyne, Collin (*McGill Univ.*); Coates, Mark (*McGill Univ.*); Popovich, Milica* (*McGill Univ.*)

18:00-19:30 ThPOS-22.5
On-Site Evaluation of Rehabilitation Patients Monitoring System using Distributed Wireless Gateways
Matsunaga, Kenichi* (*NTT Corporation*); Ogasawara, Takayuki (*NTT Device Innovation Center*); Kodate, Junichi (*NTT Device Innovation Center*); Mukaino, Masahiko (*Asahikawa Medical University*); Saitoh, Eiichi (*Fujita Health University*)

ThPOS-23: 18:00-19:30 Hall B
Optical and Photonic Sensors – Poster (Poster Session)

18:00-19:30 ThPOS-23.1
Optoelectronic Sensor-Based Shape Sensing Approach for Flexible Manipulators
Koh, Jia Han Benjamin (*King's College London*); Jeong, Taegyun (*Imperial College London*); Han, Sangjin (*Texas A&M Univ.*); Li, Wanlin (*Queen Mary Univ. of London*); Rhode, Kawal (*King's College London*); Noh, Yohan* (*King's College London*)

18:00-19:30 ThPOS-23.2
A Pulsatile Optical Tissue Phantom for the Investigation of Light-Tissue Interaction in Reflectance Photoplethysmography
Nomoni, Michelle* (*City, Univ. of London*); May, James (*City, Univ. of London*); Kyriacou, Panayiotis (*City Univ. London*)

18:00-19:30 ThPOS-23.3
Bed-Exit Prediction Applying Neural Network Combining Bed Position Detection and Patient Posture Estimation
Inoue, Madoka* (*Aiphone Co., Ltd.*); Taguchi, Ryo (*Nagoya Institute of Tech.*); Umezaki, Taizo (*Nagoya Institute of Tech.*)

18:00-19:30 ThPOS-23.4
Dual-Stiffness Force-Sensing Cannulation Tool for Retinal Microsurgery
He, Changyan* (*Johns Hopkins Univ.*); Yang, Emily (*The Johns Hopkins Univ.*); lordachita, Iulian (*Johns Hopkins Univ.*)

18:00-19:30 ThPOS-23.5
The Sensing Endotracheal Tube
May, James* (*City, Univ. of London*); Phillips, Justin (*City Univ. London*); Kyriacou, Panayiotis (*City Univ. London*)

18:00-19:30 ThPOS-23.6
Wearable Fiber Optic Sensors for Biomechanical Sensing via Joint Angle Detection
D'Mello, Yannick* (*McGill University*); Skoric, James (*McGill University*); Moukarzel, Lea (*McGill University*); Hakim, Siddiqui (*McGill University*); Plant, David (*McGill University*)

18:00-19:30 ThPOS-23.7
Sleep/Wake Classification via Remote PPG Signals
Zhang, Yawen (*Hong Kong Univ. of Science & Tech.*); Tsujikawa, Masanori* (*NEC Corp.*); Onishi, Yoshifumi (*NEC Corp.*)

18:00-19:30 ThPOS-23.8
Nine Degree of Freedom Motion Estimation for Wrist PPG Heart Rate Measurements
Vazquez Galvez, Arturo* (*The University of Manchester*); Casson, Alexander James (*The University of Manchester*)

ThPOS-24: 18:00-19:30 Hall B
Physiological Monitoring – Poster (Poster Session)

18:00-19:30 ThPOS-24.1
A Multilayer Monte Carlo Model for the Investigation of Optical Path and Penetration Depth at Different Perfusion States of the Colon
Patel, Zaibaa* (*City, University of London*); Chatterjee, Subhasri (*Research Assistant*); Thaha, Mohamed (*The Royal London Hospital, Bart's Health NHS Trust*); Kyriacou, Panayiotis (*City University London*)

- 18:00-19:30 ThPOS-24.2
Comparison of a Genetic Algorithm Variable Selection and Interval Partial Least Squares for Quantitative Analysis of Lactate in Phosphate Buffer Solution
Mamouei, MohammadHossein* (City, University of London); Qassem, Meha (City University London); Budidha, Karthik (City, University of London); Baishya, Nystha (City, University of London); Vadgama, Pankaj (Queen Mary University of London); Kyriacou, Panayiotis (City University London)
- 18:00-19:30 ThPOS-24.3
Biovitals: A Personalized Multivariate Physiology Analytics using Continuous Mobile Biosensors
Chen, Jin (Biofourmis); Yan, Minghao (Biofourmis); Howe, Robin Low Chin (Singapore Aeromedical Centre); Tong, Ng Wee (Singapore Aeromedical Centre); Chan, Soon Chee (Biofourmis); Niu, Wendou (Biofourmis); Rajput, Kuldeep Singh* (Biofourmis); Majmudar, Maulik (Massachusetts General Hospital); Chen, Gengbo (Biofourmis)
- 18:00-19:30 ThPOS-24.4
Is There an Optimal Localization of Cardio-Microphone Sensors for Phonocardiogram Analysis?
Fontecave-Jallon, Julie* (Univ. Grenoble Alpes, CNRS, CHU Grenoble Alpes, Grenoble INP); Fojtik, Karel (Univ. Grenoble Alpes, CNRS, CHU Grenoble Alpes, Grenoble INP); Rivet, Bertrand (Grenoble Universities)
- 18:00-19:30 ThPOS-24.5
Heart Rate Estimation using PPG Signal during Treadmill Exercise
Kong, Youngsun* (University of Connecticut); Chon, Ki (University of Connecticut)
- 18:00-19:30 ThPOS-24.6
Noise Reduction for Efficient In-Vehicle Respiration Monitoring with Accelerometers
Warnecke, Joana Maureen* (TU Braunschweig & Hannover Medical School); Wang, Ju (TU Braunschweig); Deserno, Thomas (RWTH Aachen University)
- 18:00-19:30 ThPOS-24.7
A Comparison of SVM and CNN-LSTM based Approach for Detecting Smoke Inhalations from Respiratory Signal
Senyürek, Volkan (The Univ. of Alabama); Imtiaz, Masudul Haider (Univ. of Alabama); Belsare, Prajakta (The Univ. of Alabama); Tiffany, Stephen (State Univ. of New York at Buffalo); Sazonov, Edward* (Univ. of Alabama)
- 18:00-19:30 ThPOS-24.8
Low-Power BPSK Inductive Data Link for an Implanted Intracortical Visual Prosthesis
Omisakin, Adedayo* (Eindhoven University of Technology); Mestrom, Rob (Eindhoven University of Technology); Bentum, Mark (Eindhoven University of Technology)
- 18:00-19:30 ThPOS-24.9
A High-Resolution Wireless Power Transfer and Data Communication System for Studying Gastric Slow Waves
Javan-Khoshkholgh, Amir (New York Institute of Technology); Alrofati, Wahib (New York Institute of Technology); Miller, Larry (Northwell); Vegesna, Anil (Northwell); Kiani, Mehdi (Pennsylvania State University); Farajidavar, Aydin* (New York Institute of Technology)
- 18:00-19:30 ThPOS-25.1
Measurement of Camptocormia Trunk Flexion using a Dual-Sensor Measurement Setup
Wolfram, Henrik* (Kiel Univ.); Margraf, Nils (Univ. of Kiel, Dept. of Neurology); Gunther, Deuschl (Dept. of Neurology); Wolke, Robin (Kiel Univ.); Rieger, Robert (Kiel Univ.)
- 18:00-19:30 ThPOS-25.2
On Smartphone Sensability of Bi-Phasic User Intoxication Levels from Diverse Walk Types in Standardized Field Sobriety Tests
Li, Ruojun (Worcester Polytechnic Institute); Balakrishnan, Ganesh (Worcester Polytechnic Institute); Nie, Jiaming (Worcester Polytechnic Institute); Li, Yu (Worcester Polytechnic Institute); Agu, Emmanuel* (Worcester Polytechnic Institute); Stein, Michael (Butler Hospital); Abrantes, Ana (Butler Hospital); Herman, Debra (Butler Hospital); Grimone, Kristin (Butler Hospital)
- 18:00-19:30 ThPOS-25.3
Agreement between Opal and G-Walk Wearable Inertial Systems in Gait Analysis on Normal and Pathological Subjects
D'Addio, Giovanni (ICS Maugeri Institute of Care & Scientific Research of Telese); Donisi, Leandro* (Dept. of Advanced Biomedical Sciences, University Hospital); Pagano, Gaetano (ICS Maugeri Institute of Care & Scientific Research of Telese); Improta, Giovanni (Dept. of Dept. of Public Health, University Hospital ""); Biancardi, Arcangelo (ICS Maugeri Institute of Care & Scientific Research of Telese); Cesarelli, Mario (University "Federico II", Naples, Italy.)
- 18:00-19:30 ThPOS-25.4
Pi-Sole: A Low-Cost Solution for Gait Monitoring using Off-the-Shelf Piezoelectric Sensors and IMU
Chandel, Vivek (TCS Research & Innovation); Singhal, Shivam* (TCS Research & Innovation); Sharma, Varsha (TCS Research & Innovation Kolkata); Ahmed, Nasimuddin (TCS Research & Innovation, Kolkata); Ghose, Avik (TCS Research & Innovation)
- 18:00-19:30 ThPOS-25.5
A Wearable System to Analyze the Human Arm for Predicting Injuries Due to Throwing
Hettiarachchi, Chirath Yudara* (Univ. of Moratuwa); Kodithuwakku, Janith (Univ. of Moratuwa); Manamperi, Buddhi Shan (Univ. of Moratuwa); Ifham, Ahamed (Univ. of Moratuwa); Silva, Pujitha (Univ. of Moratuwa, Kairos Sensing)
- 18:00-19:30 ThPOS-25.6
Lower Limb Muscle Activity Control by using Jamming Footwear
Sasagawa, Mana* (NTT Corporation); Niijima, Arinobu (NTT Service Evolution Laboratories, NTT Corporation); Eguchi, Kana (NTT Corporation); Aoki, Ryosuke (NTT Corporation); Isezaki, Takashi (NTT Service Evolution Laboratories); Kimura, Toshitaka (NTT); Watanabe, Tomoki (NTT Corporation)
- 18:00-19:30 ThPOS-25.7
Wearable Kinesthetic I/O Device for Sharing Wrist Joint Stiffness
Nishida, Jun* (University of Chicago); Yagi, Keisuke (Ibaraki University); Hassan, Modar (University of Tsukuba); Suzuki, Kenji (University of Tsukuba)
- 18:00-19:30 ThPOS-25.8
Quantifying the Influence of DBS Surgery in Patients with Parkinson's Disease during the Perioperative Period by using Wearable Sensors
Wang, Jingying (Fudan University); Gong, Dawei (Nanjing Brain Hospital); Zhang, Wenbin (Nanjing Medical University); Zhang, Han (Fudan University); Wang, Shouyan* (Fudan University)
- 18:00-19:30 ThPOS-25.9
An Automatic Navigation and Pressure Monitoring for Guided Insertion Procedure
Alsunaydih, Fahad Nasser* (Monash University); Arefin, Md Shamsul (Monash University); Redouté, Jean-Michel (Monash University); Yuce, Mehmet (Monash University)
- 18:00-19:30 ThPOS-25.10
GLOS: GLOve for Speech Recognition
Crocioni, Giulia (University of Illinois at Chicago); Di Vece, Chiara* (University of Illinois at Chicago); Esmailbeigi, Hananeh (University of Illinois at Chicago (UIC))

ThPOS-25: 18:00-19:30 Hall B
Sensing Technologies for Biomechanical Analysis – Poster (Poster Session)

- 18:00-19:30 ThPOS-25.11
Cuff-Less and Calibration-Free Blood Pressure Estimation using Convolutional Autoencoder with Unsupervised Feature Extraction
 Zhang, Jialun (*Shenzhen Institutes of Advanced Tech., Chinese Academy of S*); Wu, Dan* (*Shenzhen Institutes of Advanced Tech., Chinese Academy of S*); Li, Ye (*Shenzhen Institutes of Advanced Tech., Chinese Academy of S*)
- 18:00-19:30 ThPOS-26.11
Design and Development of a Sitting Posture Recognition System
 Fragkiadakis, Emmanouil (*National Technical Univ. of Athens*); Dalakleidi, Kalliopi* (*National Technical Univ. of Athens*); Nikita, Konstantina (*National Technical Univ. of Athens*)
- 18:00-19:30 ThPOS-26.10
Categorizing Sleep in Older Adults with Wireless Activity Monitors using LSTM Neural Networks
 Yildiz, Selda (*Oregon Health & Science Univ.*); Elliott, Jonathan (*VA Portland Health Care System, Oregon Health & Science Univ.*); Opel, Ryan (*VA Portland Health Care System*); Kaye, Jeffrey A. (*Oregon Health & Science Univ.*); Cao, Hung* (*Univ. of California, Irvine*); Lim, Miranda (*VA Portland Health Care System, Oregon Health & Science Univ.*)
- ThPOS-26: 18:00-19:30 Hall B
Wearable Technology – Poster (Poster Session)
- 18:00-19:30 ThPOS-26.1
Wearable Lab on Body: Combining Sensing of Biochemical and Digital Markers in a Wearable Device
 Pataranutaporn, Pat* (*MIT*); Jain, Abhinandan (*MIT*); Johnson, Casey (*MIT*); Shah, Pratik (*Massachusetts Institute of Technology (MIT)*); Maes, Pattie (*MIT Media Lab*)
- 18:00-19:30 ThPOS-26.2
Design and Simulation Analysis of a 17 Element Spiral Antenna Array for Brain Imaging
 Khan, Muhammad Saad* (*RheinMain Univ. of Applied Sciences, Ruesselsheim*); Rose, Georg (*Otto-von-Guericke Univ., Magdeburg*); Schweizer, Bernd (*RheinMain Univ. of Applied Sciences, Ruesselsheim*); Breusing, Andreas (*RheinMain Univ. of Applied Sciences, Ruesselsheim*)
- 18:00-19:30 ThPOS-26.3
An Investigation of Heartrate Sensing Accuracy by Wrist-Worn Fitness Tracking Devices
 Turki, Ahmad Fawzi (*University of Texas at Arlington/ King AbdulAziz University*); Jani, Mahrshi (*University of Texas At Arlington*); Ding, Kan (*The University of Texas Southwestern Medical Center*); Zhang, Rong (*University of Texas Southwestern Medical Center at Dallas*); Behbehani, Khosrow* (*University of Texas at Arlington*)
- 18:00-19:30 ThPOS-26.4
REWARD: Design, Optimization, and Evaluation of a Real-Time Relative-Energy Wearable R-Peak Detection Algorithm
 Orlandic, Lara* (*Georgia Tech*); De Giovanni, Elisabetta (*Ecole Polytechnique Fédérale de Lausanne (EPFL)*); Arza Valdés, Adriana (*Ecole Polytechnique Fédérale de Lausanne EPFL*); Yazdani, Sasan (*SmartCardia S.A.*); Vesin, Jean-Marc (*EPFL*); Atienza, David (*EPFL*)
- 18:00-19:30 ThPOS-26.5
Lower-Body Posture Estimation with a Wireless Smart Insole
 Tam, Wing Kin* (*University of Minnesota Twin Cities*); Wang, Alan (*University of Minnesota*); Wang, Baitong (*National University of Singapore*); Yang, Zhi (*University of Minnesota*)
- 18:00-19:30 ThPOS-26.6
First Evaluation of a Transcutaneous Carbon Dioxide Monitoring Wristband Device during a Cardiopulmonary Exercise Test
 Grangeat, Pierre* (*Univ. Grenoble, Alpes, CEA, LETI, MINATEC CAMPUS*); Gharbi, Sadok (*CEA/LETI/MINATEC*); Accensi, Marc (*Univ. Grenoble Alpes, CEA, LETI, Minatec Campus*); Grateau, Henri (*Univ. Grenoble Alpes, CEA, LETI, Minatec Campus*)
- 18:00-19:30 ThPOS-26.7
Feasibility Study for a Real Time Notification System Promoting Self Awareness for People with Body-Rocking Behavior
 da Silva, Rafael Luiz (*North Carolina State University*); Lobaton, Edgar* (*North Carolina State University*); Stone, Emily (*Governor Morehead School*)
- 18:00-19:30 ThPOS-26.8
Obstacle Recognition using Computer Vision and Convolutional Neural Networks for Powered Prosthetic Leg Applications
 Novo-Torres, Luis* (*University of Guanajuato*); Ramirez-Paredes, Juan-Pablo (*University of Guanajuato*); Villarreal, Dario Jose (*Southern Methodist University*)
- 18:00-19:30 ThPOS-27.1
Graph Theoretical Analysis of Cortical Networks based on Conscious Experience
 Lee, Minji (*Korea Univ.*); Baird, Benjamin (*Univ. of Wisconsin*); Gosseries, Olivia (*Univ. & Univ. Hospital of Liege*); Nieminen, Jaakko (*Aalto Univ. School of Science*); Boly, Melanie (*Univ. of Wisconsin*); Tononi, Giulio (*Univ. of Wisconsin*); Lee, Seong-Whan* (*Korea Univ.*)
- 18:00-19:30 ThPOS-27.2
PROVenance Patterns in Numerical Modelling and Finite Element Simulation Processes of Bio-Electric Systems
 Schröder, Max* (*Univ. of Rostock*); Raben, Hendrikje (*Institute of General Electrical Engineering, Univ. of Rostock*); Krüger, Frank (*Institute of Communications Engineering, Univ. of Rostock*); Ruschewski, Andreas (*Institute of Computer Science, Univ. of Rostock*); van Rienen, Ursula (*Univ. of Rostock*); Uhrmacher, Adelinde (*Institute of Computer Science, Univ. of Rostock*); Spors, Sascha (*Institute of Communications Engineering, Univ. of Rostock*)
- 18:00-19:30 ThPOS-27.3
Rapid Establishment Method of a Personalized Thermal Comfort Prediction Model
 Wu, Jianhong (*Shanghai Jiao Tong University*); Shan, Chengcheng (*Shanghai Jiao Tong University*); Hu, Jiawen (*Shanghai Jiao Tong University*); Sun, Jianqi (*Shanghai Jiao Tong University*); Zhang, Aili* (*Shanghai Jiao Tong University*)
- 18:00-19:30 ThPOS-27.4
Automated Process Incorporating Machine Learning Segmentation and Correlation of Oral Diseases with Systemic Health
 Yauney, Gregory (*Massachusetts Institute of Technology*); Rana, Aman (*Massachusetts Institute of Technology*); Wong, Lawrence (*Tufts University School of Dental Medicine*); Javia, Perikumar (*Massachusetts Institute of Technology*); Muftu, Ali (*Tufts University School of Dental Medicine*); Shah, Pratik* (*Massachusetts Institute of Technology (MIT)*)
- 18:00-19:30 ThPOS-27.5
Representation Learning of 3D Brain Angiograms, an Application for Cerebral Vasospasm Prediction
 Capoglu, Seymanur* (*UT-Health Sciences at Houston*); Savarraj, Jude (*University of Texas Health Science Center at Houston*); Sheth, Sunil (*University of Texas Health Science Center at Houston*); Choi, H. Alex (*University of Texas Health Science Center at Houston*); Giancardo, Luca (*University of Texas Health Science Center at Houston*)
- 18:00-19:30 ThPOS-27.6
Evaluation of Facial Pulse Signals using Deep Neural Net Models
 Ruminski, Jacek* (*Gdansk Univ. of Technology*); Kwasniewska, Alicja (*Gdansk Univ. of Technology*); Szankin, Maciej (*Intel Corporation*); Kocejko, Tomasz (*Gdansk Univ. of Technology*); Mazur-Milecka, Magdalena (*Gdańsk Univ. of Technology*)

ThPOS-28: 18:00-19:30 Hall B
Health Informatics for Gait and Balance Assessment and Neuromusculoskeletal Disorders – Poster (Poster Session)

18:00-19:30 ThPOS-28.1
Machine Learning based Physical Human-Robot Interaction for Walking Support of Frail People

Coviello, Luigi (*The Biorobotics Institute, Scuola Superiore Sant'Anna*); Cavallo, Filippo (*Scuola Superiore Sant'Anna*); Limosani, Raffaele (*The Biorobotics Institute, Scuola Superiore Sant'Anna*); Rovini, Erika (*Scuola Superiore Sant'Anna*); Fiorini, Laura* (*Scuola Superiore Sant'Anna*)

18:00-19:30 ThPOS-28.2
Improving Automatic Tremor and Movement Motor Disorder Severity Assessment for Parkinson's Disease with Deep Joint Training

Chang, Chun-Min (*National Tsing Hua University*); Huang, Yu-Lin (*Dept. of Electrical Engineering, National Tsing Hua Univ.*); Chen, Jui-Cheng (*Dept. of Neurology, China Medical University*); Lee, Chi-Chun* (*National Tsing Hua University*)

18:00-19:30 ThPOS-28.3
New Insights into Parkinson's Disease through Statistical Analysis of Standard Clinical Scales Quantifying Symptom Severity

Tsanas, Athanasios* (*University of Edinburgh*)

18:00-19:30 ThPOS-28.4
An Exploratory Study on the use of Virtual Reality in Balance Rehabilitation

Andreikanich, Anna (*Univ. de Aveiro, DETI*); Sousa Santos, Beatriz* (*Aveiro Univ.*); Amorim, Paula (*Rovisco Pais Rehab. Center*); Zagalo, Helder (*Univ. de Aveiro, DETI/IEETA*); Marques, Bernardo (*Univ. de Aveiro, DETI/IEETA*); Margalho, Paulo (*Rovisco Pais Rehab. Center*); Lains, Jorge (*Rovisco Pais Rehab. Center*); Faim, Fátima (*Rovisco Pais Rehab. Center*); Coelho, Margarida (*Rovisco Pais Rehab. Center*); Cardoso, Teresa (*Rovisco Pais Rehab. Center*); Dias, Paulo (*Univ. de Aveiro, DETI/IEETA*)

18:00-19:30 ThPOS-28.5
Utilizing Key Item Method to Manage Musculoskeletal Disorders in the Hospital Workplace

Koklonis, Kyriakos (*Biomedical Engineering Laboratory National Technical Univ.*); Anastasiou, Athanasios (*Biomedical Engineering Laboratory, National Technical Univ.*); Petropoulou, Ourania (*National Technical Univ. of Athens*); Pitoglou, Stavros* (*Research & Development Dpt. Computer Solutions SA, Biomedical Eng.*); Iliopoulou, Dimitra (*National Technical Univ. of Athens*); Koutsouris, Dimitrios (*Biomedical Engineering Laboratory, School of Electrical & Comp*)

18:00-19:30 ThPOS-28.6
Gait Speed Measurement using a Doppler Radar Sensor for In-Home Functional Capacity Tests

Alshama, Daniel (*University of Technology of Troyes*); Chkeir, Aly (*University of Technology of Troyes*); Soubra, Racha* (*Université de Technologie de Troyes*)

ThPOS-29: 18:00-19:30 Hall B
Predictive Analytics for Health – Poster (Poster Session)

18:00-19:30 ThPOS-29.1
Predictive Modeling using Intensive Care Unit Data: Considerations for Data Pre-Processing and Analysis

Chan, Brandon* (*Queen's University*); Sedghi, Alireza (*Queen's University*); Laird, Philip (*Queen's University*); Maslove, David M (*Queen's University*); Mousavi, Parvin (*Queen's University*)

18:00-19:30 ThPOS-29.2
Implant Failure Prediction using Discriminant Analysis

Jeong, In Cheol (*Icahn School of Medicine at Mount Sinai*); Papapanou, Panos N. (*Columbia University*); Finkelstein, Joseph* (*Icahn School of Medicine at Mount Sinai*)

18:00-19:30 ThPOS-29.3
Sparse Embedding for Interpretable Hospital Admission Prediction

Huo, Zepeng* (*Texas A&M Univ.*); Sundararajhan, Harinath (*Texas A&M Univ.*); Hurley, Nate (*Texas A&M Univ.*); Haimovich, Adrian (*Yale Univ.*); Taylor, Richard Andrew (*Yale Univ.*); Mortazavi, Bobak (*Texas A&M Univ.*)

18:00-19:30 ThPOS-29.4
Probabilistic Prediction of Epileptic Seizures using SVM

Abbaszadeh, Behrooz* (*Univ. of Ottawa*); Haddad, Tahar (*Univ. of Quebec Outaouais*); Yagoub, Mustapha (*Univ. of Ottawa*)

18:00-19:30 ThPOS-29.5
Class Imbalance Impact on the Prediction of Complications during Home Hospitalization: A Comparative Study

Calvo, Mireia* (*Institute for Bioengineering of Catalonia (IBEC)*); Cano, Isaac (*Hospital Clínic de Barcelona*); Herández, Carme (*Hospital Clínic de Barcelona*); Ribas, Vicent (*Eurecat*); Miralles, Felip (*Eurecat*); Roca, Josep (*Hospital Clínic de Barcelona*); Jané, Raimon (*Institut de Bioenginyeria de Catalunya (IBEC)*)

ThPOS-30: 18:00-19:30 Hall B
Security, Cloud Computing, and Interoperability in Health Informatics – Poster (Poster Session)

18:00-19:30 ThPOS-30.1
Secure Stream Processing for Medical Data

Segarra, Carlos (*CSEM*); Muntané Calvo, Enric (*CSEM*); Lemay, Mathieu (*CSEM*); Schiavoni, Valerio (*Université de Neuchâtel*); Delgado-Gonzalo, Ricard* (*CSEM*)

18:00-19:30 ThPOS-30.2
Security Defense Strategy for Intelligent Medical Diagnosis Systems (IMDS)

Luo, Cunjin* (*Key Lab of Medical Electrophysiology, Ministry of Education, Ins*); Soygazi, Hasan (*De Montfort Univ.*); Janicke, Helge (*De Montfort Univ.*); He, Ying (*De Montfort Univ.*)

18:00-19:30 ThPOS-30.3
QRStream: A Secure and Convenient Method for Text Healthcare Data Transferring

Mao, Huajian (*Academy of Military Medical Sciences of Chinese PLA*); Chi, Chenyang (*Academy of Military Medical Sciences of Chinese PLA*); Yu, Jinghui (*Academy of Military Medical Sciences of Chinese PLA*); Yang, Peixiang (*Academy of Military Medical Sciences of Chinese PLA*); Qian, Cheng (*Academy of Military Medical Sciences of Chinese PLA*); Zhao, Dongsheng* (*Institute of Health Service & Medical Information, Academy of*)

18:00-19:30 ThPOS-30.4
A Client/Server based Online Environment for the Calculation of Medical Segmentation Scores

Weber, Maximilian* (*TU Graz*); Wild, Daniel (*TU Graz*); Wallner, Jürgen (*Medical University of Graz*); Egger, Jan (*Graz University of Technology*)

18:00-19:30 ThPOS-30.5
Real-Time Integration of Emotion Analysis into Homecare Platforms

Andreas, Menychtas (*Greece & Univ. of Piraeus*); Galliakis, Michael (*Univ. of Piraeus*); Tsanakas, Panayiotis (*National Technical Univ. of Athens*); Maglogiannis, Ilias* (*Univ. of Piraeus*)

18:00-19:30 ThPOS-30.6
Adaptive API for Real-Time Streaming Analytics as a Service

Inibhunu, Catherine* (*Univ. of Ontario Institute of Technology*); Jalali, Roozbeh (*Univ. of Ontario Institute of Technology*); Doyle, Ian (*Univ. of Ontario Institute of Technology*); Gates, Aaron (*Univ. of Ontario Institute of Technology*); Madill, John (*Univ. of Ontario Institute of Technology*); McGregor, Carolyn (*Univ. of Ontario Inst of Technology*)

18:00-19:30 ThPOS-30.7
CHDC: Common Hospital Data Connector for Exchanging Medical Information

Kim, Min Gyu (*Kyungpook National Univ.*); Lee, Ah Ra (*KyungPook National Univ.*); Kim, Il Kon* (*Kyungpook National Univ.*)

ThPOS-31: 18:00-19:30 Hall B
Sensor Informatics and Physiological Monitoring – Poster (Poster Session)

18:00-19:30 ThPOS-31.1
Skin Conductance Response to Gradual-Increasing Experimental Pain

Syrjälä, Elise* (*University of Turku*); Jiang, Mingzhe (*University of Turku*); Pahikkala, Tapio (*University of Turku, Dept. of Future Technologies*); Salanterä, Sanna (*Dept. of Nursing Science, University of Turku & Turku Uni*); Liljeberg, Pasi (*Dept. of Information Technology, University of Turku*)

18:00-19:30 ThPOS-31.2
A New Fracture Liaison Service using the Mobile Application and IoT Sensor

Kim, Sung Woo* (*Yonsei University College of Medicine*); Won, Young-Jun (*Division of Endocrinology & Metabolism, Dept. of Internal*); Chae, Dong-Sik (*Dept. of Orthopedic surgery, Catholic Kwandong University C*); Chang, Hyuk-Jae (*Yonsei University College of Medicine*)

18:00-19:30 ThPOS-31.3
Photoplethysmographic Waveform in Hyperbaric Environment

Peláez Coca, María Dolores* (*Centro Universitario de la Defensa*); Hernando, Alberto (*BSICoS Group, CIBER-BBN*); Sanchez, Carlos (*Defense University Centre, University of Zaragoza*); Lozano Albalade, María Teresa (*Centro Universitario de la Defensa*); Izquierdo, David (*Centro Universitario de la Defensa*); Gil, Eduardo (*Zaragoza University & CIBER-BBN*)

18:00-19:30 ThPOS-31.4
The Feasibility of Arrhythmias Detection from a Capacitive ECG Measurement using Convolutional Neural Network

Kido, Koshiro (*Nara Institute of Science & Technology*); Ono, Naoaki (*Nara Institute of Science & Technology*); Altaf-UI-Amin, MD. (*Nara Institute of Science & Technology*); Kanaya, Shigehiko (*Nara Institute of Science & Technology*); Huang, Ming* (*Nara Institute of Science & Technology*)

18:00-19:30 ThPOS-31.5
Smart Sound Sensor to Detect the Number of People in a Room

Boutamine, Sami* (*UTC*); Istrate, Dan (*UTC*); Boudy, Jerome (*it-sudparis*); Tannous, Halim (*Univ. de Technologie de Compiègne*)

18:00-19:30 ThPOS-31.6
Ictal Autonomic Activity Recorded via Wearable-Sensors Plus Machine Learning can Discriminate Epileptic and Psychogenic Nonepileptic Seizures

Zsom, Andras* (*Data Science Practice, CIS, Brown University*); LaFrance Jr, W Curt (*Rhode Island Hospital / Brown Univer*); Blum, Andrew (*Brown Medical School*); Li, Paula (*Brown University*); Abdel-Wahed, Lama (*Rhode Island Hospital (RIH)*); Shaikh, Muhammad Ateeb (*Rhode Island Hospital (RIH)*); Sharma, Gaurav (*Rhode Island Hospital (RIH)*); Ranieri, Rebecca (*Rhode Island Hospital (RIH)*); Zhang, Lynn (*Rhode Island Hospital (RIH) Neurology*); Tsekhan, Shawn (*Rhode Island Hospital (RIH) Neurology*); Hamid, Tariq (*Rhode Island Hospital (RIH) Neurology*); Levin, Jay (*Rhode Island Hospital (RIH) Neurology*); Truccolo, Wilson (*Brown University*)

18:00-19:30 ThPOS-31.7
Impact of Exercise Intervention in Parkinson's Disease can be Quantified using Inertial Sensor Data and Clinical Tests

McManus, Killian* (*Kinesia Health Technologies*); McGrath, Denise (*Univ. College Dublin*); Greene, Barry R. (*Kinesia Health Technologies*); Lennon, Olive (*Univ. College Dublin*); McMahon, Laura (*Univ. College Dublin*); Caulfield, Brian (*UCD*)

ThPOS-32: 18:00-19:30 Hall B
Research-Poster-1-Page Th A (Poster Session)

18:00-19:30 ThPOS-32.1
A Novel Integrated Deep Learning Prognosis Prediction Framework based on Whole Slide Images

Liu, Yu (*University of Science & Technology of China*); Wang, Minghui* (*University of Science & Technology of China*); Li, Ao (*University of Science & Technology of China*)

18:00-19:30 ThPOS-32.2
Cell Membrane Extraction in Unstained Histological Sections using Deep Learning

Yamami, Satoshi* (*Graduate School of Engineering & Science, Shibaura Institute o*); Sugimoto, Keita (*Graduate School of Engineering & Science, Shibaura Institute o*); Takahashi, Masanobu (*Shibaura Institute of Technology*); Nakano, Masayuki (*Shonan Fujisawa Tokushukai Hospital*)

18:00-19:30 ThPOS-32.3
Deep Convolutional Features for Breast Cancer Histopathological Image Classification

Guan, Wenkai (*Marquette Univ.*); Lu, Tongtong (*Marquette Univ.*); Bhat, Bindu (*Marquette Univ.*); Ye, Dong Hye* (*Marquette Univ.*)

18:00-19:30 ThPOS-32.4
Make Pain Estimation Transparent: A Roadmap to Fuse Bayesian Deep Learning and Inductive Logic Programming

Rieger, Ines* (*Fraunhofer Institute for Integrated Circuits IIS*); Finzel, Bettina (*University of Bamberg*); Seuß, Dominik (*Fraunhofer Institute for Integrated Circuits IIS*); Wittenberg, Thomas (*Fraunhofer Institute for Integrated Circuits (IIS)*); Schmid, Ute (*University of Bamberg*)

18:00-19:30 ThPOS-32.5
AI-Based Melanoma Diagnosis Support System using a Hyperspectral Imaging Technique

Nagaoka, Takashi* (*Kindai University*)

18:00-19:30 ThPOS-32.6
Automatic Diagnosis of Melanoma using Machine Learning

Hirano, Ginji* (*Kindai Univ.*); Nagaoka, Takashi (*Kindai Univ.*)

18:00-19:30 ThPOS-32.7
Automated Melanoma Diagnosis using Transfer Learning

Kato, Kana* (*Kindai Univ.*); Nagaoka, Takashi (*Kindai Univ.*)

18:00-19:30 ThPOS-32.8
Diagnostic Evaluation of Dystrophinopathies from Thigh Muscle MRI with Deep Learning

Yang, Mei (*Peking Univ.*); Zheng, Yiming (*Peking Univ. First Hospital*); Xie, Zhiying (*Peking Univ. First Hospital*); Wang, Zhaoxia (*Peking Univ. First Hospital*); Zhang, Jue* (*Peking Univ.*); Yuan, Yun (*Peking Univ. First Hospital*)

18:00-19:30 ThPOS-32.9
Building Automatic Nail Psoriasis Severity Index System by Applying Mask R-CNN

Chen, Hung-Yi (*National Chiao Tung Univ.*); Hsieh, Kuan Yu (*National Chiao Tung Univ.*); Tsai, Han-Chun (*National Chiao Tung Univ.*); Cheng, Sheng-Jen (*National Chiao Tung Univ.*); Chen, Guan-Yu* (*National Chiao Tung Univ.*)

18:00-19:30 ThPOS-32.10
3D Cell Nuclei Detection in Unstained Thick Histological Sections using Optical Microscope

Yamami, Satoshi* (*Graduate School of Engineering & Science, Shibaura Institute o*); Takahashi, Masanobu (*Shibaura Institute of Technology*); Nakano, Masayuki (*Shonan Fujisawa Tokushukai Hospital*)

18:00-19:30 ThPOS-32.11
Automated Classification of Coronary Angiograms using Deep Convolutional Neural Networks

Moon, Jong Hak* (*Samsung Medical Center / Sungkyunkwan University*); Lee, Ji Won (*Samsung Medical Center*); Hur, Su Jeong (*Sungkyunkwan University*); Cha, Won Chul (*Samsung Medical Center*); Chung, Myung Jin (*Samsung Medical Center*); Lee, Kyu-Sung (*Samsung Medical Center*); Choi, Jin Ho (*Samsung Medical Center*); Cho, Baek Hwan (*Samsung Medical Center / Sungkyunkwan University*)

18:00-19:30 ThPOS-32.12
A Convolutional Neural Networks based Scheme for Mass Detection in Mammograms using Data Augmentation and Mammograms Synthesis

Yemini, Mor* (*Ben Gurion University of the Negev*); Lederman, Dror (*Holon Institute of Technology*); Zigel, Yaniv (*Ben-Gurion University of the Negev*)

- 18:00-19:30 ThPOS-32.13
Qualitative Analysis of Feature Extraction on Medical Images of a Pre-Trained Neural Network
 Wachter, Andreas* (*Karlsruhe Institute of Technology*); Nahm, Werner (*Karlsruhe Institute of Technology*)
- 18:00-19:30 ThPOS-32.14
Comprehensive Comparison of 2D vs. 3D Resource Usage in Large Volumetric Medical Image Segmentation
 Agris, Jacob* (*Bayer*); Gao, Xiangzhen (*Bayer*); Ghamari, Sedigh (*Bayer*)
- 18:00-19:30 ThPOS-32.15
Combination of RCNN and KCF for Landmark Tracking in 2D Ultrasound Sequence of Liver
 Lee, Jeungyoon* (*LG Electronics*); Chung, Euisuk (*Sogang Univ.*); Song, Tai-Kyong (*Sogang University*)
- 18:00-19:30 ThPOS-32.16
Prediction of Embryo Implantation by Machine Learning based on Multi-Modal Uterine Acquisitions
 Sammali, Federica (*Eindhoven Univ. of Technology*); Blank, Celine (*Ghent Univ. Hospital*); Bakkes, Tom Hendricus Gerardus Franciscus (*Eindhoven Univ. of Technology*); Rabotti, Chiara (*Eindhoven Univ. of Technology*); Schoot, Benedictus Christiaan (*Catharina Hospital Eindhoven*); Mischi, Massimo* (*Eindhoven Univ. of Technology*)
- 18:00-19:30 ThPOS-32.17
Privacy Preserved Posture Recognition from Thermal Image
 Gochoo, Munkhjargal (*National Taiwan Ocean University*); Tan, Tan-Hsu (*National Taipei University of Technology*); Hsieh, Jun-Wei* (*National Taiwan Ocean University*)
- 18:00-19:30 ThPOS-32.18
Automatic Grading of Fundus Images for Diabetic Retinopathy and Diabetic Macular Edema using an Ensemble of CNNs
 Harangi, Balazs* (*Univ. of Debrecen*); Baran, Agnes (*Faculty of Informatics, Univ. of Debrecen*); Toth, Janos (*Univ. of Debrecen, Faculty of Informatics*); Hajdu, Andras (*Univ. of Debrecen*)
- 18:00-19:30 ThPOS-32.19
Stroke Risk Stratification using Transfer Learning
 Panayides, Andreas (*Univ. of Cyprus*); Kyriacou, Efthymoulos* (*Frederick Univ. Cyprus*); Nicolaidis, Andrew (*Imperial College*); Pattichis, Constantinos (*Univ. of Cyprus*)
- 18:00-19:30 ThPOS-32.20
Trainable Windowing Method for Medical Image Analysis
 Kwon, Jangho (*Korea Institute of Science & Technology*); Kim, Laehyun (*Korea Institute of Science & Technology*); Kim, Youngjae (*Korea Institute of Science & Technology*); Choi, Kihwan* (*Korea Institute of Science & Technology*)
- 18:00-19:30 ThPOS-32.21
Automated Diagnosis of Melanoma using Three Wavelengths
 Tamura, Yudai* (*Kindai Univ.*); Nagaoka, Takashi (*Kindai Univ.*)
- 18:00-19:30 ThPOS-32.22
Skin Translation Evaluation System based on Image Processing
 Ezaki, Kodai* (*Keio University*)
- 18:00-19:30 ThPOS-32.23
Automatic Counting of Erythrocytes using Image Processing
 de Souza Costa, Priscila Caroline (*Federal Univ. Rio Grande do Norte*); Ribeiro, Anna Giselle (*Univ. Federal do Rio Grande do Norte*); Antônio Freire Teixeira, Marcos* (*Univ. Federal do Rio Grande do Norte*); Diniz, Anthony (*Federal Univ. of Rio Grande do Norte*); D. Vilar Wanderley, Caroline (*Univ. Federal do Rio Grande do Norte*); Bezerra Soares, Heliana (*Federal Univ. of Rio Grande do Norte*)
- 18:00-19:30 ThPOS-32.24
Delay-Multiply-and-Sum based Nonlinear Compounding for High-Contrast Ultrafast Ultrasound Imaging
 Kang, Jinbum* (*Sogang University*); Go, Dooyoung (*Sogang University*); Yoo, Yangmo (*Sogang University*)
- 18:00-19:30 ThPOS-32.25
Automatic Extraction of the Cardiothoracic Index in Cardiomegaly Identification using Image Processing
 L. C. Batista, Joao* (*UFRN*); M. Araujo, Natalia (*UFRN*); R. B. Souza, Sintia (*UFRN*); V. Oliveira, Beatriz (*UFRN*); B. S. Campelo, Rebecca (*UFRN*); Diniz, Anthony (*Federal Univ. of Rio Grande do Norte*); Ribeiro, Anna Giselle (*Univ. Federal do Rio Grande do Norte*); D. Vilar Wanderley, Caroline (*Univ. Federal do Rio Grande do Norte*); Bezerra Soares, Heliana (*Federal Univ. of Rio Grande do Norte*)
- 18:00-19:30 ThPOS-32.26
Non-Supervised Algorithm for the Automatic Segmentation of Blood Vessels in Retinography Images
 Santana Costa, Mateus (*UFRN*); L. C. Batista, Joao* (*UFRN*); Ribeiro, Anna Giselle (*Universidade Federal do Rio Grande do Norte*); D. Vilar Wanderley, Caroline (*Universidade Federal do Rio Grande do Norte*); Diniz, Anthony (*Federal University of Rio Grande do Norte*); Bezerra Soares, Heliana (*Federal University of Rio Grande do Norte*)
- 18:00-19:30 ThPOS-32.27
Evaluating Radar-Based Breast Imaging Performance using Patient-Specific Properties Estimation
 O'Loughlin, Declan* (*National University of Ireland Galway*); Oliveira, Bárbara L. (*National University of Ireland Galway*); Glavin, Martin (*National University of Ireland*); Jones, Edward (*National University of Ireland Galway*); O'Halloran, Martin (*National University of Ireland, Galway*)
- 18:00-19:30 ThPOS-32.28
Generation of High-Resolution Lung Computed Tomography Images using Adversarial Model
 Tsai, Han-Chun (*National Chiao Tung Univ.*); Hsieh, Kuan Yu (*National Chiao Tung Univ.*); Cheng, Sheng-Jen (*National Chiao Tung Univ.*); Chen, Hung-Yi (*National Chiao Tung Univ.*); Chen, Guan-Yu* (*National Chiao Tung Univ.*)
- 18:00-19:30 ThPOS-32.29
Visualization of 3D Computed Tomography Image on Web Browser: An Interlacing Approach
 Wang, Zihuan* (*Seoul National Univ.*); Yoo, Sunyoung (*Seoul National Univ.*); Won, Taebin (*Seoul National Univ. Hospital*); Kim, Jung (*Korea Advanced Institute of Science & Technology*); Seo, Jong Mo (*Seoul National Univ., School of Engineering*)
- 18:00-19:30 ThPOS-32.30
Glioma Tumor Segmentation using Simplified V-Net
 Kwon, Junmo (*Sungkyunkwan University*); Park, Hyunjin* (*Sungkyunkwan University*)
- 18:00-19:30 ThPOS-32.31
Automatic and High-Accurate Detection System for Individual Life-Event of Drosophila
 Kang, Siu* (*Yamagata Univ.*); Seong, Ki-Hyeon (*RIKEN Tsukuba Institute*); Matsumura, Taishi (*Yamagata Univ.*); Yuasa, Tetsuya (*Yamagata Univ.*)
- 18:00-19:30 ThPOS-32.32
Automated Detection of Lymph Nodes in Pelvic Region by using Diffusion-Weighted Images
 Sugimoto, Chika* (*Yokohama National University*); Hagiwara, Hiroaki (*Yokohama City University*)
- 18:00-19:30 ThPOS-32.33
Development of a Lesion Size Measurement System during Colonoscopy
 Kim, Chan-II (*Keimyung University*); Park, Eun-Bin (*Keimyung University*); Hwang, Seokmin (*Keimyung*); Lee, Jong-Ha* (*Keimyung University, School of Medicine*)
- 18:00-19:30 ThPOS-32.34
Automated Segmentation of Surface Muscle in Whole-Body CT Images using 2D U-Net: Preliminary Study
 Oshima, Ami* (*Aichi Prefectural University, Graduate School of Information Sci*); Kamiya, Naoki (*Aichi Prefectural University*); Zhou, Xiangrong (*Gifu University*); Hara, Takeshi (*Gifu Univ. Graduate Sch of Medicine*); Fujita, Hiroshi (*Gifu University*)

- 18:00-19:30 ThPOS-32.35
Bone Segmentation in Whole-Body CT Images using 2D U-Net
 Wakamatsu, Yuichi* (*Aichi Prefectural University*); Kamiya, Naoki (*Aichi Prefectural University*); Zhou, Xiangrong (*Gifu University*); Hara, Takeshi (*Gifu Univ. Graduate Sch of Medicine*); Fujita, Hiroshi (*Gifu University*)
- 18:00-19:30 ThPOS-32.36
Automatic Detection and Classification of Breast Micro-Calcifications in Digital Mammograms using Temporal Subtraction
 Loizidou, Kosmia* (*Univ. of Cyprus*); Skouroumouni, Galateia (*Nicosia General Hospital*); Nikolaou, Christos (*Limassol General Hospital*); Pitris, Costas (*Univ. of Cyprus*)
- 18:00-19:30 ThPOS-32.37
Hybrid U-Net – Adversarial Network Architecture to Segment Left Ventricle from Cine Cardiac MRI
 Upendra, Roshan Reddy* (*Rochester Institute of Technology*); Linte, Cristian A. (*Rochester Institute of Technology*); Dangi, Shusil (*Rochester Institute of Technology*)
- 18:00-19:30 ThPOS-32.38
Neural Networks Enable Superior Particle Detection in Synchrotron X-Ray Images for Automated Mucociliary Transport Measurement
 Gardner, Mark* (*Adelaide University*); McCarron, Alexandra (*Adelaide University*); Cmielewski, Patricia Lucia (*Adelaide University*); Morgan, Kaye (*Monash University*); Parsons, David (*Women's & Children's Hospital*); Donnelley, Martin (*University of Adelaide, Women's & Children's Hospital*)
- 18:00-19:30 ThPOS-32.39
Automated Segmentation of Spinal Discs and Cord and Visualization in Virtual Reality
 Xhoxhaj, Festim* (*Anhalt University of Applied Sciences*); Bracio, Boris Romanus (*University of Applied Science Anhalt*); Mathew James, Nisanth (*Anhalt University of Applied Sciences*)
- 18:00-19:30 ThPOS-32.40
Feature Extraction from Radiographic Images for Bone Age Identification
 F. de Souza, Thalles M. (*UFRN*); P. Vieira, Matheus (*UFRN*); A. P. Soares, Giovanna (*UFRN*); B. e Silva, Ana Luíza (*UFRN*); Antônio Freire Teixeira, Marcos* (*Universidade Federal do Rio Grande do Norte*); D. Vilar Wanderley, Caroline (*Universidade Federal do Rio Grande do Norte (UFRN)*); Ribeiro, Anna Giselle (*Universidade Federal do Rio Grande do Norte*); Bezerra Soares, Heliana (*Federal University of Rio Grande do Norte*)
- 18:00-19:30 ThPOS-32.41
Efficient Multimodal MRI Brain Tumor Segmentation using Improved U-Net Architecture
 Li, Haichun (*University of Science & Technology of China*); Li, Ao* (*University of Science & Technology of China*); Wang, Minghui (*University of Science & Technology of China*)
- 18:00-19:30 ThPOS-32.42
The Creative Diagnosis System Concerning Deviated Nasal Septum with Thermal Imaging
 Yoo, HyunJong (*SoonChunHyang University*); Lee, Onseok* (*SoonChunHyang University*)
- 18:00-19:30 ThPOS-32.43
A U-Net based Automatic Segmentation of Body Morphometry on Abdominal CT Image
 Jun, Hong Young (*Wonkwang Univ. Hospital*); Kim, SeungJin (*Wonkwang Univ.*); Jonghyun, Ryu (*Wonkwang Univ. Hospital*); Kim, Tae-Hoon (*Wonkwang Univ.*); Lee, Chung Sub (*Wonkwang Univ.*); Noh, SiHyeong (*Wonkwang Univ.*); Kim, Ji Eon (*Wonkwang Univ.*); Lee, Gi Taek (*Wonkwang Univ.*); Jeong, Chang Won* (*Wonkwang Univ.*)
- 18:00-19:30 ThPOS-32.44
Deep Learning based Respiration Rate Estimation using Depth Camera
 Oh, Kyeong Taek (*Yonsei University*); Kim, Byeongnam (*Yonsei University*); Yoo, Sun K.* (*Yonsei University Health System*)
- 18:00-19:30 ThPOS-32.45
Automated Generation of Nine-Gaze Photograph from Video Clip for the Evaluation of Strabismus
 Kim, Jeffrey* (*Seoul National Univ.*); Lee, Ho Jin (*Seoul National Univ.*); Seo, Jong Mo (*Seoul National Univ., School of Engineering*)
- 18:00-19:30 ThPOS-32.46
Segmentation Applied to the Identification of the Pancreas in Computed Tomography
 E. C. Silva, Samuel* (*UFRN*); F. M. L. de Queiroz, Erik F. M. L. de Queiroz (*UFRN*); T. Carvalho, Maria (*UFRN*); M. D. Junior, Geovanny (*UFRN*); Farias de Oliveira, Flávia (*UFRN*); D. Vilar Wanderley, Caroline (*Universidade Federal do Rio Grande do Norte (UFRN)*); G. de Moura, Camila (*UFRN*); Bezerra Soares, Heliana (*Federal University of Rio Grande do Norte*)
- 18:00-19:30 ThPOS-32.47
Dual Attention-Based Deep Learning Method for Nailfold Capillary Segmentation
 Hariyani, Yuli Sun (*Kwangwoon University*); Eom, Heesang (*Kwangwoon Univ.*); Park, Cheolsoo* (*Kwangwoon University*)
- | | |
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| ThPOS-33: 18:00-19:30 | Hall B |
| Research-Poster-1-Page Th B (Poster Session) | |
- 18:00-19:30 ThPOS-33.1
Development of an Actuated Transrectal Biopsy System for Diagnosing Prostate Cancer: Preliminary Design and Prototype
 Ashraf, Monib (*Texas A&M Univ. – Qatar*); Velazco Garcia, Jose Daniel (*Univ. of Houston*); Balakrishnan, Shidin (*Hamad Medical Corporation*); Abinahed, Julien (*Hamad Medical Corporation*); El Ansari, Walid (*Hamad Medical Corporation*); Al-Rumaihi, Khalid (*Hamad Medical Corporation*); Darweesh, Adham (*Hamad Medical Corporation*); Al-Ansari, Abdulla (*Hamad Medical Corporation*); Tsekos, Nikolaos (*Univ. of Houston*); Karkoub, Mansour (*Texas A&M Univ. – Qatar*); Navkar, Nikhil V.* (*Hamad Medical Corporation*)
- 18:00-19:30 ThPOS-33.2
Ex-Vivo Animal Tissue Discrimination by Diffuse Reflectance Spectroscopy
 Fanjul-Vélez, Félix (*University of Cantabria*); Arce-Diego, José L.* (*University of Cantabria*)
- 18:00-19:30 ThPOS-33.3
Development of High Intensity Focused Ultrasound System with 3-D Temperature Measurement Function from Ultrasound Images
 Sakakibara, Ryosuke* (*Meiji Univ.*); Kato, Kazuo (*Meiji Univ.*)
- 18:00-19:30 ThPOS-33.4
Heating Characteristics of Non-Contact Rectangular Resonant Cavity Applicator with Ultrasound Temperature Measurement System
 Takamatsu, Tomokage* (*Meiji University*); Kato, Kazuo (*Meiji University*); Shindo, Yasuhiro (*Toyo University*); Iseki, Yuya (*National Institute of Technology (KOSEN), Hachinohe College*)
- 18:00-19:30 ThPOS-33.5
Early Detection of Mild Cognitive Impairment Patients via CNN: A fNIRS Study
 Yang, Dalin (*Pusan National Univ.*); Yoo, So-Hyeon (*Pusan National Univ.*); Hong, Keum-Shik* (*Pusan National Univ.*)
- 18:00-19:30 ThPOS-33.6
A Sutureless Cuff Electrode Device for Neural Signal Recording from Guinea Pig's Sciatic Nerve
 Moon, Hyunmin* (*DGIST*); Park, Byung Wook (*Daegu Gyeongbuk Institute of Science & Technology (DGIST)*); Park, Ki-Su (*Kyungpook National Univ. Hospital*); Park, Juyoung (*Daegu-Gyeongbuk Medical Innovation Foundation (DGMIF)*); Lee, Eun-Hee (*DGMIF, Daegu-Gyeongbuk Medical Innovation Foundation*); Kim, Sohee (*Daegu Gyeongbuk Institute of Science & Technology (DGIST)*)

- 18:00-19:30 ThPOS-33.7
Electrical Stimulation for Nerve Regeneration from Implantable Sensors using NFC
 Kifle, Yonatan* (*Linköping University*); Wikner, Jacob (*Linköping University*); Zötterman, Johan (*Linköpings Universitet*); Farnebo, Simon (*Linköping University Hospital*)
- 18:00-19:30 ThPOS-33.8
Manufacturing Technologies for Electrical Treatment, Probing and Analysis Applications in Medicine and Life Science
 Kaiser, Alexander* (*Cicor Reinhardt Microtech*); Matej, Paul (*Cicor Reinhardt Microtech*); Herbot, Christian (*Cicor Reinhardt Microtech*); Ventruto, Reto (*Cicor Reinhardt Microtech*); Ruess, Karin (*Cicor Reinhardt Microtech*); Keim, Uwe (*Cicor Reinhardt Microtech*)
- 18:00-19:30 ThPOS-33.9
ASK Demodulator based on Dynamic Reference Scheme for Bioimplantable Applications
 Abdullah Zawawi, Ruhaifi (*Dept. of Health Sciences & Technology, GAIHST, Gachon Uni*); Abbasi, Wajahat Habib (*Dept. of Health Sciences & Technology, GAIHST, Gachon Uni*); Kang, Ho-Sung (*Korea University*); Kim, Seong-Woo (*Korea University*); Kim, Jungsuk* (*Gachon University*)
- 18:00-19:30 ThPOS-33.10
Transcutaneous Energy Transmission Coil with a Magnetic Body— Investigation of Magnetic Body Shape
 Sato, Junya* (*Tokyo Polytechnic Univ.*); Koshiji, Fukuro (*Tokyo Polytechnic Univ.*); Koshiji, Kohji (*Tokyo Univ. of Science*)
- 18:00-19:30 ThPOS-33.11
Applying Secret Sharing for Home-Visit Nursing Records
 Kodama, Kana* (*Osaka Univ.*); Yamada, Kenji (*Osaka Univ.*)
- 18:00-19:30 ThPOS-33.12
Haptic based on Three-Dimensional Handwriting Analysis and Evaluation System
 Kim, EunBin (*SoonChunHyang University*); Kim, Eun Young (*Dept. of Occupational Therapy, SoonChunHyang University*); Lee, Onseok* (*SoonChunHyang University*)
- 18:00-19:30 ThPOS-33.13
NefroAtlas – A Continuing Studying Platform for Physician and Residents
 Goulart, Leonardo* (*Federal Univ. of Rio Grande do Norte*); Guedes, Felipe (*Federal Univ. of Rio Grande do Norte*); Silva, Gyl (*Federal Univ. of Maranhão*); Junior, Jose (*Federal Univ. of Rio Grande do Norte*); Bezerra Soares, Heliana (*Federal Univ. of Rio Grande do Norte*); D. Vilar Wanderley, Caroline (*Univ. Federal do Rio Grande do Norte (UFRN)*); Ribeiro, Anna Giselle (*Univ. Federal do Rio Grande do Norte*)
- 18:00-19:30 ThPOS-33.14
Joint Angle Estimation using Kinematic Constraint Instead of Magnetometer Signals
 Lee, Jung Keun* (*Hankyong National University*); Jeon, Tae Hyeong (*Hankyong National University*); Jung, Woo Chang (*Hankyong National University*)
- 18:00-19:30 ThPOS-33.15
Accuracy of Time-Varying Ankle Joint Impedance Estimation during Locomotion
 Cavallo, Gaia* (*VUB*); Lataire, John (*Vrije Universiteit Brussel*)
- 18:00-19:30 ThPOS-33.16
Fatigue Reduction in Jumping Motion using Kinesio Taping
 Shinohara, Mai* (*Ritsumeikan Univ.*); Toyoshi, Takuya (*Ritsumeikan Univ.*); Shiozawa, Naruhiro (*Ritsumeikan Univ.*)
- 18:00-19:30 ThPOS-33.17
High Angular Resolution Diffusion Imaging Segmentation using 2nd Order Tensors Space
 Kaushik, Sumit* (*Masaryk University*); Slovak, Jan (*Masaryk University*); Tsegaye, Temesgen (*Masaryk University*); Bansal, Avinash (*GNIT, Mullana*)
- 18:00-19:30 ThPOS-33.18
Altered Intracellular Volume Fraction and Neurite Dispersion in People with Chromosome 22q11.2 Copy Number Variants
 Villalon Reina, Julio Ernesto* (*Imaging Genetics Center*); Nir, Talia M. (*Imaging Genetics Center, Univ. of Southern California*); Jahanshad, Neda (*Imaging Genetic Center, Univ. of Southern California*); Kushan, Leila (*Semel Institute for Neuroscience & Human Behavior & Dept.*); Bearden, Carrie (*Semel Institute for Neuroscience & Human Behavior & Dept.*); Thompson, Paul (*Univ. of Southern California*)
- 18:00-19:30 ThPOS-33.19
Characterization of Lenticulostriate Arteries using Arterial Spin Labeling and 3D Black-Blood MRI in Vascular Cognitive Impairment and Dementia
 Ma, Samantha J.* (*University of Southern California*); Jann, Kay (*University of Southern California*); Barisano, Giuseppe (*University of Southern California*); Shao, Xingfeng (*University of Southern California*); Yan, Lirong (*University of Southern California*); Casey, Marlene (*University of Southern California*); D'Orazio, Lina (*University of Southern California*); Ringman, John (*University of Southern California*); Wang, Danny JJ (*University of Southern California*)
- 18:00-19:30 ThPOS-33.20
Classification of Typical Developing and Autism Spectrum Disorder using Connectivity Matrix and Support Vector Machine
 A.R., Jac Fredo* (*Nanyang Technological University*); Dauwels, Justin (*NTU*); Langs, Georg (*Medical University Vienna*)
- 18:00-19:30 ThPOS-33.21
Development of Medical Image Quantification Software for the Assessment of Nodule in Abdominal Disease
 Kim, Ji Eon (*Wonkwang University*); Kim, SeungJin (*Wonkwang University*); Noh, SiHyeong (*Wonkwang University*); Jun, Hong Young (*Wonkwang University Hospital*); Lee, Chung Sub (*Wonkwang University*); Jonghyun, Ryu (*Wonkwang Univ. Hospital*); Kim, Tae-Hoon (*Wonkwang University*); Jeong, Chang Won* (*Wonkwang University*)
- 18:00-19:30 ThPOS-33.22
Towards a New Method of Synergy Analysis using Cine DENSE MRI
 Cohen, Zoe* (*UC Berkeley*); Ja ĉur, Miroslav (*University of California, Berkeley*); Karasan, Ekin (*Massachusetts Institute of Technology*); Bajcsy, Ruzena (*UC Berkeley, CITRIS*)
- 18:00-19:30 ThPOS-33.23
Design for the Image Acquisition Sequence of CEST MR Fingerprinting by the Cost-Based Algorithm
 Kamba, Kazuho* (*Kyoto University*); Imai, Hirohiko (*Kyoto University*); Matsuda, Tetsuya (*Kyoto University*)
- 18:00-19:30 ThPOS-33.24
Enhancement of MR Thermometry by Single-Frequency Excitation Wideband MRI Technique
 Wang, Tzu-Yi* (*Graduate Institute of Biomedical Electronics & Bioinformatics.*); Cheng, Po-Wei (*Taiwan*); Chen, Jyh-Hong (*National Taiwan University*); Chiueh, Tzi-Dar (*National Taiwan University*)
- 18:00-19:30 ThPOS-33.25
A Magnetographic Camera based on Microfabricated Optically-Pumped Magnetometers
 Krzyzewski, Sean (*University of Colorado*); Romanov, Gleb (*University of Colorado*); Korenko, Branislav (*University of Colorado*); Gerginov, Vladislav (*University of Colorado*); Alem, Orang (*University of Colorado*); Hughes, Jeremy (*University of Colorado*); Knappe, Svenja* (*University of Colorado*)

- 18:00-19:30 ThPOS-33.26
Magnetometer for Laparoscopic Detection of Magnetic Nanoparticles in Sentinel Lymph Nodes for Gastric Cancer Patients
 Kuwahata, Akihiro* (*The University of Tokyo*); Tanaka, Ryo (*The University of Tokyo*); Matsuda, Sachiko (*Keio University*); Amada, En (*Keio University School of Medicine*); Irino, Tomoyuki (*Keio University School of Medicine*); Mayanagi, Shuhei (*Keio University School of Medicine*); Isaka, Sena (*The University of Tokyo*); Chikaki, Shinichi (*The University of Tokyo*); Saito, Itsuro (*The University of Tokyo*); Tanabe, Norio (*The University of Tokyo*); Kawakubo, Hirofumi (*Keio University School of Medicine*); Takeuchi, Hiroya (*Hamamatsu University School of Medicine*); Kitagawa, Yuko (*Keio University School of Medicine*); Kusakabe, Moriaki (*The University of Tokyo*); Sekino, Masaki (*The University of Tokyo*)
- 18:00-19:30 ThPOS-33.27
Three-Dimensional Measurement of a Foot Trajectory during Gait using Inertia Sensor without Alignment
 Michihiko, Fukunaga* (*Oita Univ.*); Yusuke, Monden (*Oita Univ.*)
- 18:00-19:30 ThPOS-33.28
Amplification Effect of Fingerprint-Like Pattern for Applanation Tonometry Sensor
 Kang, Sehong (*POSTECH*); Ju, Chanyang (*POSTECH*); Kim, Sehyeon (*POSTECH*); Park, Sung-Min* (*POSTECH*)
- 18:00-19:30 ThPOS-33.29
Analysis of Fingertip-Based Features during Pick and Grasp Manipulation
 Yamashita, Tatsuya* (*Kyoto University*); Nakao, Megumi (*Kyoto University*); Matsuda, Tetsuya (*Kyoto University*)
- 18:00-19:30 ThPOS-33.30
Development of Medical Simulator for Neonatal Cardio-Pulmonary Resuscitation Training
 Ooi, Sho* (*Ritsumeikan University*); Matsumura, Kohei (*Ritsumeikan University*); Noma, Haruo (*Ritsumeikan University*); Iwanaga, Kogoro (*Kyoto University Hospital*); Hanaoka, Shintaro (*Kyoto University Hospital*); Tomotaki, Seiichi (*Kyoto University Hospital*)
- 18:00-19:30 ThPOS-33.31
Continuous Separation and Capture of Single Circulating Tumor Cells from Whole Blood using an Integrated Microfluidic Device
 Yang, Heewon (*Hanyang University*); Lee, Jusin (*Hanyang University*); Sul, Onejae (*Hanyang University*); Lee, Seung-Beck* (*Hanyang University*)
- 18:00-19:30 ThPOS-33.32
Neuro-Motor Index: Designing an EMG Control Scheme Robust to Lower-Limb Disorder
 Charafeddine, Jinan (*EndiCAP – Hopital Raymond Poincare*); Chevallier, Sylvain* (*Laboratoire d'Ingénierie des Systèmes de Versailles (LISV)*); Khalil, Mohamad (*Lebanese University, Doctoral school for sciences and technology.*); Pradon, Didier (*EndiCAP U1179 – APHP – UVSQ*); Al-Fayad, Samer (*Laboratoire d'Ingénierie des Systèmes de Versailles – UVSQ*)
- 18:00-19:30 ThPOS-33.33
The Angle of Spine and Pelvis of Transtibial Amputee in Gait
 Song, Liang* (*National Research Center for Rehabilitation Technical Aids*); Guo, JunChao (*National Research Center for Rehabilitation Technical Aids*); Yang, Jiemeng (*National Research Center for Rehabilitation Technical Aids*); Wang, Zhenze (*National Research Center for Rehabilitation Technical Aids*)
- 18:00-19:30 ThPOS-33.34
Spherical Coulomb Friction Analysis of Ground Contact Forces during Lower Limb Maximum Vertical Countermovement
 Rodrigues, Carlos M. B.* (*INESCTEC – Technology & Science Associate Laboratory*); Correia, Miguel (*Universidade do Porto, Faculdade de Engenharia*); Abrantes, João M. C. S. (*MovLab – ULHT*); Rodrigues, Marco Aurélio Benedetti (*Federal Univ. of Pernambuco*); Nadal, Jurandir (*Federal Univ. of Rio de Janeiro*)
- 18:00-19:30 ThPOS-33.35
Pineal Region Tumour Resection using a Magnetically-Driven Surgical Tool: A Feasibility Study in a Silicone Brain
 Lim, Andrew* (*University of Toronto*); Schonewille, Adam (*University of Toronto*); Looi, Thomas (*CIGITI, Hospital for Sick Children*); Drake, James (*University of Toronto, CIGITI, Hospital for Sick Children*); Diller, Eric (*University of Toronto*)
- 18:00-19:30 ThPOS-33.36
Patient Specific 3D Printing for Chest Wall Reconstruction in Thoracic Surgery
 Pontiki, Antonia, A* (*King's College London*); Darwish, Raef (*King's College London*); Farid, Mehajabeen (*King's College London*); Lim, Sarah Man Lin (*King's College London*); Bille, Andrea (*Guy's & St Thomas' NHS Foundation Trust*); Rhode, Kawal (*King's College London*)
- 18:00-19:30 ThPOS-33.37
Body Pressure Dispersion Analysis towards Interactive Bed System
 Ito, Jun* (*Tokyo Univ. of Tech.*); Usuki, Shin (*Shizuoka Univ.*)
- 18:00-19:30 ThPOS-33.38
Concomitant Limb Cryocompression and Scalp Cooling to Reduce Paclitaxel-Induced Neuropathy and Alopecia
 Magarajah, Gayathiri (*National Univ. of Singapore*); Santhanakrishnan, Priyadarshini (*National Univ. of Singapore*); Low, Hui Ying Jessalyn (*Agency for Science, Technology & Research*); Ong, Xin Ee (*National Univ. Health System*); Ng, Nicholas Zhi Hao (*National Univ. Health System*); Chan, Kim Chuan Casey (*Singapore Institute of Neurotechnology (SINAPSE)*); Ow, Samuel GW (*National Univ. Cancer Institute, Singapore*); Chan, Gloria (*National Univ. Health System*); Choo, Joan (*National Univ. Health System*); Eng, Lim Siew (*National Univ. Health System*); Wong, Andrea (*National Univ. Health System*); Vijayan, Joy (*National Univ. Health System*); Hairom, Zarinah (*National Univ. Health System*); Ang, Emily (*National Univ. Health System*); Lee, Soo Chin (*National Univ. Hospital*); He, Wei (*Singapore Institute of Manufacturing Technology, A*STAR*); Wilder-Smith, Einar P V (*National Univ. of Singapore, National Univ. Hospital*); Sundar, Raghav (*National Univ. Health System*); Bandla, Aishwarya* (*National Univ. of Singapore*); Thakor, Nitish (*National Univ. of Singapore*)
- 18:00-19:30 ThPOS-33.39
Design of an Electrically Driven Actuator using a System of Antagonistic SMAs
 Teymoori, Morteza (*Bogazici University*); Kocaturk, Ozgur (*Boğaziçi University*); Tatarlar, Efekan* (*Boğaziçi University*)
- 18:00-19:30 ThPOS-33.40
A System Dynamics Model for Evaluating the Impact of Public Investments in a Data-Driven Precision Medicine Ecosystem
 Lähteenmäki, Jaakko (*VTT Technical Research Centre of Finland*); Ruutu, Sampsa (*Gofore*); Yen, Peter (*VTT*); van Gils, Mark* (*VTT Tech Research Centre of Finland Ltd.*)
- 18:00-19:30 ThPOS-33.41
Face and Content Validity of a Physically-Based Simulator for Urethral Transection during Robot-Assisted Radical Prostatectomy
 Abinahed, Julien (*Hamad Medical Corporation*); Younes, Georges (*Hamad Medical Corporation*); Balakrishnan, Shidin (*Hamad Medical Corporation*); Alfayad, Abdulrahman (*Hamad Medical Corporation*); Palliyali, Waseem (*Hamad Medical Corporation*); Ohannessian, Gorune (*American University of Beirut*); Pan, Zherong (*University of North Carolina*); Manocha, Dinesh (*University of Maryland*); Turkiyyah, George (*American University of Beirut*); Al-Ansari, Abdulla (*Hamad Medical Corporation*); Navkar, Nikhil V.* (*Hamad Medical Corporation*)
- 18:00-19:30 ThPOS-33.42
Design and Development of a Training Simulator for Adult ECMO
 Mehta, Iti (*Univ. of Illinois Urbana Champaign*); Muralidharan, Anusha (*PUP*); Kesavadas, Thenkurussi* (*UIUC/HCESC*); Chembrammel, Pramod (*Univ. of Illinois at Urbana-Champaign*)

- 18:00-19:30 ThPOS-33.44
A Real-Time Visualized, Quantitatively Evaluated Simulator in Dilatation and Curettage
 Wu, Junjie* (*Peking Univ.*); Zheng, Yijia (*Peking Univ.*); Lu, Qun (*Peking Univ. People's Hospital*); Wang, Jianliu (*Peking Univ. People's Hospital*); Zhang, Jue (*Peking Univ.*)
- 18:00-19:30 ThPOS-33.45
Design of a Simulator for Surgical Training in Tracheostomy and Advanced Open Airway Surgery
 Deonarain, Ashley* (*University of Toronto, Hospital for Sick Children*); Wee, Justin W. (*University of Toronto, Hospital for Sick Children, CIGITI*); Looi, Thomas (*CIGITI, Hospital for Sick Children*); Gordon, Karen (*University of Toronto, Hospital for Sick Children*); Harrison, Robert (*University of Toronto, Hospital for Sick Children*); Agur, Anne (*University of Toronto*); Drake, James (*University of Toronto, CIGITI, Hospital for Sick Children*); Wolter, Nikolaus Ernst (*Hospital for Sick Children*); Propst, Evan (*Hospital for Sick Children, University of Toronto*)
- 18:00-19:30 ThPOS-33.46
Magnetic Nasal Delivery to Transport Drug, Heat, and Neural Stimulating Agents to the Brain
 Jafari, Sahar* (*Weinberg Medical Physics, Inc*); Weinberg, Irving (*Weinberg Medical Physics, Inc.*); Mair, Lamar (*Weinberg Medical Physics LLC*); Shimoji, Mika (*Weinberg Medical Physics*); Ropp, Chad (*WMP*); Stepanov, Pavel (*Weinberg Medical Physics LLC*); Hale, Olivia (*WMP*); Sun, Danica (*WMP*)
- 18:00-19:30 ThPOS-33.47
Label Free Detection of Fibrinogen in Human Plasma using GaN HEMT
 Varghese, Arathy (*Malaviya National Institute of Technology*); Periasamy, Chinnamuthan (*Malaviya National Institute of Technology, Jaipur*); Bhargava, Lava (*Malaviya National Institute of Technology, Jaipur*); Pancholi, Sidharth* (*Malaviya National Institute of Technology*)
- ThPOS-34: 18:00-19:30 Hall B
Research-Poster-1-Page Th C (Poster Session)
- 18:00-19:30 ThPOS-34.1
Liquid Metal Nanoparticles Mediated Near-Infrared Photothermal Therapy
 Sun, Xuyang (*Technical Institute of Physics & Chemistry, Chinese Academy of*); Liu, Jing* (*Tsinghua University*)
- 18:00-19:30 ThPOS-34.2
Fabrication of Gold Nanorod Arrays on Cylindrical Surface of Optical Fibers by using In-Situ Electrodeposition
 Dang, Jie* (*Peking University*); Liu, Zhengxin (*Peking University*); Zhang, Jue (*Peking University*)
- 18:00-19:30 ThPOS-34.3
Bioimpedance and Electrochemistry for Neural Stem Cell Characterization and Detection of Dopamine Release
 Schuelke, Christin* (*Univ. of Oslo*); Cunha, André (*Univ. of Oslo*); Heiskanen, Arto (*DTU Technical Univ. of Denmark*); Asif, Afia (*DTU Technical Univ. of Denmark*); Keller, Stephan Sylvest (*DTU Technical Univ. of Denmark*); Kalvoy, Haavard (*Rikshospitalet*); Martínez-Serrano, Alberto (*Universidad Autónoma de Madrid*); Emnéus, Jenny (*DTU Technical Univ. of Denmark*); Martinsen, Ørjan G (*Univ. of Oslo*)
- 18:00-19:30 ThPOS-34.4
Understanding the Biological Basis of Alternating Electric Field Therapy on Breast Cancer Metastasis
 Zhang, Meihui* (*The Ohio State Univ.*); Garg, Ayush (*The Ohio State Univ.*); Jones, Travis (*The Ohio State Univ.*); Lee, Tse-Ang (*Academia Sinica*); Subramaniam, Vishwanath (*The Ohio State Univ.*); Song, Jonathan (*The Ohio State Univ.*)
- 18:00-19:30 ThPOS-34.5
Asymmetrical Porous and Stretchable Membrane with Electrical Conductivity and Biocompatibility by Layer-by-Layer Assembly
 Jeon, Sohui (*Inha Univ.*); Shim, Bong Sup* (*Inha Univ.*)
- 18:00-19:30 ThPOS-34.6
CACI-IMPACT: High-Throughput Microfluidic 3D Cytotoxicity Assay
 Park, Dohyun (*Seoul National University*); Jeon, Noo Li* (*Seoul National University*)
- 18:00-19:30 ThPOS-34.7
Microfluidic System: Distinguish Circulating Tumor Microemboli from Circulating Tumor Cells for Accurate Cancer Detection
 Chung, Chung- Min (*National Chiao Tung Univ.*); Hsieh, Kuan Yu (*National Chiao Tung Univ.*); Cheng, Sheng-Jen (*National Chiao Tung Univ.*); Chen, Shiue-Luen (*National Chiao Tung Univ.*); Chen, Chong-You (*National Chiao Tung Univ.*); Chen, Guan-Yu* (*National Chiao Tung Univ.*)
- 18:00-19:30 ThPOS-34.8
An Image Processing-Based Motion Tracking System for Real-Time Velocity Evaluation in Microfluidic Flow Monitoring
 Chen, Szi-Wen* (*Chang Gung University*); Lin, Yen-Heng (*Chang Gung University*); Tu, Mingta (*Chang Gung University*)
- 18:00-19:30 ThPOS-34.9
A Microfluidic Device to Study Molecular Clocks Synchronization among Neuronal Populations
 Giantomasi, Lidia* (*Istituto Italiano di Tecnologia*); Malerba, Mario (*Fondazione Istituto Italiano di Tecnologia*); Barca-Mayo, Olga (*Istituto Italiano di Tecnologia*); Miele, Ermanno (*Italian Institute of Technology*); De Pietri Tonelli, Davide (*Fondazione Istituto Italiano di Tecnologia*); Berdondini, Luca (*Istituto Italiano di Tecnologia*)
- 18:00-19:30 ThPOS-34.10
Design and Simulation of Single Coaxial Microfluidic Device for Tubular Scaffold Formation
 Nguyen, Trung* (*Univ. of Ulsan*); Nguyen, Hang Phuong (*Univ. of Ulsan*); Duong, Thuy (*Univ. of Ulsan*); Phan, Huu Lam (*Ulsan Univ.*); Le, Thi Huong (*Univ. of Ulsan*); Son, Hyewon (*Univ. of Ulsan, Ulsan*); Lee, HyoSeok (*Univ. of Ulsan*); Oh, Seok (*Univ. of Ulsan*); Lee, Suwon (*Univ. of Ulsan*); Hwang, Changho (*Ulsan Univ. Hospital*); Koo, Kyoin (*Univ. of Ulsan*)
- 18:00-19:30 ThPOS-34.11
Formation of 280 µm Diameter Centerflow with Coaxial Microfluidic Device using Computational Fluid Dynamics
 Nguyen, Trung* (*University of Ulsan*); Nguyen, Hang Phuong (*University of Ulsan*); Duong, Thuy (*University of Ulsan*); Phan, Huu Lam (*Ulsan University*); Le, Thi Huong (*University of Ulsan*); Son, Hyewon (*University of Ulsan, Ulsan*); Lee, HyoSeok (*University of Ulsan*); Oh, Seok (*University of Ulsan*); Lee, Suwon (*University of Ulsan*); Hwang, Changho (*Ulsan University Hospital*); Koo, Kyoin (*University of Ulsan*)
- 18:00-19:30 ThPOS-34.12
Control of Neurite Outgrowth using Ultrasound Vibration
 Fujiwara, Koji* (*Doshisha University*); Koyama, Daisuke (*Doshisha University*)
- 18:00-19:30 ThPOS-34.13
The Center for Reproducible Biomedical Modeling
 Rampadarath, Anand* (*Univ. of Auckland*); Nickerson, David Phillip (*Univ. of Auckland*); Blinov, Michael (*Univ. of Connecticut School of Medicine*); Gennari, John H. (*Univ. of Washington*); Goldberg, Arthur (*Icahn School of Medicine at Mount Sinai*); Karr, Jonathan (*Icahn School of Medicine at Mount Sinai*); Moraru, Ion (*Univ. of Connecticut School of Medicine*); Sauro, Herbert (*Univ. of Washington*)
- 18:00-19:30 ThPOS-34.14
Visualization Tool for Simulations in Systems Medicine
 Asai, Yoshiyuki* (*Yamaguchi University Graduate School of Medicine*); Li, Li (*Intasect Communications Inc*); Abe, Takeshi (*Yamaguchi University*)
- 18:00-19:30 ThPOS-34.15
Development of Emergency Level Prediction Algorithm based Bio-Signals
 Lee, SeungJae (*Hanyang Univ.*); Kang, DongHun (*Hanyang Univ.*); Kim, Sun I. (*Osong Medical Innovation Foundation*); Lee, Jong-Shill* (*Hanyang Univ.*); Kim, In Young (*Hanyang Univ.*)

- 18:00-19:30 ThPOS-34.16
Physical Activity Patterns of Patients with Chronic Heart Failure
 O'Donnell, Johanna* (*University of Oxford*); Smith-Byrne, Karl (*University of Oxford*); Velardo, Carmelo (*University of Oxford*); Conrad, Nathalie (*University of Oxford*); Khorshidi, Reza (*University of Oxford*); Doherty, Aiden (*University of Oxford*); Dwyer, Terence (*University of Oxford*); Tarassenko, Lionel (*University of Oxford*); Rahimi, Kazem (*University of Oxford*)
- 18:00-19:30 ThPOS-34.17
Muscle-Linkage Skill Tracker for Efficient and Stable Pedaling
 Saisho, Osamu* (*NTT*); Tsukada, Shingo (*NTT Basic Research Laboratories*); Nakashima, Hiroshi (*Materials Science Research Laboratory, NTT Basic Research Labora*); Imamura, Hiroshi (*NTT*); Mihara, Atsunori (*NTT*)
- 18:00-19:30 ThPOS-34.18
Hand Position Recognition with Wearable Device for Intermittent Fasting Assistance
 Lee, HyoSeok (*University of Ulsan*); Son, Hyewon (*University of Ulsan, Ulsan*); Phan, Huu Lam (*Ulsan University*); Lee, Suwon (*University of Ulsan*); Duong, Thuy (*University of Ulsan*); Nguyen, Trung (*University of Ulsan*); Nguyen, Hang Phuong (*University of Ulsan*); Le, Thi Huong (*University of Ulsan*); Oh, Seok (*University of Ulsan*); Hwang, Changho (*Ulsan University Hospital*); Koo, Kyoin* (*University of Ulsan*)
- 18:00-19:30 ThPOS-34.19
A Template-Based Walking Phase Detection Algorithm for Ambulatory Patients during Rehabilitation
 Demkó, László* (*University Hospital Balgrist*); Schneider, Sophie (*University Hospital Balgrist*); Curt, Armin (*Spinal Cord Injury Centre, Balgrist University Hospital*)
- 18:00-19:30 ThPOS-34.20
Design of Strip-Type Force Sensor Interfacing Circuit for Body Movement during Sleep Study
 Shin, Hangsik (*Chonnam National University*); Lee, Deuk Yong (*Daelim University*); Yun, Yonghyeon* (*Daelim University*)
- 18:00-19:30 ThPOS-34.21
Modeling of Metacarpophalangeal Joint Movement using Functional Electrical Stimulation by Controlling the Equilibrium-Point
 Nagai, Miwa* (*Osaka University*); Atsumi, Keita (*Hiroshima City University*); Taniguchi, Kazuhiro (*The University of Tokyo*); Matsui, Kazuhiro (*Osaka University*); Hirai, Hiroaki (*Osaka University*); Nishikawa, Atsushi (*Osaka University*)
- 18:00-19:30 ThPOS-34.22
Discrete-Time Sliding Mode Control of an Antagonistic Muscle
 Quy Thinh, Dao* (*Shibaura Institute of Technology*); Yamamoto, Shin-ichiroh (*Shibaura Institute of Technology*)
- 18:00-19:30 ThPOS-34.23
Investigation of Interspinous Stabilization Devices for Lumbar Spinal Stenosis Treatment
 Liu, Pao-Hsin (*I-Shou University*); Tsai, Tung-Lin* (*Metal Industries Research & Development Center*); Yang, Shih-Chieh (*E-Da Hospital*); Hung, Hsiu-Ping (*I-Shou University*); Chen, Pin-Hsuan (*I-Shou University*)
- 18:00-19:30 ThPOS-34.24
Time Ahead Foot Velocity Predictions during Human Gait Changes in a Terrestrial Environment via Evolving Takagi-Sugeno Fuzzy Logic
 Vereshchaga, Yana* (*Johannes Kepler University*); Doppelhammer, Nikolaus (*Johannes Kepler University*); Baumgartner, Werner (*Johannes Kepler University Linz*)
- 18:00-19:30 ThPOS-34.25
The Mechanics of Tibialis Anterior Muscle during Swing Phase Ankle Dorsiflexion: Implications for Biomimetic Device Design
 Bajelan, Soheil (*Victoria University, Melbourne*); Sparrow, William (*Victoria University*); Begg, Rezaul* (*Victoria University*)
- 18:00-19:30 ThPOS-34.26
Development of a Whole-Body Skeletal Model of a Rat based on Anatomical Landmarks for Detailed Motion Analysis
 Shimane, Yuta (*Tokyo University of Science*); Takemura, Hiroshi (*Tokyo University of Science*); Kaneko, Hidekazu (*AIST*); Ayusawa, Ko (*National Institute of Advanced Industrial Science & Technology*); Tsujimura, Yuki (*RIKEN*); Mochimaru, Masaaki (*National Institute of Advanced Industrial Science and Technology*); Yokota, Hideo (*RIKEN Center for Advanced Photonics*); Oota, Satoshi* (*RIKEN*)
- 18:00-19:30 ThPOS-34.27
Influence of Different Boundary Conditions and Averaging Algorithms on Mechanical Behavior in FE Modeling of the Proximal Femur
 Saemann, Michael* (*Univ. Medical Center Rostock*); Kebbach, Märuan (*Dept. of Orthopaedics, Univ. Medicine Rostock*); Sass, Jan-Oliver (*Univ. Medical Center Rostock*); Mauck, Josephine (*Univ. Medical Center Rostock*); Schulze, Christian (*Univ. Medical Center Rostock*); Kluess, Daniel (*Rostock Univ. Medical Center, Dept. of Orthopaedics*); Bader, Rainer (*Univ. Medicine of Rostock, Dept. of Orthopaedics*)
- 18:00-19:30 ThPOS-34.28
Investigating Motility and Pattern Formation in Pluripotent Stem Cells through Agent-Based Modelling
 Wang, Minhong* (*University of Edinburgh*); Tsanas, Athanasios (*University of Edinburgh*); Blin, Guillaume (*University of Edinburgh*); Robertson, Dave (*University of Edinburgh*)
- 18:00-19:30 ThPOS-34.29
Evaluation of Tissue Adhesion Strength Utilizing the Spontaneous Detachment from Micro Curvature
 Matsuzawa, Ryosuke (*Keio Univ.*); Kollmannsberger, Philip (*Center for Computational & Theoretical Biology, Univ. of*); Sudo, Ryo (*Keio Univ.*); Yamashita, Tadahiro* (*Keio Univ.*)
- 18:00-19:30 ThPOS-34.30
A Piezoelectric Strain-Adaptive Bone Remodeling Simulation
 Bansod, Yogesh* (*University of Rostock*); Kebbach, Märuan (*Dept. of Orthopaedics, University Medicine Rostock*); Bader, Rainer (*University Medicine of Rostock, Dept. of Orthopaedics*); van Rienen, Ursula (*University of Rostock*)
- 18:00-19:30 ThPOS-34.31
Effect of Mixing Saline Irrigation and Blood Flow in Numerical Model of Radiofrequency Ablation
 Ahn, Jin Woo (*KBIO*); Lee, Kang Moo* (*Osong Medical Innovation Foundation*); Lee, Seung-A (*Osong Medical Innovation Foundation*); Jung, Hachul (*KBIO*); Roh, Younghoon (*Osong Medical Innovation Foundation*); Kim, Young-Jin (*Osong Medical Innovation Foundation*)
- 18:00-19:30 ThPOS-34.32
Construction of Metabolic Agent Migration Model in Brain Tissue
 Sasaki, Jun* (*Tokai Univ.*); Utsuki, Tomohiko (*Tokai Univ.*)
- 18:00-19:30 ThPOS-34.33
Initiation and Maintenance of Re-Entrant Atrial Propagation: A Computational Vulnerability Study
 Azzolin, Luca* (*Karlsruhe Institute of Technology*); Sanchez Arciniegas, Jorge Patricio (*Karlsruhe Institute of Technology*); Schuler, Steffen (*Karlsruhe Institute of Technology (KIT)*); Wachter, Andreas (*Karlsruhe Institute of Technology*); Doessel, Olaf (*Karlsruhe Institute of Technology (KIT)*); Loewe, Axel (*Karlsruhe Institute of Technology (KIT)*)
- 18:00-19:30 ThPOS-34.34
A Comprehensive Model for Airway Inert Gas Mixing
 Rastar, Amir* (*The University of Auckland*); Clark, Alys (*The University of Auckland*); Burrowes, Kelly Suzanne (*The University of Auckland*); Thompson, Bruce (*Immunology & Respiratory Medicine, The Alfred Hospital*); Nilsen, Kris (*School of Health Sciences, Faculty of Health, Arts & Design.*); Tawhai, Merryn (*The University of Auckland*)

18:00-19:30 ThPOS-34.35
Surrogate Modeling for Neuroprotective Focal Brain Cooling Device
 Abe, Takuto* (*Kyoto Univ.*); Inoue, Takao (*Yamaguchi Univ.*); Fujiwara, Koichi (*Kyoto Univ.*); Nomura, Sadahiro (*Yamaguchi Univ.*); Imoto, Hirochika (*Yamaguchi Univ.*); Suzuki, Michiyasu (*Yamaguchi Univ.*); Kano, Manabu (*Kyoto Univ.*)

18:00-19:30 ThPOS-34.45
Development of Myoelectric Hand Orthosis using 3D Printing
 Yoo, Hyun-Joon* (*Gwangju Institute of Science & Technology.*); Lee, Sangbaek (*Gwangju Institute of Science & Technology.*); Kim, Jongheon (*Inha University.*); Lee, Boreom (*Gwangju Institute of Science & Technology (GIST)*)

18:00-19:30 ThPOS-34.36
Preliminary Results for Monte Carlo Modeling in Optical Coherence Tomography
 Quintanar, Kévin (*EUPF*); Jupille, Hugo (*ENSSAT*); Pham, Jérôme (*ENSSAT*); Krewcun, Camille (*Institut Pascal*); Sarry, Laurent (*Université d'Auvergne*); Combaret, Nicolas (*Institut Pascal*); Péry, Emilie* (*Université Clermont Auvergne*)

18:00-19:30 ThPOS-34.46
Automatic Clustering of Spinal Reflexes Evoked by Epidural Electrical Stimulation of the Cervical Spinal Cord in Non-Human Primates
 Barra, Beatrice* (*University of Fribourg*); Zhuang, Katie (*Université de Fribourg*); Conti, Sara (*Université de Fribourg*); Schiavone, Giuseppe (*Ecole Polytechnique Federale de Lausanne*); Lacour, Stéphanie (*EPFL*); Bloch, Jocelyne (*Centre Hospitalier Universitaire Vaudois, CHUV*); Courtine, Gregoire (*EPFL*); Capogrosso, Marco (*University of Fribourg*)

18:00-19:30 ThPOS-34.37
A Phantom Study: Evaluation of a Novel Three-Lumen Balloon Catheter for Treatment of Intractable Limb Ischemia
 Tatarlar, Efecan* (*Boğaziçi University*); Yusuf, Emir (*Boğaziçi University*); Kocaturk, Ozgur (*Boğaziçi University*)

18:00-19:30 ThPOS-34.47
Exercise Induced Cardio Acceleration in Complete Cervical Injuries
 Umbel, Calista* (*Tarleton State Univ., Stephenville, TX*); Petroff, Neil (*Tarleton State Univ.*); Wall, Nathan (*Tarleton State Univ.*)

18:00-19:30 ThPOS-34.38
In Vitro Exposure System for Tumor Treating Fields
 Berkelmann, Lukas* (*Leibniz Univ. Hannover*); Bader, Almke (*Institute of Cell Biology & Biophysics, Dept. of Cell Phy*); Meshksar, Saba (*Institute of Microwave & Wireless System, Leibniz Univ. H*); Ngezhahayo, Anaclet (*Institute of Cell Biology & Biophysics, Dept. of Cell Phy*); Manteuffel, Dirk (*Institute of Microwave & Wireless System, Leibniz Univ. H*)

18:00-19:30 ThPOS-34.48
Surface Electromyography Classification using Wavelet Packet Decomposition and Convolutional Neural Network
 Park, Hyeong-jun* (*Gwangju Institute of Science & Tech.*); Yoo, Hyun-Joon (*Gwangju Institute of Science & Tech.*); Lee, Boreom (*Gwangju Institute of Science & Tech. (GIST)*)

18:00-19:30 ThPOS-34.39
A Simple Method to Fabricate a Surface Brachytherapy Applicator for Beta Radiation Therapy of Superficial Skin Tumors
 Pashazadeh, Ali* (*Otto-von-Guericke-Univ. of Magdeburg, Germany*); Boese, Axel (*Dept. of Medical Engineering, Otto-von-Guericke-Univ.*); Friebe, Michael (*Otto-von-Guericke-Univ.*)

18:00-19:30 ThPOS-34.49
Application of Passive Robotic Hand Therapy in Chronic Stroke Rehabilitation
 Tsai, Yuh-Show* (*Chung Yuan Christian University*); Hsu, Chia-Yu (*Chung Yuan Christian University*); Sahayam, Dravvy (*Chung Yuan Christian University*)

ThPOS-35: 18:00-19:30 Hall B
Research-Poster-1-Page Th D (Poster Session)

18:00-19:30 ThPOS-34.40
Development of Slave Device of Teleoperation System for Catheterization that can Detect Collision Force
 Osada, Keita* (*Shibaura institute of technology*); Hanafusa, Akihiko (*Shibaura Institute of Technology*)

18:00-19:30 ThPOS-35.1
Multimodal Medical Image Fusion by Optimizing Learned Pixel Weights using Structural Similarity Index
 Kumar, Nishant* (*TU Dresden*); Hoffmann, Nico (*Helmholtz-Zentrum Dresden-Rossendorf*); Oelschlägel, Martin (*Universitätsklinikum Carl Gustav Carus, Klinik und Poliklinik fū*); Koch, Edmund (*Clinical Sensoring & Monitoring, Dept. of Anesthesiology*); Matthias, Kirsch (*Asklepios Kliniken Schildautal Seesen, Abteilung für Neurochirurg*); Gumhold, Stefan (*TU Dresden*)

18:00-19:30 ThPOS-34.41
Towards Non-Assembly 3D Printed Medical Instruments
 Culmone, Costanza* (*Delft University of Technology*); Bazuin, Loes (*Delft University of Technology*); Scali, Marta (*Delft University of Technology*); Smit, Gerwin (*Delft University of Technology*); Breedveld, Paul (*Delft University of Technology*)

18:00-19:30 ThPOS-35.2
A Statistical Determination of the Energy Delivered to Muscular Tissue in Electrostimulation Protocols
 Amador, Alejandro* (*Faculty of Science, UNAM*); Legaria, Uriel (*National Autonomous University of Mexico*); Vazquez, Fabian (*Physics Dept., Faculty of Science, UNAM*)

18:00-19:30 ThPOS-34.42
Development of a New Tourniquet which Applied EHD Phenomenon
 Takei, Yusuke* (*Tokyo Denki Univ.*); Yamaguchi, Takashi (*Tokyo Denki Univ.*); Maeda, Hiroyuki (*Juntendo Univ.*); Iwase, Hideaki (*Juntendo Univ.*); Morohashi, Itaru (*Juntendo Univ. Shizuoka medical research Center for disast*); Kanda, Akio (*Juntendo Univ. Shizuoka medical research Center for disast*); Kaneko, Kazuo (*Juntendo Univ. Tokyo*); Maeda, Mutsuhiro (*Maeda Hospital*); Terasaka, Sumitaka (*Sanyo Metal Industry Co. Ltd*); Shimoohkawa, Takeharu (*Sanyo Metal Industry*); Mitsui, Kazuyuki (*Tokyo Denki Univ.*)

18:00-19:30 ThPOS-35.3
Signal-to-Noise Ratio Determination in a Hybrid System of Electrostimulation and Electromyography
 Amador, Alejandro* (*Faculty of Science, UNAM*); Legaria, Uriel (*National Autonomous University of Mexico*); Vazquez, Fabian (*Physics Dept., Faculty of Science, UNAM*)

18:00-19:30 ThPOS-34.43
Photosensitizer Tomographical Fluorescence Predictive Analysis for Dermatological Photodynamic Therapy Monitoring
 Fanjul-Vélez, Félix (*University of Cantabria*); Arce-Diego, José L.* (*University of Cantabria*)

18:00-19:30 ThPOS-35.4
Determination of Frequency Components in Voluntary and Electrically Induced Contractions
 Legaria, Uriel* (*National Autonomous University of Mexico*); Amador, Alejandro (*Faculty of Science, UNAM*); Vazquez, Fabian (*Physics Dept., Faculty of Science, UNAM*)

18:00-19:30 ThPOS-34.44
Post-Stroke Changes in the Muscle Synergies of the Less-Affected Upper Limb
 Lo, Michi WT (*The Chinese Univ. of Hong Kong*); So, Lester KP (*The Chinese Univ. of Hong Kong*); Rimini, Daniele (*Laboratory of Neurorehabilitation Technologies, IRCCS San Camill*); Turolla, Andrea (*IRCCS San Camillo Hospital Foundation*); Cheung, Vincent CK* (*The Chinese Univ. of Hong Kong*)

18:00-19:30 ThPOS-35.5
Analysis of Muscle Fatigue during Exercise and Exercise Combined with Electrostimulation
 Amador, Alejandro* (*Faculty of Science, UNAM*); Legaria, Uriel (*National Autonomous University of Mexico*); Vazquez, Fabian (*Physics Dept., Faculty of Science, UNAM*)

- 18:00-19:30 ThPOS-35.6
Power Spectrum Analysis of the Effect of Electrostimulation Over the Muscle with and without Exercise
 Legaria, Uriel* (*National Autonomous University of Mexico*); Amador, Alejandro (*Faculty of Science, UNAM*); Vazquez, Fabian (*Physics Dept., Faculty of Science, UNAM*)
- 18:00-19:30 ThPOS-35.7
Surface Modified Rare Earth Doped Nanoparticles with Increased Cell Internalization for Infrared Imaging at High Sensitivities
 Zhao, Zhenghuan (*Southwest Univ., College of Pharmaceutical Sciences, Chongq*); Yuan, Jun (*National Univ. of Singapore*); Bandla, Aishwarya (*National Univ. of Singapore*); Thakor, Nitish (*National Univ. of Singapore*); Tan, Mei Chee* (*Singapore Univ. of Technology & Design*)
- 18:00-19:30 ThPOS-35.8
Multi-Functional Nanostructured Biocomposites for Implantable, Biocompatible, and Biodegradable Electronics
 Shim, Bong Sup* (*Inha University*)
- 18:00-19:30 ThPOS-35.9
Apoptotic Anticancer Activity of Multifunctional Magnetic Nanoparticles for Biomedical Theragnostics
 Nam, Ki Chang (*Dongguk University College of Medicine*); Park, Bong Joo* (*Kwangwoon University*)
- 18:00-19:30 ThPOS-35.10
Soft and Durable Neural Micro-Electrode Coating by Synthesis of PEDOT: PSS / Graphene Composites
 Lee, Seunghyeon (*Inha University*); Eom, Taesik (*Inha University*); Shim, Bong Sup* (*Inha University*)
- 18:00-19:30 ThPOS-35.12
Fast Neural Electrical Impedance Tomography of Peripheral Nerves: Validation with Micro Computed Tomography and Neural Tracers
 Ravagli, Enrico* (*University College London*); Mastitskaya, Svetlana (*University College London*); Thompson, Nicole (*University College London*); Aristovich, Kirill (*University College London*); Holder, David (*University College London*)
- 18:00-19:30 ThPOS-35.13
A Tactile Presentation System for Myoelectric Arm User Configured using the Disk Vibrator
 Nakata, Kodai* (*Tokai Univ.*); Magatani, Kazushige (*Tokai Univ.*)
- 18:00-19:30 ThPOS-35.14
Regulating Calcium Ion Channel TRPV1 by Electrical Stimulation and Magnetic Field of Neuronal Cells
 Lin, You-Rong (*National Chiao Tung University*); Chen, Nelson (*National Chiao Tung University*); Chen, Li-Reng (*National Chiao Tung University, Institute of Biomedical Engineer*); Lin, Shien-Fong (*National Chiao Tung University*); Chen, Guan-Yu* (*National Chiao Tung University*)
- 18:00-19:30 ThPOS-35.15
AirRay: Soft High-Resolution Silicone-Platinum Electrodes
 Schuettler, Martin* (*CorTec GmbH*); Rickert, Joern (*CorTec GmbH*); Henle, Christian (*Cortec GmbH*); Stieglitz, Thomas (*University of Freiburg*); Kohler, Fabian (*CorTec GmbH*)
- 18:00-19:30 ThPOS-35.16
An In-Vitro Study of Subretinal Stimulation using Three-Dimensional Flexible Microelectrodes
 Seo, Hee Won* (*Daegu Gyeongbuk Institute of Science & Tech. (DGIST)*); Kim, Namju (*Daegu Gyeongbuk Institute of Science of Tech.*); Ahn, Jungryul (*Chungbuk National Univ.*); Cha, Seongkwang (*Chungbuk National Univ.*); Goo, Yong Sook (*Chungbuk Natl Univ. School of Medicine*); Kim, Sohee (*Daegu Gyeongbuk Institute of Science & Tech. (DGIST)*)
- 18:00-19:30 ThPOS-35.17
The MANTArray – A Multisite Active Neuro-Technology Array for High Density Recordings and Stimulation
 Boehler, Christian* (*Univ. of Freiburg*); Vomero, Maria (*Univ. of Freiburg*); Liljermalm, Rickard (*Univ. of Freiburg, Dept. of Microsystems Engineering-I*); Stieglitz, Thomas (*Univ. of Freiburg*); Asplund, Maria (*Univ. of Freiburg*)
- 18:00-19:30 ThPOS-35.18
Towards Reliable Shape Encoding in Artificial Retinal Stimulation
 Lee, Meng-Jung* (*Natural & Medical Sciences Institute at The Univ. of Tübi*); Corna, Andrea (*NMI Natural & Medical Sciences Institute at the Univ. of*); Jetter, Florian (*NMI Natural & Medical Sciences Institute at the Univ. of*); Zeck, Günther (*Natural & Medical Sciences Institute at The Univ. of Tübi*)
- 18:00-19:30 ThPOS-35.19
Benchtop Characterization of Rat Epiretinal Stimulation Array for Artificial Vision Prostheses
 Yoon, Eugene* (*University of Southern California*); Wong, Janeline (*University of Southern California*); Koo, Beomseo (*University of Michigan*); Weiland, James (*University of Michigan*); Meng, Ellis (*University of Southern California*)
- 18:00-19:30 ThPOS-35.20
Effect of Nerve Growth Factor on Axonal Regeneration of Motor Neurons Cultured in the Microfluidic Platform
 Jeong, Hee Soo (*Ewha Womans University*); Yoo, Hyun Ji (*Ewha Womans University*); Cho, Yoon Kyung (*Ewha Womans University*); Min, Kyou Sik (*Seoul National University*); Jun, Sang Beom* (*Ewha Womans University*)
- 18:00-19:30 ThPOS-35.21
Electrochemical Characterization of Electrode Materials for Retinal Stimulation
 Kim, Namju* (*Daegu Gyeongbuk Institute of Science of Technology*); Seo, Hee Won (*Daegu Gyeongbuk Institute of Science & Technology (DGIST)*); Kim, Ji Hwan (*Gwangju Institute of Science & Technology*); Yoon, Myung-Han (*Gwangju Institute of Science & Technology*); Kim, Sohee (*Daegu Gyeongbuk Institute of Science & Technology (DGIST)*)
- 18:00-19:30 ThPOS-35.22
Validation of Test-Retest Reliability of Multimodal Biosignal-Based Craving Detection in Young Adults with Internet Gaming Disorder
 Kim, Hodam (*Hanyang University*); Chae, Younsoo (*Hanyang University*); Im, Chang-Hwan* (*Hanyang University*)
- 18:00-19:30 ThPOS-35.23
Using Artificial Neural Network with Waveform Features of Photoplethysmography for Noninvasive Blood Pressure Estimation
 Lee, Tsung-Chieh (*Yuanpei Univ. of Medical Technology*); Kao, Shin-Yu (*Taipei medical Univ.*); Lee, Man-Hua (*Taipei Medical Univ.*); Chiu, Hung-Wen* (*Taipei Medical Univ.*)
- 18:00-19:30 ThPOS-35.24
Development of Human Biosignals-Based Insider Detection Technology
 Kim, Jung Hwan* (*Korea Advanced Institute of Science & Technology*); Kim, Chulmin (*KAIST*); Yim, Man-Sung (*Korea Advanced Institute of Science & Technology*)
- 18:00-19:30 ThPOS-35.25
Deep-Channel: An Ion Channel Event Detector using a Recurrent Convolutional Neural Network
 Celik, Numan* (*University of Liverpool*); O'Brien, Fiona (*University of Liverpool*); Zheng, Yalin (*University of Liverpool*); Coenen, Frans (*Dept. of Computer Science, University of Liverpool*); Barrett-Jolley, Richard (*University of Liverpool*)
- 18:00-19:30 ThPOS-35.26
Voice Conversion System for Dysarthric Speakers based on Convolutional Neural Network Approach
 Lee, Chen Kai (*National Yang-Ming Univ.*); Chen, Ko-Chiang (*National Yang-Ming Univ.*); Jhang, Sin-Hua (*National Yang-Ming Univ.*); Lai, Ying-Hui* (*National Yang-Ming Univ.*)
- 18:00-19:30 ThPOS-35.27
A Neural Network for Posture Recognition in College Dorm Rooms for Disabled Students
 Guerra, Bruna Maria Vittoria* (*Università degli Studi di Pavia*); Ramat, Stefano (*Università di Pavia*); Beltrami, Giorgio (*Università degli Studi di Pavia*); Schmid, Micaela (*Università degli Studi di Pavia*)

18:00-19:30	ThPOS-35.28	ThPOS-36: 18:00-19:30	Hall B
DBS Electrode Selection in Deep Brain Stimulation Surgery using a Neural Network Model Khosravi, Mahsa* (<i>Univ. of Western Ontario</i>); Atashzar, Seyed Farokh (<i>ECE Dept. at Western Univ. (UWO)</i>), & Canadian Surgica); Gilmore, Greydon (<i>Univ. of Western Ontario</i>); Jog, Mandar (<i>Univ. of Western Ontario – London Health Sciences Centre</i>); Patel, Rajni (<i>London Health Sciences Centre</i>)		Research-Poster-1-Page Th E (Poster Session)	
18:00-19:30	ThPOS-35.29	18:00-19:30	ThPOS-36.1
Unsupervised Learning of Subject-Specific Heart Rate Variability Time-Frequency Characteristics Wachowiak, Mark Paul* (<i>Nipissing University</i>); Moggridge, Jason (<i>Nipissing University</i>); Smolikova-Wachowiak, Renata (<i>Nipissing University</i>)		The Comparison between Cuff Electrode and Microelectrode Array in Peripheral Nerve Electrical Stimulation Zhang, Peng* (<i>Huazhong University of Science & Technology</i>); Li, Qiang (<i>Huazhong University of Science & Technology</i>)	
18:00-19:30	ThPOS-35.30	18:00-19:30	ThPOS-36.2
A Basic Study on Objective Evaluation of Emotion with EEG in Image Presentation by Recurrent Neural Network Oyama, Kento* (<i>Tokyo City University</i>); Tatsuta, Masahiro (<i>Tokyo City University</i>); Minemura, Kohei (<i>Tokyo City University</i>); Kyoso, Masaki (<i>Tokyo City University</i>)		Evaluating the Effects of Intracortical Microstimulation in Anaesthetized and Awake Behaving Rats Averna, Alberto* (<i>Istituto Italiano di Tecnologia</i>); Guggenmos, David (<i>Dept. of Physical Medicine & Rehabilitation University of</i>); Buccelli, Stefano (<i>Istituto Italiano di Tecnologia, Genova, Italy</i>); Semprini, Marianna (<i>Italian Institute of Technology</i>); Nudo, Randolph (<i>University of Kansas Medical Center</i>); Chiappalone, Michela (<i>Istituto Italiano di Tecnologia</i>)	
18:00-19:30	ThPOS-35.31	18:00-19:30	ThPOS-36.3
1-Year Mortality Prediction Model for Heart Failure Patients: Data from the Korean Acute Heart Failure (KorAHF) Registry Shin, Heean (<i>Seoul National Univ.</i>); Choi, Dong-Ju (<i>Seoul National Univ. Bundang Hospital</i>); Park, Jin-Joo (<i>Seoul National Univ. Bundang Hospital</i>); Kim, Hee Chan (<i>Seoul National Univ.</i>); Yoon, Hyung-Jin* (<i>Seoul National Univ.</i>)		Modulation of Brain Networks by Repetitive Theta Burst Stimulation in Mal De Debarquement Syndrome Chen, Yafen (<i>University of Oklahoma</i>); Urbano, Diamond (<i>Laureate Institute for Brain Research</i>); Doudican, Benjamin (<i>Laureate Institute of Brain Research</i>); Ding, Lei (<i>University of Oklahoma</i>); Cha, Yoon-Hee (<i>Laureate Institute of Brain Research</i>); Yuan, Han* (<i>University of Oklahoma</i>)	
18:00-19:30	ThPOS-35.32	18:00-19:30	ThPOS-36.4
Blood Pressure Estimation based on Convolutional Neural Network using ECG, PPG and BCG Eom, Heesang (<i>Kwangwoon Univ.</i>); Han, Seungwoo (<i>Kwangwoon Univ.</i>); Lee, Dongseok (<i>Seoul National Univ.</i>); Park, Kwang S. (<i>Seoul National Univ.</i>); Park, Cheolsoo* (<i>Kwangwoon Univ.</i>)		Changes in Spontaneous Electroencephalography by Transcranial Direct Current Stimulation during a Motor Task Choi, Ga-Young (<i>Kumoh National Institute of Technology</i>); Choi, Soo-In (<i>Kumoh National Institute of Technology</i>); Hwang, Han-Jeong* (<i>Kumoh National Institute of Technology</i>)	
18:00-19:30	ThPOS-35.33	18:00-19:30	ThPOS-36.5
Classification of Motor Imagery Tasks using Priority of Principal Components Defined by Reinforcement Learning Cho, Taeheum (<i>Kwangwoon Univ.</i>); Seok, Woojoon (<i>Kwangwoon Univ.</i>); Park, Cheolsoo* (<i>Kwangwoon Univ.</i>)		Preferentially Stimulating Retinal Ganglion Cells using Clinically-Relevant Electrode Size and Stimulation Duration Guo, Tianruo (<i>Univ. of New South Wales</i>); Tsai, David (<i>Columbia Univ.</i>); Shivdasani, Mohit N. (<i>Univ. of New South Wales</i>); Wu, Tianzhun (<i>Shenzhen Institutes of Advanced Technology (SIAT), Chinese Acade</i>); Dokos, Socrates (<i>Univ. of New South Wales</i>); Lovell, Nigel H.* (<i>Univ. of New South Wales</i>)	
18:00-19:30	ThPOS-35.34	18:00-19:30	ThPOS-36.6
Epileptic Intracranial Electroencephalogram Signal Detection using Linear and Non-Linear Classifiers Hadipour, Sarah* (<i>Northeastern Univ.</i>); Tokhmpash, Ala (<i>Northeastern Univ.</i>); Shafai, Bahram (<i>Northeastern Univ.</i>)		Quantitatively Controlling Functionally-Distinct Retinal Ganglion Cells using Electrical Stimulation Muralidharan, Madhuvanathi (<i>GSBME UNSW</i>); Guo, Tianruo (<i>University of New South Wales</i>); Shivdasani, Mohit N. (<i>University of New South Wales</i>); Tsai, David (<i>Columbia University</i>); Dokos, Socrates (<i>University of New South Wales</i>); Morley, John William (<i>University of Western Sydney</i>); Lovell, Nigel H.* (<i>University of New South Wales</i>)	
18:00-19:30	ThPOS-35.35	18:00-19:30	ThPOS-36.7
Detecting Abnormal Period in Epileptic EEG using Deep Neural Networks Shoji, Taku (<i>Tokyo Univ. of Agriculture & Technology</i>); Yoshida, Noboru (<i>Juntendo Univ. Nerima Hospital</i>); Fukumori, Kosuke (<i>Tokyo Univ. of Agriculture & Technology</i>); Tanaka, Toshihisa* (<i>Tokyo Univ. of Agriculture & Technology</i>)		Automatic Search of Optimal Transcranial Magnetic Stimulation Parameters Tervo, Aino* (<i>Aalto University</i>); Metsomaa, Johanna (<i>Aalto University</i>); Nieminen, Jaakko (<i>Aalto University School of Science</i>); Sarvas, Jukka (<i>Aalto University</i>); Ilmoniemi, Risto (<i>Aalto University School of Science</i>)	
18:00-19:30	ThPOS-35.36	18:00-19:30	ThPOS-36.8
Ballistocardiogram-Based Sleep Stage Classification using Long Short-Term Memory Networks Choi, Sang Ho (<i>Seoul National Univ.</i>); Kwon, Hyunbin (<i>Seoul National Univ.</i>); Jin, Hyungwon (<i>Seoul National Univ.</i>); Lee, Mi Hyun (<i>Seoul National Univ. Hospital</i>); Lee, Yujin (<i>Seoul National Univ. Hospital</i>); Park, Kwang S.* (<i>Seoul National Univ.</i>)		Relationship between Neuromuscular Electrical Stimulation Patterns and Knee Angle during Induced Fatigue Protocol in Spinal Cord Injury Subjects Rinaldin, Carla Daniele* (<i>Pontifical Catholic Univ. of Paraná</i>); Papcke, Caluê (<i>Pontifícia Univ. Católica do Paraná</i>); Krueger, Eddy (<i>State Univ. of Londrina</i>); Nogueira-Neto, Guilherme (<i>Pontifícia Univ. Católica do Paraná</i>); Nohama, Percy (<i>Pontifícia Univ. Católica do Paraná</i>); Scheeren, Eduardo Mendonça (<i>Federal Technological Univ. of Paraná</i>)	
18:00-19:30	ThPOS-35.37	18:00-19:30	ThPOS-36.9
Using EEG to Determine Response Certainty during a Spatial Knowledge Acquisition Training Protocol Kenny, Bret* (<i>Memorial University</i>); Veitch, Brian (<i>Memorial University</i>); Power, Sarah (<i>Memorial University</i>)		Cortical Brain Activation Difference by the Skill Level of Cognitive Sequential Rhythm Task Lee, Gihyoun (<i>Samsung Medical Center</i>); Jeong, Seonyun (<i>DGIST</i>); Lee, Seung Hyun (<i>Kyungpook National University</i>); Jung, YoungJin* (<i>Dongseo University</i>)	
18:00-19:30	ThPOS-35.38		
Unsupervised Clustering of Wakefulness Levels with Autoencoder Networks and Gaussian Mixture Models on EEG Single-Trial Data Finke, Andrea* (<i>Bielefeld University, Bielefeld, Germany</i>); Lang, Martin (<i>Bielefeld University</i>); Steppacher, Inga (<i>Bielefeld University</i>); Kissler, Johanna (<i>Bielefeld University</i>); Ritter, Helge (<i>CITEC, CoR-Lab, Bielefeld University, Bielefeld, Germany</i>)			

- 18:00-19:30 ThPOS-36.10
An Experiment Study of Bending and Torsion Fractures Morphology of Deep Brain Stimulation Leads
 Li, Linze (*Tsinghua Univ.*); Jiang, Changqing (*Tsinghua Univ.*); Wang, Hanchen (*Beihang Univ.*); Li, Luming* (*Tsinghua Univ.*)
- 18:00-19:30 ThPOS-36.11
Significant Differences in Neuronal Responses to High-Frequency Pulse Stimulation with Constant and Varying Inter-Pulse-Intervals
 Hu, Hanhan (*Zhejiang Univ.*); Feng, Zhouyan* (*Zhejiang Univ.*); Zheng, Lvpio (*Zhejiang Univ.*); Yuan, Yue (*Zhejiang Univ.*)
- 18:00-19:30 ThPOS-36.12
Axonal Stimulations with High-Frequency Pulses Alter Firing Patterns of Neurons in the Downstream Region
 Huang, Lu (*Zhejiang University*); Feng, Zhouyan* (*Zhejiang University*); Wang, Zhaoxiang (*Zhejiang University*)
- 18:00-19:30 ThPOS-36.13
Improvement Maps for Deep Brain Stimulation in Parkinson's Disease
 Nordin, Teresa* (*Linköping University*); Stenmark P., Rasmus (*Umeå University*); Blomstedt, Patric (*Umeå University*); Wardell, Karin (*Linköping University*)
- 18:00-19:30 ThPOS-36.14
Intraoperative Current and Voltage Measurement of Deep Brain Stimulation in a 6-OHDA Hemi Parkinson Rat Model
 Kober, Maria* (*Medical University Center Rostock*); Badstübner-Meeske, Kathrin (*Medial University Center Rostock, Dept. of Neurology*); Bernsdorff, Felix (*University Medical Center Rostock, Dept. of Neurology*); Storch, Alexander (*University Medical Center*); Bahls, Christian Rüdiger (*University of Rostock, Institute of General Electrical Engineeri*)
- 18:00-19:30 ThPOS-36.15
High Rate Pulsatile Stimuli Can Improve Information Transmission of Sub-Threshold Stimuli in a Hippocampal CA1 Neural Network Model
 Mori, Ryosuke (*Kanto Gakuin Univ.*); Mino, Hiroyuki* (*Kanto Gakuin Univ.*); Durand, Dominique (*Case Western Reserve Univ.*)
- 18:00-19:30 ThPOS-36.16
Spiking Network Model of Basal Ganglia for Movement Disorders
 Dutta, Abhishek* (*University of Connecticut*)
- 18:00-19:30 ThPOS-36.17
Development of Diagnostic System for Upper Limb Paralysis Patients by Motion Recognition Tracking
 Kim, SuBok (*SoonChunHyang University*); Lee, Onseok* (*SoonChunHyang University*)
- 18:00-19:30 ThPOS-36.18
Dynamic Spiking Network Model Learning Trauma Conditioning
 Dutta, Abhishek* (*University of Connecticut*)
- 18:00-19:30 ThPOS-36.19
The Clinical Feasibility of the Re-Link Trainer in Acute Stroke Rehabilitation: Preliminary Results
 Ward, Sarah (*Univ. College Dublin*); Wiedemann, Lukas (*Univ. of Auckland*); McDaid, Andrew* (*The Univ. of Auckland*)
- 18:00-19:30 ThPOS-36.20
The System That Feedback Grip Power to the Prosthetic Hand User
 Kimura, Shunsuke* (*Tokai University*); Magatani, Kazushige (*Tokai University*)
- 18:00-19:30 ThPOS-36.21
Impedance Responses Simulated with Optimal and Constant Bandwidths for Optimization of Fast Neural EIT
 Tarotin, Ilya* (*Univ. College London*); Aristovich, Kirill (*Univ. College London*); Holder, David (*Univ. College London*)
- 18:00-19:30 ThPOS-36.22
Gait Speed Control of Lower Limb Exoskeleton using Soleus Electromyogram Signals
 Lee, Jong Min* (*Korea Institute of Science & Technology*); Choi, Junho (*Korea Institute of Science & Technology*); Youn, Inchan (*Korea Institute of Science & Technology*); Kim, Seung-Jong (*Korea Univ.*)
- 18:00-19:30 ThPOS-36.23
Towards the Improvement of Algorithms used in Robot-Assisted Therapies
 Arantes, Ana Paula Bittar Britto* (*University of New Brunswick*); Bressan, Nadja (*University of Prince Edward Island*); McGibbon, Chris (*University of New Brunswick*)
- 18:00-19:30 ThPOS-36.24
Repetitively Forced use of the Paretic Leg Induced by Constraint Force Applied to the Non-Paretic Leg during Walking May Induce Motor Learning in Individuals Post-Stroke
 Wu, Ming* (*Shirley Ryan Abilitylab (Formerly Rehabilitation Institute of Ch)*); Hsu, Chao-Jung (*Shirley Ryan AbilityLab*); Kim, Janis (*Rehabilitation Institute of Chicago*)
- 18:00-19:30 ThPOS-36.25
Human Motion Tracking for Rehabilitation Basing on the 3D Image Features: A Pilot Study
 Zhou, Yi-Shu (*National Yang-Ming Univ.*); Zheng, Wei-Zhong (*National Yang Ming Univ.*); Tang, Shih-Tsang (*Ming Chuan Univ.*); Lai, Ying-Hui* (*National Yang-Ming Univ.*)
- 18:00-19:30 ThPOS-36.26
Sensorized Assistive Device to Hand Recovery
 Mercado, Federico Gustavo (*Universidad Nacional de San Juan*); Rodrigo Yanadel, H. Alejandro (*Universidad Nacional de San Juan*); Oñas, Priscila (*Universidad Nacional de San Juan Facultad de Ingenieria*); Perez Berenguer, Maria Elisa (*UNSJ*); López, Natalia M* (*Universidad Nacional de San Juan*)
- 18:00-19:30 ThPOS-36.27
Development of Wrist Rehabilitation 3D System Applying Mirror Therapy Principle for Acute Stroke Patients
 Phan, Huu Lam* (*Ulsan Univ.*); Jang, Hojeong (*Dept. of Biomedical Engineering, Univ. of Ulsan, Ulsan*); Son, Hyewon (*Univ. of Ulsan, Ulsan*); Duong, Thuy (*Univ. of Ulsan*); Nguyen, Trung (*Univ. of Ulsan*); Nguyen, Hang Phuong (*Univ. of Ulsan*); Le, Thi Huong (*Univ. of Ulsan*); Lee, Suwon (*Univ. of Ulsan*); Lee, HyoSeok (*Univ. of Ulsan*); Oh, Seok (*Univ. of Ulsan*); Hwang, Changho (*Ulsan Univ. Hospital*); Koo, KyoIn (*Univ. of Ulsan*)
- 18:00-19:30 ThPOS-36.28
EEG Coherence of Mu Rhythm in Virtual Reality Mirror Therapy
 Lim, Hyunmi (*Keimyung University*); lim, Seungeui (*Keimyung University*); Ku, Jeonghun* (*Keimyung University*)
- 18:00-19:30 ThPOS-36.29
Loss of Fascicle Gearing in Leg Muscles of Chronic Stroke Survivors
 Son, Jongsang* (*Shirley Ryan AbilityLab (formerly Rehab. Inst. of Ch)*); Rymer, William Zev (*Northwest. & Rehab Inst of Chicago*)
- 18:00-19:30 ThPOS-36.30
Titration of Drug Molecules with p53/MDM2 Fusion Protein by Monitoring Conformational Change using Solid-State Nanopores
 Chae, Hongsik (*Seoul National Univ.*); Kwak, Dong-Kyu (*Korea Research Institute of Bioscience & Biotechnology*); Lee, Mi-Kyung (*Korea Research Institute of Bioscience & Biotechnology*); Chi, Seung-Wook (*Korea Research Institute of Bioscience & Biotechnology, KRIBB*); Kim, Ki-Bum* (*Seoul National Univ.*)
- 18:00-19:30 ThPOS-36.31
A Novel Trellis-Based Heart Rate Estimation Technique
 Shimazaki, Takunori (*Osaka City University*); Hara, Shinsuke* (*Osaka City University*)

18:00-19:30 ThPOS-36.32

Pulse Wave Measurement by Piezo Film Attached to Fingernail Surface

Ishii, Kohei* (*National Institute of Technology, Kagawa College*); Fujii, Junya (*Electro-Mechanical Systems Engineering Course, Faculty of Advanc*); Nakai, Shizuki (*Electro-Mechanical Systems Engineering Course, Faculty of Advanc*); Ima, Sota (*Electro-Mechanical Systems Engineering Course, Faculty of Advanc*); Saito, Itsuro (*The University of Tokyo*); Hiraoka, Nobuaki (*National Institute of Technology, Kagawa College*)

18:00-19:30 ThPOS-36.33

Towards the Development of an Optrode Biopotential Sensor: Characterization using in Vitro Cardiac Tissue Recordings

Revol, Emilie (*École Polytechnique Fédérale de Lausanne*); Al Abed, Amr* (*University of New South Wales*); Silvestri, Leonardo (*The University of New South Wales*); Wei, Yuan (*The University of New South Wales*); Wang, Han (*The University of New South Wales*); Xinyue, Lei (*The University of New South Wales*); Firth, Josiah (*The University of New South Wales*); Lehmann, Torsten (*University of New South Wales*); Ladouceur, Francois (*University of New South Wales*); Lovell, Nigel H. (*University of New South Wales*)

18:00-19:30 ThPOS-36.34

Continuous Nocturnal Blood Pressure Tracking through Unobtrusively Sensing Pulse Transit Time

Carek, Andrew (*Georgia Institute of Technology*); Holz, Christian* (*Microsoft Research*)

18:00-19:30 ThPOS-36.35

The Changes of Trunk Dynamics in Response to Unpredictable Trip Perturbation in Older Adults

Yoo, Dongyual* (*University of Houston*); An, Junmo (*University of Houston*); Kap-Ho, Seo (*Korea Institute of Robot & Convergence*); Lee, Beom-Chan (*University of Houston*)

18:00-19:30 ThPOS-36.36

Arm Fixation Device with Laminar Jamming Structure

Lee, Chaedong (*Korea Univ.*); Hong, Daehie* (*Korea Univ.*)

18:00-19:30 ThPOS-36.37

The Effectiveness Validation of a Modularized Fixation System Providing Standardized Micromotion for Animal Study

Qi, Weichen (*The University of Hong Kong*); Feng, Xiaoreng (*Dept. of Orthopaedics & Traumatology, Queen Mary Hospital*); Zhang, Teng* (*The University of Hong Kong, Queen Mary Hospital*); Leung, Frankie Ka-Li (*The University of Hong Kong*)

18:00-19:30 ThPOS-36.38

Measurement of Strain using Ultrasound Speckle Tracking in Uniaxial Tensile Testing

Liu, Chih-Chia (*Dept. of Biomedical Engineering, National Cheng Kung Univer*); Hu, Jin-Jia* (*National Cheng Kung Univ.*)

18:00-19:30 ThPOS-36.39

Virtual Trajectory in Human Walking and Running: Dynamic Patterns Depended on Gait Speed

Fujihara, Ryo* (*Univ.*); Hirai, Hiroaki (*Osaka Univ.*); Kozasa, Kohei (*Osaka Univ.*); Watanabe, Eichi (*Osaka Univ.*); Nishikawa, Atsushi (*Osaka Univ.*); Kogawa, Daisuke (*Mizuno Corporation*); Nagao, Hiroshi (*Mizuno Corporation*); Kaneko, Yasunori (*Mizuno Corporation*); Krebs, Hermano Igo (*MIT*)

18:00-19:30 ThPOS-36.40

Prediction of Gait Events from Lower Limb Kinematics during Loaded Marching using Deep Learning

Zaroug, Abdelrahman (*Victoria University, iHeS*); Mudie, Kurt Laurence (*Victoria University*); Lai, Tze Huei, Daniel (*Victoria University*); Billing, Daniel (*Defence Science & Technology Group*); Begg, Rezaul* (*Victoria University*)

18:00-19:30 ThPOS-36.41

Tracking the 3D Shape of Steerable Catheters with Helical Markers

Yang, Anne En-Tzu* (*Sorbonne Université*); Szweczyk, Jerome (*Université Pierre et Marie Curie – Paris 6*)

Friday, 26 July 2019

FrA01: 08:30-10:00 Hall A6+A7 – Level 1
Neurological Disorders (I) (Oral Session)
Chair: Jones, Richard D. (*New Zealand Brain Research Institute*)

08:30-08:45 FrA01.1
Classification of Major Depressive Disorder from Resting-State fMRI
Sen, Bhaskar (*University of Minnesota*); Mueller, Bryon (*University of Minnesota*); Klimes-Dougan, Bonnie (*University of Minnesota*); Cullen, Kathryn R. (*University of Minnesota*); Parhi, Keshab* (*University of Minnesota*)

08:45-09:00 FrA01.2
A Practical Method for Creating Targeted Focal Ischemic Stroke in the Cortex of Nonhuman Primates
Khateeb, Karam (*Univ. of Washington*); Yao, Zhaojie (*Univ. of Washington, Seattle*); Kharazia, Viktor (*UCSF*); Burunova, Evelena (*Univ. of Washington*); Song, Shaozhen (*Univ. of Washington*); Wang, Ruikang (*Oregon Health & Science Univ.*); Yazdan-Shahmorad, Azadeh* (*Univ. of Washington*)

09:00-09:15 FrA01.3
A Study of the Midbrain Network for Covert Attentional Orienting in Cervical Dystonia Patients using Dynamic Causal Modelling
Duggan, Oisin* (*Trinity College Dublin*); Narasimham, Shruti (*Trinity College Dublin*); McGovern, Eavan (*St. Vincent's University Hospital*); Killian, Owen (*Trinity College Dublin*); O'Riordan, Sean (*St. Vincent's University Hospital Dublin*); Hutchinson, Michael (*St. Vincent's University Hospital Dublin*); Reilly, Richard (*Trinity College Dublin*)

09:15-09:30 FrA01.4
Normalized Mutual Information of Phonetic Sound to Distinguish the Speech of Parkinson's Disease
Puzhavakkathu Madom Viswanathan, Rekha (*RMIT*); Bingham, Adrian (*RMIT Univ. Melbourne*); Raghav, Sanjay (*RMIT Univ.*); Poosapadi Arjunan, Sridhar* (*SRM Institute of Science & Technology*); Jelfs, Beth (*RMIT Univ.*); Kempster, Peter (*Monash Health*); Kant Kumar, Dinesh (*RMIT Univ.*)

09:30-09:45 FrA01.5
Complexity Measures of Postural Control in Type-2 Diabetic Subjects
Mengarelli, Alessandro* (*Univ. Politecnica delle Marche*); Verdini, Federica (*Univ. Politecnica delle Marche*); Cardarelli, Stefano (*Univ. Politecnica delle Marche*); Tigrini, Andrea (*Univ. Politecnica delle Marche*); Strazza, Annachiara (*Univ. Politecnica delle Marche*); Di Nardo, Francesco (*Polytechnic Univ. of Marche*); Rabini, Rosa Anna (*Diabetology Dept., INRCA Geriatric Hospital*); Mercante, Oriano (*Posture & Movement Analysis Laboratory, INRCA Geriatric Hospital*); Fioretti, Sandro (*Univ. Politecnica delle Marche*)

09:45-10:00 FrA01.6
A 3D Deep Residual Convolutional Neural Network for Differential Diagnosis of Parkinsonian Syndromes on 18F-FDG PET Images
Zhao, Yu* (*Technische Universität München*); Menze, Bjoern (*TU Munich*); Shi, Kuangyu (*University of Bern*)

FrA02: 08:30-10:00 Hall A8 – Level 1
Neural Networks and Support Vector Machines for Biosignal Processing (Oral Session)
Chair: Wang, Yiwen (*Hong Kong Univ. of Science and Technology*)
Co-Chair: Klosterman, Samantha (*Ball Aerospace Technologies Corp.*)

08:30-08:45 FrA02.1
Early Parkinson's Disease Detection via Touchscreen Typing Analysis using Convolutional Neural Networks
Iakovakis, Dimitrios* (*Aristotle Univ. of Thessaloniki*); Hadjimitsiou, Stelios (*AUTH*); Charisis, Vasileios (*Aristotle Univ. of Thessaloniki*); Bostanjopoulou, Sevasti (*Dept. of Neurology, Hippokraton Hospital, Thessaloniki, Gre*); Klingelhofer, Lisa (*Dept. of Neurology Technical Univ. Dresden, Dresden, G*); Simone, Mayer (*Dept. of Neurology Technical Univ. Dresden, Dresden, G*); Reichmann, Heinz (*Dept. of Neurology Technical Univ. Dresden, Dresden, G*); Dias, Sofia Balula (*Faculdade de Motricidade Humana Univ. de Lisboa*); Diniz, José Alves (*Faculdade de Motricidade Humana Univ. de Lisboa*); Trivedi, Dhaval (*International Parkinson Excellence Research Centre, King's Colle*); Chaudhuri, Ray (*International Parkinson Excellence Research Centre, King's Colle*); Hadjileontiadis, Leontios (*Aristotle Univ. of Thessaloniki*)

08:45-09:00 FrA02.2
Classification of TMS Evoked Potentials using ERP Time Signatures and SVM versus Deep Learning
Naze, Sebastien* (*IBM Research*); Caggiano, Vittorio (*IBM Research*); Sun, Yinming (*Stanford School of Medicine*); Lucas, Molly (*Stanford School of Medicine*); Etkin, Amit (*Stanford University*); Kozloski, James (*IBM Research*)

09:00-09:15 FrA02.3
Investigating Ensemble Learning and Classifier Generalization in a Hybrid, Passive Brain-Computer Interface for Assessing Cognitive Workload
Klosterman, Samantha* (*Ball Aerospace Technologies Corp.*); Estep, Justin Ronald (*Air Force Research Laboratory*)

09:15-09:30 FrA02.4
A Weight Transfer Mechanism for Kernel Reinforcement Learning Decoding in Brain-Machine Interfaces
Zhang, Xiang* (*The Hong Kong Univ. of Science & Technology*); Wang, Yiwen (*Hong Kong Univ. of Science & Technology*)

09:30-09:45 FrA02.5
Optimal ELM-RBF Model and SERS Analysis of Saliva for Classification of NS1
Othman, N. H. (*Univ. Teknologi MARA*); Lee, Yoot* (*Univ. Teknologi MARA*); Mohd Radzol, Afaf Rozan (*Univ. Teknologi MARA*); Mansor, Wahidah (*Univ. Teknologi MARA*)

09:45-10:00 FrA02.6
Convolutional Neural Networks to Detect Pediatric Apnea-Hypopnea Events from Oximetry
Vaquerizo-Villar, Fernando* (*Biomedical Engineering Group, Univ. of Valladolid, CIF Q471*); Álvarez González, Daniel (*Río Hortega Univ. Hospital*); Kheirandish-Gozal, Leila (*Section of Sleep Medicine, Dept. of Pediatrics, Pritzker Sc*); Gutierrez, Gonzalo Cesar (*Univ. of Valladolid*); Barroso-García, Verónica (*Univ. of Valladolid*); del Campo, Félix (*Hospital del Río Hortega, Univ. De Valladolid*); Gozal, David (*Section of Sleep Medicine, Dept. of Pediatrics, Pritzker Sc*); Hornero, Roberto (*Univ. of Valladolid*)

FrA03: 08:30-10:00 Hall A3 – Level 1
The Future of Optical Health Monitoring – Measuring Vital signs and Brain Activity Non-Invasively (Invited Session)
Chair: Wang, Wenjin (*Philips Research*)

08:30-08:45 FrA03.1
Time-Domain Non-Contact Functional Optical Brain Imaging
Wabnitz, Heidrun* (*Physikalisch-Technische Bundesanstalt (PTB)*); Mazurenka, Mikhail (*Physikalisch-Technische Bundesanstalt (PTB)*); Di Sieno, Laura (*Politecnico di Milano*); Contini, Davide (*Politecnico di Milano*); Dalla Mora, Alberto (*Politecnico di Milano*); Macdonald, Rainer (*Physikalisch-Technische Bundesanstalt (PTB)*); Pifferi, Antonio (*Politecnico di Milano*)

08:45-09:00	FrA03.2
Advances in using Infrared Thermography for Vital Sign Monitoring Leonhardt, Steffen* (<i>RWTH Aachen University</i>)	
09:00-09:15	FrA03.3
Smart Integrated-in-Package Optode for Seizure Localization and Subsequent Detection Saha, Sreenil (<i>Ecole Polytechnique de Montreal</i>); Lesage, Frederic (<i>Polytechnique Montreal</i>); Sawan, Mohamad* (<i>Westlake Univ.</i>)	
09:15-09:30	FrA03.4
Accuracy of Pulse Oximetry in Relation to Light Penetration Depths Verkruyse, Wim* (<i>Philips Innovation Group, Philips Research, Eindhoven</i>)	
09:30-09:45	FrA03.5
Computational Intelligence for Robust Personalized Vital Sign Inference Colopy, Glen Wright* (<i>University of Oxford</i>)	

FrA04: 08:30-10:00 Hall A1 – Level 1
Advances in Physiological Monitoring (Oral Session)
 Chair: Sazonov, Edward (*University of Alabama*)

08:30-08:45	FrA04.1
Tidal Volume via Circumferences of the Upper Body: A Pilot Study Laufer, Bernhard* (<i>Furtwangen University</i>); Krueger-Ziolek, Sabine (<i>Furtwangen University</i>); Docherty, Paul David (<i>University of Canterbury</i>); Hoeflinger, Fabian (<i>Albert-Ludwigs-Universität Freiburg</i>); Reindl, Leonhard (<i>Albert-Ludwigs-Universität Freiburg</i>); Moeller, Knut (<i>Furtwangen University</i>)	

08:45-09:00	FrA04.2
Objective Detection of Cigarette Smoking from Physiological Sensor Signals Imtiaz, Masudul Haider (<i>Univ. of Alabama</i>); Senyürek, Volkan (<i>The Univ. of Alabama</i>); Belsare, Prajakta (<i>The Univ. of Alabama</i>); Tiffany, Stephen (<i>State Univ. of New York at Buffalo</i>); Sazonov, Edward* (<i>Univ. of Alabama</i>)	

09:00-09:15	FrA04.3
Respiratory Rate on Exercise Measured by Nanoparticle-Based Humidity Sensor Kano, Shinya* (<i>National Institute of Advanced Industrial Science & Technology</i>); Yamamoto, Akio (<i>Kobe Univ.</i>); Ishikawa, Akira (<i>Kobe Univ.</i>); Fujii, Minoru (<i>Kobe Univ.</i>)	

09:15-09:30	FrA04.4
Ejection Wave Segmentation for Contact-Free Heart Rate Estimation from Ballistocardiographic Signals Pröll, Samuel Martin* (<i>UMIT</i>); Hofbauer, Stefan (<i>Dept. of Anesthesiology & Critical Care Medicine, Unvers</i>); Kolbitsch, Christian (<i>Dept. of Anaesthesia & Intenive Care Medicine, Medical Un</i>); Schubert, Rainer (<i>UMIT</i>); Fritscher, Karl (<i>UMIT</i>)	

09:30-09:45	FrA04.5
Biosignal-Based Multimodal Emotion Recognition in a Valence-ArousalAffective Framework Applied to Immersive Video Visualization Pinto, Joana (<i>Instituto Superior Tecnico, Universidade de Lisboa</i>); Fred, Ana (<i>IT – Instituto de Telecomunicações</i>); Plácido da Silva, Hugo* (<i>IT – Instituto de Telecomunicações</i>)	

09:45-10:00	FrA04.6
A Wearable System Developed to Monitor People Suffering from Vasovagal Syncope Pietrewicz, Michal (<i>Gdansk Univ. of Technology</i>); Polinski, Artur (<i>Gdansk Univ. of Technology</i>); Kocejko, Tomasz* (<i>Gdansk Univ. of Technology</i>); Wtorek, Jerzy (<i>Gdansk Univ. of Technology</i>)	

FrA05: 08:30-10:00 Hall A2 – Level 1
Challenges and Advances of Signal and Image Processing in Epilepsy 1: Brain Networks (Minisymposium)
 Chair: Schiecke, Karin (*Jena University Hospital, Friedrich Schiller University Jena*)
 Co-Chair: Iasemidis, Leonidas (*Louisiana Tech University*)

08:30-08:45	FrA05.1
Insights into Diagnosis and Treatment of Epilepsy by Network Analysis of Brain Dynamics Alamoudi, Omar* (<i>Louisiana Tech U. & King Abdulaziz U.</i>); Hutson, Timothy (<i>Louisiana Tech University</i>); Pati, Sandipan (<i>University of Alabama School of Medicine</i>); Iasemidis, Leon (<i>Louisiana Tech University</i>)	

08:45-09:00	FrA05.2
Endogenous and Externally-Cued Multi-Day Cycles of Brain Activity in Epilepsy Baud, Maxime* (<i>Inselspital</i>); Rao, Vikram (<i>UCSF</i>)	

09:00-09:15	FrA05.3
Automated EEG Source Imaging and Functional Brain Connectivity in Epilepsy van Mierlo, Pieter* (<i>Ghent University, Epilog NV</i>)	

09:15-09:30	FrA05.4
Brain Networks in Epilepsy: Insights from Simultaneous Recordings of MEG and Intracerebral EEG Bénar, Christian G.* (<i>INSERM</i>); Chen, sophie (<i>Aix Marseille Univ, INSERM, INS, Inst Neurosci Syst, Marseille.</i>); Badier, Jean-Michel (<i>Aix Marseille Université</i>)	

FrA06: 08:30-10:00 Hall A5 – Level 1
Advances in Understanding of Human Motor Control Mechanisms (Invited Session)
 Chair: Zenzeri, Jacopo (*Istituto Italiano di Tecnologia*)
 Co-Chair: Suzuki, Yasuyuki (*Osaka University*)

08:30-08:45	FrA06.1
A Method for Examining the Intermittent and the Stiffness Postural Control Models using Data Assimilation with Bayesian Inference Nomura, Taishin* (<i>Osaka Univ.</i>); Suzuki, Yasuyuki (<i>Osaka Univ.</i>); Nakamura, Akihiro (<i>Osaka Univ.</i>); Kondo, Kazuya (<i>Osaka Univ.</i>); Morasso, Pietro (<i>Italian Institute of Technology</i>)	

08:45-09:00	FrA06.2
Sensorimotor Adaptation to Alteration of Postural Dynamics Induced by a Closed-Loop Perturbation System Nozaki, Daichi* (<i>The University of Tokyo</i>); Azat, Anvar (<i>University of Tokyo</i>); Nakazawa, Yosuke (<i>Graduate School of Education, The University of Tokyo</i>); Hagio, Shota (<i>Graduate School of Education, The University of Tokyo</i>)	

09:00-09:15	FrA06.3
Tool Cognition and Control: By Humans, for Machines Gowrishankar, Ganesh* (<i>CNRS</i>); Li, Jun (<i>Institute for Infocomm research</i>); Tee, Keng Peng (<i>Institute for Infocomm Research</i>)	

09:15-09:30	FrA06.4
Mechanisms of Feedforward and Feedback Adaptation in Human Motor Control Franklin, David W.* (<i>Technical University of Munich</i>)	

09:30-09:45	FrA06.5
Is Intermittent Control the Source of the 0.5-2 Hz Non-Linear Oscillatory Component in Human Balance Control Loram, Ian David* (<i>Manchester Metropolitan University</i>)	

09:45-10:00	FrA06.6
Motor Control Mechanisms in Multi Strategies and Multi Goals Tasks Zenzeri, Jacopo* (<i>Istituto Italiano di Tecnologia</i>); Cherif, Amel (<i>Istituto Italiano di Tecnologia</i>); Belgiovine, Giulia (<i>Istituto Italiano di Tecnologia</i>); Morasso, Pietro (<i>Italian Institute of Technology</i>)	

FrA07: 08:30-10:00 Physical Triggers and Nano-Biomaterials for Tissue Regeneration (Minisymposium) Chair: Ricotti, Leonardo (<i>Scuola Superiore Sant'Anna</i>) Co-Chair: Ferreira, Lino (<i>Center of Neurosciences and Cell Biology</i>)	Hall A4 – Level 1	09:30-09:45 Detecting Emotional Valence using Time-Domain Analysis of Speech Signals Deshpande, Gauri* (<i>Tata Research Development & Design Center, Tata Consultancy Se</i>); Viraraghavan, Venkata Subramanian (<i>Tata Consultancy Services Limited</i>); Duggirala, Mayuri (<i>Tata Research Development & Design Center, Tata Consultancy Se</i>); Patel, Sachin (<i>Tata Research Development & Design Center, Tata Consultancy Se</i>)	FrA08.5
08:30-08:45 Magnetic Nanomaterials for Mechanotransduction and Cell Fate Regulation Cheng, Yu* (<i>Tongji University</i>)	FrA07.1	09:45-10:00 Reinforcement Learning-Based Adaptive Insulin Advisor for Individuals with Type 1 Diabetes Patients under Multiple Daily Injections Therapy Sun, Qingnan* (<i>Univ. of Bern</i>); Jankovic, Marko (<i>Bern Univ. Hospital "Inselspital"</i>); Mougiakakou, Stavroula (<i>Univ. of Bern</i>)	FrA08.6
08:45-09:00 Magnetically Driven Ferroelectric Micromachines for Delivery and Remote Electrical Stimulation of Neuronal Cells Chen, Xiang-Zhong (<i>ETH Zürich</i>); Mushtaq, Fajer (<i>ETH Zürich</i>); Torlakcik, Harun (<i>ETH Zürich</i>); Nelson, Bradley (<i>ETH Zurich</i>); Pané Vidal, Salvador* (<i>ETH Zürich</i>)	FrA07.2	FrA09: 08:30-10:00 Regulatory Applications in Human Phantoms for Computational Electromagnetics (Invited Session) Chair: Noetscher, Gregory (<i>Worcester Polytechnic Institute</i>) Co-Chair: Horner, Marc (<i>ANSYS, Inc.</i>)	M1 – Level 3
09:00-09:15 Iron Oxide Nanoparticles as the Magneto-Mechanical and Hyperthermia Responders on Eradication of Cancer Cells Wu, Jiaojiao (<i>Tongji University</i>); Cheng, Yu* (<i>Tongji University</i>)	FrA07.3	08:30-08:45 Skull-Remodeling with Tumor Treating Fields. The Role of Finite Element Methods in Surgery Planning and Treatment Evaluation Korshoej, Anders R.* (<i>Aarhus University Hospital</i>); Bicalho Saturnino, Guilherme (<i>Technical University of Denmark</i>); Mikic, Nikola (<i>Aarhus University Hospital, Dept. of Neurosurgery</i>); Thielscher, Axel (<i>Copenhagen University Hospital Hvidovre, Denmark & Biomedical En</i>); Bomzon, Ze'ev (<i>Novocure</i>)	FrA09.1
09:15-09:30 Light-Triggered Nanomaterials to Modulate Cell/Tissue Functions Ferreira, Lino* (<i>Center of Neurosciences & Cell Biology</i>)	FrA07.4	08:45-09:00 Cloud-Based Platforms to Enable use of M&S Tools in Healthcare Lucano, Elena (<i>University of Rome "Sapienza"</i>); Carbone, Vincenzo (<i>InSilicoTrials</i>); Serano, Peter (<i>Athinoula A. Martinos Center for Biomedical Imaging, Dept.</i>); Pathmanathan, Pras (<i>US Food & Drug Administration</i>); Angelone, Leonardo M. (<i>US Food & Drug Administration, Center for Devices & Radiolog</i>); Emili, Luca (<i>InSilicoTrials</i>); Horner, Marc* (<i>ANSYS, Inc.</i>)	FrA09.2
09:30-09:45 Piezoelectric Nanomaterials and Ultrasound for Tissue Regeneration Ricotti, Leonardo* (<i>Scuola Superiore Sant'Anna</i>)	FrA07.5	09:00-09:15 Development of a Framework for Tumor Treating Fields Dosimetry and Treatment Planning using Computational Phantoms Bomzon, Ze'ev* (<i>Novocure</i>); Urman, Noa (<i>Novocure</i>); Levi, Shay (<i>Novocure Ltd.</i>); Lavy-Shahaf, Gitit (<i>Novocure Ltd</i>); Toms, Steven (<i>Warren Alpert Medical School of Brown University & Lifespan He</i>); Ballo, Matthew (<i>West Cancer Center, Memphis Tennessee</i>)	FrA09.3
FrA08: 08:30-10:00 Health Informatics – Behavioral Health Informatics (Oral Session)	M8 – Level 3	09:15-09:30 Using Computational Human Models to Calculate RF-Induced Unintended Stimulation for Implantable Medical Devices in MRI Brown, James* (<i>MSEI</i>); Qiang, Rui (<i>Micro System Engineering Inc. (Biotronik)</i>); Stadnik, Paul (<i>Micro Systems Engineering, Inc.</i>); Stotts, Larry (<i>Biotronik</i>); Von Arx, Jeffrey (<i>Micro Systems Engineering, Inc.</i>)	FrA09.4
08:30-08:45 Agitation Detection in People Living with Dementia using Multimodal Sensors Khan, Shehroz* (<i>Toronto Rehabilitation Institute</i>); Spasojevic, Sofija (<i>Toronto Rehabilitation Institute</i>); Mihailidis, Alex (<i>Univ. of Toronto</i>); Ye, Bing (<i>Univ. of Toronto</i>); Iaboni, Andrea (<i>Univ. Health Network</i>); Newman, Kristine (<i>Ryerson Univ.</i>); Wang, Angel He (<i>Ryerson Univ.</i>); Martin, Lori Schindel (<i>Ryerson Univ.</i>); Nogas, Jacob (<i>Univ. of Toronto</i>)	FrA08.1	09:30-09:45 Evaluation of Safety Metrics using the Coupled FMM-BEM Simulation Algorithm Noetscher, Gregory* (<i>Worcester Polytechnic Institute</i>); Pham, Dung (<i>Worcester Polytechnic Institute</i>); Makarov, Sergey (<i>Electrical & Computer Engineering, Worcester Polytechnic Institute</i>)	FrA09.5
08:45-09:00 Teaching Machines to Know Your Depressive State: On Physical Activity in Health and Major Depressive Disorder Qian, Kun* (<i>The Univ. of Tokyo</i>); Kuromiya, Hiroyuki (<i>The Univ. of Tokyo</i>); Zhang, Zixing (<i>Imperial College London</i>); Kim, Jinhuk (<i>Shizuoka Univ.</i>); Nakamura, Toru (<i>Osaka Univ.</i>); Yoshiuchi, Kazuhiro (<i>Dept. of Stress Sciences & Psychosomatic Medicine, Gradua</i>); Schuller, Bjoern (<i>Imperial College London</i>); Yamamoto, Yoshiharu (<i>The Univ. of Tokyo</i>)	FrA08.2	09:45-10:00 Modeling Electromagnetic Exposure of a Computational Human Model in a 3T MRI Coil Kozlov, Mikhail* (<i>Max Planck Institute for Human Cognitive & Brain Sciences</i>); Horner, Marc (<i>ANSYS, Inc.</i>); Kainz, Wolfgang (<i>Food & Drug Administration</i>); Weiskopf, Nikolaus (<i>Max Planck Institute for Human Cognitive & Brain Sciences</i>); Möller, Harald (<i>Max Planck Institute for Human Cognitive & Brain Sciences</i>)	FrA09.6
09:00-09:15 Behaviour Profiles for Evidence-Based Policies against Obesity Sarafis, Ioannis* (<i>Aristotle University of Thessaloniki</i>); Diou, Christos (<i>Aristotle University of Thessaloniki</i>); Delopoulos, Anastasios (<i>Aristotle University of Thessaloniki</i>)	FrA08.3		
09:15-09:30 Evaluation of the Impact of Extrinsic Rewards on User Engagement in a Health Promotion Context Nuijten, Raoul Ceasar Yannic (<i>Eindhoven University of Technology</i>); Van Gorp, Pieter* (<i>Eindhoven University of Technology</i>); Kaymak, Uzay (<i>Eindhoven Technische University</i>); Simons, Monique (<i>Wageningen University</i>); Astrid Kemperman, Astrid D.A.M. (<i>Eindhoven University of Technology</i>); Van den Berg, Pauline E.W. (<i>Eindhoven University of Technology</i>)	FrA08.4		

FrA10: 08:30-10:00 M2 – Level 3
Progress in Noninvasive Fetal Screening Techniques (Invited Session)
Chair: Khandoker, Ahsan H. (*Khalifa University of Science, Technology and Research*)

08:30-08:45 FrA10.1
Detection of End of T-Wave in Fetal ECG using Recurrence Plot
 Widatalla, Namareq* (*Tohoku Univ.*); Khandoker, Ahsan H (*Khalifa Univ. of Science, Technology & Research*); Kasahara, Yoshiyuki (*Tohoku Univ.*); Kimura, Yoshitaka (*Tohoku Univ.*)

08:45-09:00 FrA10.2
Fetal Cardiac Timing Events Estimation from Doppler Ultrasound Signal using Cepstrum Analysis
 Al Nuaimi, Saeed* (*Khalifa University*); Jimaa, Shihab (*Khalifa University of Science & Technology*); Hadjileontiadis, Leontios (*Aristotle University of Thessaloniki*); Khandoker, Ahsan H (*Khalifa University of Science, Technology & Research*)

09:00-09:15 FrA10.3
Comparison of Current Methods of Minimally Invasive Fetal Cardiac Monitoring
 Krishnan, Anita* (*Children's National Medical Center*); Govindan, Rathinaswamy (*Children's National Health System*)

09:15-09:30 FrA10.4
Fetal Heart Sounds Classification using Fetal Phonocardiogram Signals and Deep Learning Techniques
 Koutsiana, Elisavet (*Lab. of Medical Informatics, The Medical School, Aristotle Univ.*); Kosvira, Alexandra (*Aristotle Univ. of Thessaoniki*); Hadjileontiadis, Leontios (*Aristotle Univ. of Thessaloniki*); Khandoker, Ahsan H (*Khalifa Univ. of Science, Technology & Research*); Chouvarda, Ioanna* (*Aristotle Univ.*)

FrA11: 08:30-10:00 M4 – Level 3
State-of-the-Art Advances in Sleep Health Science and Technology: Session 1 – Novel Technologies for Sleep Quantification (Minisymposium)
Chair: Khoo, Michael (*University of Southern California*)
Co-Chair: Penzel, Thomas (*Charité Universitätsmedizin Berlin*)

08:30-08:45 FrA11.1
Tracheal Sound Sensors for Sleep Studies: From Acoustic Signals to Physiological Information
 Sabil, AbdelKebir* (*Phillips Sleep & Respiratory Care*); Glos, Martin (*Charité-Universitaetsmedizin Berlin*); Penzel, Thomas (*Charité Universitätsmedizin Berlin*)

08:45-09:00 FrA11.2
Detection of Sleepiness through Infrared-Based Analysis of Eyelids and Pupil Parameters with Drowsimeter
 Francois, Clementine* (*Phasya*); Wertz, Jerome (*Phasya*)

09:00-09:15 FrA11.3
Somnograph – Development of a New Self-Administered EEG-Based Sleep Sensor
 Glos, Martin* (*Charité-Universitaetsmedizin Berlin*); Veauthier, Christian (*Charité-Universitätsmedizin Berlin*); Wiegner, Arnim (*SOMNOmedics GmbH*); Penzel, Thomas (*Charité Universitätsmedizin Berlin*)

09:15-09:30 FrA11.4
3D-Video during the Night: A New Contactless Diagnostic Tool for Detecting Sleep Apnea and Periodic Leg Movements
 Veauthier, Christian (*Charité-Universitätsmedizin Berlin*); Ryczewski, Juliane (*Charité – Universitätsmedizin Berlin, Germany*); Mansow-Model, Sebastian (*Motognosis GmbH*); Otte, Karen (*Motognosis GmbH*); Kayser, Bastian* (*Motognosis GmbH*); Glos, Martin (*Charité-Universitaetsmedizin Berlin*); Schoebel, Christoph (*Charité Universitaetsmedizin Berlin*); Paul, Friedemann (*Charité – Universitätsmedizin Berlin, Germany*); Brandt, Alexander (*Charité – Universitätsmedizin Berlin, Germany*); Penzel, Thomas (*Charité Universitätsmedizin Berlin*)

FrA12: 08:30-10:00 M6 – Level 3
Recent Advances and Challenges in 4D Flow MRI (Invited Session)
Chair: Zhong, Liang (*National Heart Centre Singapore, Duke-NUS Medical School, National University of Singapore*)
Co-Chair: van der Geest, Rob (*Leiden University Medical Center*)

08:30-08:45 FrA12.1
4D Flow MRI-Derived Arterial Vortical Flow Associates with Bi-Ventricular Function in Pulmonary Hypertension Patients
 Elbaz, Mohammed S.M.* (*Northwestern University*)

08:45-09:00 FrA12.2
Hemodynamic Forces in the Left and Right Ventricle
 Töger, Johannes* (*Clinical Physiology, Dept. of Clinical Sciences, Lund Univ.*)

09:00-09:15 FrA12.3
Wall Shear Stress Mapping in the Aorta from 4D Flow MRI
 van Ooij, Pim (*Amsterdam University Medical Centers Location AMC*); Michael, Markl (*Northwestern University*); Zhong, Liang* (*Duke-Duke Medical School, National University of Singapore*); Nederveen, Aart (*Amsterdam University Medical Centers, AMC*); Barker, Alex (*Northwestern University*)

FrA13: 08:30-10:00 R2 – Level 3
Deep Learning Methods in Sensors and Wearable Systems (Oral Session)
Co-Chair: Potluri, Sasanka (*Institute III/Dept. Sport Science, Otto-von-Guericke University Magdeburg*)

08:30-08:45 FrA13.1
Deep Learning based Gait Abnormality Detection using Wearable Sensor System
 Potluri, Sasanka* (*Otto-von-Guericke University Magdeburg, Institute for Automation*); Ravuri, Srinivas (*Otto-von-Guericke University Magdeburg, Institute for Automation*); Diedrich, Christian (*Otto-von-Guericke University Magdeburg, Institute for Automation*); Schega, Lutz (*Otto-von-Guericke University Magdeburg, Institute for Sport Scie*)

08:45-09:00 FrA13.2
Recurrent Neural Network as Estimator for a Virtual sEMG Channel
 Machado, Juliano* (*Instituto Federal Sul-Riograndedense (IFSul)*); Cene, Vinicius H. (*Univ. Federal do Rio Grande do Sul*); Balbinot, Alexandre (*Federal Univ. of Rio Grande do Sul (UFRGS)*)

09:00-09:15 FrA13.3
Deep Neural Network-Based Gait Classification using Wearable Inertial Sensor Data
 Jung, Dawoon (*Korea Institute of Science & Technology*); Nguyen, Mau Dung (*Korean Institute of Science & Technology*); Han, Joon (*Korean Institute of Science & Technology*); Park, Mina (*Korean Institute of Science & Technology*); Lee, Kwanhoon (*Korean Institute of Science & Technology*); Yoo, Seonggeun (*Seoul National Univ. of Science & Technology*); Kim, Jinwook (*Korean Institute of Science & Technology*); Mun, Kyung-Ryoul* (*Korean Institute of Science & Technology*)

09:15-09:30 FrA13.4
Prediction of the Plantar Force during Gait using Wearable Sensors and Deep Neural Networks
 Nagashima, Mikihiya* (*Nara Institute of Science & Tech.*); Cho, Sung-Gwi (*Nara institute of Science & Tech.*); Ding, Ming (*Nara Institute of Science & Tech.*); Garcia Ricardez, Gustavo Alfonso (*Nara Institute of Science & Tech.*); Takamatsu, Jun (*Nara Institute of Science & Tech.*); Ogasawara, Tsukasa (*Nara Institute of Science & Tech.*)

09:30-09:45 FrA13.5
Feasibility Study of Deep Neural Network for Heart Rate Estimation from Wearable Photoplethysmography and Acceleration Signals
 Chung, Heewon (*Wonkwang University School of Medicine*); Ko, Hoon (*Wonkwang University School of Medicine*); Lee, Hooseok (*Wonkwang University School of Medicine*); Lee, Jinseok* (*Wonkwang University School of Medicine*)

09:45-10:00	FrA13.6	Eyelid Movement Command Classification using Machine Learning Graybill, Philip (<i>Penn State University</i>); Kiani, Mehdi* (<i>Pennsylvania State University</i>)	09:00-09:15	FrA15.3	Automatic PAP Mask Sizing with a Error Correcting Autoencoder Johnston, Benjamin* (<i>University of Sydney</i>); de Chazal, Philip (<i>University of Sydney</i>)
FrA14: 08:30-10:00	R3 – Level 3	Signal Processing and Classification in Sleep Studies (I) (Oral Session) Chair: Penzel, Thomas (<i>Charité Universitätsmedizin Berlin</i>) Co-Chair: Bianchi, Anna Maria (<i>Politecnico di Milano</i>)	09:15-09:30	FrA15.4	Endoscopic Image Clustering with Temporal Ordering Information based on Dynamic Programming Harada, Shota* (<i>Kyushu University</i>); Hayashi, Hideaki (<i>Kyushu University</i>); Bise, Ryoma (<i>Kyushu University</i>); Tanaka, Kiyohito (<i>Kyoto Second Red Cross Hospital</i>); Meng, Qier (<i>Research Center for Medical Big data, National Institute of Info</i>); Uchida, Seiichi (<i>Kyushu University</i>)
08:30-08:45	FrA14.1	A Transition Probability based Classification Model for Enhanced N1 Sleep Stage Identification during Automatic Sleep Stage Scoring Davies, Harry* (<i>Imperial College London</i>); Nakamura, Takashi (<i>Imperial College London</i>); Mandic, Danilo (<i>Imperial College</i>)	09:30-09:45	FrA15.5	Deep Multi-Modality Collaborative Learning for Distant Metastases Predication in PET-CT Soft-Tissue Sarcoma Studies Peng, Yige (<i>The University of Sydney</i>); Bi, Lei (<i>University of Sydney</i>); Guo, Yuyu (<i>School of Biomedical Engineering, Shanghai Jiao Tong University</i>); Feng, Dagan (<i>The University of Sydney</i>); Fulham, Michael (<i>Royal Prince Alfred Hospital</i>); Kim, Jinman* (<i>University of Sydney</i>)
08:45-09:00	FrA14.2	A Point Process Framework for the Characterization of Sleep States in Early Infancy Pini, Nicolò* (<i>Politecnico di Milano</i>); Lucchini, Maristella (<i>Politecnico di Milano</i>); Fifer, William P. (<i>Dept. of Psychiatry & Pediatrics, Columbia Univ. Col</i>); Signorini, Maria G. (<i>Politecnico di Milano</i>); Barbieri, Riccardo (<i>Politecnico di Milano</i>)	09:45-10:00	FrA15.6	Assessment of an Ensemble of Machine Learning Models Toward Abnormality Detection in Chest Radiographs Rajaraman, Sivaramakrishnan* (<i>National Library of Medicine</i>); Sornapudi, Sudhir (<i>Missouri Univ. of Science & Technology</i>); Kohli, Marc (<i>Dept. of Radiology & Biomedical Imaging, Univ. of Ca</i>); Antani, Sameer (<i>National Library of Medicine</i>)
09:00-09:15	FrA14.3	A Clinically Applicable Interactive Micro and Macro-Sleep Staging Algorithm for Elderly and Patients with Neurodegeneration Cesari, Matteo* (<i>Technical University of Denmark</i>); Christensen, Julie Anja Engelhard (<i>Technical University of Denmark</i>); Sixel-Döring, Friederike (<i>Paracelsus-Elena Klinik, Kassel</i>); Muntean, Maria-Lucia (<i>Paracelsus-Elena Klinik, Kassel</i>); Mollenhauer, Brit (<i>Paracelsus-Elena Klinik, Kassel</i>); Trenkwalder, Claudia (<i>Paracelsus-Elena Klinik, Kassel</i>); Jennum, Poul (<i>University of Copenhagen, Denmark</i>); Sorensen, Helge B D (<i>Technical University of Denmark</i>)	FrA16: 08:30-10:00	M5 – Level 3	Micro- and Nano-Biorobotics (Oral Session) Chair: Piovesan, Davide (<i>Gannon University</i>) Co-Chair: Schostek, Sebastian (<i>Ovesco Endoscopy AG</i>)
09:15-09:30	FrA14.4	Snoring – An Acoustic Definition Janott, Christoph* (<i>Technical University of Munich</i>); Rohrmeier, Christian (<i>Faculty of Medicine, University of Regensburg, Regensburg</i>); Schmitt, Maximilian (<i>University of Augsburg</i>); Hemmert, Werner (<i>Technical University of Munich</i>); Schuller, Bjoern (<i>University of Augsburg / Imperial College London</i>)	08:30-08:45	FrA16.1	Conducting Polymer Microtubes for Bioactuators Eslamian, Mohammadjavad (<i>Univ. of Houston</i>); Mirab, Fereshahsadat (<i>Univ. of Houston</i>); Majd, Sheereen (<i>Univ. of Houston</i>); Abidian, Mohammad Reza* (<i>Univ. of Houston</i>)
09:30-09:45	FrA14.5	Sleep Arousal and Sudden Changes in Cardiac QT Interval Salari Shahrabaki, Sobhan* (<i>University of Adelaide</i>); Baumert, Mathias (<i>The University of Adelaide</i>)	08:45-09:00	FrA16.2	Predictive Tilt Compensation for Robot Assisted Magnetic Capsule Endoscopy Mahmood, Salman* (<i>Ovesco Endoscopy AG</i>); Schurr, Marc O. (<i>Ovesco Endoscopy AG</i>); Schostek, Sebastian (<i>Ovesco Endoscopy AG</i>)
09:45-10:00	FrA14.6	Classification Algorithm for Nocturnal Hypoxemia using Nocturnal Pulse Oximetry Izumi, Shintaro* (<i>Kobe University</i>); Nagano, Tatsuya (<i>Kobe University</i>); Yoshizaki, Asuka (<i>Kobe University</i>); Nishimura, Yoshihiro (<i>Kobe University</i>)	09:00-09:15	FrA16.3	Taxonomy of Two Dimensional Bio-Inspired Locomotion Systems Kehoe, Matthew (<i>Gannon Univ.</i>); Piovesan, Davide* (<i>Gannon Univ.</i>)
FrA15: 08:30-10:00	M3 – Level 3	Image Analysis and Classification – Machine Learning Approaches (IV) (Oral Session) Chair: Antani, Sameer (<i>National Library of Medicine</i>)	09:15-09:30	FrA16.4	Investigation of Current Control for a New Bi-Directional Linear Capsule Robot Wu, Linlin* (<i>Aalborg University</i>); Lu, Kaiyuan (<i>Aalborg University</i>); Xia, Yongming (<i>Aalborg University</i>)
08:30-08:45	FrA15.1	CLPNet: Cleft Lip and Palate Surgery Support with Deep Learning Li, Yizhou (<i>Sichuan Univ.</i>); Cheng, Junhao (<i>Sichuan Univ.</i>); Mei, Hongxiang (<i>Sichuan Univ.</i>); Ma, Huangshui (<i>Sichuan Univ.</i>); Chen, Zhuojun (<i>Baidu Inc</i>); Li, Yang* (<i>Sichuan Univ.</i>)	09:30-09:45	FrA16.5	A Miniaturized Capsule Endoscope Equipped a Marking Module for Intestinal Tumor Localization Hoang, Manh Cuong* (<i>Chonnam National Univ.</i>); Choi, Eunpyo (<i>Chonnam National Univ.</i>); Kang, Byungjeon (<i>Robot Research Initiative, Chonnam National Univ.</i>); Kim, Chang-Sei (<i>Chonnam National Univ.</i>); Park, Jongoh (<i>Chonnam National Univ.</i>)
08:45-09:00	FrA15.2	Assessment of Laboratory Mouse Activity in Video Recordings using Deep Learning Methods Kopaczka, Marcin* (<i>RWTH Aachen Univ.</i>); Tillmann, Daniel (<i>RWTH Aachen Univ.</i>); Ernst, Lisa (<i>RWTH Aachen Univ.</i>); Justus, Schock (<i>RWTH Aachen Univ.</i>); Tolba, Rene (<i>RWTH Aachen Univ.</i>); Merhof, Dorit (<i>RWTH Aachen Univ.</i>)	09:45-10:00	FrA16.6	Soft Phantom for the Training of Renal Calculi Diagnostics and Lithotripsy Li, Dandan (<i>Max Planck Institute for Intelligent Systems</i>); Suarez-Ibarrola, Rodrigo (<i>Univ. Medical Centre Freiburg</i>); Choi, Eunjin (<i>Max Planck Institute for Intelligent Systems</i>); Jeong, Moonkwang (<i>Max Planck Institute for Intelligent Systems</i>); Gratzke, Christian (<i>Univ. Medical Centre Freiburg</i>); Miernik, Arkadiusz (<i>Univ. Medical Centre Freiburg</i>); Fischer, Peer (<i>Max Planck Institute for Intelligent Systems</i>); Qiu, Tian* (<i>Max Planck Institute for Intelligent Systems</i>)

FrA17: 08:30-10:00 R12 – Level 3
Point of Care – Global Health Challenges (Oral Session)
Co-Chair: Bhatti, Pamela (*Georgia Institute of Technology*)

08:30-08:45 FrA17.1
Contactless Respiration and Heartbeat Monitoring of Multiple People using a 2-D Imaging Radar
Walterscheid, Ingo (*Fraunhofer FHR*); Biallowons, Oliver* (*Fraunhofer FHR*); Berens, Patrick (*Fraunhofer FHR*)

08:45-09:00 FrA17.2
Assessment of Feeding Teats: An Experimental Study
Chericoni, Assia* (*Università Campus Biomedico di Roma*); Tosi, Jacopo (*Università Campus Bio-Medico di Roma*); Anna Maria, Visco (*Neonatal Care Unit of Santa Maria Goretti Hospital*); Lubrano, Riccardo (*Università degli Studi di Roma La Sapienza*); Taffoni, Fabrizio (*Campus Bio-Medico University*)

09:00-09:15 FrA17.3
Co-Design Open-Source Medical Devices: How to Minimize the Human Error using UBORA E-Infrastructure
Di Pietro, Licia* (*University of Pisa*); De Maria, Carmelo (*Research Center E. Piaggio – University of Pisa*); Ravizza, Alice (*PGG Scientific*); Ahluwalia, Arti (*Pisa University*)

09:15-09:30 FrA17.4
A Novel, Efficient 3D-Printing based Manufacturing Process for Custom Ocular Prostheses
Beiruti, Sally (*Massachusetts Institute of Tech.*); Chandar, Arjun (*Massachusetts Institute of Tech.*); Gee, Kaitlyn (*Massachusetts Institute of Tech.*); Jones, Alexis (*Massachusetts Institute of Tech.*); Le Henaff, Anne Claire* (*Massachusetts Institute of Tech.*); Zhang, Zhengyang (*Massachusetts Institute of Tech.*); Narain, Jaya (*Massachusetts Institute of Tech.*); Winter, Amos (*MIT*)

09:30-09:45 FrA17.5
Reliability of the Balance Quality Tester (BQT) for Balance Quality Measurement
Rahal, Mohamad (*University of Technology of Troyes (UTT), Troyes, France*); Chkeir, Aly (*University of Technology of Troyes*); Nassereddine, Mohamad (*Lebanese University – Faculty of Sciences, Beirut Lebanon*); Atieh, Mirna (*Lebanese University – Faculty of Economic Sciences & administr*); Soubra, Racha* (*Université de Technologie de Troyes*)

09:45-10:00 FrA17.6
Design Considerations for Artefact-Free Optoelectronic Systems
Firfilionis, Dimitris* (*Newcastle Univ.*); Luo, Jun-Wen (*Newcastle Univ.*); Ramezani, Reza (*Newcastle Univ.*); Escobedo Cousin, Enrique (*Newcastle Univ.*); Bailey, Richard Geoffrey (*Newcastle Univ.*); O'Neill, Anthony (*Newcastle Univ.*); Degenaar, Patrick (*Newcastle Univ.*)

FrA18: 08:30-10:00 R13 – Level 3
Neural Interfaces (Oral Session)

08:30-08:45 FrA18.1
Enhanced ICMR Amplifier for High CMRR Biopotential Recordings
Oreggioni, Julian* (*IIE, Facultad de Ingeniería, Universidad de la Republica*); Castro-Lisboa, Pablo (*Universidad de la República*); Silveira, Fernando (*Universidad de la Republica*)

08:45-09:00 FrA18.2
Fabrication of a Self-Curling Cuff with a Soft, Ionically Conducting Neural Interface
Thakur, Raviraj (*John's Hopkins Univ.*); Nair, Ankitha Rajagopalan (*John's Hopkins Univ.*); Jin, Andrew (*John's Hopkins Univ.*); Fridman, Gene* (*Johns Hopkins Univ.*)

09:00-09:15 FrA18.3
A Feasibility Study on Optically Transparent Encapsulation for Implantable Neural Prostheses
Shim, Shinyong* (*Seoul National University*); Kim, Sung June (*Seoul National University*)

09:15-09:30 FrA18.4
A System for Combined Laser Doppler Flowmetry and Microelectrode Recording during Deep Brain Stimulation Implantation

Wardell, Karin* (*Linköping University*); Zsigmond, Peter (*Linköping University*); Hemm, Simone (*University of Applied Sciences & Arts Northwestern Switzerland*)

09:30-09:45 FrA18.5
Electrochemical Stability of Thin-Film Platinum as Suitable Material for Neural Stimulation Electrodes
Pfau, Jennifer* (*Univ. of Freiburg, Dept. of Microsystems Engineering I*); Ganatra, Dev (*Univ. of Freiburg*); Weltin, Andreas (*Univ. of Freiburg*); Urban, Gerald A. (*Univ. of Freiburg*); Kieninger, Jochen (*Univ. of Freiburg*); Stieglitz, Thomas (*Univ. of Freiburg*)

09:45-10:00 FrA18.6
In Vitro Reactive-Accelerated-Aging Assessment of Anisotropic Conductive Adhesive and Back-End Packaging for Electronic Neural Interfaces
Kuliasha, Cary (*Univ. of Florida*); Judy, Jack* (*Univ. of Florida*)

FrA19: 08:30-10:00 R4 – Level 3
Sensor Informatics – Physiological Monitoring (Oral Session)
Chair: Chen, Ying (*University of Aizu*)

08:30-08:45 FrA19.1
Evaluation of Pulse Arrival Times during Lower Body Negative Pressure Test for the Non-Invasive Detection of Hypovolemia
Tigges, Timo* (*Technical Univ. Berlin*); Feldheiser, Aarne (*Charité – Univ. Berlin, Campus Virchow-Klinikum*); Pielmus, Alexandru Gabriel (*Technische Univ. Berlin*); Klum, Michael (*Technische Univ. Berlin*); Wiegank, Ludwig (*Charité – Univ. Berlin*); Orglmeister, Reinhold (*Technische Univ. Berlin*)

08:45-09:00 FrA19.2
Cuff-Less Blood Pressure Measurement based on Deep Convolutional Neural Network
Liu, Zengding (*Shenzhen Institutes of Advanced Tech., Chinese Academy of Sc*); Miao, Fen (*Shenzhen Institutes of Advanced Tech., Chinese Academy of S*); Wang, Ruxin (*Shenzhen Institutes of Advanced Tech., Chinese Academy of Sc*); Liu, Jikui (*Shenzhen Institutes of Advanced Tech. Chinese Academy of Sc*); Wen, Bo (*SIAT, CAS*); Li, Ye* (*Shenzhen Institutes of Advanced Tech., Chinese Academy of S*)

09:00-09:15 FrA19.3
Real-Time Cognitive Workload Monitoring based on Machine Learning using Physiological Signals in Rescue Missions
Momeni, Niloofar* (*Swiss Federal Institute of Technology Lausanne*); Dell'Agnola, Fabio (*Ecole Polytechnique Fédérale de Lausanne (EPFL)*); Arza Valdés, Adriana (*École Polytechnique Fédérale de Lausanne EPFL*); Aienza, David (*EPFL*)

09:15-09:30 FrA19.4
Effect of Different ECG Leads on Estimated R-R Intervals and Heart Rate Variability Parameters
Jeyhani, Vala* (*GE Healthcare*); Mäntysalo, Matti (*Tampere University*); Noponen, Kai (*University of Oulu*); Seppänen, Tapio (*University of Oulu*); Vehkaoja, Antti (*Tampere University*)

09:45-10:00 FrA19.6
Real-Time Respiration Measurement during Sleep using a Microwave Sensor
Chen, Ying* (*University of Aizu*); Kaneko, Masahiko (*Simplex Quantum Inc.*); Hirose, Shinichi (*Simplex Quantum Inc.*); Chen, Wenxi (*University of Aizu*)

FrA20: 08:30-10:00 R5 – Level 3
Motor Neuroprostheses (Oral Session)

08:30-08:45 FrA20.1
Comparative Study of Intraspinal Microstimulation and Epidural Spinal Cord Stimulation
Tao, Chunling (*Nantong Univ.*); Shen, Xiaoyan* (*Nantong Univ.*); Ma, Lei (*Nantong Univ.*); Shen, Jiahuan (*Nantong Univ.*); Li, Zhiling (*Nantong Univ.*); Wang, Zhigong (*Southeast Univ.*); Lü, Xiaoying (*Southeast Univ.*)

08:45-09:00	FrA20.2	09:30-09:45	FrA21.5
A Tool to Select FES Parameters for Chronic SCI Meneghel, Maykon Christian (<i>Pontifical Catholic University of Paraná, Graduate Program on He</i>); Manfra, Elisangela F.* (<i>Pontificia Universidade Católica do Paraná</i>); Nogueira-Neto, Guilherme (<i>Pontificia Universidade Católica do Paraná</i>)		An Energy-Efficient Implantable-Neural-Stimulator System with Wireless Charging and Dynamic Voltage Output Fu, Xingyu (<i>Institute of Microelectronics, Tsinghua Univ.</i>); Mai, Songping* (<i>Graduate School at Shenzhen, Tsinghua Univ.</i>); Wang, Zhihua (<i>Dept. of Electronic Eng., Tsinghua Univ. Beijing, P.</i>)	
09:00-09:15	FrA20.3	09:45-10:00	FrA21.6
A Performance Comparison of Neuromuscular Electrical Stimulation Protocols for Isolated Quadriceps Contraction versus Co-Contraction of Quadriceps and Hamstrings Duignan, Ciara (<i>University College Dublin</i>); Minogue, Conor M (<i>Biomedical Research Ltd</i>); Caulfield, Brian* (<i>UCD</i>)		Effect of Signals on the Encapsulation Performance of Parylene Coated Platinum Tracks for Active Medical Implants Nanbakhsh, Kambiz* (<i>Delft University of Technology</i>); Kluba, Marta Maria (<i>Delft University of Technology</i>); Pahl, Barbara (<i>Fraunhofer Institute for Reliability & Micro-integration IZM</i>); Bourgeois, Florian (<i>Comelec</i>); Dekker, Ronald (<i>TU Delft</i>); Serdijn, Wouter A. (<i>Delft University of Technology</i>); Giagka, Vasiliki (<i>Bioelectronics, TU Delft</i>)	
09:15-09:30	FrA20.4		
A Physics-Based Virtual Reality Environment to Quantify Functional Performance of Upper-Limb Prostheses Katy, Odette (<i>University of Central Florida</i>); Fu, Qiushi* (<i>University of Central Florida</i>)			
09:30-09:45	FrA20.5	10:30-10:45	FrB01.1
Simulation of the Assistance of Passive Knee Orthoses in FES Cycling Cardoso de Sousa, Ana Carolina* (<i>University of Brasília</i>); Shimabuko Cascás Sousa, Felipe (<i>Universidade de Brasília</i>); Padilha Lanari Bó, Antônio (<i>Universidade de Brasília</i>)		EMG-Based Indicators of Muscular Co-Activation during Gait in Children with Duchenne Muscular Dystrophy Rinaldi, Martina (<i>Roma Tre University</i>); Petrarca, Maurizio (<i>Pediatric Hospital Bambino Gesù</i>); Romano, Alberto (<i>Ospedale Pediatrico Bambino Gesù</i>); Vasco, Gessica (<i>Bambino Gesù Children's Hospital</i>); D'Anna, Carmen (<i>Roma TRE University – Engineering Dept.</i>); Schmid, Maurizio* (<i>Roma Tre University</i>); Castelli, Enrico (<i>Pediatric Hospital Bambino Gesù</i>); Conforto, Silvia (<i>University Roma TRE</i>)	
09:45-10:00	FrA20.6	10:45-11:00	FrB01.2
Design of a Wireless, Modular and Programmable Neuromuscular Electrical Stimulator Cerone, Giacinto Luigi* (<i>Politecnico di Torino</i>); Vieira, Taian (<i>Politecnico di Torino</i>); Botter, Alberto (<i>Politecnico di Torino</i>); Gazzoni, Marco (<i>Politecnico di Torino</i>)		Effect of Temporal Lobe Epilepsy on Auditory-Motor Integration for Vocal Pitch Regulation: Evidence from Brain Functional Network Analysis Wang, Tianqi (<i>Shenzhen Institute of Advanced Technology</i>); Liu, Hanjun (<i>The First Affiliated Hospital, Sun Yat-Sen University</i>); Wang, Lan (<i>Shenzhen Institutes of Advanced Technology, Chinese Academy of S</i>); Ng, Manwa, L. (<i>Speech Science Laboratory, Division of Speech & Hearing Scienc</i>); Li, Hua (<i>The Second People's Hospital of Shenzhen, The First Affiliated H</i>); Yan, Nan* (<i>Shenzhen Institute of Advanced Integration Technology, Chinese A</i>)	
FrA21: 08:30-10:00	R8 – level 3	11:00-11:15	FrB01.3
Smart Implants (Oral Session) Co-Chair: Hoffmann, Klaus-Peter (<i>Fraunhofer Institut für Biomedizinische Technik</i>)		Optimization of the Cortical Traveling Wave Analysis Framework for Feasibility in Stereo-Electroencephalography Coelli, Stefania* (<i>Dept. of Electronics, Information & Bioengineering, Polit</i>); Nobili, Lino (<i>Center for Sleep Medicine at Niguarda Ca' Granda Hospital, Milan</i>); Boly, Melanie (<i>University of Wisconsin</i>); Riedner, Brady (<i>University of Wisconsin</i>); Bianchi, Anna Maria (<i>Politecnico di Milano</i>)	
08:30-08:45	FrA21.1	11:15-11:30	FrB01.4
Integrated Force Sensor in a Cochlear Implant for Hearing Preservation Surgery N Vadivelu, Arvind Kumar* (<i>The University of Melbourne</i>); Liu, Zhengyong (<i>Hong Kong Polytechnic University</i>); Gunawardena, Dinusha Serandi (<i>Hong Kong Polytechnic University</i>); Chen, Bernard (<i>The University of Melbourne</i>); Tam, Hwa-Yaw (<i>Hong Kong Polytechnic University</i>); O'Leary, Stephen (<i>The University of Melbourne</i>); Oetomo, Denny (<i>The University of Melbourne</i>)		Estimating Intracranial EEG Signals at Missing Electrodes in Epileptic Networks Gunnarsdottir, Kristin* (<i>Johns Hopkins University</i>); Bulacio, Juan (<i>Cleveland Clinic</i>); Gonzalez-Martinez, Jorge (<i>Cleveland Clinic</i>); Sarma, Sridevi V. (<i>Johns Hopkins University</i>)	
08:45-09:00	FrA21.2	11:30-11:45	FrB01.5
Miniaturized Multi Sensor Implant for Monitoring of Hemodynamic Parameters Dogan, Özgü* (<i>Fraunhofer Institute for Microelectronic Circuits & Systems IM</i>); Schierbaum, Nicolas (<i>Fraunhofer Institute for Microelectronic Circuits & Systems IM</i>); Weidenmueller, Jens (<i>Fraunhofer IMS</i>); Baum, Mario (<i>Fraunhofer ENAS</i>); Schroeder, Tim (<i>Fraunhofer ENAS</i>); Wuensch, Dirk (<i>Fraunhofer ENAS</i>); Goertz, Michael (<i>Fraunhofer Institute of Microelectronic Systems & Circuits</i>); Seidl, Karsten (<i>Univ. of Duisburg-Essen</i>)		A Characterization of Epileptogenesis Presented in Hippocampal Neural Activity in a Rat Tetanus Toxin Model Park, Sang-Eon (<i>Georgia Institute of Technology</i>); Connolly, Mark* (<i>Emory University</i>); Gross, Robert (<i>Emory University</i>)	
09:00-09:15	FrA21.3	11:45-12:00	FrB01.6
Multi-Ring Ultrasonic Transducer on a Single Piezoelectric Disk for Powering Biomedical Implants Hosseini, Seyedsina* (<i>Aarhus Univ.</i>); Laursen, Kjeld (<i>Aarhus Univ.</i>); Rashidi, Amin (<i>Aarhus Univ.</i>); Moradi, Farshad (<i>Integrated Circuits & Electronics Laboratory, Dept. of En</i>)		Evaluating Invasive EEG Implantations in Medically Refractory Epilepsy with Functional Scalp EEG Recordings and Structural Imaging Data Palepu, Anil (<i>Johns Hopkins Univ.</i>); Li, Adam* (<i>Neuromedical Control Systems Laboratory</i>); Fitzgerald, Zachary (<i>Cleveland Clinic</i>); Hu, Katherine (<i>Johns Hopkins Univ.</i>); Costacurta, Julia (<i>Johns Hopkins Univ.</i>); Bulacio, Juan (<i>Cleveland Clinic</i>); Martinez-Gonzalez, Jorge (<i>Cleveland Clinic</i>); Sarma, Sridevi V. (<i>Johns Hopkins Univ.</i>)	
09:15-09:30	FrA21.4		
Frequency and Phase Synchronization in Distributed (Implantable-Transcutaneous) Neural Interfaces Toth, Robert* (<i>University of Oxford</i>); Holt, Abbey (<i>University of Oxford</i>); Benjaber, Moaad (<i>University of Oxford</i>); Sharott, Andrew (<i>University of Oxford</i>); Denison, Timothy (<i>Medtronic</i>)			

FrB02: 10:30-12:00 Hall A8 – Level 1
Independent and Principal Component Analysis (Oral Session)
Chair: Van Huffel, Sabine (*KU Leuven*)
Co-Chair: de Chazal, Philip (*University of Sydney*)

10:30-10:45 FrB02.1
Comparing Different Methods of Hand-Crafted HRV, EDR and CPC Features for Sleep Apnoea Detection
 Sadr, Nadi* (*Univ. of Sydney*); de Chazal, Philip (*Univ. of Sydney*)

10:45-11:00 FrB02.2
Properties of Motor Units of Elbow and Ankle Muscles Decomposed using High-Density Surface EMG
 Hassan, Altamash* (*Northwestern Univ.*); Kim, Edward (*Northwestern Univ.*); Khurram, Obaid (*Northwestern Univ.*); Cummings, Mark (*Northwestern Univ.*); Thompson, Christopher (*Temple Univ.*); McPherson, Laura Miller (*Florida Intl. Univ.*); Heckman, CJ (*Feinberg School of Medicine, Northwestern Univ.*); Dewald, Julius P. A. (*Northwestern Univ.*); Negro, Francesco (*Univ. Medical Center Göttingen, Bernstein Center for Comput*)

11:00-11:15 FrB02.3
Tensor based Blind Source Separation in Longitudinal Magnetic Resonance Imaging Analysis
 Stamile, Claudio (*CREATIS, Université Lyon 1*); Cotton, François (*Hospices Civils de Lyon – CREATIS*); Sappey-Marinière, Dominique (*Université Claude Bernard – Lyon1*); Van Huffel, Sabine* (*KU Leuven*)

11:15-11:30 FrB02.4
Preliminary Fusion of EEG and MRI with Phenotypic Scores in Children with Epilepsy based on the Canonical Polyadic Decomposition
 Dron, Noramon* (*University of Edinburgh*); Kinney-Lang, Eli (*University of Edinburgh*); Chin, Richard (*The University of Edinburgh*); Escudero, Javier (*University of Edinburgh*)

11:30-11:45 FrB02.5
Mining EEG Scalp Maps of Independent Components Related to HCT Tasks
 Teixeira, Ana Rita (*Universidade de Aveiro*); Santos, Isabel (*Universidade de Aveiro*); Lang, Elmar W. (*University of Regensburg*); Tome, Ana Maria* (*Universidade de Aveiro*)

11:45-12:00 FrB02.6
PCA-Driven Detection and Enhancement of Microchanges in Video Data Associated with Heart Rate
 Gauci, Lucianne* (*Univ. of Malta*); Falzon, Owen (*Univ. of Malta*); Camilleri, Kenneth Patrick (*Univ. of Malta*)

FrB03: 10:30-12:00 Hall A3 – Level 1
Optical Imaging (Oral Session)

10:30-10:45 FrB03.1
Illumination Robust Heart-Rate Extraction from Single-Wavelength Infrared Camera using Spatial-Channel Expansion
 Hu, Jingjing (*Hunan University*); He, Yunze (*Hunan University*); Liu, Jie (*Hunan University*); He, Min (*Hunan University*); Wang, Wenjin* (*Eindhoven University of Technology*)

10:45-11:00 FrB03.2
3D Reconstruction of Whole Stomach from Endoscope Video using Structure-From-Motion
 Widya, Aji Resindra* (*Tokyo Institute of Technology*); Monno, Yusuke (*Tokyo Institute of Technology*); Imahori, Kosuke (*Tokyo Institute of Technology*); Okutomi, Masatoshi (*Tokyo Institute of Technology*); Suzuki, Sho (*Nihon University School of Medicine*); Gotoda, Takuji (*Nihon University School of Medicine*); Miki, Kenji (*Tsujinaka Hospital Kashiwanoha*)

11:00-11:15 FrB03.3
Light Field Image Dataset of Skin Lesions
 Faria, Sergio* (*Instituto de Telecomunicações*); Filipe, Jose (*Instituto de Telecomunicações*); Assuncao, Pedro (*Instituto de Telecomunicações*); Santos, Miguel (*Instituto de Telecomunicações*); Fonseca-Pinto, Rui (*Instituto de Telecomunicações*); Pereira, Pedro (*Instituto de Telecomunicações*); Tavora, Luis (*ESTG, Polytechnic Institute of Leiria, Portugal*); Santiago, Felicidade (*Centro Hospitalar de Leiria*); Dominguez, Victoria (*Centro Hospitalar de Leiria*); Henrique, Martinha (*Centro Hospitalar de Leiria*)

11:15-11:30 FrB03.4
Towards Non-Invasive Patient Tracking: Optical Image Analysis for Spine Tracking during Spinal Surgery Procedures
 Manni, Francesca* (*Eindhoven Univ. of Technology*); Liu, Xin (*Eindhoven Univ. of Technology*); Holthuisen, Ronaldus Frederik Johannes (*Philips Healthcare*); Zinger, Svitlana (*Eindhoven Univ. of Technology*); van der Sommen, Fons (*Eindhoven Univ. of Technology*); Shan, Caifeng (*Philips Research*); Mamprin, Marco (*Eindhoven Univ. of Technology*); Burström, Gustav (*Karolinska Institutet, Dept of Clinical Neuroscience*); Elmi Terander, Adrian (*Karolinska Univ. Hospital*); Edstrom, Erik (*Karolinska Univ. Hospital*); de With, Peter (*Eindhoven Univ. of Technology*)

11:30-11:45 FrB03.5
Using a Motion Capture System as Reference for Motion Tracking in Photoplethysmography Imaging
 Yu, Xinchu* (*RWTH Aachen Univ.*); Cruz, Sónia (*RWTH Aachen Univ.*); Batista, Joao (*RWTH Aachen Univ. Hospital*); Bollheimer, Cornelius (*RWTH Aachen Univ. Hospital*); Leonhardt, Steffen (*RWTH Aachen Univ.*); Hoog Antink, Christoph (*RWTH Aachen Univ., Aachen, Germany*)

11:45-12:00 FrB03.6
A Portable Laser Speckle Imager based on Embedded Graphics Processing Unit Platform
 Chen, Heping (*Shanghai Jiao Tong University*); Miao, Peng (*Shanghai University*); Bo, Bin (*Shanghai Jiao Tong University*); Li, Yuanqi (*Shanghai Jiao Tong University*); Tong, Shanbao* (*Shanghai Jiao Tong University*)

FrB05: 10:30-12:00 Hall A2 – Level 1
Challenges and Advances of Signal and Image Processing in Epilepsy 2: Brain-Heart Interactions (Minisymposium)
Chair: Schiecke, Karin (*Jena University Hospital, Friedrich Schiller University Jena*)
Co-Chair: Iasemidis, Leonidas (*Louisiana Tech University*)

10:30-10:45 FrB05.1
Improving Heart Rate-Based Epileptic Seizure Detection using Efficient Personalization
 De Cooman, Thomas* (*KU Leuven, Dept. of Electrical Engineering-ESAT, STADIUS*); Varon, Carolina (*Katholieke Universiteit Leuven*); Van Paesschen, Wim (*Katholieke Universiteit Leuven*); Lagae, Lieven (*University Hospital of Leuven*); Van Huffel, Sabine (*KU Leuven*)

10:45-11:00 FrB05.2
Brain-Heart Interactions in Epilepsy: Signal-Adaptive Approaches to Quantify Specific Time and Frequency Patterns
 Schiecke, Karin* (*Jena University Hospital, Friedrich Schiller University Jena*); Leistriz, Lutz (*Jena University Hospital, Friedrich Schiller University Jena*); Feucht, Martha (*Epilepsy Monitoring Unit, Dept. of Child & Adolescent Neu*); Pati, Sandipan (*University of Alabama School of Medicine*); Iasemidis, Leonidas (*Louisiana Tech University*)

11:00-11:15 FrB05.3
Partial Information Decomposition of Brain-Heart Interactions in Temporal Lobe Epilepsy in the Childhood
 Faes, Luca* (*University of Palermo*); Pernice, Riccardo (*University of Palermo*); Feucht, Martha (*Epilepsy Monitoring Unit, Dept. of Child & Adolescent Neu*); Schiecke, Karin (*Jena University Hospital, Friedrich Schiller University Jena*)

11:15-11:30	FrB05.4	Brain-Heart Interactions in SUDEP Hutson, Timothy* (<i>Louisiana Tech University</i>); Alamoudi, Omar (<i>Louisiana Tech U. & King Abdulaziz U.</i>); Glasscock, Edward (<i>Louisiana State University Health Sciences Center</i>); Iasemidis, Leon (<i>Louisiana Tech University</i>)	11:15-11:30	FrB07.4	Preparation of Gel-Liposome Nanoparticles for Drug Delivery Applications Mirab, Fereshtehsadat (<i>University of Houston</i>); Wang, Yifei (<i>University of Houston</i>); Farhadi, Hanieh (<i>University of Houston</i>); Majd, Sheereen* (<i>University of Houston</i>)
FrB06: 10:30-12:00	Hall A5 – Level 1	Neural Coding and Rehabilitation using Brain-Machine Interfaces (Invited Session) Chair: Jiang, Ning (<i>Univ. of Waterloo</i>) Co-Chair: Wang, Yiwen (<i>Hong Kong Univ. of Science and Tech.</i>)	11:30-11:45	FrB07.5	Reactive Nitrogen Species Releasing Hydrogel for Enhanced Wound Healing Zahid, Alap Ali (<i>Qatar Univ.</i>); Ahmed, Rashid (<i>Qatar Univ.</i>); Raza ur Rehman, Syed (<i>Qatar Univ.</i>); Augustine, Robin (<i>Qatar Univ., Doha</i>); Anwarul, Hasan* (<i>Qatar Univ., Doha</i>)
10:30-10:45	FrB06.1	A Novel Brain-Computer Interface based on Action Observation Zhang, Xin (<i>Xi'an Jiao Tong Univ.</i>); Xu, Guanghua (<i>Xi'an Jiao Tong Univ.</i>); Ravi, Aravind (<i>Univ. of Waterloo</i>); Pearce, Sarah (<i>Univ. of Waterloo</i>); Jiang, Ning* (<i>Univ. of Waterloo</i>)	11:45-12:00	FrB07.6	Graphene Oxide Loaded Gelatin Methacrylate Hydrogel for Enhanced Wound Healing in Diabetic Patients Raza ur Rehman, Syed (<i>Qatar Univ.</i>); Augustine, Robin (<i>Qatar Univ., Doha</i>); Zahid, Alap Ali (<i>Qatar Univ.</i>); Ahmed, Rashid (<i>Qatar Univ.</i>); Anwarul, Hasan* (<i>Qatar Univ., Doha</i>)
10:45-11:00	FrB06.2	Combining Haptic Stimulation and Mirror Visual Feedback for Improving Perception of Embodiment Li, Ding (<i>HuaShan Hospital, Fudan University</i>); He, Jiayuan (<i>University of Waterloo</i>); Auguste, Koh (<i>University of Waterloo</i>); Jia, Jie* (<i>HuaShan Hospital Fudan University</i>)	FrB08: 10:30-12:00	M8 – Level 3	Health Informatics – Computer-Aided Decision Making (Oral Session) Chair: Picard, Rosalind (<i>Massachusetts Institute of Technology</i>) Co-Chair: Seepold, Ralf (<i>HTWG Konstanz</i>)
11:00-11:15	FrB06.3	Input-Output Modeling of the Hippocampus for Developing Memory Prostheses Song, Dong* (<i>University of Southern California</i>); She, Xiwei (<i>University of Southern California</i>); Hampson, Robert (<i>Wake Forest School of Medicine</i>); Deadwyler, Sam (<i>Wake Forest University</i>); Berger, Theodore (<i>USC</i>)	10:30-10:45	FrB08.1	Latent States Extraction through Kalman Filter for the Prediction of Heart Failure Decompensation Events Nunes, Diogo (<i>University of Coimbra</i>); Rocha, Teresa (<i>Inst Superior de Eng de Coimbra</i>); Traver, Vicente (<i>ITACA – Universitat Politècnica de València</i>); Teixeira, César (<i>University of Coimbra</i>); Ruano, M. Graça (<i>FCT, University of Algarve & CISUC-University of Coimbra</i>); Paredes, Simao (<i>Instituto Politécnico de Coimbra</i>); de Carvalho, Paulo* (<i>University of Coimbra</i>); Henriques, Jorge (<i>University of Coimbra</i>)
11:15-11:30	FrB06.4	A Kernel Reinforcement Learning Algorithm with Weight Transfer in Brain-Machine Interfaces Zhang, Xiang (<i>The Hong Kong University of Science & Technology</i>); Principe, Jose (<i>University of Florida</i>); Wang, Yiwen* (<i>Hong Kong University of Science & Technology</i>)	10:45-11:00	FrB08.2	Ecological Momentary Assessment based Differences between Android and iOS Users of the TrackYourHearing mHealth Crowdsensing Platform Pryss, Rüdiger* (<i>Ulm Univ.</i>); Schlee, Winfried (<i>Univ. Hospital Regensburg</i>); Reichert, Manfred (<i>Ulm Univ., Institute of Databases & Information Systems</i>); Kurthen, Ira (<i>Developmental Psychology: Infancy & Childhood, Dept. of P</i>); Giroud, Nathalie (<i>Cognition, Aging, & Psychophysiology Laboratory, Dept. of</i>); Jagoda, Laura (<i>Division of Neuropsychology, Dept. of Psychology, Univ.</i>); Neuschwander, Pia (<i>Division of Neuropsychology, Dept. of Psychology, Univ.</i>); Meyer, Martin (<i>Division of Neuropsychology, Dept. of Psychology, Univ.</i>); Neff, Patrick (<i>Univ. Hospital Regensburg</i>); Schobel, Johannes (<i>Ulm Univ.</i>); Hoppenstedt, Burkhard (<i>Ulm Univ.</i>); Spiliopoulou, Myra (<i>Univ. of Magdeburg</i>); Langguth, Berthold (<i>Univ. Hospital Regensburg</i>); Probst, Thomas (<i>Donau Univ. Krems</i>)
11:30-11:45	FrB06.5	Brain-State Dependent Stimulation to Boost Functional Recovery in Stroke Patients Mrachacz-Kersting, Natalie* (<i>Aalborg Univ.</i>); Jiang, Ning (<i>Univ. of Waterloo</i>); Farina, Dario (<i>Imperial College London</i>)	11:00-11:15	FrB08.3	Homogeneous and Heterogeneous Ensemble Classification Methods in Diabetes Disease: A Review Fernandez Aleman, Jose Luis (<i>University of Murcia</i>); Carrillo de Gea, Juan Manuel* (<i>University of Murcia</i>); Hosni, Mohamed (<i>ENSIAS, Mohammed V University</i>); Idri, Ali (<i>Mohammed V University Rabat</i>); Garcia-Mateos, Ginés (<i>University of Murcia</i>)
FrB07: 10:30-12:00	Hall A4 – Level 1	Biomaterials (Oral Session) Chair: Bucher, Volker (<i>Furtwangen University</i>) Co-Chair: Doll, Patrick W. (<i>Karlsruhe Institute of Technology (KIT), Institute of Microstructure Technology (IMT)</i>)	11:15-11:30	FrB08.4	Deep Reinforcement Learning for Optimal Critical Care Pain Management with Morphine using Dueling Double-Deep Q Networks Lopez-Martinez, Daniel* (<i>Massachusetts Institute of Technology</i>); Eschenfeldt, Patrick (<i>Massachusetts General Hospital</i>); Ostvar, Sassan (<i>Columbia University</i>); Ingram, Myles (<i>Columbia University</i>); Hur, Chin (<i>Columbia University</i>); Picard, Rosalind (<i>Massachusetts Institute of Technology</i>)
10:30-10:45	FrB07.1	Electrochemical Characterization and Surface Analysis of Activated Glassy Carbon Neural Electrodes Vomero, Maria* (<i>Univ. of Freiburg</i>); Mondragon, Norma Carolina (<i>Institute of Microsystem Technology (IMTEK), Laboratory for Biome</i>); Stieglitz, Thomas (<i>Univ. of Freiburg</i>)	10:45-11:00	FrB07.2	Characterization of Biostable Atomic Layer Deposited (ALD) Multilayer Passivation Coatings for Active Implants Westerhausen, Markus (<i>Hochschule Furtwangen</i>); Metzger, Michael (<i>Hochschule Furtwangen University</i>); Blendinger, Felix (<i>Furtwangen University</i>); Levermann, Anja (<i>Furtwangen University</i>); Fleischer, Monika (<i>Eberhard Karls University of Tübingen</i>); Hofmann, Boris (<i>Aesculap AG</i>); Bucher, Volker* (<i>Furtwangen University</i>)
11:00-11:15	FrB07.3	Integration of Micro-Patterned Carbon Fiber Mats into Polyimide for the Development of Flexible Implantable Neural Devices Gueli, Calogero* (<i>University of Freiburg</i>); Vomero, Maria (<i>University of Freiburg</i>); Sharma, Swati (<i>Karlsruhe Institute of Technology</i>); Stieglitz, Thomas (<i>University of Freiburg</i>)			

11:30-11:45 FrB08.5
Development of a Sleep Apnea Detection Algorithm using Long Short-Term Memory and Heart Rate Variability
 Iwasaki, Ayako* (*Kyoto Univ.*); Nakayama, Chikao (*Kyoto Univ.*); Fujiwara, Koichi (*Kyoto Univ.*); Sumi, Yuki Yoshi (*Shiga Univ. of Medical Science*); Matsuo, Masahiro (*Shiga Univ. of Medical Science*); Kano, Manabu (*Kyoto Univ.*); Kadotani, Hiroshi (*Shiga Univ. of Medical Science*)

11:45-12:00 FrB08.6
Automatic Classification and Monitoring of De Novo Parkinson's Disease by Learning Demographic and Clinical Features
 Soltaninejad, Sara* (*University of Alberta*); Basu, Anup (*University of Alberta*); Cheng, Irene (*University of Alberta*)

FrB09: 10:30-12:00 M1 – Level 3
Models of Organs and Medical Devices (Oral Session)
Co-Chair: Zhang, Henggui (*Harbin Institute of Technology, School of Computer Science and Technology*)

10:30-10:45 FrB09.1
Surface Potential Simulation for Robust Electrode Placement by MRI based Human Phantom with FEM based Quasi-Static Solver for Bioimpedance Measurement
 Urban, Mike* (*Technische Universität Berlin*); Orglmeister, Reinhold (*Technische Universität Berlin*)

10:45-11:00 FrB09.2
Evaluation of Electrode Setups by MRI based Human Phantom with FEM based Quasi-Static Solver for Bioimpedance Measurement
 Urban, Mike* (*Technische Universität Berlin*); Orglmeister, Reinhold (*Technische Universität Berlin*)

11:00-11:15 FrB09.3
Estimating Local Therapeutic Hypothermia in Case of Ischemic Stroke using a 1D Hemodynamics Model and an Energetic Temperature Model
 Lutz, Yannick* (*Karlsruhe Institute of Technology (KIT)*); Daschner, Rosa (*Karlsruhe Institute of Technology (KIT)*); Krames, Lorena (*Karlsruhe Institute of Technology (KIT)*); Loewe, Axel (*Karlsruhe Institute of Technology (KIT)*); Doessel, Olaf (*Karlsruhe Institute of Technology (KIT)*); Cattaneo, Giorgio (*Adceris GmbH & Co KG, Pforzheim*)

11:15-11:30 FrB09.4
Ultra-Focal Magnetic Stimulation using a μ TMS Coil: A Computational Study
 Colella, Micol* (*Univ. of Rome "Sapienza"*); Laher, Rebecca (*Berenson-Allen Center for Noninvasive Brain Stimulation, Divisio*); Press, Daniel (*Berenson-Allen Center for Noninvasive Brain Stimulation, Divisio*); McIllduff, Courtney (*Berenson-Allen Center for Noninvasive Brain Stimulation, Divisio*); Rutkove, Seward (*Harvard Medical School*); Pascual-Leone, Alvaro (*Harvard Medical School*); Apollonio, Francesca (*ICEmB@La Sapienza Univ. Rome*); Liberti, Micaela (*ICEmB at Sapienza Univ. of Rome*); Bonmassar, Giorgio (*A. A. Martinos Ctr. for Biomedical Imaging*)

11:30-11:45 FrB09.5
An in-Vivo Coil Setup for AC Magnetic Field-Mediated Magnetic Nanoparticle Heating Experiments
 Miaskowski, Arkadiusz (*University of Life Sciences, Lublin*); Balakrishnan, Preethiya (*Faraday-Fleming Laboratory*); Subramanian, Mahendran* (*Imperial College London*); Hovorka, Ondrej (*University of Southampton*)

11:45-12:00 FrB09.6
Role of If Density on Electrical Action Potential of Bio-Engineered Cardiac Pacemaker: A Simulation Study
 Li, Yacong (*Harbin Institute of Tech.*); Wang, Kuanquan (*Harbin Institute of Tech.*); Li, Qince (*Harbin Institute of Tech.*); Luo, Cunjin* (*Key Lab of Medical Electrophysiology, Ministry of Education, Ins*); Zhang, Henggui (*Harbin Institute of Tech., School of Computer Science & T*)

FrB10: 10:30-12:00 M2 – Level 3
Hearing4All – Innovations for Diagnosis (Minisymposium)
Chair: Nogueira, Waldo (*Leibniz Universität Hannover*)
Co-Chair: Büchner, Andreas (*Hannover Medical School*)

10:30-10:45 FrB10.1
Cognitive-Driven Binaural Speech Enhancement System for Hearing Aid Applications
 Aroudi, Ali* (*University of Oldenburg, Dept. of Medical Physics & Acoustics*); Doclo, Simon (*University of Oldenburg*)

10:45-11:00 FrB10.2
Individualized Electrical Stimulation Patterns with Auditory Prostheses and Closed-Loop Systems
 Bahmer, Andreas* (*University Clinic Würzburg*)

11:00-11:15 FrB10.3
From Surgery to Sound Perception – Signal Processing in Cochlear Implants
 Koning, Raphael* (*Advanced Bionics*); Litvak, Leonid (*Advanced Bionics*); Hamacher, Volkmar (*Advanced Bionics*)

11:15-11:30 FrB10.4
Future Trends in Hearing Implants
 Nopp, Peter* (*MED-EL Elektromedizinische Geräte Gesellschaft m.b.H.*)

11:30-11:45 FrB10.5
Developing Behind-the-Ear EEG Sensing for Hearing Devices
 Bleichner, Martin G.* (*University of Oldenburg*); Debener, Stefan (*University of Oldenburg*)

11:45-12:00 FrB10.6
Electrochemical Protocols Upgrade Conventional Noble Metal Electrodes to Long-Term Stable Sensors at the Tissue/Electrode Interface
 Weltin, Andreas* (*Univ. of Freiburg*); Ganatra, Dev (*Univ. of Freiburg*); Durisin, Martin (*Hannover Medical School*); Urban, Gerald A. (*Univ. of Freiburg*); Kieninger, Jochen (*Univ. of Freiburg*)

11:45-12:00 FrB10.7
Next Generation Cochlear Implants Require Microsecond Binaural Synchronization
 Roskoth-Kuhl, Nicole* (*Univ. Medical Center Freiburg.*); Hofmann, Ulrich G. (*Univ. of Freiburg*); Rotter, Stefan (*Univ. of Freiburg, Bernstein Center Freiburg & Faculty of B*); Kral, Andrej (*Hannover Medical School, Institute of AudioNeuro Technology & D*); Hubka, Peter (*Hannover Medical School, Institute of AudioNeuro Technology & D*); Schnupp, Jan W. (*City Univ. of Hong Kong, Dept. of Biomedical Science*)

11:45-12:00 FrB10.8
New Electrical and Ultrasound Stimulation Technologies for Treating Hearing Disorders and Tinnitus
 Lim, Hubert* (*University of Minnesota*)

FrB11: 10:30-12:00 M4 – Level 3
State-of-the-Art Advances in Sleep Health Science and Technology: Session 2 – New Developments in Sleep Apnea Diagnostics and Therapeutics (Minisymposium)
Chair: Khoo, Michael (*University of Southern California*)
Co-Chair: Penzel, Thomas (*Charité Universitätsmedizin Berlin*)

10:30-10:45 FrB11.1
Advanced Signal Processing Techniques for Sleep-Disordered Breathing (SDB) Detection using Emfit Mattress Sensor
 Perez-Macias, Jose Maria* (*Tampere Univ. of Technology*); Tenhunen, Mirja (*Dept. of Clinical Neurophysiology, Pirkanmaa Hospital Distr*); Värrä, Alpo (*Tampere Univ. of Technology*); Himanen, Sari-Leena (*irkanmaa Hospital District*); Viik, Jari (*Tampere Univ. of Technology*)

10:45-11:00 FrB11.2
Digital Health Applications in the Treatment of Sleep and Respiratory Disorders
 Armitstead, Jeffrey Peter* (*ResMed Ltd., Univ. of Sydney*); Javed, Faizan (*Univ. of New South Wales*); Malouf, Gordon Joseph (*ResMed*)

July 26 Friday

11:00-11:15	FrB11.3	Continuous Monitoring of Hypoventilation using Tidal Volume Signal Extracted from EIT Images Woo, Eung Je* (<i>Kyung Hee Univ.</i>); Oh, Tong In (<i>Kyunghee Univ.</i>); Jang, Geuk Young (<i>Dept. of Biomedical Engineering, Graduate School, Kyung Hee</i>); Wi, Hun (<i>KyungHee Univ.</i>)	FrB13: 10:30-12:00 Human Body Communication (Oral Session)	R2 – Level 3
11:15-11:30	FrB11.4	Enablers for Precision Medicine Approaches to Managing Sleep Disordered Breathing de Chazal, Philip* (<i>University of Sydney</i>); Sadr, Nadi (<i>University of Sydney</i>); Sebastian, Arun (<i>University of Sydney</i>); Johnston, Benjamin (<i>University of Sydney</i>)	10:30-10:45 Wireless Ultrasonic Communication for Biomedical Injectable Implantable Device	FrB13.1
FrB12: 10:30-12:00	M6 – Level 3	MRI – Cardiac Imaging (Oral Session)	10:45-11:00 Development of a High-Hydrous Gel Phantom for Human Body Communication based on Electrical Anisotropy	FrB13.2
10:30-10:45	FrB12.1	Functional LGE Imaging: Cardiac Phase-Resolved Assessment of Focal Fibrosis Weingärtner, Sebastian* (<i>Stanford University</i>); Demirel, Omer Burak (<i>University of Minnesota</i>); Shenoy, Chetan (<i>University of Minnesota</i>); Schad, Lothar R. (<i>Heidelberg University</i>); Schulz-Menger, Jeanette (<i>Charité-Medical University Berlin</i>); Akcakaya, Mehmet (<i>University of Minnesota</i>)	11:00-11:15 A Stochastic Channel Model for Ultra Wideband In-Body Communication	FrB13.3
10:45-11:00	FrB12.2	Temporal Resolution Enhancement of Dynamic MRI Sequences within a Motion-Based Framework Makki, Karim* (<i>IMT Atlantique</i>); Borotikar, Bhushan (<i>University of Western Brittany</i>); Garetier, Marc (<i>Latim</i>); Brochard, Sylvain (<i>CHRU Brest</i>); Ben Salem, Douraid (<i>CHRU Brest</i>); Rousseau, François (<i>Telecom Bretagne</i>)	11:15-11:30 A Self-Synchronizing, Low-Power, Low-Complexity Transceiver for Body-Coupled Communication	FrB13.4
11:00-11:15	FrB12.3	Free-Breathing Three-Dimensional T1 Mapping of the Heart using Subspace-Based Data Acquisition and Image Reconstruction Han, Paul (<i>Massachusetts General Hospital</i>); Horng, Debra (<i>Massachusetts General Hospital, Harvard Medical School</i>); Marin, Thibault (<i>Illinois Institute of Technology</i>); Petibon, Yoann (<i>Massachusetts General Hospital</i>); Ouyang, Jinsong (<i>Massachusetts General Hospital, Harvard Medical School</i>); El Fakhri, Georges (<i>Harvard Medical School, Massachusetts General Hospital</i>); Ma, Chao* (<i>Harvard Medical School</i>)	11:30-11:45 A Simulation Platform to Study the Human Body Communication Channel	FrB13.5
11:15-11:30	FrB12.4	Feasibility of in-Vivo Estimation of the Brachial Artery Area-Pressure Relation from CINE and Real-Time MRI during Upper Arm Cuff Inflation Bresch, Erik* (<i>Philips</i>); Bogatu, Laura (<i>Philips Research, Eindhoven University of Technology</i>); Smink, Jouke (<i>Philips</i>); Muehlsteff, Jens (<i>Philips</i>)	11:45-12:00 Investigating on the Interferences on Human Body Communication System Induced by Other Wearable Devices	FrB13.6
11:30-11:45	FrB12.5	A Multi-Channel Deep Learning Approach for Segmentation of the Left Ventricular Endocardium from Cardiac Images Yang, Xulei (<i>Institute for Infocomm Research, A*STAR</i>); Tjio, Gabriel (<i>A*STAR</i>); Yang, Feng (<i>Institute of High Performance Computing, A*Star, Singapore</i>); Ding, Jie (<i>Agency for Science, Technology & Research (A*STAR)</i>); Selvaraj, Senthil Kumar (<i>Institute of High Performance Computing</i>); Leng, Shuang (<i>National Heart Centre Singapore</i>); Zhao, Xiaodan (<i>National Heart Centre Singapore</i>); Tan, Ru-San (<i>National Heart Centre Singapore</i>); Zhong, Liang* (<i>National Heart Centre Singapore, Duke-NUS Medical School, Nation</i>); Su, Yi (<i>Institute of High Performance Computing</i>)	FrB14: 10:30-12:00 Signal Processing and Classification in Sleep Studies (II) (Oral Session) Chair: Sassi, Roberto (<i>Università degli Studi di Milano</i>)	R3 – Level 3
11:45-12:00	FrB12.6	Right Ventricular Segmentation from MRI using Deep Convolutional Neural Networks Purmehdi, Hakimeh (<i>University of Alberta</i>); Rakkunedeth Hareendranathan, Abhilash (<i>University of Alberta</i>); Noga, Michelle (<i>University of Alberta</i>); Punithakumar, Kumaradevan* (<i>University of Alberta</i>)	10:30-10:45 Cross-Channel Phase-Amplitude Transfer Entropy Conceptualize Long-Range Transmission in Sleep: A Case Study	FrB14.1
			10:45-11:00 Hybrid In-Phase and Continuous Auditory Stimulation Significantly Enhances Slow Wave Activity during Sleep	FrB14.2
			11:00-11:15 Effectiveness of Sleep Apnea Detection based on One vs. Two Symmetrical EEG Channels	FrB14.3
			11:15-11:30 EEG-Based Classification of Microsleep by Means of Feature Selection: An Application in Aviation	FrB14.4

- 11:30-11:45 FrB14.5
Advanced Network Neuroscience Approaches in Sleep Neurobiology on Extreme Environments
 Frantzidis, Christos* (*Aristotle Univ. of Thessaloniki*); Christiane, Nday (*Univ.*); Chriskos, Panteleimon (*Aristotle Univ. of Thessaloniki*); Gkivogkli, Polyxeni (*Aristotle Univ. of Thessaloniki*); Bamidis, Panagiotis (*Aristotle Univ. of Thessaloniki*); Kourtidou-Papadeli, Chrysoula (*Greek Aerospace Medical Association*)
- FrB15: 10:30-12:00 M3 – Level 3
Image Classification (Oral Session)
Chair: Jiang, Xiaoyi (*University of Münster*)
- 10:30-10:45 FrB15.1
New Methods for Morphological Erythrocytes Classification
 Herold-Garcia, Silena (*Universidad de Oriente*); Fernandes, Leandro A. F.* (*Universidade Federal Fluminense*)
- 10:45-11:00 FrB15.2
A Novel Real-Time Automatic Angioectasia Detection Method in Wireless Capsule Endoscopy Video Feed
 Vezakis, Ioannis* (*National Technical University of Athens*); Toumpaniaris, Petros (*National Technical University of Athens*); Polydorou, Andreas (*National & Kapodistrian University of Athens, Medical School*); Koutsouris, Dimitrios (*Biomedical Engineering Laboratory, School of Electrical & Comp*)
- 11:00-11:15 FrB15.3
Deep Feature Learning from a Hospital-Scale Chest X-Ray Dataset with Application to TB Detection on a Small-Scale Dataset
 Gozes, Ophir (*Tel Aviv University*); Greenspan, Hayit K.* (*Tel Aviv University*)
- 11:15-11:30 FrB15.4
Classification and Assessment of Hand Arthritis Stage using Support Vector Machine
 Akhbardeh, Farhad* (*University*); Vasefi, Fartash (*Simon Fraser University*); Mackinnon, Nick (*etreatMD*); Amini, Mohammad (*eTreat*); Akhbardeh, Alireza (*Johns Hopkins University*); Tavakolian, Kouhyar (*Educational*)
- 11:30-11:45 FrB15.5
Diagnostic and Prognostic Classification of Brain Disorders using Residual Learning on Structural MRI Data
 Abrol, Anees* (*Georgia State Univ., The Mind Research Network*); Rokham, Hooman (*Univ. of New Mexico*); Calhoun, Vince (*The Mind Research Network/Univ. of New Mexico*)
- 11:45-12:00 FrB15.6
Predicting Male vs. Female from Task-fMRI Brain Connectivity
 Sen, Bhaskar (*University of Minnesota*); Parhi, Keshab* (*University of Minnesota*)
- FrB16: 10:30-12:00 M5 – Level 3
Modeling and Simulation in Musculoskeletal Biomechanics (Oral Session)
Co-Chair: Fey, Nicholas (*The University of Texas at Dallas*)
- 10:30-10:45 FrB16.1
Simulation of Exoskeleton Alignment and Its Effect on the Knee Extensor and Flexor Muscles
 MajidiRad, AmirHossein (*Wichita State University*); Yihun, Yimesker (*Wichita State University*); Desai, Jaydip* (*Wichita State University*); Hakansson, Nils A. (*Wichita State University*)
- 10:45-11:00 FrB16.2
Simple Spline Representation for Identifying Sit-to-Stand Strategies
 Matthew, Robert Peter* (*UC Berkeley*); Seko, Sarah (*UC Berkeley*); Bailey, Jeannie (*Univ. of California at San Francisco*); Bajcsy, Ruzena (*UC Berkeley, CTRIS*); Lotz, Jeffrey (*Orthopaedic Surgery, Univ. of California at Berkeley*)
- 11:00-11:15 FrB16.3
Model-Based Estimation of Ankle Joint Stiffness during Dynamic Tasks: A Validation-Based Approach
 Cop, Christopher P.* (*Univ. of Twente*); Durandau, Guillaume (*Univ. of Twente*); Moya Esteban, Alejandro (*Univ. of Twente*); van 't Veld, Ronald C. (*Univ. of Twente*); Schouten, Alfred C. (*Delft Univ. of Technology*); Sartori, Massimo (*Univ. of Twente*)
- 11:15-11:30 FrB16.4
Musculoskeletal Modeling to Predict and Reduce Anterior Cruciate Ligament Injury during Single Leg Drop Jump Activity: Synergistic Muscle Co-Activation Approach
 Mazumder, Oishee* (*Tata Consultancy Services*); Chakravarty, Kingshuk (*Tata Consultancy Services Ltd.*); Chatterjee, Debatri (*TCS Innovation Lab*); Sinha, Aniruddha (*Tata Consultancy Services Ltd.*); Poduval, Murali (*Tata Consultancy Services*)
- 11:30-11:45 FrB16.5
Description of Postural Strategies through a Variable Structure Control
 Tigrini, Andrea* (*Università Politecnica delle Marche*); Mengarelli, Alessandro (*Università Politecnica delle Marche*); Cardarelli, Stefano (*Università Politecnica delle Marche*); Strazza, Annachiara (*Università Politecnica delle Marche*); Di Nardo, Francesco (*Polytechnic University of Marche*); Fioretti, Sandro (*Università Politecnica delle Marche*); Verdini, Federica (*Università Politecnica delle Marche*)
- 11:45-12:00 FrB16.6
Experimental Estimation of a Second Order, Double Inverted Pendulum Parameters for the Study of Human Balancing
 Cerda-Lugo, Angel (*Univ. Autonoma de San Luis Potosi*); Gonzalez, Alejandro* (*CONACYT-Univ. Autónoma de San Luis Potosi*); Cárdenas, Antonio (*Univ. Autónoma de San Luis Potosi*); Piovesan, Davide (*Gannon Univ.*)
- FrB17: 10:30-12:00 R12 – Level 3
Empowering Individual Healthcare Decisions through Technology (Oral Session)
Chair: Tridandapani, Srinii (*Emory University*)
Co-Chair: Pino, Esteban J. (*Universidad de Concepcion*)
- 10:30-10:45 FrB17.1
New Wearable Heart Rate Monitor for Contact Sports and Its Potential to Change Training Load Management
 Higuchi, Yuichi* (*NTT Device Innovation Center, NTT Corp.*); Saijo, Naoki (*NTT Communication Science Laboratories*); Ishihara, Takako (*NTT Device Innovation Center, NTT Corp.*); Usui, Tomohiro (*Waseda Univ. Rugby Football club*); Murakami, Takahiro (*Waseda Univ. Rugby Football club*); Miyata, Makoto (*EUPHORIA*); Ono, Kazuyoshi (*Nippon Telegraph & Telephone Corp.*); Usui, Souichiro (*Nippon Telegraph & Telephone Corp.*); Togo, Hiroyoshi (*NTT Device Innovation Center*)
- 10:45-11:00 FrB17.2
Suitability of an Inter-Burst Detection Method for Grading Hypoxic-Ischemic Encephalopathy in Newborn EEG
 Raurale, Sumit Arun* (*University College Cork*); Nalband, Saif (*University College Cork*); Boylan, Geraldine (*University College Cork*); Lightbody, Gordon (*University College Cork*); O'Toole, John M. (*University College Cork*)
- 11:00-11:15 FrB17.3
The Effect of Landmark Variability on Automated PAP Mask Sizing
 Johnston, Benjamin* (*University of Sydney*); de Chazal, Philip (*University of Sydney*)
- 11:15-11:30 FrB17.4
In-Silico Study to Develop Continuous Glucose Monitoring based Algorithm to Trigger Effective Preventive Hypotreatments in the Daily Management of Type 1 Diabetes
 Camerlingo, Nunzio* (*Dept. of Information Engineering – Univ. of Padova*); Vettoretti, Martina (*Univ. of Padova*); Del Favero, Simone (*Univ. of Padova, Padova, Italy*); Cappon, Giacomo (*Univ. of Padova*); Sparacino, Giovanni (*Univ. of Padova*); Facchinetti, Andrea (*Univ. of Padova*)

11:30-11:45	FrB17.5	Three-Dimensional Hollow Elastic Models for Intracranial Aneurysm Clipping Election – A Case Study Leal, André Giacomelli (<i>Graduate Program on Health Technology (PPGTS), Pontifical Cathol</i>); Mori, Ivy Tiemi (<i>Federal University of Technology Parana</i>); Nohama, Percy (<i>Pontificia Universidade Católica do Paraná</i>); Abreu de Souza, Mauren* (<i>Pontifical Catholic University of Paraná – PUCPR</i>)	
11:45-12:00	FrB17.6	How Long after Compliance Do You Benefit from Regulation? An Empirical Study on Diagnostic Imaging Equipment Requirements Duarte, Carlos Henrique* (<i>Brazilian Development Bank (BNDES)</i>)	
FrB18: 10:30-12:00	R13 – Level 3	Neural Signal Processing (Oral Session) Chair: James, Christopher (<i>University of Warwick</i>) Co-Chair: Al-Jumaily, Adel (<i>University of Technology Sydney</i>)	
10:30-10:45	FrB18.1	Real-Time Tracking of Magnetoencephalographic Neuromarkers during a Dynamic Attention-Switching Task Presacco, Alessandro* (<i>University of Maryland, College Park</i>); Miran, Sina (<i>University of Maryland, College Park</i>); Babadi, Behdash (<i>University of Maryland</i>); Simon, Jonathan Z. (<i>University of Maryland, College Park</i>)	
10:45-11:00	FrB18.2	Deep Learning with Convolutional Neural Network for Detecting Microsleep States from EEG: A Comparison between the Oversampling Technique and Cost-Based Learning Krishnamoorthy, Venkatasubramanian* (<i>Univ. of Otago</i>); Shoorangiz, Reza (<i>Univ. of Canterbury</i>); Weddell, Stephen J. (<i>Univ. of Canterbury</i>); Beckert, Lutz (<i>Univ. of Otago</i>); Jones, Richard D. (<i>New Zealand Brain Research Institute</i>)	
11:00-11:15	FrB18.3	Analysis of the Inter-Joints Synergistic Patterns of Limbs in Infant Crawling Zhang, Li (<i>Chongqing Univ.</i>); Deng, Chunfeng (<i>Chongqing Univ.</i>); Hou, Wensheng* (<i>Bioengineering Inst of Chongqing Univ</i>)	
11:15-11:30	FrB18.4	3D Convolutional Neural Networks for Event-Related Potential Detection Cecotti, Hubert* (<i>California State University Fresno</i>); Jha, Ganesh (<i>Fresno State</i>)	
11:30-11:45	FrB18.5	Detection of Subthalamic Nucleus using Time-Frequency Features of Microelectrode Recordings and Random Forest Classifier Periyamolapalayam Allimuthu, Karthick* (<i>National Institute of Technology Trichirappalli</i>); Wan, Kai Rui (<i>National Neuroscience Institute</i>); Rajamanickam, Yuvaraj (<i>Nanyang Technological Univ.</i>); See, Angela An Qi (<i>National Neuroscience Institute Singapore</i>); King, Nicolas Kon Kam (<i>National Neuroscience Institute Singapore</i>); Dauwels, Justin (<i>NTU</i>)	
11:45-12:00	FrB18.6	Coding of Electrical Stimulation Patterns for Binaural Sound Coding Strategies for Cochlear Implants Hinrichs, Reemt* (<i>Universität Hannover</i>); Gajecki, Tom (<i>Medical University Hannover</i>); Ostermann, Jörn (<i>Universität Hannover</i>); Nogueira, Waldo (<i>Medical University Hannover</i>)	
FrB19: 10:30-12:00	R4 – Level 3	New Trends in Perinatal and Pediatric Imaging (Invited Session) Chair: Linguraru, Marius George (<i>Children's National Health System</i>)	
10:30-10:45	FrB19.1	Quantifying Perinatal Brain Maturation using Anatomical MRI Auzias, Guillaume* (<i>Aix Marseille Univ, CNRS</i>); Rousseau, François (<i>Telecom Bretagne</i>); Takerkart, Sylvain (<i>CNRS, France</i>); Girard, Nadine (<i>CRMBM UMR 7339, Aix Marseille Université, CNRS & APHM, Hôpital</i>); Deruelle, Christine (<i>INT UMR 7289, Aix Marseille Université, CNRS.</i>); Coulon, Olivier (<i>Aix-Marseille University</i>); Lefevre, Julien (<i>Institut de Neurosciences de la Timone</i>)	
10:45-11:00	FrB19.2	Surface-Based Cerebellar Abnormalities in Preterm Neonates Dong, Qunxi (<i>Arizona State University</i>); Wang, Yalin* (<i>Arizona State University</i>); Paquette, Natacha (<i>Children's Hospital Los Angeles</i>); Reynolds III, William Thomas (<i>Children's Hospital of Pittsburgh UPMC</i>); Ceschin, Rafeal (<i>University of Pittsburgh Medical Center</i>); Hernáiz Driever, Pablo (<i>Charité-Universitätsmedizin Berlin</i>); Nelson, Marvin (<i>University of Southern California & Keck School of Medicine, c</i>); Panigraphy, Ashok (<i>Children's Hospital Los Angeles</i>); Lepore, Natasha (<i>USC / Children's Hospital Los Angeles</i>)	
11:00-11:15	FrB19.3	Mapping of Cognitive and Motor Deficits in Pediatric Cerebellar Brain Tumor Survivors into the New SUIT Cerebellar White Matter Atlas Grosse, Frederik (<i>Charité-Universitätsmedizin Berlin</i>); Rueckriegel, Stefan (<i>Universitätsklinik Würzburg</i>); Tietze, Anna (<i>Charité-Universitätsmedizin Berlin</i>); Thomale, Ulrich-Wilhelm (<i>Charité-Universitätsmedizin Berlin</i>); Timmann-Braun, Dagmar (<i>Universitätsklinikum Essen</i>); Hernáiz Driever, Pablo* (<i>Charité-Universitätsmedizin Berlin</i>)	
11:15-11:30	FrB19.4	Recent Advances in Intelligent Fetal Imaging Schnabel, Julia* (<i>King's College London</i>)	
11:30-11:45	FrB19.5	Prediction of Outcome in Pediatric Hydronephrosis from Quantitative Image and Signal Analysis Porras, Antonio R. (<i>Children's National Medical Center</i>); Roshanitabrizi, Pooneh (<i>Children's National Health System</i>); Cerrolaza, Juan J. (<i>Imperial College London</i>); Emily, Blum (<i>Georgia urology</i>); Bruce, Sprague (<i>Children's National Health System</i>); Jago, James (<i>Philips Healthcare</i>); Safdar, Nabile (<i>Sheikh Zayed Institute for Pediatric Surgical Innovation – Child</i>); Peters, Craig A. (<i>Sheikh Zayed Institute for Pediatric Surgical Innovation – Child</i>); Zember, Jonathan (<i>Children's National Health System</i>); Dorothy, Bulas (<i>Children's National Health System</i>); Pohl, Hans G. (<i>Children's National Health System</i>); Linguraru, Marius George* (<i>Children's National Health System</i>)	
FrB20: 10:30-12:00	R5 – Level 3	Education and Simulation (Oral Session) Chair: Kant Kumar, Dinesh (<i>RMIT University</i>) Co-Chair: Ricci, Serena (<i>University of Genova</i>)	
10:30-10:45	FrB20.1	Evaluation of a Developed Multichannel R-R Interval Telemeter and Garment-Type Electrode Chihara, Yuma* (<i>Kumamoto University</i>); Yamakawa, Toshitaka (<i>Kumamoto University</i>)	
10:45-11:00	FrB20.2	Construction of Automatic Scoring System to Support Objective Evaluation of Clinical Skills in Medical Education Sugamiya, Yurina* (<i>Waseda University</i>); Otani, Takuya (<i>Waseda University</i>); Nakadate, Ryu (<i>Kyushu University</i>); Takanishi, Atsuo (<i>Waseda University</i>)	

11:00-11:15 FrB20.3
Design and Implementation of a Low-Cost Birth Simulator
 Ricci, Serena* (*Univ. of Genova*); Marcutti, Simone (*DIBRIS Univ. of Genova*); Pani, Andrea (*DIBRIS Univ. of Genova*); Cordone, Massimo (*SIMAV, Univ. of Genova*); Torre, Giancarlo (*SIMAV, Univ. of Genova*); Vercelli, Gianni (*DIBRIS Univ. of Genova*); Casadio, Maura (*Univ. of Genova*)

11:15-11:30 FrB20.4
Conceptualization of an ICU Infrastructure for Simulation based Education in Medical Engineering and EHealth
 Forjan, Mathias* (*Univ. of Applied Sciences Technikum Wien*); David, Veronika (*Univ. of Applied Sciences Technikum Wien*); Wagner, Michael (*Pediatric Intensive Care & Neuropediatrics, Dept. of Pedi*); Dolesch, Lukas (*gsm Gesellschaft für Sicherheit in der Medizintechnik GmbH*); Lechner, Manuel (*gsm Gesellschaft für Sicherheit in der Medizintechnik GmbH*); Saueremann, Stefan (*Univ. of Applied Sciences Technikum Wien*)

11:30-11:45 FrB20.5
Comparison of Instructor and Student-Based Assessment in Biomedical Engineering Project based Learning using ANOVA
 Setiawan, Agung Wahyu* (*School of Electrical Engineering & Informatics, Institut Tekno*)

11:45-12:00 FrB20.6
Teaching While Surrounded by Smartphones
 Kant Kumar, Dinesh* (*RMIT Univ.*); Radcliffe, Pj (*RMIT Univ.*)

FrB21: 10:30-12:00 R8 – level 3
Smart Interactive Implants in a Network (Minisymposium)
Chair: Hoffmann, Klaus-Peter (*Fraunhofer Institut für Biomedizinische Technik*)
Co-Chair: Rupp, Rüdiger (*Heidelberg University Hospital*)

10:30-10:45 FrB21.1
Interactive Implants – Artificial Intelligence and Aspects of German Liability Law
 Droste, Wiebke* (*Institute for German, European & International Medical Law, Pu*)

10:45-11:00 FrB21.2
Innovative Power Solution for Micro-Implants
 Gottschalk, Michael* (*VARTA Microbattery GmbH*)

11:00-11:15 FrB21.3
Minimally Invasive and Conventionally Open Gastrointestinal Electrophysiological Measurements with Multilocular Electrical Stimulation
 Schiemer, Jonas* (*Univ. Mainz*); Somerlik-Fuchs, Karin H (*Albert-Ludwigs-Univ. Freiburg*); Hoffmann, Klaus-Peter (*Fraunhofer Institut für Biomedizinische Technik*); Lang, Hauke (*AVTC Unimedizin Mainz*); Kneist, Werner (*AVTC Unimedizin Mainz*)

11:15-11:30 FrB21.4
Restoration of an Impaired Grasping Function with a Network of Smart Interactive Implants
 Rupp, Rüdiger* (*Heidelberg University Hospital*); Kogut, Andreas (*Spinal Cord Injury Center, Heidelberg University Hospital*); Ruff, Roman (*Fraunhofer Institut für Biomedizinische Technik*); Hoffmann, Klaus-Peter (*Fraunhofer Institut für Biomedizinische Technik*)

11:30-11:45 FrB21.5
Interactive Implants: Experimental Medical Device Platform to Translate Developments into Products
 Krueger, Thilo B* (*inomed Medizintechnik GmbH*); Somerlik-Fuchs, Karin H (*Albert-Ludwigs-University Freiburg*)

11:45-12:00 FrB21.6
Suppression of Tinnitus using Electrical Stimulation
 Olze, Heidi* (*Charité Univ. Berlin*); Szczepek, Agnieszka J. (*Charité Univ. Berlin*); Reich, Uta (*Charité Univ. Berlin*); Vater, Jana (*Charité Univ. Berlin*); Gräbel, Stefan (*Charité Univ. Berlin*); Uecker, Florian Cornelius (*Charité Univ. Berlin*)

FrC01: 14:00-15:30 Hall A6+A7 – Level 1
Neurological Disorders (III) (Oral Session)
Chair: Bianchi, Anna Maria (*Politecnico di Milano*)

14:00-14:15 FrC01.1
A Functional Analysis-Based Approach to Quantify Upper Limb Impairment Level in Chronic Stroke Patients: A Pilot Study
 Schwarz, Anne* (*Univ. of Zurich*); Averta, Giuseppe (*Univ. of Pisa*); Veerbeek, Janne M. (*Univ. of Zurich*); Luft, Andreas (*Univ. of Zurich*); Held, Jeremia P.O. (*Univ. of Zurich*); Valenza, Gaetano (*Univ. of Pisa*); Bicchi, Antonio (*Univ. of Pisa*); Bianchi, Matteo (*Univ. of Pisa*)

14:15-14:30 FrC01.2
Measurement of Interhemispheric Correlation Coefficient in Rodent Model of Middle Cerebral Artery Occlusion using Near Infrared Spectroscopy
 Wu, Chun-Wei (*National Cheng Kung Univ.*); Yuen, Chun-Man (*Division of Neurosurgery, Dept. of Surgery, Kaohsiung Chang*); Shao, Wen-Chen (*Dept. of Biomedical Engineering, National Cheng Kung Univ.*); Lee, Hsiao-Yu (*Dept. of Digital Media Design, Far East Univ.*); Chung, Yueh-Jen (*Dept. of Medicine, China Medical Univ.*); Chen, Jia-Jin Jason* (*Dept. of Biomedical Engineering, National Cheng Kung Univ.*)

14:30-14:45 FrC01.3
Neuroprotection of Glibenclamide against Brain Injury after Cardiac Arrest via Modulation of NLRP3 Inflammasome
 Yang, Xiuli (*Univ. of Maryland School of Medicine*); Wang, Zhuoran (*Univ. of Maryland School of Medicine*); Jia, Xiaofeng* (*Univ. of Maryland School of Medicine, Johns Hopkins Univ.*)

14:45-15:00 FrC01.4
Intracerebroventricular Administration of Neural Stem Cells after Cardiac Arrest
 Wang, Zhuoran (*Univ. of Maryland School of Medicine*); Yang, Xiuli (*Univ. of Maryland School of Medicine*); He, Junyun (*Univ. of Maryland*); Du, Jian (*Univ. of Maryland School of Medicine*); Liu, Shaolin (*Howard Univ.*); Jia, Xiaofeng* (*Univ. of Maryland School of Medicine, Johns Hopkins Univ.*)

15:00-15:15 FrC01.5
Exploring Characteristic Features in Gait Patterns for Predicting Multiple Sclerosis
 Kaur, Rachneet (*University of Illinois at Urbana Champaign*); Menon, Sanjana (*University of Illinois at Urbana Champaign*); Zhang, Xiaomiao (*University of Illinois at Urbana Champaign*); Sowers, Richard (*University of Illinois at Urbana-Champaign*); Hernandez, Manuel* (*University of Illinois*)

15:15-15:30 FrC01.6
Grouping Neuronal Spiking Patterns in the Subthalamic Nucleus of Parkinsonian Patients
 Kaku, Heet* (*Univ. of Houston*); Ozturk, Musa (*Univ. of Houston*); Viswanathan, Ashwin (*Dept. of Neurology, Baylor College of Medicine*); Shahed, Joohi (*Dept. of Neurology, Baylor College of Medicine*); Sheth, Sameer (*Columbia Univ. Medical Center*); Ince, Nuri Firat (*Univ. of Houston*)

FrC02: 14:00-15:30 Hall A8 – Level 1
Signal Processing and Classification for Wearable Systems and Smartphones (Oral Session)
Chair: Mainardi, Luca (*Politecnico di Milano*)
Co-Chair: Kyritsis, Konstantinos (*Aristotle Univ. of Thessaloniki*)

14:00-14:15 FrC02.1
Automatic Stroke Screening on Mobile Application: Features of Gyroscope and Accelerometer for Arm Factor in FAST
 Phienphanich, Phongphan (*Thammasat Univ.*); Tankongchamruskul, Nattakit (*Ruamrudee International School*); Akarathanawat, Wasan (*Chulalongkorn Univ.*); Chutinet, Aurauma (*Chulalongkorn Univ.*); Nimnual, Rossukon (*Chulalongkorn Univ.*); Tantibundhit, Charturong* (*Thammasat Univ.*); Charnnarong Suwanwela, Nijasri (*Chulalongkorn Univ.*)

July 26 Friday

14:15-14:30	FrC02.2	Detecting Meals in the Wild using the Inertial Data of a Typical Smartwatch Kyriasis, Konstantinos* (<i>Aristotle University of Thessaloniki</i>); Diou, Christos (<i>Aristotle University of Thessaloniki</i>); Delopoulos, Anastasios (<i>Aristotle University of Thessaloniki</i>)	FrC04: 14:00-15:30 The Standardization of the Performance Evaluation for the Continuous Blood Pressure Measurement from Different Perspectives (Minisymposium) Chair: Avolio, Alberto P. (<i>Macquarie University</i>)	Hall A1 – Level 1
14:30-14:45	FrC02.3	Smart Phone based Snoring Sound Analysis to Identify Upper Airway Obstructions Markandeya, Mrunal* (<i>University of Queensland</i>); Abeyratne, Udantha R (<i>University of Queensland</i>)	14:00-14:15 Current Development and Regulation of Continuous Blood Pressure Monitors in Japan Tamura, Toshiyo* (<i>Waseda University</i>)	FrC04.1
14:45-15:00	FrC02.4	Smartphone PPG: Signal Processing, Quality Assessment, and Impact on HRV Parameters Tyapochkin, Konstantin* (<i>Welltory</i>); Smorodnikova, Evgeniya (<i>Welltory</i>); Pravdin, Pavel (<i>Welltory</i>)	14:15-14:30 Protocol Design and Evaluation Methodology for IEEE 1708 Park, Sung-Min* (<i>POSTECH</i>); Kim, Youngsoo (<i>Samsung Electronics</i>); Jang, Dae-Geun (<i>Samsung Advanced Institute of Tech.</i>); Kim, Youn Ho (<i>Samsung Advanced Institute of Tech.</i>)	FrC04.2
15:00-15:15	FrC02.5	BioTranslator: Inferring R-Peaks from Ambulatory Wrist-Worn PPG Signal Everson, Luke (<i>University of Minnesota</i>); Biswas, Dwaipayan* (<i>imec</i>); Verhoef, Bram-Ernst (<i>imec</i>); Kim, Chris H. (<i>University of Minnesota</i>); Van Hoof, Chris (<i>imec</i>); Konijnenburg, Mario (<i>imec</i>); Van Helleputte, Nick (<i>imec</i>)	14:30-14:45 Performance Standards for Non-Invasive Blood Pressure Monitors Lowe, Andrew* (<i>Auckland University of Technology</i>)	FrC04.3
15:15-15:30	FrC02.6	Freezing-of-Gait Detection using Wearable Sensor Technology and Possibilistic K-Nearest-Neighbor Algorithm Tahafchi, Parisa (<i>Univ. of Florida</i>); Judy, Jack* (<i>Univ. of Florida</i>)	14:45-15:00 Hemodynamic and Vascular Factors Involved in Variation of Arterial Pressure: Implications for Accuracy of Continuous Measurement of Blood Pressure Avolio, Alberto P* (<i>Macquarie Univ.</i>); Shirbani, Fatemeh (<i>Macquarie Univ., Faculty of Medicine & Health Sciences</i>); Tan, Isabella (<i>Macquarie Univ.</i>); Butlin, Mark (<i>Macquarie Univ.</i>)	FrC04.4
FrC03: 14:00-15:30	Hall A3 – Level 1	Advanced Techniques and Applications in Optical Coherence Tomography for Biomedical Imaging (Minisymposium) Chair: Wong, Damon (<i>Institute of Health Technologies, Nanyang Technological University</i>) Co-Chair: Liu, Jiang (<i>Ningbo Institute of Materials Technology and Engineering, CAS</i>)	FrC05: 14:00-15:30 Signal Processing and Classification of Cardiovascular Signals (Oral Session) Chair: Hernández, Alfredo I. (<i>Univ. of Rennes 1 and INSERM U199</i>) Co-Chair: Magenes, Giovanni (<i>University of Pavia</i>)	Hall A2 – Level 1
14:00-14:15	FrC03.1	Dynamic Optical Coherence Elastography for Mechanical Characterization of Skeletal and Cardiac Muscles Larin, Kirill* (<i>University of Houston</i>)	14:00-14:15 Quantification of Spatial Heterogeneity of Ventricular Repolarization during Early-Stage Cardiac Ischemia Induced by Coronary Angioplasty Rivolta, Massimo Walter* (<i>Università degli Studi di Milano</i>); Rocchetta, Filippo (<i>Università degli Studi di Milano</i>); Mainardi, Luca (<i>Politecnico di Milano</i>); Lombardi, Federico (<i>Università degli Studi di Milano & Fondazione IRCCS Ca' Granda</i>); Sassi, Roberto (<i>Università degli Studi di Milano</i>)	FrC05.1
14:15-14:30	FrC03.2	Multi-Channel Optical Coherence Tomography Hitzenberger, Christoph* (<i>Medical University of Vienna</i>)	14:15-14:30 Beamforming-Inspired Spatial Filtering Technique for Intracardiac Electrograms Saha, Simanto* (<i>The University of Adelaide</i>); Linz, Dominik (<i>The Centre for Heart Rhythm Disorders, The University of Adelaide</i>); Sanders, Prashanthan (<i>Centre for Heart Rhythm Disorders, South Australian Health & M</i>); Baumert, Mathias (<i>The University of Adelaide</i>)	FrC05.2
14:30-14:45	FrC03.3	Optical Coherence Tomography Image Analysis in Dermatology Yow, Ai Ping* (<i>Nanyang Technological Univ.</i>); Srivastava, Ruchir (<i>Institute for Infocomm Research</i>); Cheng, Jun (<i>Institute of Biomedical Eng., Chinese Academy of Sciences</i>); Li, Annan (<i>Beijing Univ. of Aeronautics & Astronautics</i>); Liu, Jiang (<i>Ningbo Institute of Materials Technology & Eng., CAS</i>); Wong, Damon (<i>Institute of Health Technologies, Nanyang Technological Univ.</i>); Schmetterer, Leopold (<i>Singapore Eye Research Institute</i>); Tey, Hongliang (<i>National Skin Center, Singapore</i>)	14:30-14:45 A New Frequency Domain Measure of Causality based on Partial Spectral Decomposition of Autoregressive Processes and Its Application to Cardiovascular Interactions Faes, Luca* (<i>Univ. of Palermo</i>); Krohova, Jana (<i>Comenius Univ. in Bratislava</i>); Pernice, Riccardo (<i>Univ. of Palermo</i>); Busacca, Alessandro (<i>Univ. degli Studi di Palermo</i>); Javorka, Michal (<i>Comenius Univ., Jessenius Faculty of Medicine</i>)	FrC05.3
14:45-15:00	FrC03.4	Fast Retina Optical Coherence Tomography Contrast Enhancement Hu, Yan* (<i>Chinese Academy of Sciences</i>); Yang, Jianlong (<i>Cixi Institute of Biomedical Engineering, Chinese Academy of Sci</i>); Zhao, Yitian (<i>Chinese Academy of Sciences</i>); Cheng, Jun (<i>Institute of Biomedical Engineering, Chinese Academy of Sciences</i>); Liu, Jiang (<i>Ningbo Institute of Materials Technology & Engineering, CAS</i>)	14:45-15:00 Cardiovascular Disease Diagnosis using Cross-Domain Transfer Learning Tadesse, Girmaw Abebe* (<i>Univ. of Oxford</i>); Zhu, Tingting (<i>Univ. of Oxford</i>); Liu, Yong (<i>Guangdong Academy of Medical Sciences</i>); Zhou, Yingling (<i>Guangdong Provincial People's Hospital</i>); Chen, Jiyan (<i>Guangdong provincial Key Laboratory of Coronary Heart Disease Pr</i>); Tian, Maoyi (<i>The George Institute for Global Health</i>); Clifton, David (<i>Univ. of Oxford</i>)	FrC05.4
15:00-15:15	FrC03.5	Assessing Vascular Function with Optical Coherence Tomography Schmetterer, Leopold* (<i>Singapore Eye Research Institute</i>)		

15:00-15:15	FrC05.5	FrC08: 14:00-15:30	M8 – Level 3
A Novel Method for Calibration-Based Cuff-Less Blood Pressure Estimation		Health Informatics – eHealth (Oral Session)	
Li, Zhenqi* (<i>Guangzhou Shiyuan Electronics Co., Ltd</i>); Yan, Cong (<i>Guangzhou Shiyuan Electronics Co., Ltd</i>); Zhao, Wei (<i>Guangzhou Shiyuan Electronics Co., Ltd</i>); Hu, Jing (<i>Guangzhou Shiyuan Electronic Technology Co., Ltd.</i>); Jia, Dongya (<i>CVTE, Guangdong Province, China</i>); Wang, Hongmei (<i>Guangzhou Shiyuan Electronics Co., Ltd</i>); You, Tianyuan (<i>Guangzhou Shiyuan Electronics Co., Ltd.</i>)		Chair: Vanrumste, Bart (<i>Katholieke Universiteit Leuven</i>)	
15:15-15:30	FrC05.6	14:00-14:15	FrC08.1
Pulse Wave Curve Fitting to Heterogeneous Noninvasive Plethysmographic Signals for Blood Pressure Tracking		PREgDICT: Early Prediction of Gestational Weight Gain for Pregnancy Care	
Pielmus, Alexandru Gabriel* (<i>Technische Univ. Berlin</i>); Klum, Michael (<i>Technische Univ. Berlin</i>); Tigges, Timo (<i>Technical Univ. Berlin</i>); Osterland, Dennis (<i>Technische Univ. Berlin</i>); Orglmeister, Reinhold (<i>Technische Univ. Berlin</i>)		Puri, Chetanya* (<i>Marie Curie Fellow, Dept. of Electrical Engineering, KU Leu</i>); Kooijman, Gerben (<i>Philips Research</i>); Masculo, Felipe (<i>Philips Research</i>); Van Sambeek, Shannon (<i>Philips Research</i>); Den Boer, Sebastiaan (<i>Philips Research</i>); Luca, Stijn (<i>KU Leuven Technology Campus Geel, AdvISe</i>); Vanrumste, Bart (<i>Katholieke Universiteit Leuven</i>)	
FrC06: 14:00-15:30	Hall A5 – Level 1	14:15-14:30	FrC08.2
Recent Advances in In-Vitro Neural Interface Technology (Invited Session)		Mobile Apps for Post Traumatic Stress Disorder	
Chair: Nam, Yoonkey (<i>Korea Advanced Institute of Science and Tech.</i>)		Drissi, Nidal (<i>ENSIAS, Mohammed V University</i>); Ouhbi, Sofia* (<i>UAE University</i>); Janati Idrissi, Mohammed Abdou (<i>ENSIAS, Mohammed V University</i>); Ghogho, Mounir (<i>Université internationale de Rabat (UIR)</i>)	
14:00-14:15	FrC06.1	14:30-14:45	FrC08.3
Planar MEA Technology History: From Printed Circuits to Brain-on-Chip to Very Large Scale		Recent Trends in Diabetes-Related Consumer Health Information Technology Research	
Wheeler, Bruce* (<i>University of Florida</i>)		Claiborne, John* (<i>VCU School of Medicine</i>); Wellbeloved-Stone, Claire (<i>University of Virginia</i>); Valdez, Rupa Sheth (<i>University of Virginia</i>)	
14:15-14:30	FrC06.2	14:45-15:00	FrC08.4
Multi-Well MEAs for High-Throughput Screening		MHealth4Afrika – Co-Designing a Standards based Solution for use in Resource Constrained Primary Healthcare Facilities	
Ross, James (<i>Axion BioSystems</i>); De Filippi, Giovanna* (<i>Axion BioSystems</i>)		Cunningham, Paul M.* (<i>IST-Africa Institute</i>); Cunningham, Miriam (<i>IST-Africa Institute</i>)	
14:30-14:45	FrC06.3	15:00-15:15	FrC08.5
Nanoplasmonic Microelectrode Arrays for Opto-Thermal Modulation of Neuronal Activity in Vitro		Detecting Undiagnosed Diabetes: Proof-of-Concept based on the Health-Information Exchange System of the Veneto Region (North-East Italy)	
Nam, Yoonkey* (<i>Korea Advanced Institute of Science & Tech.</i>)		Longato, Enrico* (<i>University of Padova</i>); Di Camillo, Barbara (<i>University of Padova</i>); Sparacino, Giovanni (<i>University of Padova</i>); Saccavini, Claudio (<i>Arsenà.IT, Veneto's Research Centre for eHealth Innovation</i>); Cocchiglia, Arianna (<i>Arsenà.IT, Veneto's Research Centre for eHealth Innovation</i>); Tramontan, Lara (<i>Arsenà.IT</i>); Fadini, Gian Paolo (<i>University of Padova</i>)	
14:45-15:00	FrC06.4	15:15-15:30	FrC08.6
Subcellular-Resolution Electrophysiology with Highly Integrated CMOS-Based Microelectrode Arrays		A Portable Sensor Sheet for Measuring the Eating Pace in Meal Assistance Care	
Hierlemann, Andreas* (<i>ETH Zurich</i>)		Watanabe, Takeharu* (<i>Univ. of Tsukuba</i>); Shimokakimoto, Tomoya (<i>Univ. of Tsukuba</i>); Jayatilake, Dushyantha (<i>PLIMES Inc</i>); Inoue, Makoto (<i>Niigata Univ.</i>); Suzuki, Kenji (<i>Univ. of Tsukuba</i>)	
FrC07: 14:00-15:30	Hall A4 – Level 1	FrC09: 14:00-15:30	M1 – Level 3
Micro/Nano-Sensing in Application Environment (Invited Session)		Modeling and Simulation of Magnetic Nanoparticles for Biomedical Applications: From Physical Properties towards Therapeutic Behavior (Invited Session)	
Chair: Lei, Kin Fong (<i>Chang Gung University</i>)		Chair: Baumgarten, Daniel (<i>UMIT – Private University for Health Sciences, Medical Informatics and Technology</i>)	
14:00-14:15	FrC07.1	Co-Chair: Leliaert, Jonathan (<i>Ghent University</i>)	
A Hand-Held Whole-Cell Sensing Device for Detecting Antibiotics in Food Samples		14:00-14:15	FrC09.1
Lu, Mei-Yi (<i>Academia Sinica Taiwan</i>); Kao, Wei-Chen (<i>Academia Sinica Taiwan</i>); Belkin, Shimshon (<i>Hebrew Univ. of Jerusalem</i>); Cheng, Ji-Yen* (<i>Academia Sinica Taiwan</i>)		Modelling the Response of Magnetic Nanoparticles Inside Living Cells	
14:15-14:30	FrC07.2	Leliaert, Jonathan* (<i>Ghent University</i>); Coene, Annelies (<i>Ghent University</i>); Cabrera, David (<i>iMdea Nanociencia</i>); Artés-Ibáñez, Emilio (<i>iMdea Nanociencia</i>); Dupré, Luc (<i>Ghent University</i>); Telling, Neil (<i>Institute for Science & Technology in Medicine, Keele University</i>); Teran, Francisco (<i>iMdea Nanociencia</i>)	
Cancer Cell Migration in 3D Environment		14:15-14:30	FrC09.2
Lei, Kin Fong* (<i>Chang Gung University</i>)		Interstitial Dosage Limits for Nanoscale Medicines and Agents	
14:30-14:45	FrC07.3	Pankhurst, Quentin* (<i>University College London</i>); Southern, Paul (<i>Resonant Circuits Limited</i>); Baumgarten, Daniel (<i>UMIT – Private University for Health Sciences, Medical Informati</i>)	
Electrofluidic Pressure Sensor Embedded Microfluidic Devices for In-Plane Cellular Elasticity Measurements			
Ko, Ping-Liang (<i>Academia Sinica</i>); Wang, Chien-Kai (<i>Tamkang Univ.</i>); Liao, Wei-Hao (<i>Academia Sinica</i>); Tung, Yi-Chung* (<i>Academia Sinica</i>)			
14:45-15:00	FrC07.4		
Intelligent Gas Sensing System and Its Applications			
Yao, Da-Jeng* (<i>National Tsing Hua University</i>)			
15:00-15:15	FrC07.5		
Accelerometer-Based Wearable Device Assisted Physical Activity Monitoring for Readmission Risk in COPD Patients			
Verma, Vijay Kumar* (<i>Chang Gung Univ.</i>); Lin, Wen-Yen (<i>Chang Gung Univ.</i>); Lee, Ming-Yih (<i>Chang Gung Univ.</i>)			

14:30-14:45	FrC09.3	In Silico Testing of Clinical Magnetic Hyperthermia: Nanothermometry Options and the Role of Tumour Vasculature Ortega, Daniel* (<i>IMDEA Nanoscience</i>); Rubia-Rodriguez, Irene (<i>IMDEA Nanoscience</i>); Hernandez-Juarez, Beatriz (<i>Universidad Autonoma de Madrid</i>); Teran, Francisco (<i>iMdea Nanociencia</i>); Verdaguer, Helena (<i>Vall d'Hebron Institute of Oncology</i>); Macarulla, Teresa (<i>Vall d'Hebron Institute of Oncology</i>)	FrC11: 14:00-15:30	M4 – Level 3	State-of-the-Art Advances in Sleep Health Science and Technology: Session 3 – Clinical Issues in Sleep Apnea (Minisymposium) Chair: Khoo, Michael (<i>University of Southern California</i>) Co-Chair: Penzel, Thomas (<i>Charité Universitätsmedizin Berlin</i>)
14:45-15:00	FrC09.4	Numerical Simulation of Magnetic Drug Targeting into Tumor Tissue Gonella, Veronica (<i>UMIT – Private University for Health Sciences, Medical Informati</i>); Baumgarten, Daniel* (<i>UMIT – Private University for Health Sciences, Medical Informati</i>)	14:00-14:15	FrC11.1	Diagnosing Sleep Apnea Comorbidities Penzel, Thomas* (<i>Charité Universitätsmedizin Berlin</i>); Glos, Martin (<i>Charité-Universitaetsmedizin Berlin</i>); Schoebel, Christoph (<i>Charité Universitaetsmedizin Berlin</i>); Fietze, Ingo (<i>Charité-Universitaetsmedizin Berlin</i>)
FrC10: 14:00-15:30	M2 – Level 3	Sensor Informatics – Sensors and Sensor Systems (Oral Session) Chair: Chon, Ki (<i>University of Connecticut</i>)	14:15-14:30	FrC11.2	Autonomic Effects of Sleep-Disordered Breathing in Sickle Cell Disease: Is there a Link to Vaso-Occlusive Crisis? Khoo, Michael* (<i>University of Southern California</i>); Chalacheva, Patjanaporn (<i>University of Southern California</i>); Ji, Yunhua (<i>University of Southern California</i>); Coates, Thomas (<i>Childrens Hospital Los Angeles, USC Keck School of Medicine</i>)
14:00-14:15	FrC10.1	System for Monitoring User Engagement with Personalized Medical Devices to Improve use and Health Outcomes Clements, Eileen* (<i>University of Texas at Arlington</i>); Roane, Brandy (<i>University of North Texas Health Science Center</i>); Alshabrawy, Hesham (<i>University of Texas at Arlington</i>); Gopalakrishnan, Aishwarya (<i>University of Texas at Arlington</i>); Balaji, Sripathy (<i>University of Texas at Arlington</i>)	14:30-14:45	FrC11.3	Phenotyping Sleep Apnea in Chronic Heart Failure: Effects of Angiotensin Receptor Neprilysin Inhibition (ARNi) on Loop Gain and Cycle Length of Cheyne-Stokes Respiration Schoebel, Christoph* (<i>Charité Universitaetsmedizin Berlin</i>); Fietze, Ingo (<i>Charité-Universitaetsmedizin Berlin</i>); Penzel, Thomas (<i>Charité Universitätsmedizin Berlin</i>)
14:15-14:30	FrC10.2	Smartwatch based Atrial Fibrillation Detection from Photoplethysmography Signals Bashar, Syed Khairul* (<i>Univ. of Connecticut</i>); Han, Dong (<i>Univ. of Connecticut</i>); Ding, Eric (<i>Univ. of Massachusetts Medical School</i>); Whitcomb, Cody (<i>Univ. of Massachusetts Medical School</i>); McManus, David (<i>Univ. of Massachusetts Medical Center</i>); Chon, Ki (<i>Univ. of Connecticut</i>)	14:45-15:00	FrC11.4	Moderate Obstructive Sleep Apnoea: Decreased Cerebral Perfusion When Awake? Jones, Richard D.* (<i>New Zealand Brain Research Institute</i>); Innes, Carrie R. H. (<i>Canterbury District Health Board</i>); Buckley, Russell (<i>New Zealand Brain Research Institute</i>); Kelly, Paul (<i>Christchurch Hospital</i>); Hlavac, Michael (<i>Christchurch Hospital</i>); Beckert, Lutz (<i>University of Otago</i>)
14:30-14:45	FrC10.3	Smartwatch PPG Peak Detection Method for Sinus Rhythm and Cardiac Arrhythmia Han, Dong* (<i>University of Connecticut</i>); Bashar, Syed Khairul (<i>University of Connecticut</i>); Lázaro, Jesús (<i>University of Zaragoza</i>); Ding, Eric (<i>University of Massachusetts Medical School</i>); Whitcomb, Cody (<i>University of Massachusetts Medical School</i>); McManus, David (<i>University of Massachusetts Medical Center</i>); Chon, Ki (<i>University of Connecticut</i>)	FrC12: 14:00-15:30	M6 – Level 3	MRI – Neuroimaging (Oral Session) Chair: Chan, Kevin C. (<i>New York University</i>) Co-Chair: Barbieri, Riccardo (<i>Politecnico di Milano</i>)
14:45-15:00	FrC10.4	Feasibility of Long-Term Daily Life Electrocardiogram Monitoring based on a Wearable Armband Device Lázaro, Jesús* (<i>University of Zaragoza</i>); Reljin, Natasa (<i>University of Connecticut</i>); Noh, Yeon Sik (<i>University of Massachusetts Amherst</i>); Laguna, Pablo (<i>Zaragoza University & CIBER-BBN</i>); Chon, Ki (<i>University of Connecticut</i>)	14:00-14:15	FrC12.1	Perfusion Quantification using Arterial Spin Labeling Magnetic Resonance Imaging after Revascularization for Moyamoya Disease Li, Liang (<i>Dept. of Electronic & Information Engineering, Harbin Ins</i>); Lei, Yu (<i>Dept. of Neurosurgery, Shanghai HuaShan Hospital, Shanghai.</i>); Su, JiaBin (<i>Dept. of Neurosurgery, Shanghai HuaShan Hospital, Shanghai.</i>); PengZheng, Zhou (<i>Dept. of Electronic & Information Engineering, Harbin Ins</i>); Lv, Haiyan (<i>Mindsgo Life Science Shenzhen Ltd.</i>); Wang, Tong (<i>Harbin Institute of Technology, Shenzhen</i>); Ma, Ting* (<i>Harbin Institute of Technology at Shenzhen</i>)
15:00-15:15	FrC10.5	Wearable Sensors for Prodromal Motor Assessment of Parkinson's Disease using Supervised Learning Rovini, Erika* (<i>Scuola Superiore Sant'Anna</i>); Moschetti, Alessandra (<i>Scuola Superiore Sant'Anna</i>); Fiorini, Laura (<i>Scuola Superiore Sant'Anna</i>); Esposito, Dario (<i>Scuola Superiore Sant'Anna</i>); Maremmani, Carlo (<i>Azienda USL Toscana Nord-Ovest</i>); Cavallo, Filippo (<i>Scuola Superiore Sant'Anna</i>)	14:15-14:30	FrC12.2	Resting State Neural Correlates of Cardiac Sympathetic Dynamics in Healthy Subjects Valenza, Gaetano* (<i>Univ. of Pisa</i>); Duggento, Andrea (<i>Univ. of Rome "Tor Vergata"</i>); Passamonti, Luca (<i>Univ. of Cambridge</i>); Toschi, Nicola (<i>Univ. of Rome "Tor Vergata", Faculty of Medicine</i>); Barbieri, Riccardo (<i>Politecnico di Milano</i>)
15:15-15:30	FrC10.6	Automatic Detection of Atrial Fibrillation in Ballistocardiogram (BCG) using Wavelet Features and Machine Learning Yu, Bin* (<i>Eindhoven University of Technology</i>); Zhang, Biyong (<i>BOBO Technology Ltd.</i>); Xu, Lisheng (<i>Northeastern University</i>); Fang, Peng (<i>Shenzhen Institutes of Advanced Technology, Chinese Academy of S</i>); Hu, Jun (<i>Eindhoven University of Technology</i>)	14:30-14:45	FrC12.3	Resting-State Functional Connectivity in Popular Targets for Deep Brain Stimulation in the Treatment of Major Depression: An Application of a Graph Theory Amiri, Saba (<i>Tehran Univ. of Medical Sciences</i>); Arbabi, Mohammad (<i>TUMS</i>); Kazemi, Kamran (<i>Univ. of Picardie Jules Verne</i>); Parvaresh-Rizi, Mansor (<i>Iran Univ. of Medical Sciences</i>); Mirbagheri, Mehdi* (<i>Northwestern Univ./TUMS</i>)

- 14:45-15:00 FrC12.4
Disruption of Brain Network Organization in Primary Open Angle Glaucoma
 Minosse, Silvia* (*Univ. of Rome "Tor Vergata", Faculty of Medicine*); Garaci, Francesco (*Univ. of Rome Tor Vergata*); Martucci, Alessio (*Univ. of Rome "Tor Vergata"*); Lanzafame, Simona (*Univ. of Rome "Tor Vergata"*); Di Giuliano, Francesca (*Univ. of Rome Tor Vergata*); Picchi, Eliseo (*Univ. of Rome Tor Vergata*); Cesareo, Massimo (*Univ. of Rome "Tor Vergata"*); Mancino, Raffaele (*Univ. of Rome "Tor Vergata"*); Guerri, Maria (*Univ. of Rome "Tor Vergata"*); Floris, Roberto (*Univ. of Rome Tor Vergata*); Nucci, Carlo (*Univ. of Rome "Tor Vergata"*); Toschi, Nicola (*Univ. of Rome "Tor Vergata", Faculty of Medicine*)
- 15:00-15:15 FrC12.5
Reduced Betweenness Centrality of a Sensory-Motor Vestibular Network in Subclinical Agoraphobia
 Indovina, Iole (*Laboratory of Neuromotor Physiology, IRCCS Santa Lucia Foundation*); Conti, Allegra* (*IRCCS Santa Lucia Foundation*); Lacquaniti, Francesco (*Dept. of Neuromotor Physiology Fondazione Santa Lucia IRCCS*); Staab, Jeffrey P. (*Dept.s of Psychiatry & Psychology & Otorhinolaryngology*); Passamonti, Luca (*University of Cambridge*); Toschi, Nicola (*University of Rome "Tor Vergata", Faculty of Medicine*)
- 15:15-15:30 FrC12.6
Abnormal Interhemispheric Functional Interactions in Drug-Naïve Adult-Onset First Episode Psychosis Patients
 Wang, Danni (*Shanghai Jiao Tong University*); Zhuo, Kaiming (*Shanghai Mental Health Center, School of Medicine, Shanghai Jiao*); Zhu, Yongjun (*Shanghai Mental Health Center, School of Medicine, Shanghai Jiao*); Liu, Dengtang (*Shanghai Mental Health Center, School of Medicine, Shanghai Jiao*); Li, Yao* (*Shanghai Jiao Tong University*)
- FrC13: 14:00-15:30 R2 – Level 3
Implantable Sensors (Oral Session)
 Chair: Hoffmann, Klaus-Peter (*Fraunhofer Institut für Biomedizinische Technik*)
- 14:00-14:15 FrC13.1
Micro Electrode Arrays Fabrication using Flexible Perfluoroalkoxy Alkane Films
 Kim, Ji Sung* (*Seoul National Univ.*); Jang, Ki-Hwan (*Seoul National Univ.*); Ahn, Sung Hoon (*Seoul National Univ.*); Seo, Jong Mo (*Seoul National Univ., School of Engineering*)
- 14:15-14:30 FrC13.2
Overvoltage Protection Circuits for Ultrasonically Powered Implantable Microsystems
 Rashidi, Amin* (*Aarhus Univ.*); Laursen, Kjeld (*Aarhus Univ.*); Hosseini, Seyedsina (*Aarhus Univ.*); Moradi, Farshad (*Integrated Circuits & Electronics Laboratory, Dept. of En*)
- 14:30-14:45 FrC13.3
NFC Powered Implantable Temperature Sensor
 Kifle, Yonatan* (*Linköping Univ.*); Wikner, Jacob (*Linköping Univ.*); Zötterman, Johan (*Linköpings Univ.*); Farnebo, Simon (*Linköping Univ. Hospital*); Ryden, Louise (*Linköping Univ.*)
- 14:45-15:00 FrC13.4
Development of a Nanofabricated Sensor for Monitoring Intraocular Pressure via Ocular Tissue Strain
 Lazkani, Naim (*California Baptist Univ.*); Truitt, Seth (*California Baptist Univ.*); Kawaguchi, Nathan (*California Baptist Univ.*); DeWolf, Aaron (*California Baptist Univ.*); Van Zant, Cody (*California Baptist Univ.*); Villegas, James (*California Baptist Univ.*); Hassel, Abbygail (*California Baptist Univ.*); Park, Joshua (*California Baptist Univ.*); Jones, Creed (*California Baptist Univ.*); Butler, John (*California Baptist Univ.*); Rickard, Matthew* (*California Baptist Univ.*)
- 15:00-15:15 FrC13.5
An Implantable, Low-Power Instrumentation for the Long Term Monitoring of the Sleep of Animals under Natural Conditions
 Massot, Bertrand* (*INL, CNRS UMR 5270, INSA Lyon, University of Lyon*); Rattenborg, Niels C. (*Max Planck Institute for Ornithology, Avian Sleep Group*); Hedenstrom, Anders (*Dept. of Biology, Center for Animal Movement research, Lun*); Susanne, Akesson (*Dept. of Biology, Center for Animal Movement research, Lun*); Libourel, Paul-Antoine (*CRNL*)
- 15:15-15:30 FrC13.6
Intraoperative Cerebral Measurements using Implantable Cortical Multimodality Probe
 Ishihara, Yuya* (*Kumamoto Univ.*); Sakai, Shun (*Kumamoto Univ.*); Yamakawa, Toshitaka (*Kumamoto Univ.*); Inoue, Takao (*Yamaguchi Univ.*); Suzuki, Michiyasu (*Yamaguchi Univ.*)
- FrC14: 14:00-15:30 R3 – Level 3
Signal Processing and Classification of Neural Signals (Oral Session)
 Chair: Wang, Yiwen (*Hong Kong Univ. of Science and Technology*)
 Co-Chair: Bertrand, Alexander (*KU Leuven, Univ. of Leuven*)
- 14:00-14:15 FrC14.1
A Data-Driven Regularization Approach for Template Matching in Spike Sorting with High-Density Neural Probes
 Wouters, Jasper* (*KU Leuven*); Kloosterman, Fabian (*imec*); Bertrand, Alexander (*KU Leuven, University of Leuven*)
- 14:15-14:30 FrC14.2
Stability of Stochastic Finite-Size Spiking-Neuron Networks: Comparing Mean-Field, 1-Loop Correction and Quasi-Renewal Approximations
 Todorov, Dmitrii (*Brown Univ.*); Truccolo, Wilson* (*Brown Univ.*)
- 14:30-14:45 FrC14.3
A K-Medoids based Point-Process Modeling on Neural Spike Transformation using Binless Kernel
 Qian, Cunle (*Zhejiang University*); Sun, Xuyun (*Zhejiang University*); Yang, Zaiyue (*Southern University of Science & Technology*); Pan, Gang (*Zhejiang University*); Wang, Yiwen* (*Hong Kong University of Science & Technology*)
- 14:45-15:00 FrC14.4
Laminar Origin of Evoked ECoG High-Gamma Activity
 Dougherty, Maximilian* (*LBNL*); Nguyen, Anh (*The Univ. of Iowa*); Baratham, Vyassa (*UC Berkeley*); Bouchard, Kristofer E. (*LBNL*)
- 15:00-15:15 FrC14.5
Stochastic Point Process Models for Multi-Compartment Dendritic-Tree Input-Output Transformations in Spiking Neurons
 Saha, Dipta (*Brown Univ.*); Truccolo, Wilson* (*Brown Univ.*)
- 15:15-15:30 FrC14.6
Effects of Gastrin-Releasing Peptide on Hippocampal Neural Networks in Vascular Dementia Rats
 Wang, Faqi* (*Tianjin Univ.*); Yang, Jiajia (*Tianjin Univ.*); Yang, Xuening (*Tianjin Univ.*); Wang, Ling (*Tianjin Univ.*); Zheng, Chenguang (*Tianjin Univ.*); Ming, Dong (*Tianjin Univ.*)
- FrC15: 14:00-15:30 M3 – Level 3
Image and Data Fusion (Oral Session)
 Co-Chair: Chmelik, Jiri (*Brno University of Technology, Faculty of Electrical Engineering and Telecommunication*)
- 14:00-14:15 FrC15.1
Iterative Machine Learning based Rotational Alignment of Brain 3D CT Data
 Chmelik, Jiri* (*Brno Univ. of Technology, Faculty of Electrical Engineering*); Jakubicek, Roman (*Brno Univ. of Technology*); Vicar, Tomas (*Brno Univ. of Technology, Faculty of Electrical Engineering*); Walek, Petr (*Brno Univ. of Technology, Faculty of Electrical Engineering*); Ourednicek, Petr (*Philips Nederland*); Jan, Jiri (*Brno Univ. of Technology*)

- 14:15-14:30 FrC15.2
Multimodal Data Fusion of Deep Learning and Dynamic Functional Connectivity Features to Predict Alzheimer's Disease Progression
 Abrol, Anees* (*Georgia State University, The Mind Research Network*); Fu, Zening (*University of Hong Kong*); Du, Yuhui (*The Mind Research Network*); Calhoun, Vince (*The Mind Research Network/University of New Mexico*)
- 14:30-14:45 FrC15.3
Digital Reconstruction of Teeth using Near-Infrared Light
 Angelino, Keith (*Massachusetts Institute of Technology*); Yaune, Gregory (*Massachusetts Institute of Technology*); Rana, Aman (*Massachusetts Institute of Technology*); Edlund, David (*MIT*); Shah, Pratik* (*Massachusetts Institute of Technology (MIT)*)
- 14:45-15:00 FrC15.4
Markerless Tracking of Micro-Endoscope for Optical Biopsy in Stomach
 Zenteno, Omar* (*Universite d'Orleans*); Vantrung, Pham (*Universite d'Orleans*); Treuillet, Sylvie (*Ecole Polytechnique de l'Université d'Orléans*); Lucas, Yves (*Orleans University*)
- 15:00-15:15 FrC15.5
Design of Microscope Optics for the Acquisition of Multiple Wavelength Band Image
 Lee, Youngro* (*Seoul National University*); Kim, Jeffrey (*Seoul National University*); Bae, So Hyun (*Hallym University*); Seo, Jong Mo (*Seoul National University, School of Engineering*)
- 15:15-15:30 FrC15.6
Multimodal T2w and DWI Prostate Gland Automated Registration
 De Santi, Bruno* (*Politecnico di Torino*); Salvi, Massimo (*Politecnico di Torino*); Giannini, Valentina (*University of Turin*); Meiburger, Kristen M. (*Politecnico di Torino*); Michielli, Nicola (*Politecnico di Torino*); Seoni, Silvia (*Politecnico di Torino*); Regge, Daniele (*Istitute for Cancer research & Treatment*); Molinari, Filippo (*Politecnico di Torino*)
- FrC16: 14:00-15:30 M5 – Level 3
Rehabilitation Robotics – Exoskeletons (Oral Session)
 Chair: Dhaher, Yasin (*Northwestern University*)
- 14:00-14:15 FrC16.1
Upper-Limb Actuated Exoskeleton for Muscular Dystrophy Patients: Preliminary Results
 Dalla Gasperina, Stefano (*Politecnico di Milano*); Gandolla, Marta* (*Politecnico di Milano, NearLab, Dept. of Electronics, Infor*); Manti, Alessandro (*Politecnico di Milano*); Aquilante, Lorenzo (*Politecnico di Milano*); Longatelli, Valeria (*Politecnico di Milano*); D'Angelo, Maria Grazia (*Scientific Institute Eugenio Medea, Bosisio Parini*); Molteni, F (*Hospital Valduce "Villa Beretta"*); Biffi, Emilia (*Scientific Institute Eugenio Medea, Bosisio Parini*); Rossini, Mauro (*Valduce Hospital, Villa Beretta, Rehabilitation Centre*); Gfoehler, Margit (*TU Wien*); Puchinger, Markus (*TU Wien*); Braghin, Francesco (*Politecnico di Milano*); Pedrocchi, Alessandra (*Politecnico di Milano*)
- 14:15-14:30 FrC16.2
Design of the Clutched Variable Parallel Elastic Actuator (CVPEA) for Lower Limb Exoskeletons
 Li, Yinbo (*Tsinghua University*); Li, Zhibin (*Tsinghua University*); Penzlin, Bernhard (*Chair for Medical Information Technology, RWTH Aachen University*); Tang, Zihan (*Tsinghua University*); Liu, Yali (*Tsinghua University*); Guan, Xinyu (*Tsinghua University*); Ji, Linhong* (*Tsinghua University*); Leonhardt, Steffen (*RWTH Aachen University*)
- 14:30-14:45 FrC16.3
Passive Knee Assistance Affects Whole-Body Biomechanics during Sit-to-Stand
 Seko, Sarah* (*UC Berkeley*); Matthew, Robert, P (*UC Berkeley*); Riemer, Raziel (*Dept. of Industrial Engineering & Management Ben-Gurion Unive*); Bajcsy, Ruzena (*UC Berkeley, CITRIS*)
- 14:45-15:00 FrC16.4
Effects of Robotic Exoskeleton Gait Training on an Adolescent with Brain Injury
 Karunakaran, Kiran* (*NJIT, Kessler Foundation*); Ehrenberg, Naphtaly (*NJIT*); Cheng, JenFu (*Children's Specialized Hospital*); Nolan, Karen J. (*Kessler Foundation*)
- 15:00-15:15 FrC16.5
How Height and Weight of Patients with Spinal Cord Injury Affect the Spring Locations of Unpowered Energy-Stored Exoskeleton
 Guan, Xinyu (*Tsinghua Univ.*); Kuai, Shengzheng (*Shenzhen Second People's Hospital*); Song, Liang (*National Research Center for Rehabilitation Technical Aids*); Li, Chong (*Tsinghua Univ.*); Liu, Weifeng (*Tsinghua Univ.*); Liu, Yali* (*Beijing Institute of Technology*); Ji, Linhong (*Tsinghua Univ.*); Wang, Rencheng (*Tsinghua Univ.*); Zhang, Zhiqiang (*National Research Center for Rehabilitation Technical Aids*)
- 15:15-15:30 FrC16.6
Mobility and Cognitive Improvements Resulted from Overground Robotic Exoskeleton Gait-Training in Persons with MS
 Androwis, Ghaith* (*Kessler Foundation, & New Jersey Institute of Technology*); Kwasnica, Marek (*Kessler Foundation*); Niewrzol, Peter (*Montclair State Univ.*); Popok, Paula (*Montclair State Univ.*); Fakhoury, Farris N (*Kessler Institute for Rehabilitation*); Sandroff, Brian (*Univ. of Alabama*); Yue, Guang (*Kessler Foundation*); DeLuca, John (*Kessler Foundation*)
- FrC17: 14:00-15:30 R12 – Level 3
Imaging Informatics – Image Analysis, Processing and Classification (Oral Session)
 Chair: Mahmoudi, Babak (*Emory University*)
- 14:00-14:15 FrC17.1
Estimation of Absolute Blood Pressure using Video Images Captured at Different Heights from the Heart
 Sugita, Norihiro* (*Tohoku University*); Noro, Taihei (*Tohoku University*); Yoshizawa, Makoto (*Tohoku University*); Ichiji, Kei (*Tohoku University Graduate School of Medicine*); Yamaki, Shunsuke (*Tohoku University*); Homma, Noriyasu (*Tohoku University Graduate School of Medicine*)
- 14:15-14:30 FrC17.2
Cancer Image Quantification With and Without, Expensive Whole Slide Imaging Scanners
 Tanveer, M. Asjid* (*National Univ. of Sciences & Technology*); Nawaz, Wajahat (*National Univ. of Sciences & Technology*); Rashid, Haroon (*National Univ. of Sciences & Technology*); Kiyani, Amber (*Riphah International Univ., Islamabad, Pakistan*); Khurram, Syed Ali (*Univ. of Sheffield*); Khan, Hassan Aqeel (*National Univ. of Sciences & Technology*)
- 14:30-14:45 FrC17.3
A Cloud-Based Framework for Implementing Portable Machine Learning Pipelines for Neural Data Analysis
 Ellis, Charles (*Georgia Institute of Technology*); Gu, Ping (*Emory University*); Eslampanah Sendi, Mohammad Sadegh (*Georgia Institute of Technology*); Huddleston, Daniel (*Emory University*); Sharma, Ashish (*Emory University*); Mahmoudi, Babak* (*Emory University*)
- 14:45-15:00 FrC17.4
Hemodynamics Analysis of Patients with Mild Cognitive Impairment during Working Memory Tasks
 Yoo, So-Hyeon (*Pusan National University*); Hong, Keum-Shik* (*Pusan National University*)
- 15:00-15:15 FrC17.5
Automated Classification of Airborne Pollen using Neural Networks
 Schiele, Julian* (*Univ. of Augsburg*); Rabe, Fabian (*Univ. of Augsburg*); Schmitt, Maximilian (*Univ. of Augsburg*); Glaser, Manuel (*Univ. of Augsburg, UNIKA-T*); Haering, Franziska (*Technical Univ. of Munich, UNIKA-T, Chair of Environmental*); Brunner, Jens O. (*Univ. of Augsburg*); Bauer, Bernhard (*Univ. of Augsburg*); Schuller, Bjoern (*Univ. of Augsburg / Imperial College London*); Traidl-Hoffmann, Claudia (*Technical Univ. of Munich, UNIKA-T, Chair of Environmental*); Damialis, Athanasios (*Technical Univ. of Munich*)

15:15-15:30	FrC17.6	Deep Learning for Automating the Organization of Institutional Dermatology Image Stores Wang, Michael* (<i>Mayo Clinic</i>); Comfere, Nneka (<i>Mayo Clinic</i>); Murphree, Dennis (<i>Mayo Clinic</i>)	
FrC18: 14:00-15:30	R13 – Level 3	Image Reconstruction and Enhancement (Oral Session) Co-Chair: Antani, Sameer (<i>National Library of Medicine</i>)	
14:00-14:15	FrC18.1	A Network-Driven Prior Induced Bregman Model for Parallel MR Imaging Li, Guanyu (<i>Nanchang Univ.</i>); Liu, Yiling (<i>Nanchang Univ.</i>); Zhang, Minghui (<i>Nanchang Univ.</i>); Wang, Shanshan (<i>Shenzhen Institutes of Advanced Technology</i>); Zhu, Yanjie (<i>Shenzhen Institutes of Advanced Technology, Chinese Academy of S</i>); Liu, Qiegen (<i>Dept. of Electronic Information Engineering, Nanchang Univ</i>); Liang, Dong* (<i>Shenzhen Institutes of Advanced Technology</i>)	
14:15-14:30	FrC18.2	Performance Evaluation of a Generative Adversarial Network for Deblurring Mobile-Phone Cervical Images Ganesan, Prasanth (<i>Florida Atlantic University</i>); Xue, Zhiyun (<i>National Library of Medicine</i>); Singh, Sanjana (<i>National Library of Medicine</i>); Long, L. Rodney (<i>National Library of Medicine</i>); Ghoraani, Behnaz (<i>Florida Atlantic University</i>); Antani, Sameer* (<i>National Library of Medicine</i>)	
14:30-14:45	FrC18.3	Diffomorphic Upsampling of Serially Acquired Sparse 2D Cross-Sections in Cardiac MRI Lee, Brian C* (<i>Johns Hopkins Univ.</i>); Tward, Daniel (<i>Johns Hopkins Univ.</i>); Wei, Jinchi (<i>Johns Hopkins Univ.</i>); Tiple, Dnyanesh (<i>Johns Hopkins Univ.</i>); Weiss, Robert G. (<i>Johns Hopkins Medical Institutions</i>); Miller, Michael (<i>Johns Hopkins Univ.</i>); Ardekani, Siamak (<i>Johns Hopkins Univ.</i>)	
14:45-15:00	FrC18.4	T1rho Fractional-Order Relaxation of Human Articular Cartilage Zou, Lixian (<i>Shenzhen Institutes of Advanced Technology, Chinese Academy of S</i>); Wang, Haifeng (<i>Shenzhen Institutes of Advanced Technology, Chinese Academy of S</i>); Zhu, Yanjie (<i>Shenzhen Institutes of Advanced Technology, Chinese Academy of S</i>); Liu, Yuanyuan (<i>Shenzhen Institutes of Advanced Technology, Chinese Academy of S</i>); Cheng, Jing (<i>Shenzhen Institutes of Advanced Technology, Chinese Academy of S</i>); Jia, Sen (<i>Shenzhen Institutes of Advanced Technology, Chinese Academy of S</i>); Shi, Caiyun (<i>Shenzhen Institutes of Advanced Technology, Lauterbur Research C</i>); Su, Shi (<i>Shenzhen Institutes of Advanced Technology, Chinese Academy of S</i>); Liu, Xin (<i>Shenzhen Institutes of Advanced Technology, Chinese Academy of S</i>); Zheng, Hairong (<i>Shenzhen Inst of Advanced Tech</i>); Liang, Dong* (<i>Shenzhen Institutes of Advanced Technology</i>)	
15:00-15:15	FrC18.5	Fundus Image Enhancement Method based on CycleGAN You, QiJing* (<i>Nanjing University of Aeronautics & Astronautics</i>); Wan, Cheng (<i>Nanjing University of Aeronautics & Astronautics</i>); Sun, Jing (<i>Nanjing University of Aeronautics & Astronautics</i>); Shen, Jianxin (<i>Nanjing University of Aeronautics & Astronautics</i>); Ye, Hui (<i>Jiangsu province hospital</i>); Yu, Qiuli (<i>BenQ Hospital of Nanjing Medical University</i>)	
15:15-15:30	FrC18.6	Examining the Effect of Noise on Biosignal Estimates Extracted through Spatio-Temporal Video Processing Bennett, Stephanie Louise* (<i>Carleton Univ.</i>); Goubran, Rafik A. (<i>Carleton Univ.</i>); Knoefel, Frank-Dietrich (<i>Bruyere Continuing Care, Univ. of Ottawa, Carleton Univ.</i>)	
FrC20: 14:00-15:30	R5 – Level 3	Ethical Design Considerations for MedTech Developments in an Exponential World with AI / Robotics / Blockchain / Tissue Engineering / 3D Printing / Genetics Engineering ... (Minisymposium) Chair: Friebe, Michael (<i>Otto-von-Guericke-Univ.</i>) Co-Chair: Huttmacher, Dietmar W. (<i>Queensland Univ. of Technology</i>)	
14:00-14:15	FrC20.1	MedTec Related Exponential Technologies Require Ethical Design Considerations and an Adapted Engineering Education Friebe, Michael* (<i>Otto-von-Guericke-University</i>); Herzog, Christian (<i>University Lübeck</i>)	
14:15-14:30	FrC20.2	Ethics as an Essential Teaching Element for Innovative Medical Technology Engineering Education Herzog, Christian* (<i>University Lübeck</i>); Friebe, Michael (<i>Otto-von-Guericke-University</i>)	
14:30-14:45	FrC20.3	Quo Vadis Immunotherapy Industry – A Porter's Five Forces Analysis Maartens, Joachim (<i>Institute of Health & Biomedical Innovation</i>); Huttmacher, Dietmar W.* (<i>Queensland Univ. of Technology</i>)	
14:45-15:00	FrC20.4	Using Blockchain for Healthcare Applications: Foundations for Ethicaldesign Considerations Bartling, Soenke* (<i>Humboldt Institute for Internet & Society</i>); Friebe, Michael (<i>Otto-von-Guericke-University</i>)	
15:00-15:15	FrC20.5	Ethical Design Considerations for MedTec: The Big Picture and Accompanying Concerns Gomes Ataide, Elmer Jeto* (<i>Otto-von-Guericke Universität</i>); Maartens, Joachim (<i>Institute of Health & Biomedical Innovation</i>); Bartling, Soenke (<i>Humboldt Institute for Internet & Society</i>); Huttmacher, Dietmar W. (<i>Queensland University of Technology</i>); Herzog, Christian (<i>University Lübeck</i>); Friebe, Michael (<i>Otto-von-Guericke-University</i>)	
FrPOS-01: 18:00-19:30	Hall B	Signal Processing and Classification of Electrophysiological Signals – Poster (Poster Session)	
18:00-19:30	FrPOS-01.1	Assessing tDCS Placebo Effects on EEG and Cognitive Tasks Holmbæk Petersen, Tine* (<i>Technical University of Denmark</i>); Puthusserypady, Sadasivan (<i>Technical University of Denmark</i>)	
18:00-19:30	FrPOS-01.2	Comparison of Extreme Learning Machine and K-Nearest Neighbour Performance in Classifying EEG Signal of Normal, Poor and Capable Dyslexic Children Ahmad Zainuddin, Ahmad Zuber (<i>Universiti Kuala Lumpur</i>); Mansor, Wahidah* (<i>Universiti Teknologi MARA</i>); Lee, Yoot (<i>Universiti Teknologi MARA</i>); Mahmoodin, Zulkifli (<i>Universiti Kuala Lumpur British Malaysian Institute</i>)	
18:00-19:30	FrPOS-01.3	Spectral Analysis versus Signal Complexity Methods for Assessing Attention Related Activity in Human EEG Malinowska, Urszula* (<i>Nencki Institute of Experimental Biology</i>); Wojciechowski, Jakub (<i>Bioimaging Research Center, World Hearing Center of Institute of)</i> ; Waligóra, Marek (<i>Nencki Institute of Experimental Biology</i>); Wróbel, Andrzej (<i>Institute of Philosophy, University of Warsaw</i>); Niedbalski, Paweł (<i>Elmiko Biosignals Sp. z o.o.</i>); Rogala, Jacek (<i>Nencki Institute of Experimental Biology</i>)	
18:00-19:30	FrPOS-01.4	EEG Signals Classification using Machine Learning for the Identification and Diagnosis of Schizophrenia Zhang, Lei* (<i>University of Regina</i>)	

- 18:00-19:30 FrPOS-01.5
EEG Feature Analysis for Detecting the Fluctuation of Consciousness Level during Propofol Anesthesia
Zhang, Yun (*Xidian Univ.*); Wang, Yubo (*Xidian Univ.*); Cai, Suping (*Xidian Univ.*); Li, Jun (*Xidian Univ.*); Ren, Junchan (*Xidian Univ.*); Wang, Qiang (*The First Affiliated Hospital of Xi'an Jiao Tong Univ.*); Huang, Liyu* (*Xidian Univ.*)
- 18:00-19:30 FrPOS-01.6
Investigating the Optimal Baseline Positioning to Maximize Cognitive Experimental Outcome
Reali, Pierluigi* (*Politecnico di Milano*); Lolatto, Riccardo (*Politecnico di Milano*); De Stefano, Paola (*Politecnico di Milano*); Cerutti, Sergio (*Politecnico di Milano*); Bianchi, Anna Maria (*Politecnico di Milano*)
- 18:00-19:30 FrPOS-01.7
Temporally Adaptive Common Spatial Patterns with Deep Convolutional Neural Networks
Mousavi, Mahta* (*University of California, San Diego*); de Sa, Virginia (*University of California, San Diego*)
- 18:00-19:30 FrPOS-01.8
Time Warping Solutions for Classifying Artifacts in EEG
Maruthachalam, Srihari* (*Indian Institute of Technology, Madras*); Kumar, Mari Ganesh (*Indian Institute of Technology Madras*); Murthy, Hema (*Indian Institute of Technology Madras*)
- 18:00-19:30 FrPOS-01.9
Analysis and Classification for Single-Trial EEG Induced by Sequential Finger Movements
Zhang, Shanshan* (*Tianjin Univ.*); Wang, Kun (*Tianjin Univ.*); Xu, Minpeng (*Tianjin Univ.*); Wang, Zhongpeng (*Tianjin Univ.*); Chen, Long (*Tianjin Univ.*); Wang, Faqi (*Tianjin Univ.*); Zhang, Lixin (*Tianjin Univ.*); Ming, Dong (*Tianjin Univ.*)
- 18:00-19:30 FrPOS-01.10
Subspace Techniques for Task-Independent EEG Person Identification
Kumar, Mari Ganesh* (*Indian Institute of Tech. Madras*); M S, Saranya (*Indian Institute of Tech. Madras*); Narayanan, Shrikanth (*Univ. of Southern California*); Sur, Mriganka (*MIT*); Murthy, Hema (*Indian Institute of Tech. Madras*)
- 18:00-19:30 FrPOS-01.11
A Graph Signal Processing Approach to Study High Density EEG Signals in Patients with Disorders of Consciousness
Mortahab, Sepehr* (*Univ. of Liege*); Annen, Jitka (*Univ. of Liege*); Chatelle, Camille (*Univ. of Liege*); Cassol, Helena (*Univ. of Liege*); Martens, Geraldine (*Univ. of Liege*); Thibaut, Aurore (*Univ. of Liege*); Gosseries, Olivia (*Univ. & Univ. Hospital of Liege*); Laureys, Steven (*Cyclotron Research Center, Univ. of Liege in Belgium*)
- 18:00-19:30 FrPOS-01.12
Toward a Cooperation Index based on EEG-Workload Causality: Preliminary Findings on Aerospace-Like Tasks
Sciaraffa, Nicolina* (*Univ. of Rome Sapienza*); Borghini, Gianluca (*Sapienza Univ. of Rome*); Arico, Pietro (*Fondazione Santa Lucia*); Di Flumeri, Gianluca (*Univ. of Rome Sapienza*); Bonelli, Stefano (*deep blue*); Drogoul, Fabrice (*Eurocontrol*); Vozzi, Alessia (*BrainSigns srl*); Ronca, Vincenzo (*BrainSigns srl*); Bezerianos, Anastasios (*National Univ. of Singapore*); Thakor, Nitish (*National Univ. of Singapore*); Babiloni, Fabio (*Univ. of Rome*)
- 18:00-19:30 FrPOS-01.13
Bag of Patterns for Nearest Neighbour Neonatal EEG Recall
Murphy, Brian Michael (*Univ. College Cork*); Boylan, Geraldine (*Univ. College Cork*); Lightbody, Gordon (*Univ. College Cork*); Marnane, William* (*Univ. College Cork*)
- 18:00-19:30 FrPOS-01.14
Power Spectrum and Cross Power Spectral Density based EEG Correlates of Intensive Care Delirium
Mikola, Annika (*North Estonia Medical Centre*); Särkelä, Mika (*GE*); Lipping, Tarmo* (*Tampere University*)
- 18:00-19:30 FrPOS-01.15
Comparison between a Passive and Active Response Task and their Effect on the Amplitude and Latency of the P300 Component for Visual Stimuli While using Low Fidelity Equipment
Schembri, Patrick* (*University of Greenwich*); Pelc, Mariusz (*University of Greenwich*); Ma, Jixin (*University of Greenwich*)
- 18:00-19:30 FrPOS-01.16
Neurophysiological Changes Associated with Training in Laparoscopic Surgery using EEG: A Pilot Study
Suárez-Revelo, Jazmín Ximena* (*Universidad de Antioquia*); Ochoa, John Fredy (*University of Antioquia*); Hernandez, Alher Mauricio (*University of Antioquia*)
- 18:00-19:30 FrPOS-01.17
EEG Movement Artifact Suppression in Interactive Virtual Reality
Tremmel, Christoph (*Old Dominion University*); Herff, Christian (*Maastricht University*); Krusienski, Dean* (*Virginia Commonwealth University*)
- FrPOS-02: 18:00-19:30 Hall B
Signal Processing and Classification of Heart Rate Variability – Poster (Poster Session)
- 18:00-19:30 FrPOS-02.1
Usefulness of Spectral Analysis of Respiratory Rate Variability to Help in Pediatric Sleep Apnea-Hypopnea Syndrome Diagnosis
Barroso-García, Verónica* (*Univ. of Valladolid*); Gutierrez, Gonzalo Cesar (*Univ. of Valladolid*); Kheirandish-Gozal, Leila (*Section of Sleep Medicine, Dept. of Pediatrics, Pritzker Sc*); Álvarez González, Daniel (*Rio Hortega Univ. Hospital*); Vaquerizo-Villar, Fernando (*Biomedical Engineering Group, Univ. of Valladolid, CIF Q471*); del Campo, Félix (*Hospital del Rio Hortega. Universidad De Valladolid*); Gozal, David (*Section of Sleep Medicine, Dept. of Pediatrics, Pritzker Sc*); Hornero, Roberto (*Univ. of Valladolid*)
- 18:00-19:30 FrPOS-02.2
Clustering Continuous Wavelet Transform Characteristics of Heart Rate Variability through Unsupervised Learning
Wachowiak, Mark Paul* (*Nipissing Univ.*); Moggridge, Jason (*Nipissing Univ.*); Smolkova-Wachowiak, Renata (*Nipissing Univ.*)
- 18:00-19:30 FrPOS-02.3
Entropy Profiling to Detect ST Change in Heart Rate Variability Signals
Udhayakumar, Radhagayathri* (*University of Melbourne*); Karmakar, Chandan (*Deakin University*); Palaniswami, Marimuthu (*The University of Melbourne*)
- 18:00-19:30 FrPOS-02.4
Pre-Surgery Stress Monitoring using Heart Rate Variability Measures
Sebastin, Amalan* (*Healthcare Tech. Innovation Centre*); Balakarthikeyan, Vaishali (*Healthcare Tech. Innovation Centre*); SP, Preejith (*Healthcare Tech. Innovation Center – IITMadras*); Joseph, Jayaraj (*HTIC, Indian Institute of Tech. Madras*); Sivaprakasam, Mohanasankar (*Indian Institute of Tech. Madras*)
- FrPOS-03: 18:00-19:30 Hall B
Signal Processing and Classification of Movement-Related Signals – Poster (Poster Session)
- 18:00-19:30 FrPOS-03.1
Application of the Teagar-Kaiser Energy Operator and Wavelet Transform for Detection of Finger Tapping Contact and Release Times using Accelerometry
O'Callaghan, Ben* (*Univ. College Dublin*); Flood, Matthew W. (*Univ. College Dublin*); Lowery, Madeleine (*Univ. College Dublin*)
- 18:00-19:30 FrPOS-03.2
Quantitative Assessment of Ataxic Gait using Inertial Sensing at Different Walking Speeds
Phan, Dung* (*Deakin University*); Nguyen, Nhan (*Deakin University*); Pathirana, Pubudu N (*Deakin University*); Horne, Malcolm (*Florey Institute of Neuroscience & Mental Health*); Power, Laura (*Royal Victorian Eye & Ear Hospital*); Szmulewicz, David (*Victorian Eye & Ear Hospital*)

18:00-19:30 FrPOS-03.3
Emotional Stimulation during Motor Exercise: An Integration to the Holistic Rehabilitation Framework
 Kritikos, Jacob* (*National Technical University of Athens*); Koutsouris, Dimitrios (*Biomedical Engineering Laboratory, School of Electrical & Comp*); Caravas, Pamela (*Harvard Medical School Affiliate*); Douloudi, Marilina (*National & Kapodistrian University of Athens*); Tzannetos, Ioannis (*National Technical University of Athens*)

18:00-19:30 FrPOS-03.4
Fall Detection for the Elderly based on 3-Axis Accelerometer and Depth Sensor Fusion with Random Forest Classifier
 Kim, Kijung (*Korea Institute of Science & Technology*); Yun, Guhnoo (*Korea Institute of Science & Technology*); Park, Sungkee (*Korea Institute of Science & Technology*); Kim, Dong Hwan* (*Korea Institute of Science & Technology*)

18:00-19:30 FrPOS-03.5
Automatic Inference of Rat's Hindlimb Trajectory to Synchronize with Forelimb Gait Through Phase
 Anopas, Dollaporn (*Nanyang Technological Univ.*); Jatesiktat, Prayook (*NTU*); Lim, Guan Ming* (*Nanyang Technological Univ.*); Lin, Junquan (*Nanyang Technological Univ.*); Wee, Seng Kwee (*Tan Tock Seng Hospital*); Er, Tow Peh (*Tan Tock Seng Hospital*); Chew, Sing Yian (*Nanyang Technological Univ.*); Ang, Wei Tech (*Nanyang Technological Univ.*)

FrPOS-04: 18:00-19:30 Hall B
Signal Processing and Classification of Multivariate and Multimodal Biosignals – Poster (Poster Session)

18:00-19:30 FrPOS-04.1
A Framework for Spatiotemporal Analysis of Gastrointestinal Spike Burst Propagation
 Kuruppu, Sachira* (*Univ. of Auckland*); Cheng, Leo K (*The Univ. of Auckland*); Angeli, Timothy Robert (*Auckland Bioengineering Institute, Univ. of Auckland*); Avci, Recep (*Univ. of Auckland*); Paskaranandavadivel, Niranchan (*The Univ. of Auckland*)

18:00-19:30 FrPOS-04.2
Estimation of Sparse VAR Models with Artificial Neural Networks for the Analysis of Biosignals
 Schubert, Marvin* (*Technische Hochschule Mittelhessen (THM) – Univ. of Applied*); Schanze, Thomas (*Technische Hochschule Mittelhessen (THM), FB LSE, IBMT*)

18:00-19:30 FrPOS-04.3
Cuff-Less Blood Pressure Measurement using Supplementary ECG and PPG Features Extracted through Wavelet Transformation
 Singla, Muskan (*International Institute of Information & Technology, Hyderabad*); Sistla, Prasad (*Care Foundation*); Syed, Azeemuddin* (*International Institute of Information & Technology, Hyderabad*)

18:00-19:30 FrPOS-04.4
Analysis of Physiological and Activity Data Specific to Locations Obtained through Geographical Clustering
 Wolschewski, Anastasia (*Institute for Applied Informatics at Univ. of Leipzig*); Schreiber, Max (*Interdisciplinary Competence Center Biomedical Data Science, Ins*); Handel, Till (*Institute for Applied Informatics (InfAI)*); Ivanova, Galina* (*Interdisciplinary Competence Center Biomedical Data Science, Ins*)

18:00-19:30 FrPOS-04.5
Liquid Gastroesophageal Reflux Characterization by Investigating Multichannel Intraluminal Impedance-pH Monitoring Data
 Rabbani, Hossein* (*Isfahan Univ. of Medical Sciences*)

18:00-19:30 FrPOS-04.6
CHAMPS: Cardiac Health Hypergraph Analysis using Multimodal Physiological Signals
 Dutta Choudhury, Anirban* (*Tata Consultancy Services Ltd.*); Chowdhury, Ananda (*Jadavpur University*)

FrPOS-05: 18:00-19:30 Hall B
Signal Processing and Classification of Respiratory Signals – Poster (Poster Session)

18:00-19:30 FrPOS-05.1
Automatic Estimation of Respiratory Effort using Esophageal Pressure
 Großhoff, Jan* (*University of Luebeck*); Petersen, Eike (*University of Lübeck*); Becher, Tobias (*University Medical Center Schleswig-Holstein*); Rostalski, Philipp (*Institute for Electrical Engineering in Medicine, University of*)

18:00-19:30 FrPOS-05.2
Noise Removal of Tracheal Sound Recorded during CPET to Determine Respiratory Rate
 Zhang, Qi (*University of Toronto*); de Oliveira Francisco, Cristina (*KITE, Toronto Rehabilitation Institute, University Health Network*); Kabir, Muammar Muhammad (*Toronto Rehabilitation Institute, University Health Network*); Zhang, Jing (*University of Toronto*); Montazeri Ghahjaverestan, Nasim (*Institute of Biomaterial & Biomedical Engineering, University of*); Taati, Babak* (*Toronto Rehabilitation Institute & University of Toronto*); Yadollahi, Azadeh (*University of Toronto*)

18:00-19:30 FrPOS-05.3
Reckoning Respiratory Signals to Effectively Decipher Mental State
 Banerjee, Tanushree (*TCS Innovation Lab*); Khasnobish, Anwesha* (*TCS*); Chowdhury, Arijit (*TCS Innovation Lab*); Chatterjee, Debatri (*TCS Innovation Lab*)

18:00-19:30 FrPOS-05.4
A Novel Stuttering Disfluency Classification System based on Respiratory Biosignals
 Villegas, Bruno (*Pontificia Univ. Católica del Perú*); Flores, Kevin M. (*Pontificia Univ. Católica del Perú*); Acuña, Kevin José (*Pontifical Catholic Univ. of Peru*); Pacheco-Barrios, Kevin (*Univ. San Ignacio de Loyola, Lima, Peru.*); Elias, Dante* (*Pontifical Catholic Univ. of Peru*)

18:00-19:30 FrPOS-05.5
Photoplethysmography Response to Laryngeal Mask Airway Insertion during Propofol-Remifentanyl Anesthesia
 Chen, Wanlin (*Zhejiang Univ.*); Jiang, Feng (*Zhejiang Univ.*); Chen, Xinzhong (*Zhejiang Univ.*); Feng, Ying (*Zhejiang Univ.*); Miao, Jiajun (*Zhejiang Univ.*); Jiao, Cuicui (*Zhejiang Univ.*); Chen, Shali (*Zhejiang Univ.*); Chen, Hang* (*Zhejiang Univ.*)

FrPOS-06: 18:00-19:30 Hall B
Time-Frequency Analysis of Biosignals – Poster (Poster Session)

18:00-19:30 FrPOS-06.1
A New Efficient Algorithm for Prediction of Preterm Labor
 Shahbakhti, Mohammad* (*Kaunas University of Technology*); Beiramvand, Matin (*Islamic Azad University*); Bavi, Mohammad Reza (*Mehr Private Hospital*); Mohammadi Far, Somayeh (*Vytautas Magnus University*)

18:00-19:30 FrPOS-06.2
Spectral Parametrization of PPG, IPG and pAT Pulse Waves for Continuous Noninvasive Blood Pressure Estimation
 Pielmus, Alexandru Gabriel* (*Technische Universität Berlin*); Klum, Michael (*Technische Universität Berlin*); Tigges, Timo (*Technical University Berlin*); Orglmeister, Reinhold (*Technische Universität Berlin*)

18:00-19:30 FrPOS-06.3
Fetal Cardiac Timing Events Estimation from Doppler Ultrasound Signal Cepstrum Analysis
 Al Nuaimi, Saeed* (*Khalifa University*); Jimaa, Shihab (*Khalifa University of Science & Technology*); Kimura, Yoshitaka (*Tohoku University*); Hadjileontiadis, Leontios (*Aristotle University of Thessaloniki*); Khandoker, Ahsan H (*Khalifa University of Science, Technology & Research*)

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- 18:00-19:30 FrPOS-06.4
Cortical Pitch Response Components Correlate with the Pitch Saliency of Resolved and Unresolved Components of Mandarin Tones
 Peng, Fei (*Chongqing Univ.*); Hou, Wensheng* (*Bioengineering Inst of Chongqing Univ.*); Zhang, Li (*Chongqing Univ.*)
- 18:00-19:30 FrPOS-06.5
Evaluation of Mel-Frequency Cepstrum for Wheeze Analysis
 Pramono, Renard Xaviero Adhi* (*Imperial College London*); Imtiaz, Syed Anas (*Imperial College London*); Rodriguez-Villegas, Esther (*Imperial College London*)
- 18:00-19:30 FrPOS-06.6
A Dataset for Systematic Testing of Crackle Separation Techniques
 Pal, Ravi* (*University of Southampton*); Barney, Anna (*University of Southampton*)
- 18:00-19:30 FrPOS-06.7
Modulation of Mu Suppression during Visual Perspective Taking by Social Rejection
 Peng, Suhao (*Southeast Univ.*); Leng, Yue* (*Southeast Univ.*); Ge, Sheng (*Southeast Univ.*); Deng, Huihua (*Southeast Univ.*)
- 18:00-19:30 FrPOS-06.8
Analysis of EEG Frequency Components and an Examination of Electrodes Localization during Speech Imagery
 Tsukahara, Akihiko* (*Tokyo Denki University*); Yamada, Masayuki (*Tokyo Denki University*); Tanaka, Keita (*Tokyo Denki University*); Uchikawa, Yoshinori (*Tokyo Denki University*)
- 18:00-19:30 FrPOS-06.9
Effective EEG Channels for Emotion Identification Over the Brain Regions using Differential Evolution Algorithm
 Al-Qazzaz, Noor* (*UKM*); Sabir, Mohannad K. (*Baghdad Univ./Al-Khwarizmi Engineering College*); Md Ali, Sawal Hamid (*National Univ. of Malaysia*); Siti Anom, Ahmad (*Universiti Putra Malaysia*); Grammer, Karl (*Univ. of vienna*)
- 18:00-19:30 FrPOS-06.10
The EEG Analysis of Actual Left/Right Lateral Bending Movements in Patient of Lumbar Disc Herniation
 Li, Huihui* (*Shenzhen Institutes of Advanced Tech., Chinese Academy of S*); Du, Wenjing (*Shenzhen Institutes of Advanced Tech., Chinese Academy of S*); Ivanov, Kamen (*Shenzhen Institutes of Advanced Tech., Chinese Academy of S*); Yang, Yuchao (*Shenzhen Institutes of Advanced Tech., Chinese Academy*); Zhan, Yang (*Shenzhen Institutes of Advanced Tech., Chinese Academy*); Wang, Lei (*Shenzhen Institutes of Advanced Tech.*)
- FrPOS-07: 18:00-19:30 Hall B
Ophthalmic Imaging and Analysis – Poster (Poster Session)
- 18:00-19:30 FrPOS-07.1
Automatic Parallel Detection of Neovascularization in Retinal Images using Ensemble of Extreme Learning Machine
 Huang, He (*Northeastern Univ., China*); Ma, He* (*Northeastern Univ.*); Qian, Wei (*Univ. of Texas at El Paso*)
- 18:00-19:30 FrPOS-07.2
3D Reconstruction of the Optic Nerve Head of a Phantom Eye from Images Obtained using a Slit Lamp Fitted with Low Cost Add-Ons
 Coghill, Ian* (*University of Strathclyde*); Jordan, Kirsty Charlotte (*University of Strathclyde*); Black, Richard Anthony (*University of Strathclyde*); Livingstone, Iain (*NHS Greater Glasgow & Clyde*); Giardini, Mario Ettore (*University of Strathclyde*)
- 18:00-19:30 FrPOS-07.3
Estimation of Time Delay between Artery and Vein Pulsation using Experimental Video-Ophthalmoscope
 Valterova, Eva* (*Faculty of Electrical Engineering & Communication, Brno Univ.*); Tornow, Ralf-Peter (*Univ. of Erlangen*); Kolar, Radim (*Brno Univ. of Technology*)
- 18:00-19:30 FrPOS-07.4
Eye Movement Analysis using a Binocular Video-Ophthalmoscope
 Kolar, Radim* (*Brno University of Technology*); Odstrcilik, Jan (*Brno University of Technology*); Labounkova, Ivana (*Brno University of Technology*); Hracho, Michal (*Brno University of Technology*); Tornow, Ralf-Peter (*University of Erlangen*)
- 18:00-19:30 FrPOS-07.5
Blind Source Separation of Different Retinal Pulsatile Patterns from Simultaneous Long-Term Binocular Ophthalmoscopic Video-Records
 Labounkova, Ivana* (*Brno Univ. of Technology*); Labounek, Rene (*Univ. of Minnesota*); Odstrcilik, Jan (*Brno Univ. of Technology*); Hracho, Michal (*Brno Univ. of Technology*); Nestrail, Igor (*Univ. of Minnesota*); Tornow, Ralf-Peter (*Univ. of Erlangen*); Kolar, Radim (*Brno Univ. of Technology*)
- FrPOS-08: 18:00-19:30 Hall B
Optical Imaging – Poster (Poster Session)
- 18:00-19:30 FrPOS-08.1
Chromatic Properties of Blood during Coagulation
 Razavi, Jahan* (*Monta Vista School*); Arbabian, Amin (*Stanford University*)
- 18:00-19:30 FrPOS-08.2
PIV Analysis of Stented Haemodynamics in the Descending Aorta
 Williamson, Petra Nicole (*University of Canterbury*); Docherty, Paul David* (*University of Canterbury*); Yazdi, Sina Ghafoorpoor (*University of Canterbury*); Jermy, Mark (*University of Canterbury*); Khanafer, Adib (*Canterbury District Health Board*); Kabaliuk, Natalia (*University of Canterbury*); Geoghegan, Patrick Henry (*Aston University*)
- 18:00-19:30 FrPOS-08.3
A Comprehensive Classification System for Breast Cancer Diagnosis based on Dynamic Optical Breast Imaging
 Yang, Wenming* (*Dept. of Electronic Engineering, Graduate School at Shenzhen*); Wang, Zirui (*Tsinghua University*); Chen, Kaiquan (*Tsinghua University*); Li, Zhide (*Tsinghua University*); Liao, Qingmin (*Tsinghua University*)
- 18:00-19:30 FrPOS-08.4
Automated Iris Segmentation from Anterior Segment OCT Images with Occludable Angles via Local Phase Tensor
 Shang, Qiaoling (*Shenyang Jianzhu Univ.*); Zhao, Yitian* (*Chinese Academy of Sciences*); Hao, Huaying (*Ningbo Univ.*); Chen, Zhili (*Shenyang Jianzhu Univ.*); Su, Pan (*Ningbo Institute of Industrial Technology, Chinese Academy of Sc*); Li, Fei (*Zhongshan Ophthalmic Center, State Key Laboratory of Ophthalmology*); Zhang, Xiulan (*Zhongshan Ophthalmic Center, State Key Laboratory of Ophthalmology*); Liu, Jiang (*Ningbo Institute of Materials Technology & Engineering, CAS*)
- 18:00-19:30 FrPOS-08.5
A New Texture-Based Segmentation Method for Optical Coherence Tomography Images
 Monemian, Maryam* (*Isfahan University of Medical Sciences*); Rabbani, Hossein (*Isfahan Univ. of Medical Sciences*)
- 18:00-19:30 FrPOS-08.6
Convolutional Neural Network Approach to Classify Skin Lesions using Reflectance Confocal Microscopy
 Wodzinski, Marek* (*AGH Univ. of Science & Technology*); Skalski, Andrzej (*AGH Univ. of Science & Technology*); Witkowski, Alexander (*Dept. of Dermatology, Univ. of Modena & Reggio Emilia*); Pellacani, Giovanni (*Dept. of Dermatology, Univ. of Modena & Reggio Emilia*); Łudzik, Joanna (*Dept. of Biostatistics & Telemedicine, Jagiellonian Univ.*)
- 18:00-19:30 FrPOS-08.7
Fast Hyperspectral Diffuse Optical Imaging Method with Joint Sparsity
 Durgin, Natalie (*Spiceworks*); Grotheer, Rachel* (*Goucher College*); Huang, Chenxi (*Yale Univ.*); Li, Shuang (*Colorado School of Mines*); Ma, Anna (*Univ. of California, San Diego*); Needell, Deanna (*UCLA*); Qin, Jing (*Montana State Univ.*)

- 18:00-19:30 FrPOS-08.8
A Novel Hand-Held based Diffuse Optical Tomography Device for Breast Tumor Detection
 Guo, Jia-Jiun (*National Chiao Tung Univ.*); Wu, Wen-Jun (*National Chiao Tung Univ.*); Fang, Wai-Chi* (*National Chiao Tung Univ.*)
- 18:00-19:30 FrPOS-08.9
MBLL with Weighted Partial Path Length for Multi-Distance Probe Configuration of fNIRS
 Song, Xizi (*Tianjin Univ.*); Chen, Xinrui* (*Tianjin Univ.*); Wang, Zhongpeng (*Tianjin Univ.*); An, Xingwei (*Tianjin Univ.*); Ming, Dong (*Tianjin Univ.*)
- 18:00-19:30 FrPOS-08.10
Dual Layered Models of Light Scattering in the Near Infrared A: Optical Measurements and Simulation
 Almajidy, Rand Kasim (*Univ. Medical Center, Freiburg Dept. of Neurosurgery*); Rackebrandt, Klaas (*Unity AG, Hamburg*); Gehring, Hartmut (*Dept. of Anaesthesiology, Univ. of Luebeck, Luebeck*); Hofmann, Ulrich G.* (*Univ. of Freiburg*)
- 18:00-19:30 FrPOS-08.11
Dual Layered Models of Light Scattering in the Near Infrared B: Experimental Results with a Phantom
 Almajidy, Rand Kasim (*Univ. Medical Center, Freiburg Dept. of Neurosurgery*); Rackebrandt, Klaas (*Unity AG, Hamburg*); Gehring, Hartmut (*Dept. of Anaesthesiology, Univ. of Luebeck, Luebeck*); Hofmann, Ulrich G.* (*Univ. of Freiburg*)
- 18:00-19:30 FrPOS-08.12
Superficial Fluctuations in Functional Near-Infrared Spectroscopy
 Zhang, Fan* (*Univ. of Oklahoma*); Cheong, Daniel (*Univ. of Oklahoma*); Chen, Yuxuan (*Univ. of Oklahoma*); Khan, Ali Fahim (*Univ. of Oklahoma*); Ding, Lei (*Univ. of Oklahoma*); Yuan, Han (*Univ. of Oklahoma*)
- 18:00-19:30 FrPOS-08.13
Automatic Identification of Mixed Retinal Cells in Time-Lapse Fluorescent Microscopy Images using High-Dimensional DBSCAN
 Appapogu, Divya Spoorthy (*IIT Hyderabad*); Manne, Shanmukh Reddy* (*Indian Institute of Technology Hyderabad*); Dhyani, Vaibhav (*Indian Institute of Technology Hyderabad*); Swain, Sarpras (*Indian Institute of Technology, Hyderabad*); Shahulhameed, Shahna (*L V Prasad Eye Institute Hyderabad*); Mishra, Siddhartha (*IIT Hyderabad*); Kaur, Inderjeet (*L V Prasad Eye Institute Hyderabad*); Giri, Lopamudra (*Indian Institute of Technology Hyderabad*); Jana, Soumya (*Indian Institute of Technology Hyderabad*)
- 18:00-19:30 FrPOS-08.14
In Silico Modelling of Blood Vessel Segmentations for Estimation of Discretization Error in Spatial Measurement and its Impact on Quantitative Fluorescence Angiography
 Naber, Ady* (*Karlsruhe Institute of Technology*); Berwanger, Daniel (*Karlsruhe Institute of Technology*); Nahm, Werner (*Karlsruhe Institute of Technology*)
- FrPOS-09: 18:00-19:30 Hall B
Other and Novel Imaging Applications – Poster (Poster Session)
- 18:00-19:30 FrPOS-09.1
A Method for Multi-Day Tracking of Gastrointestinal Smooth Muscle Contractile Patterns in Organotypic Culture
 Du, Peng* (*The Univ. of Auckland*); Mazzone, Amelia (*Mayo Clinic*); Calder, Stefan (*Auckland Bioengineering Institute, Univ. of Auckland*); Qian, Anna (*The Univ. of Auckland*); Gibbons, Simon J (*Mayo Clinic College of Medicine*); Farrugia, Gianrico (*Mayo Clinic College of Medicine*); Beyder, Arthur (*Mayo Clinic*)
- 18:00-19:30 FrPOS-09.2
Exploring the Supra Linear Relationship between PetCO₂ and fMRI Signal Change with ICA
 Callara, Alejandro Luis* (*Dipartimento di Ingegneria dell'Informazione, Univ. of Pisa*); Morelli, Maria Sole (*Scuola Superiore Sant'Anna (Pisa)*); Cauzzo, Simone (*Scuola Superiore Sant'Anna, Institute of Life Science*); Giannoni, Alberto (*Fondazione Gabriele Monasterio, Pisa*); Hartwig, Valentina (*Univ. of Pisa*); Montanaro, Domenico (*Fondazione Toscana "G. Monasterio", National Research Council, P*); Landini, Luigi (*Univ. of Pisa*); Passino, Claudio (*Fondazione Gabriele Monasterio, Pisa*); Emdin, Michele (*Fondazione Gabriele Monasterio, Pisa*); Vanello, Nicola (*Univ. of Pisa*)
- 18:00-19:30 FrPOS-09.3
3D Ultrasound Spine Image Selection using Convolution Learning-to-Rank Algorithm
 Lyu, Juan (*Harbin Engineering Univ.*); Ling, Sai Ho, Steve* (*Univ. of Technology Sydney*); Banerjee, Sunetra (*Univ. of Technology Sydney*); Zheng, Jenny (*Imperial College London*); Lai, Ka Lee (*The Hong Kong Polytechnic Univ.*); Yang, De (*The Hong Kong Polytechnic Univ.*); Zheng, Yong-Ping (*The Hong Kong Polytechnic Univ.*); Su, Steven Weidong (*Univ. of Technology, Sydney*)
- 18:00-19:30 FrPOS-09.4
A Novel Scanning Algorithm for MEG/EEG Imaging using Covariance Partitioning and Noise Learning
 Cai, Chang (*University of California, San Francisco*); Sekihara, Kensuke (*Tokyo Metropolitan University*); Nagarajan, Srikantan S.* (*University of California, San Francisco*)
- 18:00-19:30 FrPOS-09.5
Towards Automatic Artifact Rejection in Resting-State MEG Recordings: Evaluating the Performance of the SOUND Algorithm
 Rodríguez-González, Victor (*Biomedical Engineering Group, University of Valladolid*); Poza, Jesus* (*University of Valladolid*); Núñez, Pablo (*University of Valladolid*); Gomez, Carlos (*University of Valladolid*); Garcia, Maria (*University of Valladolid*); Shigihara, Yoshihito (*Precision Medicine Center, Hokuto Hospital*); Hoshi, Hideyuki (*Precision Medicine Center, Hokuto Hospital*); Santamaría, Eduardo (*University of Valladolid*); Homero, Roberto (*University of Valladolid*)
- 18:00-19:30 FrPOS-09.6
Bidimensional Fuzzy Entropy: Principle Analysis and Biomedical Applications
 Hilal, Mirvana* (*University of Angers*); Humeau-Heurtier, Anne (*University of Angers*)
- 18:00-19:30 FrPOS-09.7
Statistical Shape-Kinematics Models of the Skeletal Joints: Application to the Shoulder Complex
 Foueack, Jean-Rassaire* (*Univ. of Cape Town*); Alemneh, Tewodros (*Univ. of Cape Town*); Borotikar, Bhushan (*Univ. of Western Brittany*); Burdin, Valerie (*IMT Atlantique/Institut Mines Telecom*); Douglas, Tania S (*Univ. of Cape Town*); Mutsvangwa, Tinashe Ernest Muzvidzwa (*Univ. of Cape Town*)
- 18:00-19:30 FrPOS-09.8
Three-Dimensional Distorted Born Iterative Method Enhanced by Breast Boundary Extraction for Microwave Mammography
 Noritake, Kazuki (*University of Electro-Communications*); Kidera, Shouhei* (*University of Electro-Communications*)

- 18:00-19:30 FrPOS-09.9
Three Dimensional Positive Contrast Susceptibility Fast Spin Echo MR Imaging with Variable Excitation Pulses and PD Algorithm
 Shi, Caiyun (*Shenzhen Institutes of Advanced Tech., Lauterbur Research C*); Cheng, Jing (*Shenzhen Institutes of Advanced Tech., Chinese Academy of S*); Su, Shi (*Shenzhen Institutes of Advanced Tech., Chinese Academy of S*); Zou, Lixian (*Shenzhen Institutes of Advanced Tech., Chinese Academy of S*); Chen, Hanwei (*Guangzhou Panyu Central Hospital*); Xie, Guoxi (*Shenzhen Institutes of Advanced Tech., Lauterbur Research C*); Liang, Dong (*Shenzhen Institutes of Advanced Tech.*); Liu, Xin (*Shenzhen Institutes of Advanced Tech., Chinese Academy of S*); Wang, Haifeng* (*Shenzhen Institutes of Advanced Tech., Chinese Academy of S*)
- 18:00-19:30 FrPOS-09.10
Biomechanics of C2C12 Cells Observed with Cellular Resolution Scanning Acoustic Microscope Combined with Optical Microscope
 Hirano, Ryo (*Tohoku Univ.*); Kanzaki, Makoto (*Tohoku Univ.*); Arakawa, Mototaka (*Tohoku Univ.*); Hermawan, Norma (*Tohoku Univ.*); Kobayashi, Kazuto (*Honda Electronics Co., Ltd.*); Saijo, Yoshifumi* (*Tohoku Univ.*)
- 18:00-19:30 FrPOS-09.11
Effect of English Learning Experience on Young Children's Prefrontal Cortex Functioning for Attentional Control: An fNIRS Study
 Li, Chuanjiang* (*Southeast Univ.*); Zhang, Mingming (*Southeast Univ.*); Ding, Keya (*Southeast Univ.*); Zhou, Jing (*East China Normal Univ.*); Yu, Dongchuan (*Southeast Univ.*)
- FrPOS-10: 18:00-19:30 Hall B
PET and SPECT Imaging – Poster (Poster Session)
- 18:00-19:30 FrPOS-10.1
Timing Calibration for PET based on Low Rank Constraint
 Chen, Huai* (*Zhejiang University, College of Optical Science & Engineering*); Liu, Huafeng (*Zhejiang University*)
- 18:00-19:30 FrPOS-10.2
Direct 4D PET Reconstruction with Discrete Tissue Types
 Scipioni, Michele* (*Dept. of Information Eng., Univ. of Pisa, Pisa*)
- 18:00-19:30 FrPOS-10.3
Localisation of the Lines of Response in a Continuous Cylindrical Shell PET Scanner
 Wilson, Keenan John (*Univ. of Technology, Sydney*); Alabd, Roumani (*Univ. of Technology, Sydney*); Abolhasan, Mehran (*Univ. of Technology, Sydney*); Safavi-Naeini, Mitra (*Australian Nuclear Science & Technology Organisation*); Franklin, Daniel R* (*Univ. of Technology, Sydney*)
- FrPOS-11: 18:00-19:30 Hall B
X-Ray Radiography and CT – Poster (Poster Session)
- 18:00-19:30 FrPOS-11.1
Attention-Guided Convolutional Neural Network for Detecting Pneumonia on Chest X-Rays
 Li, Bingchuan (*Beijing University of Posts & Telecommunications*); Kang, Guixia* (*Beijing University of Posts & Telecommunications*); Cheng, Kai (*Beijing University of Posts & Telecommunications*); Zhang, Ningbo (*Beijing University of Posts & Telecommunications*)
- 18:00-19:30 FrPOS-11.2
Morphological Area Gradient: System-Independent Dense Tissue Segmentation in Mammography Images
 Torres, German* (*Tampere Univ.*); Sassi, Antti (*Tampere Univ. Hospital*); Otso, Arponen (*Tampere Univ. Hospital*); Holli-Helenius, Kirsi (*Tampere Univ. Hospital*); Laaperi, Anna-Leena (*Tampere Univ. Hospital*); Rinta-Kiikka, Irina (*Tampere Univ. Hospital*); Kamarainen, Joni (*Tampere Univ.*); Pertuz, Said (*Universidad Industrial de Santander*)
- 18:00-19:30 FrPOS-11.3
Calibration of Stereo Radiography System for Radiostereometric Analysis Application
 Allab, Amiel* (*Ecole de Technologie Supérieure*); Vazquez, Carlos (*Ecole de Technologie Supérieure*); Cresson, Thierry (*Ecole de Technologie Supérieure*); De Guise, Jacques (*Ecole de Technologie Supérieure*)
- 18:00-19:30 FrPOS-11.4
Do Mammographic Systems Affect the Performance of Computerized Parenchymal Analysis?
 Pertuz, Said* (*Universidad Industrial de Santander*); Sassi, Antti (*Tampere University Hospital*); Holli-Helenius, Kirsi (*Tampere University Hospital*); Otso, Arponen (*Tampere University Hospital*); Laaperi, Anna-Leena (*Tampere University Hospital*); Rinta-Kiikka, Irina (*Tampere University Hospital*)
- 18:00-19:30 FrPOS-11.5
Augmenting Soft Tissue Contrast using Edge-Enhancing Phase-Imaging Techniques in X-Ray Microtomography
 Reunamo, Aino* (*Tampere Univ.*); Hannula, Markus (*Tampere Univ.*); Hyttinen, Jari (*Tampere Univ. of Technology*)
- 18:00-19:30 FrPOS-11.6
Automatic Segmentation of Coronary Artery Lumen via Anisotropic Graph-Cuts
 Wan, Min (*Nanchang University*); Ma, Libin (*Nanchang University*); Zhao, Xiaodan (*National Heart Centre Singapore*); Leng, Shuang (*National Heart Centre Singapore*); Zhang, Jun-Mei (*National Heart Centre*); Tan, Ru-San (*National Heart Centre Singapore*); Zhong, Liang* (*Duke-Duke Medical School, National University of Singapore*)
- 18:00-19:30 FrPOS-11.7
Hybrid Optimization Method (HOM) in Dual Energy Mammography Reconstruction
 Komolafe, Temitope Emmanuel (*University of Science & Technology of China, Hefei*); Zhang, Cheng* (*Suzhou Institute of Biomedical Engineering & Technology, Chine*)
- 18:00-19:30 FrPOS-11.8
Deep Learning-Based Radiomics Models for Early Recurrence Prediction of Hepatocellular Carcinoma with Multi-Phase CT Images and Clinical Data
 Wang, Weibin (*Ritsumeikan Univ.*); Chen, Yen-Wei* (*Ritsumeikan Univ.*); Iwamoto, Yutaro (*Ritsumeikan Univ.*); Han, Xian-Hua (*Ritsumeikan Univ.*); Chen, Qingqing (*Sir Run Shaw Hospital, Zhejiang Univ.*); Hu, Hongjie (*Sir Run Run Shaw Hospital*); Lin, Lanfen (*Zhejiang Univ.*); Zhang, Qiaowei (*Sir Run Run Shaw Hospital, Zhejiang Univ.*)
- FrPOS-12: 18:00-19:30 Hall B
Cardiac Electrophysiology – Poster (Poster Session)
- 18:00-19:30 FrPOS-12.1
Predicting Electrical Storm using Episodes' Parameters from ICD Recorded Data
 Shakibfar, Saeed* (*Univ. of Copenhagen*); Yazdchi, Mohammadreza (*Isfahan Univ.*); Aliakbaryhosseinabadi, Susan (*the Center for Sensory-Motor Intraction, Dept. of Health Sc*)
- 18:00-19:30 FrPOS-12.2
A Numerical Evaluation of Multi-Lead Subcutaneous Implantable Cardioverter Defibrillator for Low Energy and Less Damage in Swine
 Lai, Dakun* (*Univ. of Electronic Science & Tech. of China*); Fan, Xiaobiao (*Univ. of Electronic Science & Tech.*); Chen, Qingquan (*Quxian County People's Hospital*)
- 18:00-19:30 FrPOS-12.3
A Robust Algorithm for Selecting Optimal Regularization Parameter based on Bilateral Accumulative Area
 Chen, Riqing (*The Institute of Biomedical Engineering, Graduate School at Shen*); Li, Jianning (*Tsinghua University*); Wu, Jian* (*Tsinghua University*)

18:00-19:30 FrPOS-12.4
Convolutional Neural Network based Detection of Atrial Fibrillation Combing R-R Intervals and F-Wave Frequency Spectrum
 Lai, Dakun* (*University of Electronic Science & Technology of China*); Zhang, Xinshu (*University of Electronic Science & Technology of China*); Zhang, Yifei (*University of Electronic Science & Technology of China*); Heyat, Md Belal Bin Heyat (*University of Electronic Science & Technology of China*)

FrPOS-13: 18:00-19:30 Hall B
Cardiac Mechanics – Poster (Poster Session)

18:00-19:30 FrPOS-13.1
Improving in Vitro Evaluation Capabilities of Cardiac Assist Devices through a Validated Exercise Simulation
 Pauls, Jo P* (*Griffith Univ., Southport, Australia*); Roberts, Llion Roberts (*Griffith Univ.*); Stephens, Andrew (*Innovative Cardiovascular Engineering & Technology Laboratory*); Fraser, John F. (*Prince Charles Hospital, Brisbane, Queensland*); Tansley, Geoff (*Griffith Univ., Queensland, Australia*); Gregory, Shaun David (*Queensland Univ. of Technology*)

18:00-19:30 FrPOS-13.2
Reliability of Left Atrial Pressure Estimation from Left Ventricular Filling Measurement in a Total Artificial Heart
 Diedrich, Mario* (*RWTH Aachen – Institute of Applied Medical Engineering*); Steinseifer, Ulrich (*RWTH Aachen Univ.*); Schmitz-Rode, Thomas (*RWTH Aachen Univ., Institute of Applied Medical Engineering*); Risvanis, Fotios (*RWTH Aachen – Institute of Applied Medical Engineering*); Arens, Jutta (*RWTH Aachen*); Kirn, Borut (*Medical Faculty, Univ. of Ljubljana*)

18:00-19:30 FrPOS-13.3
Heart Failure Phenotypes Require Sex-Specific Criteria which are based on Ventricular Dimensions
 Kerkhof, Peter LM* (*VU Univ. Medical Center*); Heyndrickx, Guy R. (*Cardiovascular Center, OLV Clinic, Aalst*); Handy, Neal (*Dept. Emergency Medicine, Drexel Univ. College of Medicine.*)

FrPOS-14: 18:00-19:30 Hall B
Cardiorespiratory Vibrations – Poster (Poster Session)

18:00-19:30 FrPOS-14.1
Influence of Empirical Mode Decomposition on Heart Rate Variability Indices Obtained from Smartphone Seismocardiograms
 Siecinski, Szymon* (*Silesian University of Technology, Faculty of Biomedical Enginee*); Kostka, Pawel Stanislaw (*Silesian University of Technology*); Tkacz, Ewaryst (*Silesian Univ. of Tech, Faculty of Biomedical Engineering*)

18:00-19:30 FrPOS-14.2
Effect of Static Respiratory Volume on the Waveform of Cardiac-Induced Sternal Vibrations
 Skoric, James* (*McGill University*); D'Mello, Yannick (*McGill University*); Lortie, Michel (*MacDonald, Dettwiler & Associates Corporation*); Stephane, Gagnon (*MacDonald, Dettwiler & Associates Corporation*); Plant, David (*McGill University*)

18:00-19:30 FrPOS-14.3
Monitoring Cardiac Function by Accelerometer – Detecting Start Systole from the Acceleration Signal makes Additional ECG Recordings for R-Peak Detection Redundant
 Wajdan, Ali* (*The Intervention Centre, Oslo University Hospital & University*); Krogh, Magnus Reinsfelt (*University of Oslo*); Villegas-Martinez, Manuel (*University of Oslo*); Halvorsen, Per Stainer (*Intervention Centre, University Hospital Oslo*); Grymyr, Ole-Johannes Holm Nielsen (*University of Oslo, The Intervention Centre OUS Rikshospitalet*); Elle, Ole Jacob (*The Intervention Centre, Oslo University Hospital & Dept.*); Remme, Espen W. (*The Intervention Centre, Oslo University Hospital*)

18:00-19:30 FrPOS-14.4
A Novel Bimodal Stethoscope for Gastric Collection of Heart Sounds: Preliminary Results
 Dopierala, Cindy* (*Univ. Grenoble Alpes, TIMC-IMAG Lab*); Boucher, Francois (*Univ. Grenoble Alpes, TIMC – IMAG*); Frikha, Mohamed-Ridha (*Univ. Grenoble Alpes, VetAgro Sup*); Thiebault, Jean-Jacques (*Univ. Grenoble Alpes, VetAgro Sup*); Defaye, Pascal (*Univ. Grenoble Alpes, CHUGA*); Tuvignon, Patrick (*Univ. Grenoble Alpes, CHUGA*); Fontecave-Jallon, Julie (*Univ. Grenoble Alpes, CNRS, CHU Grenoble Alpes, Grenoble INP*); Cinquin, Philippe (*Joseph Fourier Univ. / CNRS*); Gumery, Pierre-Yves (*Univ. Grenoble Alpes*)

18:00-19:30 FrPOS-14.5
Analysis of Tracheal and Pulmonary Continuous Adventitious Respiratory Sounds in Asthma
 Lozano-García, Manuel* (*Institute for Bioengineering of Catalonia (IBEC), The Barcelona*); Davidson, Clare Muireann (*Univ. College Dublin*); Jané, Raimon (*Institut de Bioenginyeria de Catalunya (IBEC)*)

FrPOS-15: 18:00-19:30 Hall B
Heart Rate and Blood Pressure Variability – Poster (Poster Session)

18:00-19:30 FrPOS-15.1
Quantification of Different Regulatory Pathways Contributing to Heartbeat Dynamics during Multiple Stimuli: A Proof of the Concept
 Ghiasi, Shadi* (*Univ. of Pisa*); Greco, Alberto (*Univ. of Pisa*); Faes, Luca (*Univ. of Palermo*); Javorka, Michal (*Comenius Univ., Jessenius Faculty of Medicine*); Barbieri, Riccardo (*Politecnico di Milano*); Scilingo, Enzo Pasquale (*Univ. of Pisa*); Valenza, Gaetano (*Univ. of Pisa*)

18:00-19:30 FrPOS-15.2
The Role of Haptic Stimuli on Affective Reading: A Pilot Study
 Ghiasi, Shadi* (*Univ. of Pisa*); Valenza, Gaetano (*Univ. of Pisa*); Morelli, Maria Sole (*Scuola Superiore Sant'Anna (Pisa)*); Bianchi, Matteo (*Univ. of Pisa*); Scilingo, Enzo Pasquale (*Univ. of Pisa*); Greco, Alberto (*Univ. of Pisa*)

18:00-19:30 FrPOS-15.3
Characterizing Autonomic Response to Arousing Visual-Auditory Multi-Modal Task in Autism Spectrum Disorder (ASD)
 Cavinato, Lara* (*Politecnico di Milano*); Cardinaux, Annie (*Massachusetts Institute of Technology*); Jain, Kriti (*Massachusetts Institute of Technology*); Jamal, Wasifa (*Univ. of Southampton*); Kjelgaard, Margaret (*Marymount College*); Sinha, Pawan (*mit.edu*); Barbieri, Riccardo (*Politecnico di Milano*)

18:00-19:30 FrPOS-15.4
Robust Beat-to-Beat Interval from Wearable PPG using RLS and SSA
 Bhattacharjee, Tanuka* (*Research & Innovation, TATA Consultancy Services, India*); Dutta Choudhury, Anirban (*Tata Consultancy Services Ltd.*); Pal, Arpan (*Tata Consultancy Services*)

18:00-19:30 FrPOS-15.5
Assessing Synergy/Redundancy of Baroreflex and Non-Baroreflex Components of the Cardiac Control during Sleep
 Cairo, Beatrice* (*Univ. degli Studi di Milano*); Bari, Vlasta (*IRCCS Policlinico San Donato*); De Maria, Beatrice (*IRCCS Fondazione Salvatore Maugeri, Milano*); Vaini, Emanuele (*IRCCS Policlinico San Donato*); Guaraldi, Pietro (*IRCCS, Institute of Neurological Sciences of Bologna, Bologna, I*); Lucini, Daniela (*Univ. degli studi di Milano*); Pagani, Massimo (*Univ. degli studi di Milano*); Provini, Federica (*Univ. of Bologna*); Calandra Buonauro, Giovanna (*Dipartimento di Scienze Biomediche e Neuromotorie, Alma Mater St*); Cortelli, Pietro (*Dipartimento di Scienze Biomediche e Neuromotorie, Alma Mater St*); Porta, Alberto (*Univ. degli Studi di Milano*)

FrPOS-16: 18:00-19:30 Hall B
Respiratory and Pulmonary Systems (Poster Session)

18:00-19:30 FrPOS-16.1
Physical Fitness Contributes to Cardio-Respiratory Synchronization
 Perry, Sean* (*University of Warwick*); Khovanova, Natasha (*University of Warwick*); Khovanov, Igor (*University of Warwick*)

- 18:00-19:30 FrPOS-16.2
Effects of Different Modes of Mechanical Ventilation on Aerodynamics of the Patient-Specific Airway: A Numerical Study
 Zhu, Limin (*Shanghai Children's Medical Center (SCMC) Affiliated Shanghai Ji*); Shen, Juanya (*Shanghai Children's Medical Center (SCMC) Affiliated Shanghai Ji*); Gong, Xiaolei (*Shanghai Children's Medical Center (SCMC) Affiliated Shanghai Ji*); Liu, Liping (*Shanghai Children's Medical Center (SCMC) Affiliated Shanghai Ji*); Liu, Jinlong* (*Shanghai Children's Medical Center, Shanghai Jiao Tong University*); Xu, Zhuoming (*Shanghai Children's Medical Center (SCMC) Affiliated Shanghai Ji*)
- 18:00-19:30 FrPOS-16.3
Efficacy of Continuous Positive Airway Pressure in Casualties Suffering from Primary Blast Lung Injury: A Modeling Study
 Scott, Timothy (*Academic Dept. of Military Anaesthesia & Critical Care, R*); Haque, Mainul (*Univ. of Nottingham*); Das, Anup (*Univ. of Warwick*); Cliff, Ian (*Univ. Hospital North Midlands, Stoke-On-Trent, UK.*); Bates, Declan Gerard* (*Univ. of Warwick*); Hardman, Jonathan G. (*Univ. of Nottingham*)
- 18:00-19:30 FrPOS-16.4
Changes of Particle Deposition Caused by Different Breathing Patterns during Active Lung Simulation
 Pasteka, Richard* (*Univ. of Applied Sciences Technikum Wien*); Forjan, Mathias (*Univ. of Applied Sciences Technikum Wien*)
- 18:00-19:30 FrPOS-16.5
Wave Reflection in an Anatomical Model of the Pulmonary Circulation in Local and Global Hypertensive Disease
 Shaarbaef Ebrahimi, Behdad* (*Univ. of Auckland*); Tawhai, Merryn (*The Univ. of Auckland*); Kumar, Haribalan (*Univ. of Auckland*); Clark, Alys (*The Univ. of Auckland*)
- FrPOS-17: 18:00-19:30 Hall B
Sleep Apnea – Poster (Poster Session)
- 18:00-19:30 FrPOS-17.1
SnoreNet: Detecting Snore Events from Raw Sound Recordings
 Sun, Jingpeng (*University of Chinese Academy of Sciences*); Hu, Xiyuan* (*Institute of Automation, Chinese Academy of Sciences, University*); Zhao, Yingying (*South Campus of Guanganmen Hospital, China Academy of Chinese Me*); Sun, Shuchen (*Guanganmen Hospital, China Academy of Chinese Medical*); Chen, Chen (*Chinese Academy of Sciences, University of Chinese Academy of Sc*); Peng, Silong (*Institute of Automation, Chinese Academy of Sciences, University*)
- 18:00-19:30 FrPOS-17.2
Automatic Silence Events Detector from Smartphone Audio Signals: A Pilot mHealth System for Sleep Apnea Monitoring at Home
 Castillo-Escario, Yolanda (*Institute for Bioengineering of Catalonia (IBEC)*); Ferrer-Lluis, Ignasi (*Institute for Bioengineering of Catalonia*); Montserrat, Josep Maria (*Hospital Clinic de Barcelona. Universitat de Barcelona (UB)*); Jané, Raimon* (*Institut de Bioenginyeria de Catalunya (IBEC)*)
- 18:00-19:30 FrPOS-17.3
Dynamic Estimation of Cerebral Blood Flow using Blood Pressure Signal in Sleep Apnea Patients
 Jani, Mahrshi (*University of Texas At Arlington*); Soltan Zadi, Armin (*University of Texas at Arlington*); Alex, Raichel (*University of Texas Arlington*); Zhang, Rong (*University of Texas Southwestern Medical Center at Dallas*); Watenpaugh, Donald (*Sleep Consultants Inc.*); Behbehani, Khosrow* (*University of Texas at Arlington*)
- 18:00-19:30 FrPOS-17.4
Automatic Event Detector from Smartphone Accelerometry: Pilot mHealth Study for Obstructive Sleep Apnea Monitoring at Home
 Ferrer-Lluis, Ignasi* (*Institute for Bioengineering of Catalonia*); Castillo-Escario, Yolanda (*Institute for Bioengineering of Catalonia (IBEC)*); Montserrat, Josep Maria (*Hospital Clinic de Barcelona. Universitat de Barcelona (UB)*); Jané, Raimon (*Institut de Bioenginyeria de Catalunya (IBEC)*)
- 18:00-19:30 FrPOS-17.5
Non-Linear HRV Analysis to Quantify the Effects of Intermittent Hypoxia using an OSA Rat Model
 Romero, Daniel* (*Institute for Bioengineering of Catalonia*); Jané, Raimon (*Institut de Bioenginyeria de Catalunya (IBEC)*)
- 18:00-19:30 FrPOS-17.6
Quantifying Long QT Syndrome in Obese Sleep Apnea Patients Undergoing Roux-En-Y Gastric Bypass Surgery
 Al-Abed, Mohammad* (*Hashemite Univ.*); Al-Bashir, Areen (*Jordan Univ. of Science & Technology*); Obeidat, Nathir (*Univ. of Jordan*); Alzyoud, Sukaina (*The Hashemite Univ.*); Abu-Khalaf, Mahmoud (*Univ. of Jordan*); Obeidat, Mohammad (*Univ. of Jordan*); AlRyalat, Saif AlDeen (*Univ. of Jordan*); Abu Khadra, Haya (*The Hashemite Univ.*); Jalamneh, Mais (*The Hashemite Univ.*); Al-Bluwi, Rania (*The Hashemite Univ.*); Al-Omari, Wafaa (*The Hashemite Univ.*)
- 18:00-19:30 FrPOS-17.7
Pre-Diabetic Patients with Severe Obstructive Sleep Apnea: Novel Parameters of Hypoxia during Sleep Correlate with Insulin Resistance
 Perantoni, Eleni* (*Aristotle Univ. of Thessaloniki, Greece*); Chouvarda, Ioanna (*Aristotle Univ.*); Filos, Dimitrios (*Aristotle Univ. o Thessaloniki*); Steiropoulos, Paschalis (*Democritus Univ. of Thrace, Alexandroupoli*); Archodogeorgis, Konstantinos (*Democritus Univ. of Thrace, Alexandroupoli*)
- FrPOS-18: 18:00-19:30 Hall B
Vascular Hemodynamics – Poster (Poster Session)
- 18:00-19:30 FrPOS-18.1
The Effect of Error Propagation in the 3D Reconstruction of Coronary Segments using CTCA Images on Crucial Hemodynamic Parameters
 Siogkas, Panagiotis (*Forth-IMBB*); Sakellarios, Antonis* (*Forth-Biomedical Research Institute*); Kyriakidis, Savvas (*Institute of Molecular Biology & Biotechnology, FORTH*); Anagnostopoulos, Constantinos (*Biomedical Research Foundation, Academy of Athens*); Pelosi, Gualtiero (*Institute of Clinical Physiology, National Research Council*); Rocchiccioli, Silvia (*Institute of Clinical Physiology, National Research Council, Pis*); Michalis, Lampros (*Univ. of Ioannina*); Fotiadis, Dimitrios I. (*Univ. of Ioannina*)
- 18:00-19:30 FrPOS-18.2
A Computational Multi-Level Atherosclerotic Plaque Growth Model for Coronary Arteries
 Pleouras, Dimitrios (*Dept. of Biomedical Research, Forth-IMBB, GR 45110 Ioannina, Gre*); Sakellarios, Antonis* (*Forth-Biomedical Research Institute*); Kyriakidis, Savvas (*Institute of Molecular Biology & Biotechnology, FORTH*); Kigka, Vassiliki (*Univ. of Ioannina*); Siogkas, Panagiotis (*Forth-IMBB*); Tsompou, Panagiota (*Unit of Medical Technology & Intelligent Information Systems.*); Tachos, Nikolaos (*Unit of Medical Technology & Intelligent Information Systems.*); Georga, Eleni I. (*Univ. of Ioannina*); Andrikos, Ioannis (*Univ. of Ioannina*); Rocchiccioli, Silvia (*Institute of Clinical Physiology, National Research Council, Pis*); Pelosi, Gualtiero (*Institute of Clinical Physiology, National Research Council*); Michalis, Lampros (*Univ. of Ioannina*); Fotiadis, Dimitrios I. (*Univ. of Ioannina*)
- 18:00-19:30 FrPOS-18.3
An in Vitro Flow Model for Cardiovascular Inflammation
 Oweis, Ghanem F.* (*American University of Beirut*)
- 18:00-19:30 FrPOS-18.4
Two-Element Fractional-Order Windkessel Model to Assess the Arterial Input Impedance
 Bahloul, Mohamed A. (*KAUST*); Laleg, Taous-Meriem* (*King Abdullah University of Science & Technology (KAUST)*)
- 18:00-19:30 FrPOS-18.5
Synthetic PPG Generation from Haemodynamic Model with Baroreflex Autoregulation: A Digital Twin of Cardiovascular System
 Mazumder, Oishee* (*Tata Consultancy Services*); Roy, Dibyendu (*TCS Research*); Bhattacharya, Sakyajit (*TCS Innovation Labs*); Sinha, Aniruddha (*Tata Consultancy Services Ltd.*); Pal, Arpan (*Tata Consultancy Services*)

- 18:00-19:30 FrPOS-18.6
Beat to Beat Modulation of Arterial Pulse Wave Velocity Induced by Vascular Smooth Muscle Tone
 Cymberknop, Leandro Javier (*Universidad Tecnológica Nacional*); Gabaldon, Felipe (*Technical University of Madrid*); Armentano, Ricardo Luis* (*Republic University*)
- 18:00-19:30 FrPOS-19.1
Multimodal Image-Free Ultrasound Technique for Evaluation of Arterial Viscoelastic Properties: A Feasibility Study
 V, Raj Kiran* (*IIT Madras*); P M, Nabeel (*Indian Institute of Tech. Madras*); Joseph, Jayaraj (*HTIC, Indian Institute of Tech. Madras*); Frese, Hanna (*Healthcare Tech. Innovation Center*); Sivaprakasam, Mohanasankar (*Indian Institute of Tech. Madras*)
- 18:00-19:30 FrPOS-19.2
Continuous Assessment of Carotid Diameter using an Accelerometer Patch Probe for Ambulatory Arterial Stiffness Monitoring
 R, Arathy* (*Indian Institute of Technology Madras*); P M, Nabeel (*Indian Institute of Technology Madras*); Joseph, Jayaraj (*HTIC, Indian Institute of Technology Madras*); V V, Abhidev (*Healthcare Technology Innovation Centre, IIT Madras*); Sivaprakasam, Mohanasankar (*Indian Institute of Technology Madras*)
- 18:00-19:30 FrPOS-19.3
Cuffless Blood Pressure Estimation from Only the Waveform of Photoplethysmography using CNN
 Shimazaki, Shota* (*Aichi Prefectural University*); Kawanaka, Haruki (*Aichi Prefectural University*); Ishikawa, Hiroki (*Murata Manufacturing Co., Ltd.*); Inoue, Koichi (*Murata Manufacturing Co., Ltd.*); Oguri, Koji (*Aichi Prefectural University*)
- 18:00-19:30 FrPOS-19.4
Blood Pressure Estimation based on Pulse Arrival Time and Heart Rate: A Correlation Analysis for Critically Ill Patients
 Dash, Ashutosh (*Indian Institute of Technology, Kharagpur*); Jain, Karan (*Indian Institute of Technology, Kharagpur*); Ghosh, Nirmalya (*Indian Institute of Technology (IIT), Kharagpur*); Patra, Amit (*Indian Institute of Technology Kharagpur*); Dutta Choudhury, Anirban* (*Tata Consultancy Services Ltd.*)
- 18:00-19:30 FrPOS-19.5
Image-Free Technique for Flow Mediated Dilatation using ARTSENS® Pen
 Joseph, Jayaraj (*HTIC, Indian Institute of Technology Madras*); S Chandran, Dinu (*All India Institute of Medical Sciences, New Delhi*); V, Raj Kiran* (*IIT Madras*); V V, Abhidev (*Healthcare Technology Innovation Centre, IIT Madras*); Sivaprakasam, Mohanasankar (*Indian Institute of Technology Madras*)
- 18:00-19:30 FrPOS-19.6
A Frequency-Domain Approach to Noninvasive Intracranial Pressure Estimation
 Jaishankar, Rohan (*Massachusetts Institute of Technology*); Fanelli, Andrea (*Massachusetts Institute of Technology*); Filippidis, Aristotelis (*Boston Medical Center*); Vu, Thai (*Boston Medical Center*); Holsapple, James (*Boston Medical Center, Boston University School of Medicine*); Heldt, Thomas* (*Massachusetts Institute of Technology*)
- 18:00-19:30 FrPOS-20.1
A Closed-Loop Method to Identify EMG-Torque Dynamics in Human Balance Control
 Amiri, Pouya* (*PhD Candidate, Dept. of Biomedical Eng., McGill Univ*); Kearney, Robert Edward (*McGill Univ.*)
- 18:00-19:30 FrPOS-20.2
Mediolateral Stability Index as a Biomarker for Parkinson's Disease Progression: A Graph Connectivity based Approach
 Mazumder, Oishee (*Tata Consultancy Services*); Gavas, Rahul* (*TCS Research & Innovation, Tata Consultancy Services Ltd.*); Sinha, Aniruddha (*Tata Consultancy Services Ltd.*)
- 18:00-19:30 FrPOS-20.3
Controller Gains of an Inverted Pendulum are Influenced by the Visual Feedback Position
 Cesonis, Justinas* (*Technical University of Munich*); Leib, Raz (*Technical University of Munich*); Franklin, Sae (*Institute for Cognitive Systems, Technical University of Munich*); Franklin, David W. (*Technical University of Munich*)
- 18:00-19:30 FrPOS-20.4
A Computer Simulation Study on the Influences of Loss and Damage of Primary Muscle Spindle Afferents on Soleus Muscle Stretch Reflex
 Crepaldi Rodrigues, Eliane* (*University of Campinas*); Elias, Leonardo (*University of Campinas*)
- 18:00-19:30 FrPOS-20.5
A Simplified Estimation of Abnormal Reflex Torque Due to Elbow Spasticity using Neuro-Musculoskeletal Model
 Sung, Joohwan (*Daegu Gyeongbuk Institute of Science & Tech. (DGIST)*); Choi, Seoyoung (*Daegu Gyeongbuk Institute of Science & Tech.*); Kim, Junyoung (*Daegu Gyeongbuk Institute of Science & Tech. (DGIST)*); Kim, Jonghyun* (*DGIST*)
- 18:00-19:30 FrPOS-20.6
Anticipatory and Compensatory Postural Responses during Perturbed Standing in Individuals with Traumatic Brain Injury
 Pilkar, Rakesh* (*Kessler Foundation*); Ibranke, Oluwaseun (*Kessler Foundation*); Ehrenberg, Naphtaly (*Kessler Foundation*); Nolan, Karen J. (*Kessler Foundation*)
- 18:00-19:30 FrPOS-20.7
A Novel Time-Domain based Feature for EMG-PR Prosthetic and Rehabilitation Application
 Pancholi, Sidharth* (*Malaviya National Institute of Technology*); Jain, Prateek (*Malaviya National Institute of Technology*); Varghese, Arathy (*Malaviya National Institute of Technology*); Joshi, Amit M. (*Malaviya National Institute of Technology*)
- 18:00-19:30 FrPOS-20.8
A Recurrent Neural Network for Hand Gesture Recognition based on Accelerometer Data
 Koch, Philipp* (*University of Lübeck*); Dreier, Mark (*Universität zu Lübeck*); Maaß, Marco (*University of Lübeck*); Böhme, Martina (*University of Luebeck*); Phan, Huy (*University of Kent*); Mertins, Alfred (*University of Lübeck*)
- 18:00-19:30 FrPOS-20.9
Analysis of Standing Balance on Sloped Surfaces in Individuals with Lumbar Disc Herniation
 Li, Jinping (*Shandong Univ.*); Wei, Na (*Qilu Hospital, Shandong Univ.*); Yue, Shouwei (*Dept. of Physical Medicine & Rehab., Qilu Hospital*); Zhang, Yang (*Dept. of Physical Medicine & Rehab., Qilu Hospital*); Li, Ke* (*Shandong Univ.*)
- 18:00-19:30 FrPOS-20.10
Effects of Somatosensory Information Provision to Fingertips for Mitigation of Postural Sway and Promotion of Muscle Coactivation in an Upright Posture
 Mitani, Ryoma* (*Yokohama National University*); Shimatani, Koji (*Prefectural University of Hiroshima*); Sakata, Mami (*Yokohama National University*); Mukaeda, Takayuki (*Graduate School of Engineering, Yokohama National University*); Shima, Keisuke (*Yokohama National University*)
- 18:00-19:30 FrPOS-20.11
Preliminary Results of a Dual Balancing Task
 Cherif, Amel* (*Istituto Italiano di Tecnologia*); Zenzeri, Jacopo (*Istituto Italiano di Tecnologia*); Morasso, Pietro (*Italian Institute of Technology*)
- 18:00-19:30 FrPOS-20.12
Strategy Preference in Complex Dynamical Tasks: Preliminary Results
 Belgiovine, Giulia* (*Istituto Italiano di Tecnologia*); Morasso, Pietro (*Italian Institute of Technology*); Zenzeri, Jacopo (*Istituto Italiano di Tecnologia*)

- 18:00-19:30 FrPOS-20.13
Synergy-Based Myocontrol of a Multiple Degree-of-Freedom Humanoid Robot for Functional Tasks
 Lunardini, Francesca (*Politecnico di Milano*); Antonietti, Alberto (*Politecnico di Milano*); Casellato, Claudia (*Politecnico di Milano*); Pedrocchi, Alessandra* (*Politecnico di Milano*)
- 18:00-19:30 FrPOS-20.14
Onset Detection to Study Muscle Activity in Reaching and Grasping Movements in Rats
 Castillo-Escario, Yolanda* (*Institute for Bioengineering of Catalonia (IBEC)*); Rodríguez-Cañón, María (*Universitat Autònoma de Barcelona / CIBERNED / Institute for Bio*); Garcia-alias, Guillermo (*Universitat Autònoma de Barcelona*); Jané, Raimon (*Institut de Bioenginyeria de Catalunya (IBEC)*)
- 18:00-19:30 FrPOS-20.15
Identification of Muscle Fasciculations from Surface EMG: Comparison with Ultrasound-Based Detection
 Botter, Alberto* (*Politecnico di Torino*); Carbonaro, Marco (*Politecnico di Torino*); Vieira, Taian (*Politecnico di Torino*); Hodson-Tole, Emma (*Manchester Metropolitan University*)
- 18:00-19:30 FrPOS-20.16
Increase in Muscle Activation during Physiotherapy with Electromyography Biofeedback for Patients with Acute Cervical Spinal Cord Injuries
 Li, Guijin (*Shirley Ryan AbilityLab*); Doman, Caitlin (*Shirley Ryan AbilityLab*); Suresh, Nina* (*Shirley Ryan Ability Lab*)
- FrPOS-21: 18:00-19:30 Hall B
Neural Interfaces – Poster (Poster Session)
- 18:00-19:30 FrPOS-21.1
Recessed Traces for Planarized Passivation of Chronic Neural Microelectrodes
 Nolta, Nicholas (*Univ. of Connecticut*); Ghelich, Pejman (*Univ. of Connecticut*); Han, Martin* (*Univ. of Connecticut*)
- 18:00-19:30 FrPOS-21.2
Investigation of using Cyclic Olefin Copolymer as Neural Electrode
 Baik, Changhoon* (*Seoul National University*); Seo, Jong Mo (*Seoul National University, School of Engineering*)
- FrPOS-22: 18:00-19:30 Hall B
Neural Signal Processing – Poster (Poster Session)
- 18:00-19:30 FrPOS-22.1
Automatic Detection of High Frequency Oscillations (80-500Hz) based on Convolutional Neural Network in Human Intracerebral Electroencephalogram
 Ma, Kefei (*University of Electronic Science & Technology of China*); Lai, Dakun* (*University of Electronic Science & Technology of China*); Chen, Zichu (*University of Electronic Science & Technology of China*); Zeng, Zhuoheng (*University of Electronic Science & Technology of China*); Zhang, Xinyue (*University of Electronic Science & Technology of China*); Chen, Wenjing (*West China Hospital of Sichuan University*); Zhang, Heng (*West China Hospital of Sichuan University*)
- 18:00-19:30 FrPOS-22.2
Cross-Frequency Coupling Features of Postictal Generalized EEG Suppression State
 Grigorovsky, Vasily* (*University of Toronto*); del Campo, Martin (*University Health Network*); Chinvarun, Yotin (*Director of Comprehensive Epilepsy Program & Neurology Unit, P*); Carlen, Peter L. (*University of Toronto*); Bardakjian, Berj Luther (*University of Toronto*)
- 18:00-19:30 FrPOS-22.3
Novel Metrics to Measure the Effect of Additive Inputs on the Activity of Sensory System Neurons
 Hosseini, Maryam* (*Université de Sherbrooke*); Rodriguez, Gerardo (*University of Minnesota*); Guo, Hongsun (*University of Minnesota*); Lim, Hubert (*University of Minnesota*); Plourde, Eric (*Université de Sherbrooke*)
- 18:00-19:30 FrPOS-22.4
Single Neuron Imaging Reveals Metabotropic Glutamate Receptor-Mediated Bursting and Delay in Calcium Oscillation in Hippocampal Neurons
 Singh, Ranjana (*Indian Institute of Technology Hyderabad*); Saxena, Abha* (*Indian Institute of Technology Hyderabad*); Giri, Lopamudra (*Indian Institute of Technology Hyderabad*)
- 18:00-19:30 FrPOS-22.5
HEAR to Remove Pops and Drifts: The High-Variance Electrode Artifact Removal (HEAR) Algorithm
 Kobler, Reinmar Josef* (*Graz University of Technology*); Sburlea, Andreea Ioana (*Graz University of Technology*); Mondini, Valeria (*University of Bologna*); Müller-Putz, Gernot (*Graz University of Technology*)
- 18:00-19:30 FrPOS-22.6
EEG based Analysis of Cortical Activity during Mirror Visual Feedback Target-Directed Movement
 Rohafza, Maryam* (*New Jersey Institute of Technology*); Saleh, Soha (*Kessler Foundation*); Adamovich, Sergei (*New Jersey Institute of Technology*)
- 18:00-19:30 FrPOS-22.7
EEG-Based Classification of Olfactory Response to Pleasant Stimuli
 Abbasi, Nida Itrat (*National Univ. of Singapore*); Bose, Rohit (*National Univ. of Singapore*); Bezerianos, Anastasios (*National Univ. of Singapore*); Thakor, Nitish (*National Univ. of Singapore*); Dragomir, Andrei* (*National Univ. of Singapore*)
- 18:00-19:30 FrPOS-22.8
A Preliminary Analysis on Impact of Additive Flicker Noise on Detection Sensitivity of Neural Spikes
 Eisen, Erik Sul (*San Diego State University*); Töreyn, Hakan* (*San Diego State University*)
- 18:00-19:30 FrPOS-22.9
Cortical Patterns for Prediction of Subjective Preference Induced by Chords
 Yano, Hajime* (*Kobe University*); Takiguchi, Tetsuya (*Kobe University*); Nakagawa, Seiji (*Chiba University*)
- 18:00-19:30 FrPOS-22.10
Changes in Neuronal Entropy in a Network Model of the Cortico-Basal Ganglia during Deep Brain Stimulation
 Fleming, John* (*University College Dublin*); Lowery, Madeleine (*University College Dublin*)
- 18:00-19:30 FrPOS-22.11
Classification of Rehabilitation Participation in Elderly In-Patients with Mild Cognitive Impairments Utilising Physiological Responses
 Kim, Jung-Yeon* (*ICT Convergence Rehabilitation Engineering Research Center, Soon*); Nam, Yunyoung (*SoonChunHyang University*); Lee, Seong-A (*SoonChunHyang University*)
- 18:00-19:30 FrPOS-22.12
A Priori Sample Size Determination for the Number of Subjects in an EEG Experiment
 Guttman-Flury, Eva* (*Shanghai Jiao Tong Univ.*); Sheng, Xinjun (*Shanghai Jiao Tong Univ.*); Zhang, Dingguo (*Shanghai Jiao Tong Univ.*); Zhu, Xiangyang (*Shanghai Jiao Tong Univ.*)
- FrPOS-23: 18:00-19:30 Hall B
Neural Stimulation – Poster (Poster Session)
- 18:00-19:30 FrPOS-23.1
Infrared Laser Pulses Excite Action Potentials in Primary Cortex Neurons in Vitro
 Xia, Qingling (*Chongqing Univ.*); Hou, Wensheng* (*Bioengineering Inst of Chongqing Univ*); Nyberg, Tobias (*Royal Institute of Technology, Sweden*); Zhang, Li (*Chongqing Univ.*)
- 18:00-19:30 FrPOS-23.2
Skull Impact on the Ultrasound Beam Profile of Transcranial Focused Ultrasound Stimulation
 Tsai, Pin-Chien (*The Pennsylvania State University*); Sadeghi Gougheri, Hesam (*Pennsylvania State University*); Kiani, Mehdi* (*Pennsylvania State University*)

18:00-19:30 FrPOS-23.3

Modulation of Multiunit Spike Activity by Transcranial AC Stimulation (tACS) in the Rat Cerebellar Cortex

Asan, Ahmet (*New Jersey Institute of Technology*); Sahin, Mesut* (*New Jersey Institute of Technology*)

18:00-19:30 FrPOS-23.4

Influence of Gender-Related Differences in Transcranial Direct Current Stimulation: A Computational Study

Thomas, Chris (*Soterix Medical, Inc.*); Ghodratoostani, Iman (*University of Sao Paulo*); Delbem, Alexandre (*University of Sao Paulo*); Ali, Afaq (*Soterix Medical, Inc.*); Datta, Abhishek* (*Soterix Medical, Inc.*)

18:00-19:30 FrPOS-23.5

A Wireless Neurostimulator System with an Embedded ARM Microprocessor

Ersoz, Alpaslan (*Univ. of Connecticut*); Phu, Helen (*Univ. of Connecticut*); Kim, Insoo (*Univ. of Connecticut Health Center*); Han, Martin* (*Univ. of Connecticut*)

18:00-19:30 FrPOS-23.6

Deep Brain Stimulation in the Globus Pallidus Modulates Pallidal and Subthalamic Neural Oscillations

Geng, Xinyi (*Fudan Univ.*); Zhang, Ruili (*Fudan Univ., Institute of Science & Technology for Brain-*); Shen, Lei (*Fudan Univ., Institute of Science & Technology for Brain-*); Wang, Jingying (*Fudan Univ.*); Zhang, Jianguo (*Beijing Neurosurgical Institute, Capital Medical Univ.*); Wang, Shouyan* (*Fudan Univ.*)

18:00-19:30 FrPOS-23.7

Identification of Effective Stimulation Parameters to Abort Epileptic Seizures in a Neural Mass Model

Arrais, Marouan* (*University of Rennes 1*); Wendling, Fabrice (*INSERM – Université de Rennes 1*); Modolo, Julien (*Univ. Rennes, INSERM, LTSI-U1099*)

18:00-19:30 FrPOS-23.8

Patient-Specific Simulations of Deep Brain Stimulation Electric Field with Aid of In-House Software ELMA

Johansson, Johannes* (*Linköping University*); Alonso, Fabiola (*Linköping University*); Wardell, Karin (*Linköping University*)

FrPOS-24: 18:00-19:30 Hall B

Neurological Disorders (Poster Session)

18:00-19:30 FrPOS-24.1

Quantifying Changes in Brain Function Following Injury via Network Measures

Salsabilian, Shiva (*Rutgers University*); Bibineyshvili, Elena (*Rutgers University*); Margolis, David (*Rutgers University*); Najafizadeh, Laleh* (*Rutgers University*)

18:00-19:30 FrPOS-24.2

A Tendon Indentation Method to Quantify Velocity-Dependent Reflex Responses after Hemispheric Stroke

Afzal, Taimoor (*Shirley Ryan Ability Lab*); Rymer, William Zev (*Northwest. & Rehab Inst of Chicago*); Suresh, Nina* (*Shirley Ryan Ability Lab*)

18:00-19:30 FrPOS-24.3

Cortical Stroke Affects Activity and Stability of Theta/Delta States in Remote Hippocampal Regions

Ip, Zachary (*Univ. of Washington*); Rabiller, Gratianna (*UCSF*); He, Jiwei (*Univ. of California, San Francisco*); Yao, Zhaojie (*Univ. of Washington, Seattle*); Akamatsu, Yosuke (*Univ. of California San Francisco*); Nishijimi, Yasuo (*Univ. of California San Francisco*); Liu, Jialing (*UCSF*); Yazdan-Shahmorad, Azadeh* (*Univ. of Washington*)

18:00-19:30 FrPOS-24.4

Post-Stroke Motor Deficits Are Most Evident at Frequencies Near 125 Hz in EMG Multivariate Probability Distributions

Aggarwal, Anu* (*Central Michigan University*); Wright, Zachary (*University of Illinois at Chicago, Shirley Ryan AbilityLab*); Huang, Felix (*Shirley Ryan AbilityLab*); Patton, James (*U. Illinois at Chicago (UIC), & the Shirley Ryan Ability Lab (fo*)

FrPOS-25: 18:00-19:30 Hall B

Rehabilitation – Poster (Poster Session)

18:00-19:30 FrPOS-25.1

Using Virtual Reality to Examine the Neural and Physiological Responses to Height and Perturbations in Quiet Standing

Kaur, Rachneet (*University of Illinois at Urbana Champaign*); Sun, Rongyi (*University of Illinois at Urbana-Champaign*); Ziegelman, Liran (*University of Illinois at Urbana-Champaign*); Sowers, Richard (*University of Illinois at Urbana-Champaign*); Hernandez, Manuel* (*University of Illinois*)

18:00-19:30 FrPOS-25.2

Comparing Auditory Brainstem Responses Evoked by Click and Sweep-Tone in Normal-Hearing Adults

Jiang, Yanbing (*Shenzhen Institutes of Advanced Technology*); Wang, Dan (*the CAS Key Laboratory of Human-Machine Intelligence-Synergy Sys*); Liu, Zhenzhen (*the CAS Key Laboratory of Human-Machine Intelligence-Synergy Sys*); Tan, Jingqian (*The Third Affiliated Hospital, Sun Yat-Sen Univ.*); Samuel, Oluwarotimi Williams (*Shenzhen Institutes of Advanced Technology*); Deng, Hanjie (*the CAS Key Laboratory of Human-Machine Intelligence-Synergy Sys*); Wang, Xin (*Shenzhen Institutes of Advanced Technology, Chinese Academy of Science*); Zhu, Mingxing (*Shenzhen Institutes of Advanced Technology Chinese Academy of Science*); Wang, Xiaochen (*the CAS Key Laboratory of Human-Machine Intelligence-Synergy Sys*); Sun, Shurui (*the School of Pharmacy & Bioengineering, Chongqing Univ.*); Li, Peng (*The Third Affiliated Hospital of Sun Yat-Sen Univ.*); Chen, Shixiong* (*Shenzhen Institutes of Advanced Technology*); Li, Guanglin (*Shenzhen Institutes of Advanced Technology*)

18:00-19:30 FrPOS-25.3

The Effects of Repetitive Transcranial Magnetic Stimulation (rTMS) on Balance Control in Children with Cerebral Palsy

Dadashi, Farnoosh (*Tehran Univ. of Medical Sciences*); Shahrokhi, Amin (*Noorafshar Hospital, Tehran, Iran*); Nourian, Ruhollah (*Sports Medicine Research Center, Tehran Univ. of Medical Science*); Irani, Ashkan (*Dept. of Occupational Therapy, Faculty of Rehabilitation, Science*); Molavi, Mohammad (*Dey Hospital & Pejvak Radiology Center, Tehran, Iran*); Rafieenazari, Zahra (*Djavad Mowafaghian Research Center & Shahid Beheshti Univ.*); Mirbagheri, Mehdi (*Northwestern Univ./TUMS*); Mirbagheri, Alireza* (*Tehran Univ. of Medical Sciences (TUMS)*)

18:00-19:30 FrPOS-25.4

Development of a Dynamic Oriented Rehabilitative Integrated System

Summa, Susanna* (*Bambino Gesù Children's Hospital, IRCCS*); Gori, Riccardo (*Pegaso onlus*); Castelli, Enrico (*Pediatric Hospital Bambino Gesù*); Petrarca, Maurizio (*Pediatric Hospital Bambino Gesù*)

18:00-19:30 FrPOS-25.5

Kinematic Redundancy Analysis during Goal-Directed Motion for Trajectory Planning of an Upper-Limb Exoskeleton Robot

Wang, Chen (*Institute of Automation, Chinese Academy of Sciences*); Peng, Liang (*Institute of Automation, Chinese Academy of Sciences*); Hou, Zeng-Guang* (*Institute of Automation, Chinese Academy of Sciences*); Li, Jingyue (*China Rehabilitation Research Center, Beijing Bo'ai Hospital*); Luo, Lincong (*Institute of Automation, Chinese Academy of Sciences*); Chen, Sheng (*Institute of Automation, Chinese Academy of Sciences*); Wang, Weiqun (*Chinese Academy of Sciences*)

18:00-19:30 FrPOS-25.6

The Effects of Anti-Gravity Treadmill Training on Gait Characteristics in Children with Cerebral Palsy

Lotfian, Mahboube (*Tehran University of Medical Sciences*); Dadashi, Farnoosh (*Tehran University of Medical Sciences*); Rafieenazari, Zahra (*Djavad Mowafaghian Research Center & Shahid Beheshti University*); Shahrokhi, Amin (*Noorafshar Hospital, Tehran, Iran*); Rasteh, Mehrnaz (*Day Hospital, Tehran, Iran*); Molavi, Mohammad (*Dey Hospital & Pejvak Radiology Center, Tehran, Iran*); Mirbagheri, Alireza (*Tehran University of Medical Sciences (TUMS)*); Mirbagheri, Mehdi* (*Northwestern University/TUMS*)

FrPOS-26: 18:00-19:30 Hall B
Sensory Neuroprostheses – Poster (Poster Session)

18:00-19:30 FrPOS-26.1
Modeling Fixational Eye Movement for the Vision Prosthesis
Rizzo, Rudy (*University of Padova*); Seo, Jong Mo* (*Seoul National University, School of Engineering*)

18:00-19:30 FrPOS-26.2
A Preliminary Study on Virtual Electrode for Subretinal Prostheses by Computational Model
Wang, Ning (*Shanghai Jiao Tong University*); Song, Xiaoyu (*Shanghai Jiao Tong University*); Li, Tong (*Shanghai Jiao Tong University*); Guo, Tianruo (*University of New South Wales*); Li, Liming* (*Shanghai Jiao Tong University*)

18:00-19:30 FrPOS-26.3
Design of an Integrated Subretinal Implant using Cellular Neural Networks for Binary Image Generation in a 130 nm BiCMOS Process
Potschka, Julian* (*Friedrich-Alexander-Univ. Erlangen-Nuremberg*); Soell, Christopher (*Friedrich-Alexander Univ. Erlangen-Nuremberg*); Kirchner, Jens (*Univ. of Erlangen-Nuremberg*); Mardin, Christian (*Friedrich-Alexander-Univ. Erlangen-Nuremberg*); Stadelmayer, Markus (*Friedrich-Alexander-Univ. Erlangen-Nuremberg*); Maiwald, Tim (*Friedrich-Alexander-Univ. Erlangen-Nuremberg*); Breun, Sascha (*Friedrich-Alexander-Univ. Erlangen-Nuremberg*); Kolb, Katharina (*Friedrich-Alexander-Univ. Erlangen-Nuremberg*); Bauch, Andreas (*Friedrich-Alexander-Univ. Erlangen-Nuremberg*); Dietz, Marco (*Friedrich-Alexander-Univ. Erlangen-Nuremberg*); Beck, Christopher (*Friedrich-Alexander-Univ. Erlangen-Nuremberg*); Matthias, Voelkel (*Friedrich-Alexander-Univ. Erlangen-Nuremberg*); Hagelauer, Amelie (*Friedrich-Alexander-Universität Erlangen-Nürnberg*); Weigel, Robert (*Univ. of Erlangen Nuremberg*)

FrPOS-27: 18:00-19:30 Hall B
Biorobotics and Biomechanics (I) – Poster (Poster Session)

18:00-19:30 FrPOS-27.1
Integration of Forearm sEMG Signals with IMU Sensors for Trajectory Planning and Control of Assistive Robotic Arm
Schabron, Bridget (*Wichita State University*); Reust, Adam (*Wichita State University*); Desai, Jaydip* (*Wichita State University*); Yihun, Yimesker (*Wichita State University*)

18:00-19:30 FrPOS-27.2
Impact of an Uncooperative Passenger on the Control of an Externally Guided Self-Balancing Patient-Transport System
Philippen, Lovis (*RWTH Aachen Univ.*); Verjans, Mark* (*RWTH Aachen Univ.*); Schleer, Philipp (*RWTH Aachen Univ.*); Drobinsky, Sergey (*RWTH Aachen Univ.*); Radermacher, Klaus (*RWTH Aachen Univ., Chair of Medical Engineering*)

18:00-19:30 FrPOS-27.3
Characterization of Helical Propulsion Inside in Vitro and Ex Vivo Models of a Rabbit Aorta
Mahdy, Dalia (*German Univ. in Cairo*); Hesham El Feshawy, Sarah* (*German Univ. in Cairo GUC*); Mansour, Mohanad (*German Univ. in Cairo*); Basla, Ibrahim (*German Univ. in Cairo*); Hamdi, Nabila (*The German Univ. in Cairo*); Khalil, Islam S. M. (*Univ. of Twente*); Misra, Sarthak (*Univ. of Twente*); Mohamed, Abdallah (*German Univ. in Cairo*)

18:00-19:30 FrPOS-27.4
Bio-Inspired Model of Humanoid Robot for Ascending Movement
Vatankhah, Maryam* (*Borough of Manhattan Community College, City University of New York*); Kobravi, Hamid Reza (*Islamic Azad University, Mashhad Branch*); Ritter, Arthur (*Stevens Institute of Technology*)

18:00-19:30 FrPOS-27.5
Pilot Study of Cadence, a Novel Shoe for Patients with Foot Drop
Evora, Arlette* (*University of California, Santa Barbara*); Sloan, Erinn (*University of California, Santa Barbara*); Castellino, Sean (*Santa Barbara Cottage Hospital*); Hawkes, Elliot W. (*University of California, Santa Barbara*); Susko, Tyler (*MIT*)

18:00-19:30 FrPOS-27.6
Short-Term Effects of Robot-Resistance Exercises on Muscle Strength and Activations: Types of Muscle Contraction and Speed of Contraction
Choi, Wiha (*DGIST*); Oh, Sehoon (*DGIST*); Lee, Junghoon (*DGIST*); Lee, Chan (*DGIST*); Kim, Young-Kwan* (*Chonnam National Univ.*)

18:00-19:30 FrPOS-27.7
Analytic Model for Quadruped Locomotion Task-Space Planning
Tiseo, Carlo* (*University of Edinburgh*); Vijayakumar, Sethu (*The University of Edinburgh*); Mistry, Michael (*School of Informatics of The University of Edinburg*)

18:00-19:30 FrPOS-27.8
A Novel Underactuated Robotic Finger with Variable Stiffness Joints
Teng, Zhicheng (*Xi'an Jiao Tong University*); Xu, Guanghua* (*Xi'an Jiao Tong University*); Liang, Renghao (*Xi'an Jiao Tong University*); Li, Min (*School of Mechanical Engineering, Xi'an Jiao Tong University*); Zhang, Sicong (*Xi'an Jiao Tong University*); Tao, Tangfei (*Xi'an Jiao Tong University*)

18:00-19:30 FrPOS-27.9
A Fully Implantable Wireless Stimulation System for Pigeon Navigation
Choi, Gwang Jin* (*Seoul National Univ.*); Jang, Jungwoo (*Seoul National Univ.*); Kim, Sunhyo (*College of Veterinary Medicine & Research Institute for Veteri*); Baek, Changhoon (*Seoul National Univ.*); Yun, Seunghyeon (*Seoul National Univ.*); Shim, Shinyong (*Seoul National Univ.*); Seo, Jungmin (*Seoul National Univ.*); Jung, Younginha (*Nanoscience & Technology, Seoul National Univ.*); Seo, Kangmoon (*Seoul National Univ. College of Veterinary Medicine*); Seo, Jong Mo (*Seoul National Univ., School of Engineering*); Song, Yoon-Kyu (*Seoul National Univ.*); Kim, Sung June (*Seoul National Univ.*)

18:00-19:30 FrPOS-27.10
Estimation of Muscle Activity Change under Different Bolus Conditions using Musculoskeletal Model of Swallowing
Urabe, Mariko* (*Tokyo Univ. of Science*); Hashimoto, Takuya (*Tokyo Univ. of Science*); Kikuchi, Takahiro (*Musashino Red Cross Hospital*); Michiwaki, Yukihiro (*Musashino Red Cross Hospital*); Koike, Takuji (*The Univ. of Electro-Communications*)

18:00-19:30 FrPOS-27.11
Optimizing Probability Threshold of Convolution Neural Network to Improve HRV-Based Acute Stress Detection Performance
He, Jiayuan (*Univ. of Waterloo*); Jiang, Ning* (*Univ. of Waterloo*)

18:00-19:30 FrPOS-27.12
Bone Conduction as Sensory Feedback Interface: A Preliminary Study
Mayer, Raphael Maria* (*The Univ. of Melbourne*); Mohammadi, Alireza (*The Univ. of Melbourne*); Alici, Gursel (*Univ. of Wollongong*); Choong, Peter (*The Univ. of Melbourne*); Oetomo, Denny (*The Univ. of Melbourne*)

18:00-19:30 FrPOS-27.13
Designing Configurable Arm Rehabilitation Games: How Do Different Game Elements Affect User Motion Trajectories?
Guneyso Ozgur, Arzu* (*EPFL*); Wessel, Maximilian Jonas (*Ecole Polytechnique Fédérale de Lausanne (EPFL)*); Asselborn, Thibault (*EPFL*); Olsen, Jennifer Kaitlyn (*EPFL*); Johal, Wafa (*EPFL*); Ozgur, Ayberk (*EPFL*); Hummel, Friedhelm Christoph (*EPFL*); Dillenbourg, Pierre (*EPFL*)

18:00-19:30 FrPOS-27.14
Body Segment Mechanical Signal Contributions to Continuous Prediction of Locomotor Transitions Performed under Varying Anticipation
Kazemimoghadam, Mahdieh (*The University of Texas at Dallas*); Fey, Nicholas* (*The University of Texas at Dallas*)

- 18:00-19:30 FrPOS-27.15
Modeling Perturbed Posture through an Adaptive Sliding Mode Approach
Tigrini, Andrea* (*Univ. Politecnica delle Marche*); Mengarelli, Alessandro (*Univ. Politecnica delle Marche*); Cardarelli, Stefano (*Univ. Politecnica delle Marche*); Strazza, Annachiara (*Univ. Politecnica delle Marche*); Di Nardo, Francesco (*Polytechnic University of Marche*); Fioretti, Sandro (*Univ. Politecnica delle Marche*); Verdini, Federica (*Univ. Politecnica delle Marche*)
- 18:00-19:30 FrPOS-27.16
Human Wrist Impedance Estimation based on Impulse Response Induced by Snap-Through Buckling of Closed-Elastica
Yagi, Keisuke* (*Ibaraki University*); Mochiyama, Hiromi (*University of Tsukuba*)
- 18:00-19:30 FrPOS-27.17
Influence of Tactile Sensitivity in the Finger on Postural Control while using the Light touch Effect
Oshita, Kazushige* (*Kyushu Kyoritsu University*); Yano, Sumio (*Kobe University*)
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- FrPOS-28: 18:00-19:30 Hall B
Biorobotics and Biomechanics (II) – Poster (Poster Session)
- 18:00-19:30 FrPOS-28.1
Using a Texture Analyser to Objectively Quantify Foot Orthoses
Cuppens, Kris* (*Mobilab – Thomas More Univ. College*); De Raeve, Eveline (*Mobilab – Thomas More Univ. College*); Saey, Tom (*Mobilab – Thomas More Univ. of Applied Sciences*); Broeckx, Mario (*Mobilab – Thomas More Univ. College*); Knipfels, Ingrid (*Mobilab – Thomas More Univ. College*); Claes, Johan (*Lab4Food, Microbial & Molecular Systems, KU Leuven*); Muraru, Luiza (*Thomas More Univ. of Applied Sciences*); Creyelman, Veerle (*Thomas More Univ. of Applied Sciences*)
- 18:00-19:30 FrPOS-28.2
Experimental Modal Analysis of an In-Situ Clavicle
Rusovici, Razvan* (*UCF*); Topping, Daniel (*UCF College of Medicine*); Eriksson, Sven (*University of Central Florida College of Medicine*); Lopez, Daralys (*University of Central Florida*)
- 18:00-19:30 FrPOS-28.3
The Effect of the Freezing Time on Muscle Fiber Mechanical Properties
Kammoun, Malek (*Sorbonne Université, Université de Technologie de Compiègne, UMR*); Pouletaut, Philippe (*UTC France*); Nguyen, Tan-Nhu* (*Université de Technologie de Compiègne*); Malayannan, Subramaniam (*Dept. of Biochemistry & Molecular Biology, Mayo Clinic, R*); Hawse, John R (*Dept. of Biochemistry & Molecular Biology, Mayo Clinic, R*); Bensamoun, Sabine (*UTC*)
- 18:00-19:30 FrPOS-28.4
Distributed Bio-Inspired Humanoid Posture Control
Lippi, Vittorio* (*TU Berlin*); Molinari, Fabio (*TU Berlin*); Seel, Thomas (*Technische Universität Berlin*)
- 18:00-19:30 FrPOS-28.5
EMG-Based Control in a Test Platform for Exoskeleton with One Degree of Freedom
Suplino, Lucas Oliveira (*University of Sao Paulo*); Fischi Sommer, Leonardo (*University of São Paulo*); Forner-Cordero, Arturo* (*Escola Politécnica da Universidade de Sao Paulo*)
- 18:00-19:30 FrPOS-28.6
Investigation of the Optic Nerve Head Morphology Influence to the Optic Nerve Head Biomechanics – Patient Specific Model
Satekenova, Elnara (*Nazarbayev Univ.*); Ko, Match Wai Lun (*Univ. of Hong Kong*); Kim, Jong Ryeol* (*Nazarbayev Univ.*)
- 18:00-19:30 FrPOS-28.7
Investigation of the Optic Nerve Head Morphology Influence to the Optic Nerve Head Biomechanics – Population Specific Model
Ko, Match Wai Lun* (*Univ. of Hong Kong*); Lai, Chrissi Chi Ching (*Univ. of Hong Kong*); Ng, Partick Chun Kit (*Univ. of Hong Kong*); Chow, Billy Ho Yeung (*Univ. of Hong Kong*); Woo, Moses Jun Seen (*Univ. of Hong Kong*); Yim, Kingsley Ho Chiu (*Univ. of Hong Kong*); Kim, Jong Ryeol (*Nazarbayev Univ.*)
- 18:00-19:30 FrPOS-28.8
Precision Motion Control using Nonlinear Contact Force Model in a Surgical Device
Ng, Cailin* (*NUS*); Liang, Wenyu (*National University of Singapore*); Gan, Chee Wee (*NUS*); Lim, Hsueh Yee (*NUS*); Tan, Kok Kiong (*National University of Singapore*)
- 18:00-19:30 FrPOS-28.9
Evaluation of the Influence of Cyclic Loading on a Laser Sintered Transtibial Prosthetic Socket using Digital Image Correlation (DIC)
Saey, Tom* (*Mobilab – Thomas More Univ. of Applied Sciences*); Muraru, Luiza (*Thomas More Univ. of Applied Sciences*); De Raeve, Eveline (*Mobilab – Thomas More Univ. College*); Cuppens, Kris (*Mobilab – Thomas More Univ. College*); Balcaen, Ruben (*Faculty of Engineering Technology, KU Leuven*); Creyelman, Veerle (*Thomas More Univ. of Applied Sciences*)
- 18:00-19:30 FrPOS-28.10
Prosthetic Hip ROM from Multibody Software Simulation
Putame, Giovanni (*PolitoBIOMed Lab, Dept. of Mechanical & Aerospace Enginee*); Pascoletti, Giulia* (*University of Perugia*); Franceschini, Giordano (*Dept. of Engineering, University of Perugia*); Dichio, Giancarlo (*PolitoBIOMed Lab, Dept. of Mechanical & Aerospace Enginee*); Terzini, Mara (*PolitoBIOMed Lab, Dept. of Mechanical & Aerospace Enginee*)
- 18:00-19:30 FrPOS-28.11
A New Trajectory Determination Method for Robot-Assisted Ankle Ligament Rehabilitation
Liu, Zixiao (*Southern Univ. of Science & Technology*); Zhong, Bin (*Southern Univ. of Science & Technology*); Zhong, Wenjuan (*Southern Univ. of Science & Technology*); Guo, Kq (*Southern Univ. of Science & Technology*); Zhang, Mingming* (*Southern Univ. of Science & Technology*)
- 18:00-19:30 FrPOS-28.12
Design of a Myoelectric 3D-Printed Prosthesis for a Child with Upper Limb Congenital Amputation
Corimanya, Luis* (*University of Tsukuba*); Watanabe, Reiko (*University of Tsukuba Hospital*); Hassan, Modar (*University of Tsukuba*); Hada, Yasushi (*University of Tsukuba Hospital*); Suzuki, Kenji (*University of Tsukuba*)
- 18:00-19:30 FrPOS-28.13
Learning-Based Parameter Estimation for Hysteresis Modeling in Robotic Catheterization
Omisore, Olatunji Mumini* (*Shenzhen Institutes of Advanced Technology, Chinese Academy of S*); Shipeng, Han (*Shenzhen Institutes of Advanced Technology, Chinese Academy of S*); Zhou, Tao (*Shenzhen Institutes of Advanced Technology, Chinese Academy of S*); Al-Handarish, Yousef (*Shenzhen Institutes of Advanced Technology, Chinese Academy of S*); Du, Wenjing (*Shenzhen Institutes of Advanced Technology, Chinese Academy of S*); Ivanov, Kamen (*Shenzhen Institutes of Advanced Technology, Chinese Academy of S*); Wang, Lei (*Shenzhen Institutes of Advanced Technology*)
- 18:00-19:30 FrPOS-28.14
Reducing the Number of Degrees of Freedom to Control an Eye Surgical Robot through Classification of Surgical Phases
Askaripoor, Hadi* (*Technical University Munich*); Mingchuan, Zhou (*Technical University Munich*); Lohmann, Chris (*Klinikum Rechts der isaar, Muenchen*); Cerveri, Pietro (*Politecnico di Milano*); Nasser, M. Ali (*Technische Universitaet Muenchen*)
- 18:00-19:30 FrPOS-28.15
Design of a Non-Invasive Pulse Rate Controlled Deep Vein Thrombosis Prophylaxis Lower Limb Device
K, Vinay* (*IIIT Bangalore*); Vazhiyal, Vikas (*NIMHANS*); Rao, Madhav (*IIITBangalore*)
- 18:00-19:30 FrPOS-28.16
Design and Preliminary Evaluation of a Novel Robotic System for Mobilization of Glenohumeral Joint
Azarsa, Mohammad Hassan (*Dept. of Medical Physics & Biomedical Engineering, School*); Mirbagheri, Alireza* (*Tehran Univ. of Medical Sciences (TUMS)*); Shadmehr, Azadeh (*Tehran Univ. of Medical Sciences*); Karimi, Nouredin (*Tehran Univ. of Medical Sciences*); Mirbagheri, Mehdi (*Northwestern Univ./TUMS*)

- 18:00-19:30 FrPOS-28.17
Comparison of Two Intervertebral Disc Failure Models in a Numerical C4-C5 Trauma Model
 Beausejour, Marie-Helene (*Ecole de Technologie Supérieure*); Petit, Yvan* (*École de Technologie Supérieure*); Arnoux, Pierre-Jean (*Laboratoire de Biomécanique Appliquée, Aix-Marseille Université*); Wagnac, Eric (*Ecole de Technologie Supérieure*)
- FrPOS-29: 18:00-19:30 Hall B
Diagnostic Devices – Physiological Monitoring (I) – Poster (Poster Session)
- 18:00-19:30 FrPOS-29.1
Attentional Bias for Emotional Faces in Depressed and Non-Depressed Individuals: An Eye-Tracking Study
 Figueiredo, Germano R.* (*Federal University of Technology – Paraná*); Ripka, Wagner L. (*UTFPR- Federal Technological University of Paraná*); Romanelli, Eduardo F. R. (*UTFPR – Federal University of Technology – Paraná*); Ulbricht, Leandra (*UTFPR – Federal University of Technology – Paraná*)
- 18:00-19:30 FrPOS-29.2
Unsupervised GEI-Based Gait Disorders Detection from Different Views
 Elkholy, Amr* (*Egypt-Japan University for Science & Technology(E-JUST)*); Makihara, Yasushi (*The Institute of Scientific & Industrial Research, Osaka Univ*); Gomaa, Walid (*Egypt-Japan University for Science & Technology(E-JUST)*); Ahad, Md Atiqur Rahman (*The Institute of Scientific & Industrial Research, Osaka Univ*); Yagi, Yasushi (*Osaka University*)
- 18:00-19:30 FrPOS-29.3
Develoement of an Application for Aid in Cataract Screening
 Pereira da Cunha, Ana Julia* (*UFRN*); Soares Gadelha de Lima, Luis Felipe (*Federal University of Rio Grande do Norte*); Ribeiro, Anna Giselle (*Universidade Federal do Rio Grande do Norte*); D. Vilar Wanderley, Caroline (*Universidade Federal do Rio Grande do Norte (UFRN)*); Diniz, Anthony (*Federal University of Rio Grande do Norte*); Bezerra Soares, Heliana (*Federal University of Rio Grande do Norte*)
- 18:00-19:30 FrPOS-29.4
INSA Wound Mapping System: II. Preliminary Porcine Results
 Montalibet, Amalric* (*INL UMR-5270 – INSA Lyon*); Massot, Bertrand (*INL, CNRS UMR 5270, INSA Lyon, University of Lyon*); Dahri-Correia, Latifa (*MEDAE SAS*); McAdams, Eric (*INSA Lyon*)
- 18:00-19:30 FrPOS-29.5
Study of Patients Self-Training Influence on Peripheral Neuropathies Diseases Diagnosis through D.I.T.A Device
 Avila Mireles, Edwin Johnatan* (*Istituto Italiano di Tecnologia*); Abidi, Haider (*Istituto Italiano di Tecnologia*); D'Imperio, Mariapaola (*Istituto Italiano di Tecnologia*); Liberini, Paolo (*Spedali Civili Di Brescia, Neurological Clinic, Brescia, Italy*); Caldwell, Darwin G. (*Italian Institute of Technology*); Cannella, Ferdinando (*Istituto Italiano di Tecnologia*); Scaccia, Massimiliano (*Istituto Italiano di Tecnologia*)
- FrPOS-30: 18:00-19:30 Hall B
Diagnostic Devices – Physiological Monitoring (II) – Poster (Poster Session)
- 18:00-19:30 FrPOS-30.1
Nocturnal Hypoglycemia Detection using Optimal Bayesian Algorithm in an EEG Spectral Moments based System
 Ngo, Cuong Q.* (*Swinburne University of Technology*); Chai, Rifai (*Swinburne University of Technology*); Nguyen, Tuan V. (*University of Technology, Sydney, Australia*); Jones, Timothy (*Princess Margaret Hospital for Children*); Nguyen, Hung T. (*Swinburne University of Technology*)
- 18:00-19:30 FrPOS-30.2
Classification of Postprandial Glycemic Patterns in Type 1 Diabetes Subjects under Closed-Loop Control: An in Silico Study
 Schröder, Corinna (*University of Stuttgart*); Diez, Jose Luis (*Politechnical University of Valencia*); Laguna, Alejandro (*Politechnical University of Valencia*); Bondia, Jorge (*Technical University of Valencia*); Tarín, Cristina* (*University of Stuttgart*)
- 18:00-19:30 FrPOS-30.3
Multi-Cartridge Fluorescence Reader for Quantitative Immunoassays
 Bheemavarapu, Lalitha Pratyusha* (*Indian Institute of Technology, Madras*); Shah, Malay Ilesh (*Healthcare Technology Innovation Center (HTIC), Indian Institute*); Joseph, Jayaraj (*HTIC, Indian Institute of Technology Madras*); Sivaprakasam, Mohanasankar (*Indian Institute of Technology Madras*)
- 18:00-19:30 FrPOS-30.4
Training a Neural Network for Vocal Stereotypy Detection
 Fetzner, John (*University of St. Thomas*); Min, Cheol-Hong* (*University of St. Thomas*)
- 18:00-19:30 FrPOS-30.5
Early Detection of Mild Cognitive Impairment using Pervasive Sensing
 Chowdhury, Arijit* (*TCS*); Bhattacharya, Sakyajit (*TCS Innovation Labs*); Ghose, Avik (*TCS Research & Innovation*); Krishnan, Balasubramaniam (*TCS*)
- 18:00-19:30 FrPOS-30.6
Estimation of Arterial Pulse Wave Velocity from Doppler Radar Measurements: A Feasibility Study
 Vasireddy, Rakesh* (*Inselspital, Bern University Hospital*); Goette, Josef (*Institute for Human Centered Engineering, Bern University of App*); Jacomet, Marcel (*Institute for Human Centered Engineering, Bern University of App*); Vogt, Andreas (*Dept. of Anaesthesiology & Pain Medicine, Inselspital, Bern*)
- 18:00-19:30 FrPOS-30.7
Modeling the Variability of Insulin Sensitivity for People with Type 1 Diabetes based on Clinical Data from an Artificial Pancreas Study
 Blanc, Romain (*Univ. Grenoble Alpes, CEA, LETI*); Romero Ugalde, Héctor Manuel (*Univ. Grenoble Alpes, CEA, LETI*); Benhamou, Pierre Yves (*Univ. Grenoble Alpes, CHU Grenoble Alpes, Endocrinology*); Charpentier, Guillaume (*Centre Hospitalier Sud-Francilien, Dept. of Diabetes & En*); Franc, Sylvia (*CERITD*); Huneker, Erik (*Diabeloop*); Villeneuve, Emma (*Univ. Grenoble Alpes, CEA, LETI*); Doron, Maeva* (*CEA LETI*)
- 18:00-19:30 FrPOS-30.8
Establishing Pose based Features using Histograms for the Detection of Abnormal Infant Movements
 McCay, Kevin* (*Northumbria Univ.*); Ho, Edmond S. L. (*Northumbria Univ.*); Marcroft, Claire (*Newcastle Hospitals NHS Trust*); Embleton, Nicholas (*Newcastle Hospitals NHS Trust*)
- 18:00-19:30 FrPOS-30.9
Breathing Detection from Tracheal Sounds in Both Temporal and Frequency Domains in the Context of Phrenic Nerve Stimulation
 LU, Xinyue* (*Univ. of Montpellier, INRIA, NeuroResp*); Guiraud, David (*INRIA*); Renaux, Serge (*ATROTECH/NEURORESP/ SIRMED*); Similowski, Thomas (*UPRES EA2397 Univ. Paris VI Pierre et Marie Curie*); Azevedo-Coste, Christine (*INRIA/LIRMM*)
- 18:00-19:30 FrPOS-30.10
Feasibility Study of a Novel MRI-Safe and Interactive Respiratory Biofeedback System
 Ellerau, Mona (*Otto-von-Guericke University Magdeburg*); Odenbach, Robert* (*Otto-von-Guericke University Magdeburg*); Friebe, Michael (*Otto-von-Guericke-University*)
- 18:00-19:30 FrPOS-30.11
Signal Quality in Reconstructed 12-Lead Ambulatory ECGs Recorded using 3-Lead Device
 Ivanovic, Marija* (*Vinca Institute of Nuclear Sciences*); Miletic, Marjan (*Vinca Institute of Nuclear Sciences, University of Belgrade, Mik*); Subotic, Ida (*Clinical center of Serbia*); Boljevic, Darko (*Institute for Cardiovascular Diseases "Dedinje"*)

FrPOS-31: 18:00-19:30 Hall B
Health Technology and Clinical Engineering – Poster (Poster Session)

18:00-19:30 FrPOS-31.1
Development of Adapted Guitar to Improve Motor Function after Stroke: Feasibility Study in Young Adults
 Dechenaud, Marcelline* (*Louisiana State University*); Laidig, Daniel (*TU Berlin*); Seel, Thomas (*Technische Universität Berlin*); Gilbert, Hunter B. (*Louisiana State University*); Kuznetsov, Nikita (*Louisiana State University*)

18:00-19:30 FrPOS-31.2
TTR-FAP Progression Evaluation based on Gait Analysis using a Single RGB-D Camera
 Vilas-Boas, Maria* (*INESC-TEC & Faculty of Engineering, Univ. of Porto*); Rocha, Ana Patrícia (*Univ. of Aveiro*); Choupina, Hugo Miguel Pereira (*Univ. of Porto*); Cardoso, Márcio Neves (*Hospital Santo António, Centro Hospitalar do Porto E.P.E.*); Fernandes, José Maria (*Univ. of Aveiro (PT 501461108)*); Coelho, Teresa (*Unidade Corino de Andrade, Hospital Santo António, Centro Hospit*); Cunha, Joao Paulo Silva (*INESC TEC / Univ. of Porto*)

18:00-19:30 FrPOS-31.3
Using Thermography as Auxiliary Tool to Thyroid Cancer Diagnosis: Case Study
 Magas, Viviane (*Federal University of Technology – Paraná (UTFPR)*); Ulbricht, Leandra* (*UTFPR – Federal University of Technology – Paraná*); Romaneli, Eduardo F. R. (*UTFPR – Federal University of Technology – Paraná*); Gamba, Humberto (*Federal Univ. of Technology UTFPR- C.N.P.J.*)

18:00-19:30 FrPOS-31.4
DigitalROM: Development and Validation of a System for Assessment of Shoulder Range of Motion
 Muaremi, Amir* (*Novartis Institutes for Biomedical Research*); Walsh, Lorcan (*Novartis*); Stanton, Tom (*Novartis*); Schieker, Matthias (*Novartis Institutes for Biomedical Research*); Clay, leuan (*Novartis Institutes for Biomedical Research*)

18:00-19:30 FrPOS-31.5
Non-Invasive Assessments of the Advanced Glycation End Products in Human Skin using Reflectance NIR Spectroscopy
 Shin, Eui Seok* (*Samsung Advanced Institute of Tech.*); Park, Yun Sang (*Samsung Electronics Co., Ltd.*); Nam, Sung Hyun (*Samsung Advanced Institute of Tech., Samsung Electronics*)

18:00-19:30 FrPOS-31.6
New Strategy of Visual Acuity Assessment by Consecutively-Sized Landolt Ring Symbol
 Lee, Ho Jin* (*Seoul National University*); Lee, Woon-Hee (*Seoul National University*); Bae, So Hyun (*Hallym University*); Seo, Jong Mo (*Seoul National University, School of Engineering*)

FrPOS-32: 18:00-19:30 Hall B
Therapeutic Systems and Technologies – Poster (Poster Session)

18:00-19:30 FrPOS-32.1
An Noninvasive and Impedance-Ignored Control Strategy of the Ablation Zone in Radiofrequency Ablation Therapy
 Zheng, Yaobin (*Shanghai Jiao Tong Univ.*); Zhang, Kangwei (*Shanghai Jiao Tong Univ.*); Zou, Jincheng (*Shanghai Jiao Tong Univ.*); Zou, Ke (*Shanghai Jiao Tong Univ.*); Sun, Jianqi (*Shanghai Jiao Tong Univ.*); Zhang, Aili* (*Shanghai Jiao Tong Univ.*)

18:00-19:30 FrPOS-32.2
Post-Treatment Analysis of Irreversible Electroporation Waveforms Delivered to Human Pancreatic Cancer Patients
 Beitel-White, Natalie* (*Virginia Tech*); Martin, Robert C. G. (*University of Louisville*); Davalos, Rafael (*Virginia Tech*)

18:00-19:30 FrPOS-32.3
Miniaturized Peristaltic Rotary Pump for Non-Continuous Drug Dosing
 Tamadon, Izadyar* (*Scuola Superiore Sant'Anna*); Simoni, Virginia (*Univ. of Pisa*); Iacovacci, Veronica (*Scuola Superiore Sant'Anna*); Vistoli, Fabio (*Univ. of Pisa*); Ricotti, Leonardo (*Scuola Superiore Sant'Anna*); Menciacchi, Arianna (*Scuola Superiore Sant'Anna*)

18:00-19:30 FrPOS-32.4
Improved Outcomes in Hemodialysis/Hemodiafiltration (HD/HDF) Treatments Applying Exercise and Physio-Logical Monitoring Techniques: Preliminary Results

Lopez del Angel, Francisco (*Univ. Autonoma Metropolitana*); Azpiroz-Leehan, Joaquin* (*Univ. Autonoma Metropolitana*); Martinez-Licona, Fabiola (*Univ. Autonoma Metropolitana*); Moron Mendoza, Andres (*Asociación Mexicana de Obesidad Riñon y Nutricion*); Fonseca Alva, Angel (*Nefrored SAPI*); Quevedo, Karina (*Nefrored SAPI*); Rosas Andreu, Gerardo (*Nefrored SAPI*); Cadena, Miguel (*Univ. Autonoma Metropolitana*); De la Rosa, Ana Maria (*Nefrored SAPI*); Mendez, Danilo (*Univ. Nacional Autónoma de Mexico*); Sacristan, Emilio (*Univ. Autónoma Metropolitana*)

FrPOS-33: 18:00-19:30 Hall B
Research-Poster-1-Page Fr A (Poster Session)

18:00-19:30 FrPOS-33.1
Deep Brain Stimulation of Subthalami Nucleus Changes Laterality in Parkinson's Disease Patients
 Chladek, Jan* (*Institute of Scientific Instruments, ASCR, v.v.i.*); Bočková, Martina (*Brno Epilepsy Center, Dept. of Neurology, St Anne's Unvers*); Bob, Petr (*Center for Neuropsychiatric Research of Traumatic Stress, Dept.*); Lamos, Martin (*Masaryk Univ.*); Goldemundová, Sabina (*Central European Institute of Technology, Masaryk Univ., Br*); Baláž, Marek (*Central European Institute of Technology, Masaryk Univ., Br*); Rektor, Ivan (*Central European Institute of Technology, Masaryk Univ., Br*); Halamek, Josef (*Institute of Scientific Instruments*); Jurak, Pavel (*Inst of Scientific Instruments Academy*)

18:00-19:30 FrPOS-33.2
Continuous Estimation of Grasp Movement with sEMG and Temporal Convolutional Nets Model
 Guo, Weiyu (*Shenzhen Institute of Advanced Technology, Chinese Academy of Sc*); Wang, Chao (*Shenzhen Institutes of Advanced Technology, Chinese Academy of S*); Lin, Chuang* (*Shenzhen Institutes of Advanced Technology, Chinese Academy of S*); Li, Le (*The First Affiliated Hospital, Sun Yat-Sen University*); Huang, Xin (*Dept. of Rehabilitation Medicine, The First Affiliated Hosp*); Zhang, Hang (*Shenzhen Institutes of Advanced Technology, Chinese Academy*)

18:00-19:30 FrPOS-33.3
Analysis of Tachograms of Healthy Subjects and Congestive Patients in Sleep and Wake State and in Stress Tests with Hurst Exponent
 Salcedo Martínez, Amparo* (*Instituto Politécnico Nacional*); Zamora-Justo, José Alberto (*UPIBI, Instituto Politécnico Nacional*); Muñoz-Diosdado, Alejandro (*UPIBI, Instituto Politécnico Nacional, Mexico*)

18:00-19:30 FrPOS-33.4
Real-Time Electromyogram-Based Facial Expression Recognition using Riemannian Geometry Features for VR Applications
 Cha, Ho-Seung (*Hanyang University*); Choi, SeongJun (*Hanyang University*); Im, Chang-Hwan* (*Hanyang University*)

18:00-19:30 FrPOS-33.5
Detecting Persons with Major Depression by a Voice Index based on the Relationship between Hurst Exponent and Zero Crossing Rate
 Shinohara, Shuji* (*The Univ. of Tokyo*); Toda, Hiroyuki (*National Defense Medical College*); Nakamura, Mitsuteru (*The Univ. of Tokyo*); Omiya, Yasuhiro (*PST Inc.*); Higuchi, Masakazu (*The Univ. of Tokyo*); Takano, Takeshi (*PST Inc.*); Manome, Nobuhito (*SoftBank Robotics Corp. / The Univ. of Tokyo*); Suzuki, Kouta (*SoftBank Robotics Corp. / The Univ. of Tokyo*); Saito, Taku (*National Defense Medical College*); Tanichi, Masaaki (*National Defense Medical College*); Mitsuyoshi, Shunji (*Dept. of Verbal Analysis of Pathophysiology Graduate School of M*); Uraguchi, Tomotaka (*PST Inc.*); Yoshino, Aihide (*National Defense Medical College*); Tokuno, Shinichi (*The Univ. of Tokyo*)

- 18:00-19:30 FrPOS-33.6
A Single Trial Detection Method for the Activation of Stereo-Electroencephalographic (SEEG) Signals
 Li, Guangye (*Shanghai Jiao Tong Univ.*); Paraskevopoulou, Sivylla-Eleni (*Imperial College London*); Jiang, Shize (*Fu Dan Univ.*); Chen, Liang (*Huanshan Hospital*); Schalk, Gerwin (*Wadsworth Center, New York State Dept. of Health*); Zhang, Dingguo* (*Shanghai Jiao Tong Univ.*)
- 18:00-19:30 FrPOS-33.7
Event Related Potentials in Adolescents with Insulin Resistance
 Wang, Lana* (*East Carolina Univ.*); White, Austin T. (*East Carolina Univ.*); Williams, Patrick (*East Carolina Univ.*); Wittwer, Jennifer (*East Carolina Univ.*); Collier, David (*East Carolina Univ.*); Kim, Sunghan (*East Carolina Univ.*)
- 18:00-19:30 FrPOS-33.8
Multivariate Multiscale Distribution Entropy Analysis of EEG for Discriminating Emotional States
 Lee, Dae-Young (*Kwangwoon University*); Choi, Young-Seok* (*Kwangwoon University*)
- 18:00-19:30 FrPOS-33.9
The Image Sequence based Driver Sleep Detection and Algorithm
 Hwang, Seokmin (*Keimyung*); Kim, Chan-Il (*Keimyung Univ.*); Park, Eun-Bin (*Keimyung Univ.*); Lee, Jong-Ha* (*Keimyung Univ., School of Medicine*)
- 18:00-19:30 FrPOS-33.10
Using Nonlinear Signal Analysis to Localize the Seizure Onset Zone: A Data-Driven Approach
 Gonzalez Martinez, Cristina* (*Univ. Pompeu Fabra*); Niediek, Johannes (*Edmond & Lily Safra Center for Brain Sciences, The Hebrew Univ*); Mormann, Florian (*Dept. of Epileptology, Univ. of Bonn*); Andrzejak, Ralph (*Computational Neuroscience Group, Dept. of Information and*)
- 18:00-19:30 FrPOS-33.11
LSTM Network for the Reconstruction of Standard ECG from Patch-Type 3-Lead ECG
 Kim, Hee Chan* (*Seoul National Univ.*); An, Jieun (*Seoul National Univ.*); Ku, Yunseo (*Chungnam National Univ. College of Medicine*); Shin, Heean (*Seoul National Univ.*); Yang, Seungman (*Seoul National Univ.*); Lee, Joonnyong (*Seoul National Univ. Hospital*); Sohn, Jangjay (*Seoul National Univ.*)
- 18:00-19:30 FrPOS-33.12
Assessment of Complexity Level in Decision Making: An Eye-Tracking Study
 Nasreen, Shazia* (*IIT Kharagpur*); Roy, Anup Kumar (*IIT Kharagpur*); Joshi, Prachi (*IIT Kharagpur*); Singh, Nicky (*IIT Kharagpur*); Guha, Rajlakshmi (*IIT Kharagpur*); Paik, Jiaul Hoque (*IIT Kharagpur*)
- 18:00-19:30 FrPOS-33.13
Concept of a System for Real-Time Measurement and Visualization of Brain-Shift
 Juan, Carlos G.* (*Miguel Hernandez University*); Blanco-Angulo, Carolina (*Miguel Hernandez University of Elche*); Bermejo, Natividad (*Miguel Hernandez University of Elche*); Garcia Martinez, Hector (*Miguel Hernández University of Elche*); Vicente, Jose M. (*Miguel Hernandez University*); Avila-Navarro, Ernesto (*Miguel Hernandez University*); Sabater-Navarro, Jose Maria (*Universidad Miguel Hernandez*)
- 18:00-19:30 FrPOS-33.14
Detecting Keratoconus based on Statistical Modeling of Light Intensity Distribution of Scheimpflug Images
 Consejo, Alejandra* (*Polish Academy of Science*); Gławdecka, Karolina (*Wrocław Univ. of Science & Technology*); Karnowski, Karol Marian (*Institute of Physical Chemistry of the Polish Academy of Science*); Solarzski, Jędrzej (*Instytut Chemii Fizycznej PAN*); Rozema, Jos (*Antwerp Univ. Hospital*); Iskander, D Robert (*Wrocław Univ. of Technology*); Wojtkowski, Maciej (*Institute of Physical Chemistry, Polish Academy of Sciences*)
- 18:00-19:30 FrPOS-33.15
Synthetic Stereo Images of the Optic Disc from the CORD Dataset
 Coghill, Ian* (*University of Strathclyde*); Jordan, Kirsty Charlotte (*University of Strathclyde*); Menolotto, Matteo (*University of Strathclyde*); Black, Richard Anthony (*University of Strathclyde*); Livingstone, Iain (*NHS Greater Glasgow & Clyde*); Giardini, Mario Ettore (*University of Strathclyde*)
- 18:00-19:30 FrPOS-33.16
Assessment of Motion Artifact Reduction Algorithm using Multi-Channel PPG Measurement System in Wearable System
 Kim, Min Seong (*Hanyang Univ.*); Kang, DongHun (*Hanyang Univ.*); Lee, Jong-Shill* (*Hanyang Univ.*); Kim, In Young (*Hanyang Univ.*); Park, Hoon Ki (*Hanyang Univ. Hospital*)
- 18:00-19:30 FrPOS-33.17
Dual-Wavelength Photoacoustic Gas Detection for Smart Endoscopy
 Wadamori, Naoki* (*Nagaoka University of Technology*)
- 18:00-19:30 FrPOS-33.18
Variable Source Emitter, Smart Textile Headgear Design for Functional Near-Infrared Spectroscopy
 Bartkowski, Christian Henry* (*NIRx Medizintechnik GmbH, TU Berlin*); Gemignani, Jessica (*Technische Universität Berlin*); Barbour, Randall (*SUNY Downstate Medical Center*); Lang, Klaus Dieter (*Technische Universität Berlin*); von Krshiwoblozki, Malte (*Fraunhofer IZM*); Vieroth, Rene (*TU-Berlin*); Dils, Christian (*Fraunhofer IZM*); Jung, Erik (*Fraunhofer IZM*); Schmitz, Christoph (*NIRx Medizintechnik GmbH*)
- 18:00-19:30 FrPOS-33.19
Measurement Sensitivity Enhancement of Surface Tissue using Planar Light Source and Spatially-Resolved Near-Infrared Spectroscopy
 Tsubota, Kohei* (*Shizuoka University*); Niwayama, Masatsugu (*Shizuoka University*)
- 18:00-19:30 FrPOS-33.20
Measurement Sensitivity and Sensor Arrangement for Liver Tissue Oximeter
 Kanzawa, Takahiro* (*Shizuoka University*); Niwayama, Masatsugu (*Shizuoka University*)
- 18:00-19:30 FrPOS-33.21
Determination of Facial Optical Properties based on ToF, Spatially-Resolved and Time-Resolved Measurement
 Nagakura, Jin* (*Shizuoka University*); Niwayama, Masatsugu (*Shizuoka University*)
- 18:00-19:30 FrPOS-33.22
Wiener-Filter based Tissue Recognition in Surgical Microscopy
 Babilon, Sebastian* (*TU Darmstadt*); Klages, Julian (*TU Darmstadt, Fachgebiet Lichttechnik*); Myland, Paul (*TU Darmstadt, Fachgebiet Lichttechnik*); Khanh, Tran Quoc (*TU Darmstadt, Fachgebiet Lichttechnik*)
- 18:00-19:30 FrPOS-33.23
Embedded Tumor Size Estimation using Projections Analysis of Smartphone-Based Compression-Induced Images
 Choi, Sung In (*Temple Univ.*); Oleksyuk, Vira (*Temple Univ.*); Caroline, Dina (*Temple Univ. Hospital*); Pascarella, Suzanne (*Temple Univ. Hospital*); Kybic, Jan (*Czech Technical Univ. in Prague*); Won, Chang-Hee* (*Temple Univ.*)
- 18:00-19:30 FrPOS-33.24
The Effect of Acupuncture Stimulation on Cognitive Function using Functional Near Infrared Spectroscopy: A Pilot Study
 Lee, Seung Hyun (*Kyungpook National Univ.*); Park, Sang Soo (*Dept. of Internal Korean Medicine, Dunsan Korean Medicine H*); Kim, Jieun (*Korea Institute of Oriental Medicine*); Yoo, Ho-Ryong* (*Dunsan Korean Medicine Hospital, Daejeon Univ.*); Lee, Jun-Hwan (*Korea Institute of Oriental Medicine*)

- 18:00-19:30 FrPOS-33.25
Multiclass SVM for Embryo Time-Lapse Image Classification
 Molder, Anna Leida (*Istituto Italiano di Tecnologia*); Hartshorne, Geraldine (*University of Warwick*); Costen, Nicholas Paul* (*Manchester Metropolitan University*); Czanner, Silvester (*Liverpool John Moores University*)
- 18:00-19:30 FrPOS-33.26
Stabilization of Dynamic Electricity after Sacubitril /Valsartan Treatment in Spontaneously Hypertensive Rats
 Syu, Jhen-Yang (*Institute of Biomedical Engineering, College of Electrical & C*); Sung, Yen-Ling (*National Chiao-Tung University*); Hsu, Hung-Jui (*NCTU*); Lin, Ting-Tse (*National Taiwan University Hospital Hsin-Chu Branch*); Lin, Shien-Fong* (*National Chiao Tung University*)
- 18:00-19:30 FrPOS-33.27
Method to Mitigate Confounding Effects from Human Movements While Dynamic Optical Contrast Imaging
 Hu, Yong* (*UCLA*); Pellionisz, Peter (*UCLA David Geffen School of Medicine*); St. John, Maie (*UCLA Head & Neck Surgery*)
- 18:00-19:30 FrPOS-33.28
Design and Simulation of Dual -Axis Confocal Imaging Mirrors for Terahertz Medical Imaging
 Hu, Yong* (*UCLA*); Grundfest, Warren S. (*UCLA*); Taylor, Zachary (*UCLA*)
- 18:00-19:30 FrPOS-33.29
Development of Visual Support Tool for Endoscopic Surgery – Evaluation of Enhanced Field of View
 Hanafusa, Akihiko* (*Shibaura Institute of Technology*); Yokoyama, Yuichi (*Shibaura Institute of Technology*)
- 18:00-19:30 FrPOS-33.30
Endoscopic Single-Shot 3D Reconstruction of Oral Cavity
 Rosenthal, Jean-Claude (*Fraunhofer Heinrich-Hertz-Institute*); Wisotzky, Eric L.* (*Fraunhofer Heinrich-Hertz-Institut*); Eisert, Peter (*Fraunhofer Heinrich-Hertz-Institute*); Uecker, Florian Cornelius (*Charité Universitätsmedizin Berlin*)
- 18:00-19:30 FrPOS-33.31
Simultaneous RGB and Depth Image Capture System using Common Endoscope based on High Frequency Alternative Pattern Projection
 Furukawa, Ryo (*Hiroshima City Univ.*); Oka, Shiro (*Hiroshima Univ. Hospital*); Kotachi, Takahiro (*Hiroshima Univ. Hospital*); Okamoto, Yuki (*Hiroshima Univ. Hospital*); Tanaka, Shinji (*Hiroshima Univ. Hospital*); Kawasaki, Hiroshi* (*Kyushu Univ.*)
- 18:00-19:30 FrPOS-33.32
Frame-Wise Auto-Calibration of Projector-Camera Pair of 3D Endoscope
 Furukawa, Ryo* (*Hiroshima City Univ.*); Oka, Shiro (*Hiroshima Univ. Hospital*); Kotachi, Takahiro (*Hiroshima Univ. Hospital*); Okamoto, Yuki (*Hiroshima Univ. Hospital*); Tanaka, Shinji (*Hiroshima Univ. Hospital*); Kawasaki, Hiroshi (*Kyushu Univ.*)
- 18:00-19:30 FrPOS-33.33
Development of Methods to Visualize and Quantify Follicle Cells in Ovarian Tissue by Optical Coherence Tomography
 Saito, Kasumi (*Keio University*); Motani, Yuki (*Keio University*); Takae, Seido (*St. Marianna University School of Medicine*); Suzuki, Nao (*St. Marianna University School of Medicine*); Tsukada, Kosuke* (*Keio University*)
- 18:00-19:30 FrPOS-33.34
Rigid-Endoscope Optical Coherence Tomography System using Two-Dimensional KTN Optical Beam Scanner
 Ohmi, Masato* (*Osaka Univ.*); Choi, Eunjoo (*Osaka Univ.*)
- 18:00-19:30 FrPOS-33.35
Reconstructing Resting State Networks with Diffuse Optical Tomography
 Khan, Ali Fahim* (*University of Oklahoma*); Zhang, Fan (*University of Oklahoma*); Yuan, Han (*University of Oklahoma*); Ding, Lei (*University of Oklahoma*)
- 18:00-19:30 FrPOS-33.36
Surface Acoustic Wave-Driven Enhanced Dye Uptake in Retinal Tissue
 Stamp, Melanie* (*Univ. of Melbourne*); Tong, Wei (*Univ. of Melbourne*); Peng, Danli (*Univ. of Melbourne*); Ibbotson, Michael R (*Australian College of Optometry*); Collins, David J (*Univ. of Melbourne*); Garrett, David J. (*Univ. of Melbourne*); Praver, Steven (*Univ. of Melbourne*)
- 18:00-19:30 FrPOS-33.37
A 3D Test Target for Focal Plane Assessment in Confocal Laser Endomicroscopy
 Su, Yilun* (*Karlsruhe Institute of Technology*); Nahm, Werner (*Karlsruhe Institute of Technology*)
- 18:00-19:30 FrPOS-33.38
Neuroregeneration and Plasticity in the Adult Central Nervous System: Two Models of Neuroregeneration Analyzed by Ultramicroscopy
 Jährling, Nina* (*TU Vienna*); Benedetti, Bruno (*Paracelsus Medizinische PrivatUniversität*); Bieler, Lara (*Paracelsus Medizinische PrivatUniversität*); Becker, Klaus (*TU Vienna*); Saghafi, Saiedeh (*TU Vienna*); Kramer, Edgar R. (*University of Plymouth*); Weiler, Reto (*Carl von Ossietzky Universität Oldenburg*); Dodt, Hans-Ulrich (*TU Vienna*); Couillard-Despres, Sebastian (*Paracelsus Medizinische PrivatUniversität*)
- 18:00-19:30 FrPOS-33.39
Development of Optoacoustic Microscopic and Mesoscopic Imaging Handheld for Skin Monitoring
 Afshari, Parastoo* (*Technische Universität München & Helmholtz Zentrum München*); Berezhnoi, Andrei ((*Chair for Biological Imaging, Technische Universität München*)); Aguirre, Juan ((*Chair for Biological Imaging, Technische Universität München*)); Zakian, Christian (*Helmholtz Zentrum München*); Ntziachristos, Vasilis (*Technische Universität München & Helmholtz Zentrum München*)
- 18:00-19:30 FrPOS-33.40
A NIRS System using Micro-Wall Structural Photodiodes
 Chang, Yeonhee (*DGIST*); Ko, Minjee (*Daegu Gyeongbuk Institute of Science & Technology (DGIST)*); Lee, Jinseon (*DGIST*); Cho, Chang-Hee (*Daegu Gyeongbuk Institute of Science & Technology*); Song, Cheol* (*DGIST*)
- 18:00-19:30 FrPOS-33.41
Correcting Physiological Noises in Functional Near-Infrared Spectroscopy
 Zhang, Fan (*Univ. of Oklahoma*); Cheong, Daniel (*Univ. of Oklahoma*); Chen, Yuxuan (*Univ. of Oklahoma*); Khan, Ali Fahim* (*Univ. of Oklahoma*); Ding, Lei (*Univ. of Oklahoma*); Yuan, Han (*Univ. of Oklahoma*)
- 18:00-19:30 FrPOS-33.42
A Human Growth Model with Anatomical Structure for Numerical Simulations
 Nagaoka, Tomoaki* (*National Institute Info & Comm Tech*); Wake, Kanako (*National Institute of Information & Communications Technology*)
- 18:00-19:30 FrPOS-33.43
Experimental Studies on the Ventilation Parameters in the Model Respiratory Tract with Double-Lumen Endotracheal Tube
 Kramiec-Romanowska, Katarzyna* (*Nalecz Institute of Biocybernetics & Biomedical Engineering Po*); Steckka, Anna (*Nalecz Institute of Biocybernetics & Biomedical Engineering PA*); Zieliński, Krzysztof (*The Nalecz Institute of Biocybernetics & Biomedical*); Dorosz, Agata (*Faculty of Chemical & Process Engineering Warsaw University of*); Okrzeja, Piotr (*Nalecz Institute of Biocybernetics & Biomedical Engineering*)

- 18:00-19:30 FrPOS-33.44
Cerebral Aneurysm Intervention with Preoperative Planning in Immersive Virtual Reality
 Dakua, Sarada (*Hamad Medical Corporation*); Abinahed, Julien (*Hamad Medical Corporation*); Balakrishnan, Shidin* (*Hamad Medical Corporation*); Younes, Georges (*Hamad Medical Corporation*); Zakaria, Ayman (*Hamad Medical Corporation*); Baobeid, Abdulla (*Hamad Medical Corporation*); Al-Ansari, Abdulla (*Hamad Medical Corporation*); Soheilian Esfahani, Sahar (*Qatar Univ.*); Zhai, Xiaojun (*Qatar Univ.*); Amira, Abbes (*Univ. of the West of Scotland*); Bensaali, Faycal (*Qatar Univ.*); Richardson, Robin (*Univ. College London*); Peter, Coveney (*Univ. College London*)
- 18:00-19:30 FrPOS-33.45
New Comprehension of Human Auditory System based on Acoustic Resonance of Outer Hair Cells
 Horii, Yasushi* (*Kansai Univ.*); Hong, Wenjia (*Kansai Univ.*); Tamaki, Airi (*Kansai Univ.*); Kitamura, Toshiaki (*Kansai Univ.*)
- 18:00-19:30 FrPOS-33.46
Discussion on Aging-Based Pitch Shift of Absolute Pitch in Auditory System based on Acoustic Resonance of Outer Hair Cells
 Tamaki, Airi (*Kansai Univ.*); Hong, Wenjia (*Kansai Univ.*); Kitamura, Toshiaki (*Kansai Univ.*); Horii, Yasushi* (*Kansai Univ.*)
- 18:00-19:30 FrPOS-33.47
Biomechanical Modelling and Computer Aided Simulation of Deep Brain Retraction in Neurosurgery
 Gautam, Umesh (*IIT Delhi*); Bhaskar, Suryanarayanan (*AllMS Jodhpur*); Roy, Sitikantha* (*Indian Institute of Technology Delhi*); Awasthi, Abhilash (*Indian Institute of Technology Delhi, New Delhi, India*)
- 18:00-19:30 FrPOS-33.48
Mechanical Study on Piezoelectric Energy Harvesting Concepts for an Energy-Autonomous Total Hip Replacement
 Lange, Hans-E.* (*Rostock Univ. Medical Center*); Kluess, Daniel (*Rostock Univ. Medical Center, Dept. of Orthopaedics*)
- 18:00-19:30 FrPOS-33.49
High-Resolution Slow-Wave Response to High and Low Energy Pacing
 Alighaleh, Saeed* (*Auckland Bioengineering Institute, University of Auckland*); Cheng, Leo K (*The University of Auckland*); Avci, Recep (*University of Auckland*); O'Grady, Gregory (*University of Auckland*); Angeli, Timothy Robert (*Auckland Bioengineering Institute, University of Auckland*); Paskaranandavadivel, Niranchan (*The University of Auckland*)
- 18:00-19:30 FrPOS-33.50
Subdermal Solar Energy Harvesting – A Monte-Carlo Simulation on Light Transmission in Human Skin
 Tholl, Maximilien Victor* (*University of Bern, Artorg Center*); Niederhauser, Thomas (*Bern University of Applied Sciences*); Zurbuchen, Adrian (*University of Bern, sitem-insel*); Frenz, Martin (*University of Bern, Institute of Applied Physics, Biomedical Pho*); Tanner, Hildegard (*University Hospital Bern, Dept. of Cardiology*); Haeblerlin, Andreas (*University Hospital Bern, Dept. of Cardiology*)
- FrPOS-34: 18:00-19:30 Hall B
Research-Poster-1-Page Fr B (Poster Session)
- 18:00-19:30 FrPOS-34.1
Mobile Patient-Specific Real-Time Energy Simulations
 Tatum, Nathan (*ARA*); Hoer, Tim (*Duke University*); White, Steven A (*Applied Research Associates*); Baird, Austin* (*Applied Research Associates*)
- 18:00-19:30 FrPOS-34.2
A Wearable Bio-Feedback Gait Training Device for the Stroke Patients
 Chang, Y. T. (*Cheng Kung University*); Chen, Tainsong* (*National Cheng Kung University*)
- 18:00-19:30 FrPOS-34.3
In-Vitro Testing for the Risk Assessment of Workers with Active Implantable Devices Exposed to Electromagnetic Fields
 Mattei, Eugenio* (*Italian National Institute of Health*); Censi, Federica (*Italian National Institute of Health*); Calcagnini, Giovanni (*Italian National Institute of Health*)
- 18:00-19:30 FrPOS-34.4
Contactless Pulse Rate Measurement based on a SoC Platform
 Chen, Hong-Ren (*National Taiwan University of Science & Technology*); Lin, Yuan-Hsiang* (*National Taiwan University of Science & Technology*)
- 18:00-19:30 FrPOS-34.5
An Image-Based Health Care System for Bedside Monitoring
 Chiang, Kuan-Ting (*National Taiwan University of Science & Technology*); Lin, Yuan-Hsiang* (*National Taiwan University of Science & Technology*)
- 18:00-19:30 FrPOS-34.6
A Non-Contact Cardiopulmonary Measuring System using Medical Radar and FPGA
 V. Nguyen, Cuong (*Hanoi Univ. of Science & Technology*); Dinh-Trung, Duc (*Hanoi Univ. of Science & Technology*); Sun, Guanghao* (*The Univ. of Electro-Communications*); Han Trong Thanh, Thanh (*Hanoi Univ. of Science & Technology*); Do Trong, Tuan (*Hanoi Univ. of Science & Technology*); Ishibashi, Koichiro (*The Univ. of Electro-Communications*)
- 18:00-19:30 FrPOS-34.7
The Accuracy of Wrist-Worn Heart Rate Measurements: A Comparison between a Consumer and Research Grade Device
 Giggins, Oonagh* (*Dundalk Institute of Technology*); Doyle, Julie (*CASALA, Dundalk Institute of Technology*)
- 18:00-19:30 FrPOS-34.8
Acquisition of Impedance Cardiogram with Integrated Synchronous Demodulation and Baseline Correction
 T S, Susmi* (*Indian Institute of Technology Bombay*); Pandey, Prem C. (*IIT Bombay*)
- 18:00-19:30 FrPOS-34.9
The Suitable Sensitive Area of Photodiode: Comparison of SNR and Amplitude of Green Photoplethysmogram for Pulse Rate Monitoring
 Kusaba, Shihori (*Fukuoka Institute of Tech.*); Lee, Jihyoung* (*Fukuoka Institute of Tech.*); Fukumoto, Yuto (*Fukuoka Institute of Tech.*); Kihara, Hiromu (*Fukuoka Institute of Tech.*); Kabashima, Shogo (*Fukuoka Institute of Tech., Fukuoka, Japan*); Ikejiri, Kouki (*Fukuoka Institute of Tech.*); Isizaki, Shouta (*Fukuoka Institute of Tech.*); Yamakoshi, Takehiro (*Fukuoka Institute of Tech.*)
- 18:00-19:30 FrPOS-34.10
A Study of the PPG Amplitude for Determination of Systolic Arterial Pressure in the Finger based on the Volume Oscillometric Method
 Fukumoto, Yuto (*Fukuoka Institute of Technology*); Lee, Jihyoung* (*Fukuoka Institute of Technology*); Yamakoshi, Yasuhiro (*Showa Univ. School of Medicine*); Kusaba, Shihori (*Fukuoka Institute of Technology*); Kihara, Hiromu (*Fukuoka Institute of Technology*); Ikejiri, Kouki (*Fukuoka Institute of Technology*); Isizaki, Shouta (*Fukuoka Institute of Technology*); Yamakoshi, Takehiro (*Fukuoka Institute of Technology*); Yamakoshi, Ken-ichi (*Kanazawa Univ.*)
- 18:00-19:30 FrPOS-34.11
Range-Gate Tracking Technique for Ultrasonic Doppler Sensor
 Um, Ji-Yong* (*Hannam Univ.*); Park, Hyun-Tae (*Hannam Univ.*)
- 18:00-19:30 FrPOS-34.12
Measurement of Laryngeal Elevation using PVDF Film for Multimodal Assessment of Swallowing Function
 Hashimoto, Takuya* (*Tokyo University of Science*)

- 18:00-19:30 FrPOS-34.13
Testing of Autonomic Nervous System using a Smartphone
Jung, Gihoon (*SoonChunHyang University*); Ha, Sangho* (*SoonChunHyang University*); Seok, Jin Myoung (*Dept. of Neurology, SoonChunHyang University Cheonan Hospit*); Park, Jongkyu (*SoonChunHyang University Cheonan Hospital*); Park, Sang-Heum (*SoonChunHyang University College of Medicine*)
- 18:00-19:30 FrPOS-34.14
Temporal Effects of Loading on Upper Limb Physiological Tremor
Akazawa, Jun* (*Meiji University of Integrative Medicine*)
- 18:00-19:30 FrPOS-34.15
Comparison between Physiological Indexes from ECG and BVP in Daily-Living Tasks
Ito, Kodai* (*National Institute of Advanced Industrial Science & Tech.*); Laohakangvalvit, Tipporn (*National Institute of Advanced Industrial Science & Tech.*); Tada, Mitsunori (*National Institute of Advanced Industrial Science & Tech.*)
- 18:00-19:30 FrPOS-34.16
A Tonometry based Non-Invasive Continuous Arterial Pressure Pulse Measuring Device
Pande, Karan (*Indian Institute of Technology Delhi*); Pandey, Udayan (*Indian Institute of Technology Delhi*); Ghosh, Saswath (*Indian Institute of Technology Delhi*); Roy, Sitikantha* (*Indian Institute of Technology Delhi*)
- 18:00-19:30 FrPOS-34.17
Estimation of Time-Domain Indices of HRV by Body Pressure Distribution at Sitting Position
Sakai, Risako (*Nagoya City University*); Yokoyama, Kiyoko* (*Nagoya City University*)
- 18:00-19:30 FrPOS-34.18
Real Time Blood Pressure Monitoring a Three-Dimensional Acceleration-Based Cuff-Less Non-Invasive Approach
Hsu, Po-Ya* (*UC San Diego*); Hsu, Po-Han (*National Taipei Univ.*); Liu, Hsin-Li (*Central Taiwan Univ. of Science & Tech.*)
- 18:00-19:30 FrPOS-34.19
Feasibility Study on Assessment of Stress Situation using Non-Contact Image Photo-Plethysmography
Ikarashi, Akira* (*Aino Univ.*); Hayashi, Takuto (*Aino Univ.*)
- 18:00-19:30 FrPOS-34.20
Influence of a Signal Model on the Quality of Estimates of Brain Evoked Responses Measured with Magnetoencephalography
Sielużycki, Cezary* (*Faculty of Fundamental Problems of Technology, Wrocław Univ.*); Matysiak, Artur (*Leibniz Institute for Neurobiology, Magdeburg*); König, Reinhard (*Leibniz Institute for Neurobiology, Magdeburg*); Iskander, D Robert (*Wrocław University of Technology*)
- 18:00-19:30 FrPOS-34.21
Estimation of Internet Gaming Disorder Severity using Heart Rate Variability
Hong, Sung Jun (*Osong Medical Innovation Foundation*); Lee, SeungJae (*Hanyang University*); Park, Jinsick (*Hanyang University*); Kim, Byungyeon (*Osong Medical Innovation Foundation*); Kim, In Young* (*Hanyang University*)
- 18:00-19:30 FrPOS-34.22
Quantification of Pupil Reflex Dynamics in Response to Voluntary Muscular Contraction across Age
Marmarelis, Zissis* (*University of Southern California*); Huang, Ringo (*University of Southern California*); Mather, Mara (*University of Southern California*)
- 18:00-19:30 FrPOS-34.23
Evaluation of Brain Response to Multisensory Stimuli by using Index of Spatiotemporal Locality of Magnetoencephalography
Mori, Fumina* (*The University of Tokyo*); Kikuchi, Keigo (*The University of Tokyo*); Kotani, Kiyoshi (*University of Tokyo*); Jimbo, Yasuhiko (*University of Tokyo*)
- 18:00-19:30 FrPOS-34.24
Analysis of Driver Inattention State using Electroencephalography
Lim, Hyunjun (*Hyundai Mobis CO., Ltd*); Jung, Yujin (*Hyundai Mobis*); Park, Ki-Hee (*Hyundai Mobis Co., Ltd.*); Hwang, JongHo (*Hyundai Mobis*); Lee, Chang Won* (*Hyundai Mobis*)
- 18:00-19:30 FrPOS-34.25
Similar Muscle Synergies during Hand Reaching and Withdrawing
Lin, Jiayin* (*Sun Yet-sen Univ.*); Luo, Jie (*Sun Yat-Sen Univ.*)
- 18:00-19:30 FrPOS-34.26
A Fast PPG-HR Transformation Algorithm with High Robustness
Tian, Yang* (*Tsinghua University*); He, Weihua (*Tsinghua University*); Jia, Yihan (*Tsinghua University*)
- 18:00-19:30 FrPOS-34.27
Non-Convulsive Status Epilepticus Detection
Wang, Ying* (*Eindhoven Univ. of Technology*); Long, Xi (*Eindhoven Univ. of Technology & Philips Research*); van Dijk, Johannes (*Kempnhaeghe Center for Sleep Medicine*); Lazeron, Richard (*Epilepsy Center Kempnhaeghe*); Aarts, Ronald M. (*Philips*); Arends, Johan B.A.M. (*Epilepsy Center Kempnhaeghe*)
- 18:00-19:30 FrPOS-34.28
Towards Objective Pain Assessment: Characterization of Autonomic Signals through Ambulatory Monitoring
Moscato, Serena* (*University of Bologna*); Palumbo, Pierpaolo (*DEI – University of Bologna*); Sichi, Vittoria (*Fondazione ANT Italia Onlus*); Chiari, Lorenzo (*University of Bologna*)
- 18:00-19:30 FrPOS-34.29
Measurement of Onset of Muscle Fatigue using Shifts in EMG Median Frequency in Children with Cerebral Palsy: A Pilot Study during a Walk-to-Run Test
Bielmann, Mathieu* (*CIRRI – Univ. of Laval*); Bertrand Charette, Michaël (*Univ. Laval*); Levesque, Jessica (*Univ. Laval*); Roy, Jean Sébastien (*Univ. Laval*); Maltais, Desirée (*Univ. Laval*); Bouyer, Laurent (*Univ. of Laval*)
- 18:00-19:30 FrPOS-34.30
High-Frequency Analysis for Detecting Bursts in Preterm EEG
Lundy, Christopher T.* (*Irish Centre for Fetal & Neonatal Translational Research (INFA)*); Boylan, Geraldine (*University College Cork*); O'Toole, John M. (*University College Cork*)
- 18:00-19:30 FrPOS-34.31
Reduction of Latency Jitter in ERP through Visibility Graphs and Community Detection
Puxeddu, Maria Grazia* (*Sapienza, Univ. of Rome*); Toppi, Jlenia (*Univ. of Rome "Sapienza"*); Mattia, Donatella (*Fondazione Santa Lucia IRCCS*); Astolfi, Laura (*Univ. of Rome Sapienza*)
- 18:00-19:30 FrPOS-34.32
SEMG Cross Correlation Assessment of Muscle Coordination during Lower Limb Maximum Vertical Countermovement
Rodrigues, Carlos M. B.* (*INESCTEC – Technology & Science Associate Laboratory*); Correia, Miguel (*Universidade do Porto, Faculdade de Engenharia*); Abrantes, João M. C. S. (*MovLab – ULHT*); Rodrigues, Marco Aurélio Benedetti (*Federal Univ. of Pernambuco*); Nadal, Jurandir (*Federal Univ. of Rio de Janeiro*)
- 18:00-19:30 FrPOS-34.33
Neurophysiological Assessment of Auditory Thresholds for Electrical Stimulations Delivered by Cochlear Implants: A Pilot Study
Ma, Junwei (*University of Oklahoma*); Wolfe, Jace (*Hearts for Hearing*); Yuan, Han (*University of Oklahoma*); Ding, Lei* (*University of Oklahoma*)
- 18:00-19:30 FrPOS-34.34
Estimation Model for VO2max using a Wearable Sensor in Non-Laboratory Setting
Kwon, Soon Bin (*Seoul National University*); Ahn, Joong Woo (*Seoul National University Hospital*); Kim, Heejin (*Seoul National University*); Kwon, Chiheon (*Seoul National University*); Kim, Hee Chan* (*Seoul National University*); Yoon, Hyung-Jin (*Seoul National University*)

- 18:00-19:30 FrPOS-34.35
Decoding Muscle Expressions under Fatiguing Contractions in Surface Electromyography Signals
 Ramakrishnan, Swaminathan* (*IIT Madras, India*); Makaram, Navaneethakrishna (*Indian Institute of Technology Madras*)
- 18:00-19:30 FrPOS-34.36
Analysis of Feature Reduction on Bladder Volume Classification of Electrical Impedance Data
 Dunne, Eoghan* (*National University of Ireland Galway*); Santorelli, Adam (*National University of Ireland Galway*); O'Halloran, Martin (*National University of Ireland, Galway*); Porter, Emily (*National University of Ireland Galway*)
- 18:00-19:30 FrPOS-34.37
Increasing Rehabilitation Performance with Smart-Bar and Smart Device
 Park, Jun Young (*Dongguk Univ.*); Kwon, Bumsun (*Dongguk Univ. Hospital*); Park, Sung Yun* (*Dongguk Univ.*)
- 18:00-19:30 FrPOS-34.38
Recognizing Lymphatic Fibrosis using Semantic Segmentation Method for Accurate Lymphatic System Deterioration Diagnosis
 Lee, Suwon (*Univ. of Ulsan*); Son, Hyewon (*Univ. of Ulsan, Ulsan*); Lee, YongKwan (*Univ. of Ulsan*); Duong, Thuy (*Univ. of Ulsan*); Phan, Huu Lam (*Ulsan Univ.*); Nguyen, Trung (*Univ. of Ulsan*); Nguyen, Hang Phuong (*Univ. of Ulsan*); Le, Thi Huong (*Univ. of Ulsan*); Oh, Seok (*Univ. of Ulsan*); Lee, HyoSeok (*Univ. of Ulsan*); Hwang, Changho (*Ulsan Univ. Hospital*); Koo, Kyoin* (*Univ. of Ulsan*)
- 18:00-19:30 FrPOS-34.39
Evaluation Method of Parasympathetic Nervous Activities by Heart Rate Time Series Measured by Wearable Device
 Hayashi, Emi (*Nagoya City University*); Yokoyama, Kiyoko* (*Nagoya City University*); Ito, Hisatoshi (*Toho Gas Co., Ltd.*); Kawahara, Yuko (*Toho Gas Co., Ltd.*)
- 18:00-19:30 FrPOS-34.40
Robust Estimation of Apnea-Hypopnea Index using a Wearable Patch
 Yazdani, Sasan* (*SmartCardia S.A.*); Baumann, Sebastien (*SmartCardia S.A.*); Braojos, Ruben (*SmartCardia S.A.*); Rincón, Francisco (*SmartCardia Sàrl*); Murali, Srinivasan (*SmartCardia Sàrl*)
- 18:00-19:30 FrPOS-34.41
Audio Source Separation for Reducing Sleeping Partner Sounds: Simulation Study
 Mordoh, Valeria* (*Ben-Gurion University of the Negev*); Zigel, Yaniv (*Ben-Gurion University of the Negev*)
- 18:00-19:30 FrPOS-34.42
An Artifact Correction Method for Ear-EEG Data using Riemannian Geometry
 Blum, Sarah* (*Univ. of Oldenburg*); Mirkovic, Bojana (*Univ. of Oldenburg*); Debener, Stefan (*Univ. of Oldenburg*)
- 18:00-19:30 FrPOS-34.43
Closed Loop Control System of a Bionic Artificial Sphincter
 Al Adem, Kenana* (*Khalifa Univ. of Science & Technology*); Stefanini, Cesare (*Khalifa Univ. of Science & Technology*)
- 18:00-19:30 FrPOS-34.44
Closed-Loop Control of Prosthetic Hand Grasp with Non-Invasive Neural Feedback of Evoked Tactile Sensation
 Chou, Chih-Hong (*Shanghai Jiao Tong Univ.*); Hao, Manzhao (*School of Biomedical Engineering, Shanghai Jiao Tong Univ.*); Yin, Pengyu (*School of Biomedical Engineering, Shanghai Jiao Tong Univ.*); Zhang, Zhuozhi (*Shanghai Jiao Tong Univ.*); Zhang, Jie (*Xidian Univ.*); Niu, Chuanxin M. (*Ruijin Hospital, School of Medicine, Shanghai Jiao Tong University*); Pei, Weihua (*Institute of Semiconductors, CAS*); Liang, Wenyuan (*National Research Center for Rehabilitation Technical Aids*); Yao, Feng (*Shanghai Kesheng Prostheses Co., Ltd.*); Lan, Ning* (*Shanghai Jiao Tong Univ.*)
- 18:00-19:30 FrPOS-34.45
Kinematic Analysis based Optimal Design of a Robotic Prosthetic Hand
 Kim, Chang Won* (*KIMM*); Chu, Jun-Uk (*Korea Institute of Machinery & Materials*); Sin, Minki (*Seoul National University*); Lee, Dongkyu (*Korea Institute of Machinery & Materials*); Kwon, Ohwon (*Korea Institute of Machinery & Materials*)
- 18:00-19:30 FrPOS-34.46
Association between Cardiorespiratory Fitness and the Metabolic Syndrome in Korean Adults
 Bae, Ye Seul (*Seoul National Univ. Hospital*); Kim, Kyung Hwan (*Seoul National Univ. Hospital*); Lee, Hae-Young (*Seoul National Univ. Hospital*); Kim, Mi Jin (*Seoul National Univ. Hospital*); Park, Sang Min* (*Seoul National Univ. Hospital*)
- 18:00-19:30 FrPOS-34.47
Improvement in Cognitive Function of MCI Patients after Application of Acupuncture: A fNIRS Study
 Ghafoor, Usman (*Pusan National University*); Yoo, Ho-Ryong Yoo (*Neurology Disorder Center, Dunsan Korean Medicine Hospital, Daej*); Hong, Keum-Shik* (*Pusan National University*)
- 18:00-19:30 FrPOS-34.48
FRAME: Fall Risk Assessment for Lower Limb Amputees
 Palumbo, Pierpaolo* (*DEI – University of Bologna*); Stravato, Stefano (*Vibre*); Davalli, Angelo (*INAIL Prosthesis Center*); Chesani, Federico (*DISI – University of Bologna*); Chiari, Lorenzo (*University of Bologna*)
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- FrPOS-35: 18:00-19:30 Hall B
Research-Poster-1-Page Fr C (Poster Session)
- 18:00-19:30 FrPOS-35.1
Perfusion Mismatch Analysis – A Novel Risk Stratification Method for Pulmonary Embolism using Dual Energy CT
 Kesavadas, Tushar* (*Feinberg School of Medicine Northwestern Uty*); Howard, Travis (*Northwestern University*); Allen, Bradley (*Northwestern University*); Sankar, Kamyia (*Northwestern University*); Schimmel, Daniel (*Northwestern University*); Collins, Jeremy (*Mayo Clinic*)
- 18:00-19:30 FrPOS-35.2
InSafe: A Low-Cost Device to Improve Oxygenation and Airway Visualization during Emergency Intubation
 Gordon, Alex* (*Univ. of Toronto*); Mika, Nonoyama (*Hospital for Sick Children*); Diane, Soares (*Hospital for Sick Children*); Karsli, Cengiz (*Hospital for Sick Children*); Tessaro, Mark (*Hospital for Sick Children*); Estrada, Marvin (*Hospital for Sick Children*); Looi, Thomas (*CIGITI, Hospital for Sick Children*)
- 18:00-19:30 FrPOS-35.3
Pulmonary Function Test Equipment for Mice using Double Chamber Plethysmography
 Park, Hyun Mok (*Dongguk University*); Chang, Kyung Hwa (*Dongguk University College of Medicine*); Moon, Sang-Hyub (*Dongguk University*); Lee, Ye Jin (*Dongguk University*); Nam, Ki Chang* (*Dongguk University College of Medicine*)
- 18:00-19:30 FrPOS-35.4
Moisture-Triggered Fast Fixation Bandage
 Yuan, Bo (*Tsinghua University*); Liu, Jing* (*Tsinghua University*)
- 18:00-19:30 FrPOS-35.5
Light-Touch based Virtual Cane Improves Standing Balance without Physical Support
 Alluri, Sindhu Reddy (*Missouri Univ. of Science & Technology*); Burns, Devin (*Missouri Univ. of Science & Technology*); Song, Yun Seong* (*Missouri Univ. of Science & Technology*)
- 18:00-19:30 FrPOS-35.6
Improvements in Gait Adaptability after Robotic Exoskeleton Gait Therapy in Person with Multiple Sclerosis
 Niewrzol, Peter (*Montclair State Univ.*); Popok, Paula (*Montclair State Univ.*); Kwasnica, Marek (*Kessler Foundation*); Yue, Guang (*Kessler Foundation*); Androwis, Ghaith* (*Kessler Foundation, & New Jersey Institute of Technology*)

- 18:00-19:30 FrPOS-35.7
In Search for Fluid Flow Structures in Upper Human Airways during Independent Lung Ventilation
 Kramek-Romanowska, Katarzyna* (*Nalecz Institute of Biocybernetics & Biomedical Engineering Po*); Dorosz, Agata (*Faculty of Chemical & Process Engineering Warsaw University of*); Stecka, Anna (*Nalecz Institute of Biocybernetics & Biomedical Engineering PA*); Okrzeja, Piotr (*Nalecz Institute of Biocybernetics & Biomedical Engineering*)
- 18:00-19:30 FrPOS-35.8
Proposal of a Pediatric Externally Powered Prosthetic Hand
 Takemoto, Nobuo (*Osaka Institute of Technology*); Taniguchi, Hironari* (*Osaka Institute of Technology*)
- 18:00-19:30 FrPOS-35.9
Developing an Inexpensive Myoelectric Prosthetic Arm for Persons with Amputation
 Rattazzi, Ryan (*NJIT*); Haque, Emad (*NJIT*); Whitaker, Ricardo (*NJIT*); Baldassini, Nicole (*NJIT*); Adamovich, Sergei (*New Jersey Institute of Technology*); Androwis, Ghaith* (*Kessler Foundation, & New Jersey Institute of Technology*)
- 18:00-19:30 FrPOS-35.10
Modeling and Validation of a Novel Robotic Lower Extremity Exoskeleton for Neurorehabilitation
 Zhou, Xianlian A. (*New Jersey Institute of Technology*); Nunez, Erick (*NJIT*); Adamovich, Sergei (*New Jersey Institute of Technology*); Androwis, Ghaith* (*Kessler Foundation, & New Jersey Institute of Technology*)
- 18:00-19:30 FrPOS-35.11
Characterization of a Polymeric Composite Material for Its Potential use in the Replacement of Cruciate Anterior Ligament
 Zemanate, Andrés Felipe (*Univ. Autónoma de Occidente*); Ramirez, Alejandra* (*Univ. Autónoma de Occidente*); Neuta, Paola Andrea (*Univ. Autónoma de Occidente*); Caicedo, Julio César (*Univ. Autónoma de Occidente*)
- 18:00-19:30 FrPOS-35.12
A Simple Method for Mechanical Strength Measurement of Alginate-Collagen Fiber-Shaped Scaffold
 Oh, Seok (*Univ. of Ulsan*); Duong, Thuy* (*Univ. of Ulsan*); Phan, Huu Lam (*Ulsan Univ.*); Son, Hyewon (*Univ. of Ulsan, Ulsan*); Nguyen, Trung (*Univ. of Ulsan*); Nguyen, Hang Phuong (*Univ. of Ulsan*); Le, Thi Huong (*Univ. of Ulsan*); Lee, Suwon (*Univ. of Ulsan*); Lee, HyoSeok (*Univ. of Ulsan*); Hwang, Changho (*Ulsan Univ. Hospital*); Koo, Kyojin (*Univ. of Ulsan*)
- 18:00-19:30 FrPOS-35.13
Alginate-Collagen Mixture for Tunica Intermedia in Blood Vessel-Mimicking Structure Formation
 Nguyen, Hang Phuong* (*University of Ulsan*); Duong, Thuy (*University of Ulsan*); Oh, Seok (*University of Ulsan*); Phan, Huu Lam (*Ulsan University*); Nguyen, Trung (*University of Ulsan*); Le, Thi Huong (*University of Ulsan*); Lee, Suwon (*University of Ulsan*); Son, Hyewon (*University of Ulsan, Ulsan*); Lee, HyoSeok (*University of Ulsan*); Hwang, Changho (*Ulsan University Hospital*); Koo, Kyojin (*University of Ulsan*)
- 18:00-19:30 FrPOS-35.14
Construction of Three-Dimensional Aggregates by Human iPSC Cell-Derived Hepatocyte-Like Cells in a Microfluidic Device
 Harada, Yuko* (*Keio University*); Yamashita, Tadahiro (*Keio University*); Sudo, Ryo (*Keio University*)
- 18:00-19:30 FrPOS-35.15
Self-Assembly Tetra-Copolymer Scaffold Processed the Human Synovium-Derived Stem Cells for Cartilage Tissue Engineering: An in-Vivo Mice Animal Study
 Wang, Chen-Chie* (*Taipei Tzu-Chi General Hospital*); Yang, Ya-Ting (*Taipei Tzu-Chi General Hospital, Orthopedic Dept.*); Yang, Kai-Chiang (*School of Dental Technology, College of Oral Medicine, Taipei Me*)
- 18:00-19:30 FrPOS-35.16
A Heart Rate Correction for Consumer-Grade Wrist-Worn Sensor
 Choksatchawathi, Tanut (*Vidyasirimethi Institute of Science & Technology*); Ponglertnapakorn, Puntawat (*Brain@VISTEC : Vidyasirimethi Institute of Science & Technology*); Wisutthisen, Thayakorn (*King Mongkut's Univ. of Technology Thonburi*); Wilaiprasitporn, Theerawit* (*Vidyasirimethi Institute of Science & Technology (VISTEC)*)
- 18:00-19:30 FrPOS-35.17
Data Logging Systems for Capturing Human-Wheelchair Interaction for Children Diagnosed with Dyskinetic Cerebral Palsy
 Gakopoulos, Sotirios* (*KU Leuven*); Nica, Ioana (*KU Leuven*); Bekteshi, Saranda (*KU Leuven, Dept. of Rehabilitation Sciences, Campus Bruges.*); Aerts, Jean-Marie (*KU Leuven*); Monbaliu, Elegast (*KU Leuven, Dept. Rehabilitation Sciences Campus Bruges*); Hallez, Hans (*KU Leuven*)
- 18:00-19:30 FrPOS-35.18
Ubiquitous Monitoring of Sleep-Wake Cycles using Combined Sensing and Deep Learning Models
 Zhai, Bing (*Newcastle University upon Tyne*); Perez Pozuelo, Ignacio* (*University of Cambridge*); Brage, Soren (*MRC Epidemiology Unit, University of Cambridge*); Yu, Guan (*Newcastle University upon Tyne*)
- 18:00-19:30 FrPOS-35.19
A Multi-Parameter Approach for Objective Measurement of Pain
 Yan, Minghao (*Biofourmis*); Chen, Gengbo (*Biofourmis*); Labuschagne, FJ (*Life Groenkloof Hospital*); Killia, CA (*Netcare Unitas*); Chan, Soon Chee (*Biofourmis*); Hadjiat, Yacine (*Mundipharma Pte. Ltd.*); Rajput, Kuldeep Singh* (*Biofourmis*)
- 18:00-19:30 FrPOS-35.20
Evaluation of the Accuracy of Parametric and Non-Parametric Estimates in Kullback-Leibler Divergence in Rapid Eye Movement Sleep Estimation
 Fujie, Tatsuro* (*Osaka Electro-Communication University*); Tagawa, Munenori (*Osaka electro-communication University*); Nakamura, Hideo (*Osaka Electro-Communication Univ*); Umimoto, Koichi (*Osaka Electro-Communication University*)
- 18:00-19:30 FrPOS-35.21
GripIT: A Mobile Isometric Handgrip Test for Evaluation of Autonomic Cardiovascular Reflexes in Non-Clinical Applications
 Costa, Pedro Filipe Fernandes (*Instituto Politécnico Setúbal, Escola Superior de Tecnologia de*); Rocha, Miguel Ângelo (*IT – Instituto de Telecomunicações*); Baptista, Ricardo (*Instituto Politécnico de Setúbal*); Plácido da Silva, Hugo* (*IT – Instituto de Telecomunicações*)
- 18:00-19:30 FrPOS-35.22
A Feature-Based Approach to Quantify Motor Activity and Predict Outcomes in Critically Ill Patients
 Bhattacharyay, Shubhayu* (*Johns Hopkins Univ.*); Wang, Matthew (*Johns Hopkins Univ.*); Rattray, John (*Johns Hopkins Univ.*); Fredricks, Michiru (*Johns Hopkins Univ.*); Aditya, Joshi (*Johns Hopkins Univ.*); Etienne-Cummings, Ralph (*Johns Hopkins Univ.*); Kudela, Pawel (*Johns Hopkins Univ.*); Stevens, Robert (*Johns Hopkins Univ.*)
- 18:00-19:30 FrPOS-35.23
Auxiliary Integrated Multi-Sensor System for Medical Sensing
 Rana, Srinivas (*King's College London*); Pricci, Roberto L. (*MediWise, Medical Wireless Sensing Ltd.*); Kosmas, Panagiotis (*Kings College London*); Kallos, Efthymios* (*MediWise, Medical Wireless Sensing Ltd.*)
- 18:00-19:30 FrPOS-35.24
Low-Cost Wearable Assistive Technology Device for Visually Impaired
 Gay-Torné, Júlia (*Universitat Internacional de Catalunya (UIC)*); Marimon, Xavier* (*Universitat Politècnica de Catalunya*)
- 18:00-19:30 FrPOS-35.25
Step Counting using a Head-Mounted Accelerometer
 Cristiano, Alessia* (*San Raffaele Hospital*); Sanna, Alberto (*San Raffaele Hospital*); Trojaniello, Diana (*University of Sassari*)

- 18:00-19:30 FrPOS-35.26
Sleep Posture and Motion Detection using Depth Camera
Itoh, Yuki (*Nagaya City Univ.*); Yokoyama, Kiyoko* (*Nagoya City Univ.*); Umetani, Tomohiro (*Konan Univ.*)
- 18:00-19:30 FrPOS-35.27
Information Transmission in an Auditory Nerve Fiber Model Stimulated by a Simultaneous Pulse Rate and Amplitude-Modulated (PRAM) Waveform
Kawase, Yumeko (*Kanto Gakuin University*); Mino, Hiroyuki* (*Kanto Gakuin University*)
- 18:00-19:30 FrPOS-35.28
Rapid FPGA Implementation of Independent Component Analysis for EEG Pre-Processing
Kim, Young Soo* (*Bradley Univ.*); Sambolu, Ramya (*Bradley Univ.*)
- 18:00-19:30 FrPOS-35.29
Neural Recording from Rat Barrel Cortex for Brain-Machine Interface
Lee, Youjin (*Ewha Womans Univ.*); Cho, Yoon Kyung (*Ewha Womans Univ.*); Lee, Jee Won (*Ewha Womans Univ.*); Kong, Chanho (*Yonsei Univ.*); Shin, Jaewoo (*Yonsei Univ.*); Koh, Chin Su (*Yonsei Univ.*); Jung, Hyun Ho (*Yonsei Univ.*); Chang, Jin Woo (*Yonsei Univ.*); Jun, Sang Beom* (*Ewha Womans Univ.*)
- 18:00-19:30 FrPOS-35.30
Effect of Simultaneously Stimulating Different Ganglion Cell Types with the Same Stimulation Strategy in Epiretinal Implants
Hosseini, Maryam* (*Univ. de Sherbrooke*); Azadmanesh, Matin (*Univ. de Sherbrooke*); Plourde, Eric (*Univ. de Sherbrooke*)
- 18:00-19:30 FrPOS-35.31
Avoiding Retinal Ganglion Cell Axon Activation with Oriented Rectangular Electrodes
Tong, Wei (*Univ. of Melbourne*); Meffin, Hamish (*National ICT Australia*); Hejazi, Maryam (*Univ. of Melbourne*); Stamp, Melanie (*Univ. of Melbourne*); Garrett, David J. (*Univ. of Melbourne*); Praver, Steven (*Univ. of Melbourne*); Ibbotson, Michael R* (*Australian College of Optometry*)
- 18:00-19:30 FrPOS-35.32
in-Vivo Characterisation of a Diamond-Based Epiretinal Prosthesis
Evans, Mihailo (*The Univ. of New South Wales*); Garrett, David J. (*Univ. of Melbourne*); Burns, Owen (*The Bionics Institute of Australia*); Yeoh, Jonathan (*Centre for Eye Research Australia*); Fox, Kate (*RMIT Univ.*); Nayagam, David A.X. (*The Bionics Institute*); Villalobos, Joel (*Bionics Institute*); Sabu, Anu (*The Bionics Institute of Australia*); Saunders, Alexia (*The Bionics Institute of Australia*); McPhedran, Michelle (*The Bionics Institute of Australia*); Abbott, Carla (*Centre for Eye Research Australia*); Luu, Chi (*Centre for Eye Research Australia*); Ganesan, Kumaravelu (*Univ. of Melbourne*); Meffin, Hamish (*National ICT Australia*); Praver, Steven (*Univ. of Melbourne*); Shepherd, Robert (*The Bionics Institute of Australia*); Shivdasani, Mohit N.* (*Univ. of New South Wales*)
- FrPOS-36: 18:00-19:30 Hall B
Research-Poster-1-Page Fr D (Poster Session)
- 18:00-19:30 FrPOS-36.1
Comparison between Computer and Smartphone-Based Voice Recording System to Detect Parkinson's Disease
Perez, Carlos J.* (*Univ. de Extremadura*); Campos Roca, Yolanda (*Univ. de Extremadura*); Madruga, Mario (*Univ. de Extremadura*); Santiago, Diego (*Univ. de Extremadura*)
- 18:00-19:30 FrPOS-36.2
Modulation of Event-Related Potentials by Cognitive Inhibition of Habitual Behaviors
Kang, Jae-Hwan (*Institute for Basic Science (IBS)*); Kim, Junsuk (*Institute for Basic Science*); Kim, Sung-Phil* (*Ulsan National Institute of Science & Technology*)
- 18:00-19:30 FrPOS-36.3
12-Lead ECG Feature Identification to Discriminate Different Types of Atrial Flutter
Luongo, Giorgio* (*Karlsruhe Institute of Technology*); Schuler, Steffen (*Karlsruhe Institute of Technology (KIT)*); Doessel, Olaf (*Karlsruhe Institute of Technology (KIT)*); Loewe, Axel (*Karlsruhe Institute of Technology (KIT)*)
- 18:00-19:30 FrPOS-36.4
Sleep Pattern Recognition via Wearable Health Devices
Fedorin, Illia* (*Samsung R&D Institute Ukraine*); Slyusarenko, Kostyantyn (*Samsung R&D Institute Ukraine*); Lee, Wonkyu (*Samsung Electronics*)
- 18:00-19:30 FrPOS-36.5
Speech Command Recognition for Dysarthric Speakers based on Deep Learning Approach: A Pilot Study
Hung, Ying-Hsiu (*National Yang-Ming Univ.*); Chen, Ko-Chiang (*National Yang-Ming Univ.*); Han, Ji Yan (*Yang Ming*); Ho, Guan-Min (*APrevent Medical*); Chang, Chia-Yuan (*APrevent Medical Inc.*); Lai, Ying-Hui* (*National Yang-Ming Univ.*)
- 18:00-19:30 FrPOS-36.6
Proposal of a SSVEP-Based BCI using Stimuli with Gradually Changing Flickering Frequencies
Yagi, Jin* (*Meijo Univ.*); Mukai, Toshiharu (*Meijo Univ.*)
- 18:00-19:30 FrPOS-36.7
Feature Selection for Emotional State Identification based on Electroencephalogram
Yu, Sung-Nien* (*National Chung Cheng University*); Lin, Wei-Ren (*National Chung Cheng University*)
- 18:00-19:30 FrPOS-36.8
Valence and Arousal Attributes in Emotional State Identification based on Photoplethysmogram
Yu, Sung-Nien* (*National Chung Cheng University*); Lee, Chi-Chih (*National Chung Cheng University*)
- 18:00-19:30 FrPOS-36.9
Feasibility Study for Asynchronous Communication with Eyes
Chang, Won-Du* (*Tongmyong University*); Cha, Ho-Seung (*Hanyang University*); Im, Chang-Hwan (*Hanyang University*)
- 18:00-19:30 FrPOS-36.10
A Deep Learning Approaches for Pathological Voice Detection using Gender Analysis Methods
Lee, JiYeoun* (*Jungwon University*); Choi, Hee-Jin (*Korea Advanced Institute of Science & Technology*)
- 18:00-19:30 FrPOS-36.11
A Study of Personal Identification Method based on EMG Signal
Lu, Lijing (*Institute of Automation, Chinese Academy of Sciences*); Mao, Jingna* (*Chinese Academy of Sciences*); Wang, Wuqi (*Institute of Automation, Chinese Academy of Sciences*); Ding, Guangxin (*IACAS*); Zhang, Zhiwei (*Institute of Automation, Chinese Academy of Sciences*)
- 18:00-19:30 FrPOS-36.12
Low-Complexity Data-Driven Seizure Detection Algorithm for Home Monitoring of Patients with Epilepsy using Wearable EEG
Dan, Jonathan* (*KU Leuven*); Vandendriessche, Benjamin (*Case Western Reserve Univ.*); Weckhuysen, Dorien (*KU Leuven*); Van Paesschen, Wim (*Katholieke Univ. Leuven*); Bertrand, Alexander (*KU Leuven, Univ. of Leuven*)
- 18:00-19:30 FrPOS-36.13
Estimation of Unified Parkinson's Disease Rating Scale III: A Sensor-Type Selection Study
Murtadha, Hssayeni (*Florida Atlantic Univ.*); Shahed, Joohee (*Dept. of Neurology, Baylor College of Medicine*); Burack, Michelle (*Univ. of Rochester*); Ghoraani, Behnaz* (*Florida Atlantic Univ.*)
- 18:00-19:30 FrPOS-36.14
Preliminary Study: Person Identification using Multi-Channel ECG Measured on the Chest
Lee, Dongseok (*Seoul National University*); Kim, Jeehoon (*Seoul National University*); Kwon, Hyunbin (*Seoul National University*); Park, Kwang S.* (*Seoul National University*)

- 18:00-19:30 FrPOS-36.15
K-NN Verses GMM for Neonatal EEG Multi-Event Classification
 Murphy, Brian Michael (*Univ. College Cork*); Boylan, Geraldine (*Univ. College Cork*); Lightbody, Gordon (*Univ. College Cork*); Marnane, William* (*Univ. College Cork*)
- 18:00-19:30 FrPOS-36.16
The Influence of Fetal Movement to Fetal QRS Complex Morphology
 Weiß, Jonas* (*TU Dresden*); Zaunseder, Sebastian (*Dortmund Univ. of Applied Sciences & Arts*); Schmidt, Martin (*TU Dresden*)
- 18:00-19:30 FrPOS-36.17
Sleep Staging with a Wearable Respiratory Signal Adapted to an Inductance Plethysmography-Based Deep Learning Model
 Ganglberger, Wolfgang* (*Massachusetts General Hospital*); Sun, Haoqi (*Massachusetts General Hospital*); Tesh, Ryan (*Massachusetts General Hospital (MGH)*); Panneerselvam, Ezhil (*Massachusetts General Hospital, Harvard*); Paixao, Luis (*Massachusetts General Hospital*); Leone, Michael (*Massachusetts General Hospital*); Quadri, Syed (*Dept. of Neurology, Massachusetts General Hospital, Harvard*); Thomas, Robert Joseph (*Beth Israel Deaconess Medical Center*); Kuller, David Thomas (*MyAir Ilc*); Westover, Brandon (*Massachusetts General Hospital*)
- 18:00-19:30 FrPOS-36.18
EEG-ECG Fusion-Based Multi-Modal Personal Authentication Algorithm using Deep Learning Methods
 Kim, Jeehoon (*Seoul National Univ.*); Lee, Dongseok (*Seoul National Univ.*); Sung, Dongsuk (*Seoul National Univ.*); Kim, Jason (*Korea Internet & Security Agency*); Park, Kwang S.* (*Seoul National Univ.*)
- 18:00-19:30 FrPOS-36.19
Bio-Signal Feature Selection using Genetic Algorithm for Sleep Status Analysis
 Lee, JeeEun (*YonSei Univ.*); Kim, HanBit (*Yonsei Univ.*); Yoo, Sun K.* (*Yonsei Univ. Health System*)
- 18:00-19:30 FrPOS-36.20
Experimental Study of the Patient-Specific Airway Occlusion of an Obstructive Sleep Apnea Patient using Silicone Models
 Arnold, Marleen* (*University of Wuppertal*); Burgmann, Sebastian (*University of Wuppertal*); Bonitz, Lars (*Dortmund General Hospital*); Pugachev, Alexander (*CADFEM Medical GmbH*); Janoske, Uwe (*University of Wuppertal*)
- 18:00-19:30 FrPOS-36.21
An Interpenetrating, Patternable Conducting Polymer Hydrogel Covalently Bonded to Gold for Electrically Tuneable Drug Delivery
 Bansal, Mahima* (*Univ. of Auckland*); Aqrawe, Zaid (*Univ. of Auckland*); Montgomery, Johanna (*The Univ. of Auckland, Centre for Brain Research*); Wu, Zimei (*Univ. of Auckland*); Svirskis, Darren (*The Univ. of Auckland, School of Pharmacy*)
- 18:00-19:30 FrPOS-36.22
A 3D Diamond Electrode Array for High Acuity Stimulation in Retinas
 Stamp, Melanie* (*Univ. of Melbourne*); Tong, Wei (*Univ. of Melbourne*); Ganesan, Kumaravelu (*Univ. of Melbourne*); Ibbotson, Michael R (*Australian College of Optometry*); Praver, Steven (*Univ. of Melbourne*); Garrett, David J. (*Univ. of Melbourne*)
- 18:00-19:30 FrPOS-36.23
An Dual-Mode Antenna for Implantable Neurostimulators
 Feng, Yuan (*Tsinghua Univ.*); Ma, Bozhi (*Tsinghua Univ.*); Hao, Hongwei (*Tsinghua Univ.*); Li, Luming* (*Tsinghua Univ.*)
- 18:00-19:30 FrPOS-36.24
A Novel Tuning Method of the Resonance Coupling Wireless Power Transfer for Implantable Medical Devices
 Minemura, Kohei* (*Tokyo City Univ.*); Tatsuta, Masahiro (*Tokyo City Univ.*); Yamamoto, Arata (*Tokyo City Univ.*); Kyoso, Masaki (*Tokyo City Univ.*); Shimatani, Yuichi (*Tokyo City Univ.*)
- 18:00-19:30 FrPOS-36.25
Factors Affecting Electrical Characteristics of Implanted Receiver Coils for the Resonance Coupling Wireless Power Transmission in the Living Body
 Yamamoto, Arata* (*Tokyo City Univ.*); Minemura, Kohei (*Tokyo City Univ.*); Tatsuta, Masahiro (*Tokyo City Univ.*); Shimatani, Yuichi (*Tokyo City Univ.*); Kyoso, Masaki (*Tokyo City Univ.*)
- 18:00-19:30 FrPOS-36.26
Characteristic Evaluation of Flexible Film Material for a Wearable Device by Image-Based Method
 Toyoshi, Takuya* (*Ritsumeikan University*); Shiozawa, Naruhiro (*Ritsumeikan University*)
- 18:00-19:30 FrPOS-36.27
Sleep Stage Prediction Model by using Electrocardiogram Measured by Smart Wear in Field Test
 Matsumoto, Hiroataka* (*Ritsumeikan University*); Okada, Shima (*Ritsumeikan University*); Shiozawa, Naruhiro (*Ritsumeikan University*); Makikawa, Masaaki (*Ritsumeikan University*)
- 18:00-19:30 FrPOS-36.28
Development of Underwear-Type Electrocardiogram Measurement System
 Goto, Daisuke* (*Ritsumeikan University*); Nakatani, Minoru (*Ritsumeikan University*); Toyoshi, Takuya (*Ritsumeikan University*); Shiozawa, Naruhiro (*Ritsumeikan University*)
- 18:00-19:30 FrPOS-36.29
Classification of Seated Postures by a Backrest Capacitive Pressure Sensor
 Ho, Jong Gab (*SoonChunHyang Univ.*); Kim, Young (*SoonChunHyang Univ.*); Min, Se Dong* (*SoonChunHyang Univ.*)
- 18:00-19:30 FrPOS-36.30
Locally Operated Master-Slave Control System with Forceps Insertable Portable Operating Device for Laparoscopic Surgery
 Karino, Hideyuki* (*Osaka Institute of Technology*); Kawai, Toshikazu (*Osaka Institute of Technology*); Nishizawa, Yuji (*Dept. of Gastroenterological Surgery, Faculty of Medicine.*); Nishikawa, Atsushi (*Osaka University*); Iwamoto, Noriyasu (*Shinshu University*); Horise, Yuki (*Tokyo Women's Medical University*); Masamune, Ken (*The University of Tokyo*)
- 18:00-19:30 FrPOS-36.31
Forceps Manipulator with Circular Ring Guided Rail and Linear Guide Roller for Laparoscopic Surgery
 Sasaki, Ayumu* (*Osaka Institute of Technology*); Amemori, Hiroki (*Osaka Institute of Technology*); Kawai, Toshikazu (*Osaka Institute of Technology*); Nishikawa, Atsushi (*Osaka Univ.*); Nishizawa, Yuji (*Dept. of Gastroenterological Surgery, Faculty of Medicine.*); Nakamura, Tatsuo (*Kyoto Univ.*)
- 18:00-19:30 FrPOS-36.32
Image Recognition of Surgical Tool in Working Area for Laparoscope Robot Control
 Nishimura, Fumiaki* (*Osaka Institute of Technology*); Nakasuji, Hisa (*Osaka Institute of Technology*); Kawai, Toshikazu (*Osaka Institute of Technology*); Nishikawa, Atsushi (*Osaka University*); Iwamoto, Noriyasu (*Shinshu University*); Nishizawa, Yuji (*Dept. of Gastroenterological Surgery, Faculty of Medicine.*); Nakamura, Tatsuo (*Kyoto University*)
- 18:00-19:30 FrPOS-36.33
Development of Bending Assist System with SMA Coil for Endoscopic Surgical Robot
 Goto, Toshiya* (*Shibaura Institute of Technology*); Hanafusa, Akihiko (*Shibaura Institute of Technology*); Suzuki, Naoki (*The Jikei University School of Medicine*); Hattori, Asaki (*The Jikei University School of Medicine*)
- 18:00-19:30 FrPOS-36.34
Modeling and Force Analysis of Cable Conduit System
 Choi, Jinwoo (*Korea Univ.*); Hong, Daehie* (*Korea Univ.*)

- 18:00-19:30 FrPOS-36.35
BioGears Model to Estimate Glycogen Depletion and Blood Glucose Levels for Diabetic Patients during Simulated Exercise
 Baird, Austin* (*Applied Research Associates*); Tatum, Nathan (ARA); White, Steven A (*Applied Research Associates*); McDaniel, Matthew (*Applied Research Associates*); Marin, Lucas (*Applied Research Associates*); Carter, Jennifer (*Applied Research Associates, Inc.*)
- 18:00-19:30 FrPOS-36.36
Predicting Deep Brain Stimulation Success from Preoperative Markers using Machine Learning in Parkinson's Disease
 Habets, Jeroen* (*Maastricht Univ.*); Janssen, Mark (*Dept. of Neurophysiology, Maastricht Univ. Medical Cen*); Duits, Annelien (*Dept. of Neuropsychology, Maastricht Univ. Medical Cen*); De Greef, Bianca (*Clinical Epidemiology & Medical Technology Assessment, Maastricht*); Temel, Yasin (*Dept. of Neurosurgery, Maastricht Univ. Medical Center*); Kuijff, Mark (*Maastricht Univ. Medical Center*); Kubben, Pieter Leonard (*Maastricht Univ. Medical Center*); Herff, Christian (*Maastricht Univ.*)
- 18:00-19:30 FrPOS-36.37
Prediction of Eight-Year Risk of Breast Cancer in Koreans
 Choi, Sung Hyouk (*Dept. of Biomedical Engineering, Seoul National University*); Park, Minseon (*Seoul National University Hospital*); Yoon, Hyung-Jin* (*Seoul National University*)
- 18:00-19:30 FrPOS-36.38
The Proposal of a New Diagnostic Criterion for Schizophrenia Focused on an Abnormal Sense of Agency
 Murata, Yuuki (*the Dept. of Computer & Information Sciences, Tokyo Univ.*); Yano, Shiro (*Tokyo Univ. of Agriculture & Technology*); Kondo, Toshiyuki* (*Tokyo Univ. of Agriculture & Technology*); Maeda, Takaki (*Keio Univ. School of Medicine*)
- 18:00-19:30 FrPOS-36.39
The Effects of Transcranial Ultrasound Stimulation of the Prefrontal Cortex on Sleep in Freely Moving Mice
 Jo, Yehhyun (*KAIST*); Kim, Seongyeon (*Korea Advanced Institute of Science & Technology (KAIST)*); Kim, Hyunggug (*KAIST*); Lee, Sang-Mok (*KAIST*); Lee, Hyunjoo Jenny* (*Korea Advanced Institute of Science & Technology (KAIST)*)
- 18:00-19:30 FrPOS-36.40
Bolt-Clamped Ultrasonic Transducer Design for Fat Emulsification via Equivalent Circuit Model
 Kim, JinHyuk (*Kwangwoon University*); Lee, Jungwoo* (*Kwangwoon University*)
- 18:00-19:30 FrPOS-36.41
Miniaturized Capacitive Micromachined Ultrasound Transducer Arrays for Personalized Medicine
 Baum, Mario* (*Fraunhofer ENAS*); Saeidi, Nooshin (*Technical University of Chemnitz*); Wiemer, Maik (*Fraunhofer ENAS*); Otto, Thomas (*Fraunhofer ENAS*)
- 18:00-19:30 FrPOS-36.42
Focused Ultrasound Improves Adult Hippocampal Neurogenesis and Cognitive Function in a Cholinergic Degeneration
 Shin, Jaewoo* (*Yonsei University*); Kong, Chanho (*Yonsei University*); Lee, Jihyeon (*Yonsei University*); Chang, Won Seok (*Yonsei University*); Chang, Jin Woo (*Yonsei University*)
- 18:00-19:30 FrPOS-36.43
Novel Calibration Algorithm against Convection Changes for Non-Invasive Measurement of Core Body Temperature
 Matsunaga, Daichi* (*NTT Device Technology Labs*); Tanaka, Yujiro (*NTT Device Technology Labs.*); Seyama, Michiko (*NTT Device Technology Labs*)
- 18:00-19:30 FrPOS-36.44
Microwave Radiometer for Noninvasive Temperature Measurement of Internal Body
 Chiu, Chien wen* (*National Ilan Univ.*); Zheng, Mao Sheng (*Dept. of Electronic Engineering, National Ilan Univ.*); Gong, Jian Y. (*Dept. of Electronic Engineering, National Ilan Univ.*)
- 18:00-19:30 FrPOS-36.45
A Detailed Thermal Characterization of the Hand with Attention to Heat Flux
 Subramanian, Arjun (*National Univ. of Singapore*); Bandla, Aishwarya* (*National Univ. of Singapore*); Veluru, Jagadeesh Babu (*Singapore Institute of Manufacturing Technology, A*STAR*); Palanisamy, Mohankumar (*National Univ. of Singapore*); Hey, Jonathan Heng Kiat (*SIMTech, Agency for Science, Technology & Research*); Sundar, Raghav (*National Univ. Health System*); Thakor, Nitish (*National Univ. of Singapore*); Ramakrishna, Seeram (*National Univ. of Singapore*); He, Wei (*Singapore Institute of Manufacturing Technology, A*STAR*)
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- FrPOS-37: 18:00-19:30 Hall B
Research-Poster-1-Page Fr E (Poster Session)
- 18:00-19:30 FrPOS-37.1
Continuous Blood Pressure Signal Modeling based on Deep Learning Method and a Physiological Mathematical Model
 Kim, Youmin (*Gachon Univ.*); Kang, JunHyuk (*Gachon Univ.*); Cho, Jinwoo (*Gachon Univ.*); Choi, Ahyoung* (*Gachon Univ.*)
- 18:00-19:30 FrPOS-37.2
Parameter Optimization in Ensemble Empirical Mode Decomposition Applied to Electrogastrigraphy
 Tatsuta, Masahiro* (*Tokyo City University*); Minemura, Kohei (*Tokyo City University*); Yamamoto, Arata (*Tokyo City University*); Kyoso, Masaki (*Tokyo City University*)
- 18:00-19:30 FrPOS-37.3
Decomposition of Electrical Cochlear Response using Different EMD Algorithms for the Reduction of Signal Artifacts
 Castaneda-Villa, Norma* (*Universidad Autónoma Metropolitana-Izt*); Granados Trejo, María del Pilar (*Universidad Autónoma Metropolitana-Iztapalapa*); Cornejo-Cruz, Juan Manuel (*Universidad Autónoma Metropolitana*)
- 18:00-19:30 FrPOS-37.4
Investigation of EEG Activity in the Different Events during Playing Game
 Tahara, Ayumi* (*Kyushu Univ.*); Nakphu, Nonthaporn (*Kyushu Univ.*); Le Thi Cam, Van (*KYUSHU Univ.*); Kaewlee, Thitikorn (*Dept of Biomedical Engineering*); Wongsawat, Yodchanan (*Mahidol Univ.*); Iramina, Keiji (*Kyushu Univ., Japan*)
- 18:00-19:30 FrPOS-37.5
Combining Adaptive Hermite and Sigmoid Functions with Piecewise Polynomial Interpolation for ECG Beat Representation
 Boeck, Carl* (*Johannes Kepler University Linz*); Kovács, Péter (*Johannes Kepler University*); Meier, Jens (*Kepler University Linz*); Huemer, Mario (*Johannes Kepler University*)
- 18:00-19:30 FrPOS-37.6
Decreased Post-Occlusion Reactive Hyperemia in Sole Microcirculation in Patients with Diabetes Mellitus
 Wang, Jia-Jung* (*I-Shou University*); Liu, Shing-Hong (*Chaoyang University of Technology, Taichung, Taiwan, ROC*); Su, Xuan-Hao (*I-Shou University*); Tseng, Wei-Kung (*Dept. of Cardiology, E-Da Hospital*)
- 18:00-19:30 FrPOS-37.7
Predicting Heart Failure Adverse Events using Telemonitoring Data
 O'Donnell, Johanna* (*University of Oxford*); Velardo, Carmelo (*University of Oxford*); Rahimi, Kazem (*University of Oxford*); Tarassenko, Lionel (*University of Oxford*)
- 18:00-19:30 FrPOS-37.8
Prosodic Features of Speech in Children with Autism
 Eni, Marina* (*Ben-Gurion Univ. of the Negev*); Dinstein, Ilan (*Ben Gurion Univ.*); Zigel, Yaniv (*Ben-Gurion Univ. of the Negev*)
- 18:00-19:30 FrPOS-37.9
Diagnosis of Major Depression using Cross-Frequency Coupling
 Colic, Sinisa* (*McMaster University*); Flor-Henry, Pierre (*Alberta Hospital Edmonton*); Lind, John C. (*University of Alberta*); Chu, Justin (*University of Toronto*); Reilly, James (*McMaster University*); Hasey, Gary (*McMaster University*)

- 18:00-19:30 FrPOS-37.10
Proposal of a Method for Measuring Pulse Transit Time using a Tactile Sensor
 Nonoyama, Taro* (*Meijo University*); Ogishi, Yudai (*Meijo University*); Mukai, Toshiharu (*Meijo University*)
- 18:00-19:30 FrPOS-37.11
Relationship between Sleep Stage and Head Motion
 Yoshihi, Motoki* (*Ritsumeikan Univ., College of Science & Engineering*); Okada, Shima (*Ritsumeikan Univ.*); Nochino, Teruaki (*Osaka Univ.*); Makikawa, Masaaki (*Ritsumeikan Univ.*)
- 18:00-19:30 FrPOS-37.12
Tracing Rhythmic Regularity Processing in EEG and MEG
 Brandl, Stephanie* (*Berlin Institute of Technology*); Haumann, Niels Trusbak (*Aarhus University*); Brattico, Elvira (*Aarhus University*); Vuust, Peter (*Aarhus University*); Grube, Manon (*Berlin Institute of Technology*)
- 18:00-19:30 FrPOS-37.13
Fluctuations of Hemodynamic Global Signal are Correlated with Vigilance States in Middle-Aged and Older Adults: A Simultaneous EEG and fNIRS Study
 Chen, Yuxuan (*Univ. of Oklahoma*); Roque, Jesse (*Univ. of Oklahoma*); Tang, Julia (*Univ. of Oklahoma*); Craft, Melissa (*The Univ. of Oklahoma*); Carlson, Barbara (*The Univ. of Oklahoma*); Yuan, Han* (*Univ. of Oklahoma*)
- 18:00-19:30 FrPOS-37.14
Frequency Identification for Epileptic Spike Detection by Linear-Phase Constrained Convolutional Neural Network
 Fukumori, Kosuke (*Tokyo Univ. of Agriculture & Technology*); Yoshida, Noboru (*Juntendo Univ. Nerima Hospital*); Tanaka, Toshihisa* (*Tokyo Univ. of Agriculture & Technology*)
- 18:00-19:30 FrPOS-37.15
Motion Artifact Correction of Photoplethysmogram (PPG) Signal using Advanced Wavelet based Method
 Arora, Rahul* (*Samsung R&D Institute India Bangalore*); Sujit, Jos (*Samsung Research India-Bangalore*); Abdul Majeed, Ibrahim (*Samsung R&D India – Bangalore*); Karam, Choi (*Samsung Advanced Institute of Technology*); Bae, Sang Kon (*Samsung Advanced Inst of Tech*)
- 18:00-19:30 FrPOS-37.16
EEG Analysis Towards Evaluating Synthesized Speech Quality
 Halim Parmonangan, Ivan* (*Nara Institute of Science & Technology*); Tanaka, Hiroki (*Nara Institute of Science & Technology*); Sakriani, Sakti (*Nara Institute of Science & Technology*); Takamichi, Shinnosuke (*The Univ. of Tokyo*); Satoshi, Nakamura (*Nara Institute of Science & Technology*)
- 18:00-19:30 FrPOS-37.17
The EEG Band Analysis for Comparing Attentional State of Elderly People in Different Web Environments
 Kim, Wooseop (*The Seongnam Senior Experience Complex, Eulji Univ.*); Shin, Young Seok (*Eulji Univ.*); Jung, Duk Young* (*The Seongnam Senior Experience Complex, Eulji Univ.*)
- 18:00-19:30 FrPOS-37.18
Behavioral Analysis of Steroid Hormone-Treated Mouse by Automated Long-Term Overnight Continuous Measurement
 Kasai, Ririko (*Keio University*); Mitsukura, Yasue* (*Keio University*); Hamada, Nozomu (*Keio University*)
- 18:00-19:30 FrPOS-37.19
Stroke Status Prediction with Imbalanced Demographic, Lifestyle and Biomarkers Data using Machine-Learning Models
 Chan, Kei Hang Katie* (*City University of Hong Kong / Brown University*); Liu, Jundong (*City University of Hong Kong*)
- 18:00-19:30 FrPOS-37.20
A Knowledge base for Human Motor Brain Circuitry
 Wittenberg, George* (*University of Pittsburgh*); Bocan, Kara (*University of Pittsburgh*); Roy, Souvik (*University of Pittsburgh*); Miskov-Zivanov, Natasa (*University of Pittsburgh*)
- 18:00-19:30 FrPOS-37.21
Single Cell Acoustic Trap using an Array Transducers
 Iim, Hae Gyun (*Pohang University of Science & Technology*); Kim, Hyung Ham (*Pohang University of Science & Technology*); Yoon, Changhan* (*Inje University*)
- 18:00-19:30 FrPOS-37.22
Semantic Segmentation of Echocardiography for Diagnosis of Heart Failure with Preserved Ejection Fraction
 Chiou, Yu-An (*National Chiao Tung Univ.*); Lin, Shien-Fong* (*National Chiao Tung Univ.*); Hung, Chung-Lieh, Chung-Lieh (*Division of Cardiology, Dept. of Internal Medicine, Mackay*)
- 18:00-19:30 FrPOS-37.23
Discrete Morphometric Analysis by Echocardiography in Trypanosoma Cruzi Infection
 Hevia-Montiel, Nidiyare (*Univ. Nacional Autonoma de Mexico*); Parra-Castaneda, Natalia* (*Proyecto Savia, Formación Temprana de Científicos, SIIES*); Carrillo-Bermejo, Angel (*Univ. Nacional Autónoma de México*); Haro, Paulina (*CONACYT-Centro de Investigaciones Regionales Dr. Hideyo Noguchi*); Perez-Gonzalez, Jorge (*Univ. Nacional Autonoma de Mexico*); Molino-Minero-Re, Erik (*Instituto de Investigaciones en Matemáticas Aplicadas y en Siste*)
- 18:00-19:30 FrPOS-37.24
Ultrasound Echo and Photoacoustic Vectorial Doppler Tissue Motion and Blood Flow Imaging
 Sumi, Chikayoshi* (*Sophia University*)
- 18:00-19:30 FrPOS-37.25
Ultrasound Shear-Wave and Machine Learning for Muscle Contusion Assessment and Classification
 Huang, Da-Ming (*National Cheng Kung University*); Wang, Shyh-Hau* (*National Cheng Kung University*)
- 18:00-19:30 FrPOS-37.26
Machine Learning Approach to Needle Insertion Site Identification for Neuraxial Anaesthesia in Obese Patients
 Ma, Jun (*National Univ. of Singapore*); Leng, Yusong (*National Univ. of Singapore*); Ng, Cailin* (*NUS*); Ikhsan, Mohammad (*National Univ. of Singapore*); Tan, Kok Kiong (*National Univ. of Singapore*); Chan, Jason Ju In (*KK Women's & Children's Hospital*); Sia, Alex Tiong Heng (*KK Women's & Children's Hospital*); Sng, Ban Leong (*KK Women's & Children's Hospital*)
- 18:00-19:30 FrPOS-37.27
Improvement of Tissue Harmonic Imaging using Hankel SVD
 Kim, Yeongdae* (*Dept. of Electrical Engineering, Sogang University*); Yeo, Sunmi (*Sogang University, Electronic Engineering*); Chung, Euisuk (*Sogang Univ.*); Jang, Jintae (*Sogang University*); Song, Tai-Kyong (*Sogang University*)
- 18:00-19:30 FrPOS-37.28
Real-Time Ultrasound/Photoacoustic Imaging System and Its In Vitro/in-Vivo Applications
 Liao, Lun-De* (*National Health Research Institutes, Taiwan.*)
- 18:00-19:30 FrPOS-37.29
Ultra Wide-Field Acoustic-Resolution Photoacoustic Microscopy based on High-Speed MEMS Scanning
 Baik, Jin Woo (*Pohang Univ. of Science & Technology*); Kim, Jin Young (*POSTECH*); Cho, Seonghee (*Pohang Univ. Science & Technology*); Choi, Seongwook (*Pohang Univ. of Science & Technology*); Kim, Jongbeom (*POSTECH*); Kim, Chulhong* (*Pohang Univ. of Science & Technology*)
- 18:00-19:30 FrPOS-37.30
High-Speed and Label-Free Intraoperative Histology by MEMS-Based Photoacoustic Microscopy
 Kim, Hyojin (*POSTECH*); Baik, Jin Woo (*Pohang University of Science & Technology*); Kim, Jin Young (*POSTECH*); Son, Myeongjoo (*College of Medicine, Gachon University*); Byun, Kyunghye (*College of Medicine, Gachon University*); Ryu, Seon Young (*Panovision Co. Ltd.*); Kim, Chulhong* (*Pohang University of Science & Technology*)

- 18:00-19:30 FrPOS-37.31
A Feasibility Study of an X-Ray Induced Acoustic Imaging System for a Low-Dose X-Ray Absorption Contrast Imaging
 Park, Eunyong (*Pohang University of Science & Technology (POSTECH)*); Park, Kyungjin (*Pohang University of Science & Technology*); Lee, Donghyun (*POSTECH*); Choi, Seongwook (*Pohang University of Science & Technology*); Kim, Hyeongsu (*POSTECH*); Kim, Jong Hyun (*Pohang Accelerator Laboratory*); Kim, Chulhong* (*Pohang University of Science & Technology*)
- 18:00-19:30 FrPOS-37.32
Needle Detection and Quality Enhancement in Ultrasound Images
 García-Berná, José Alberto* (*University of Murcia*); Kim, Denisse M. (*University of Murcia*); García-Mateos, Ginés (*University of Murcia*); Carrillo de Gea, Juan Manuel (*University of Murcia*); Fernandez Aleman, Jose Luis (*University of Murcia*); Hosni, Mohamed (*ENSIAS, Mohammed V University*); Idri, Ali (*Mohammed V University Rabat*)
- 18:00-19:30 FrPOS-37.33
Automatic Identification of the Juxtaluminar Hypochoic Black Area in B-Mode Ultrasound Images of Carotid Plaque
 Dalakleidi, Kalliopi* (*National Technical Univ. of Athens*); Golemati, Spyretta (*National Kapodistrian Univ. of Athens*); Lekkas, Konstantinos (*National Technical Univ. of Athens*); Xenikou, Monika Filitsa (*National Technical Univ. of Athens*); Liapis, Christos (*National Kapodistrian Univ. of Athens*); Nikita, Konstantina (*National Technical Univ. of Athens*)
- 18:00-19:30 FrPOS-37.34
Carotid Plaque Motion Characterization using Ultrasound Video
 Kyriacou, Efthymoulos* (*Frederick Univ. Cyprus*); Pattichis, Constantinos (*Univ. of Cyprus*); Pattichis, Marios (*Univ. of New Mexico*); Nicolaidis, Andrew (*Imperial College*)
- 18:00-19:30 FrPOS-37.35
Simple Evaluation of Cerebral Artery Occlusion by Pulse Wave Measurement using a Piezoelectric Sensor
 Itai, Natsuko* (*Doshisha University*); Tsurusaki, Ryo (*Doshisha University*); Matsukawa, Mami (*Doshisha University*); Saito, Kozue (*Nara Medical University*); Yamagami, Hiroshi (*National Cerebral & Cardiovascular Center*); Nagatsuka, Kazuyuki (*National Cerebral & Cardiovascular Center*)
- 18:00-19:30 FrPOS-37.36
Formulas to Explain Popular Oscillometric Blood Pressure Estimation Methods
 Chandrasekhar, Anand (*Indian Institute of Technology Madras*); Yavarimanesh, Mohammad (*Michigan State Univ.*); Hahn, Jin-Oh (*Univ. of Maryland*); Sung, Shih-Hsien (*Taipei Veterans General Hospital*); Chen, Chen-Huan (*National Yang-Ming Univ.*); Cheng, Hao-Min (*Taipei Veterans General Hospital*); Mukkamala, Ramakrishna* (*Michigan State Univ.*)
- 18:00-19:30 FrPOS-37.37
A Deconvolution Method for Perfusion Imaging under Ongoing Ventilation using Electrical Impedance Tomography
 Hentze, Benjamin* (*RWTH Aachen University*); Muders, Thomas (*Dept. of Anaesthesiology & Intensive Care Medicine, Unive*); Walter, Marian (*RWTH Aachen University*); Putensen, Christian (*Dept. of Anaesthesiology & Intensive Care Medicine, Unive*); Leonhardt, Steffen (*RWTH Aachen University*)
- 18:00-19:30 FrPOS-37.38
A Formula to Relate Pulse Wave Velocity to Blood Pressure
 Yavarimanesh, Mohammad (*Michigan State University*); Chandrasekhar, Anand (*Indian Institute of Technology Madras*); Hahn, Jin-Oh (*University of Maryland*); Mukkamala, Ramakrishna* (*Michigan State University*)
- 18:00-19:30 FrPOS-37.39
Modelling the Pre and Post-Operative Hepatic Arterial Hemodynamics in Living Liver Donor
 Ma, Renfei* (*University of Auckland*); Hunter, Peter (*University of Auckland*); Ho, Harvey (*University of Auckland*); Safaei, Soroush (*University of Auckland*)
- 18:00-19:30 FrPOS-37.40
Advanced Modeling Approaches and Big Data in a Multimodal Strategy for the Stratification of Carotid Artery Disease
 Mantzaris, Michalis (*Unit of Medical Technology & Intelligent Information Systems.*); Potsika, Vassiliki (*Unit of Medical Technology & Intelligent Information Systems.*); Siogkas, Panagiotis (*Forth-IMBB*); Pappas, Ioannis (*Biomedical Engineering Laboratory, ICCS, National Technical Univ*); Exarchos, Themis P. (*Unit of Medical Tech & Intelligent Info*); Koncar, Igor (*Clinic for Vascular & Endovascular Surgery, Serbian Clinical C*); Pelisek, Jaroslav (*Dept. for Vascular & Endovascular Surgery, Klinikum recht*); Andreakos, Evangelos (*Laboratory of Immunobiology, Center for Clinical, Experimental S*); Fotiadis, Dimitrios I.* (*University of Ioannina*)
- 18:00-19:30 FrPOS-37.41
Computational Fluid Dynamics of Blood Flow at the Left Atrium Appendage
 Grigoriadis, Grigoris (*University of Ioannina*); Sakellarios, Antonis* (*Forth-Biomedical Research Institute*); Naka, Katerina (*University of Ioannina*); Kosmidou, Ioanna (*Columbia University Medical Center*); Ellis, Christopher (*Vanderbilt University Medical Center*); Michalis, Lampros (*University of Ioannina*); Fotiadis, Dimitrios I. (*University of Ioannina*)
- 18:00-19:30 FrPOS-37.42
Achieving Finger Photoplethysmogram Reliability in the High NIR Water Absorption Band via Optimisation of Applied Pressure
 Harada, Atsuhiko* (*Fukuoka Institute of Tech.*); Lee, Jihyoung (*Fukuoka Institute of Tech.*); Rolfe, Peter (*Oxford BioHorizons Ltd*); Kusaba, Shihori (*Fukuoka Institute of Tech.*); Kabashima, Shogo (*Fukuoka Institute of Tech., Fukuoka, Japan*); Shibata, Masahiro (*Shibaura Institute of Tech.*); Yamakoshi, Takehiro (*Fukuoka Institute of Tech.*)
- | | |
|---|--------|
| FrPOS-38: 18:00-19:30 | Hall B |
| Research-Poster-1-Page Fr F (Poster Session) | |
- 18:00-19:30 FrPOS-38.1
Transmission Characteristics of Electrode Arrangement in Human Body Communication
 Mochizuki, Kanta* (*Tokyo Polytechnic Univ.*); Koshiji, Fukuro (*Tokyo Polytechnic Univ.*); Koshiji, Kohji (*Tokyo Univ. of Science*)
- 18:00-19:30 FrPOS-38.2
Hospitalized Patient Monitoring of Indirect Instantaneous Blood Pressure in Dorsalis Pedis Artery based on the Volume-Compensation Method
 Yamakoshi, Yasuhiro* (*Showa University School of Medicine*); Lee, Jihyoung (*Fukuoka Institute of Technology*); Yamakoshi, Takehiro (*Fukuoka Institute of Technology*); Rolfe, Peter (*Oxford BioHorizons Ltd*); Motoi, Kosuke (*Shizuoka Institute of Science & Technology*); Shibata, Masahiro (*Shibaura Institute of Technology*); Yamakoshi, Ken-ichi (*Kanazawa University*)
- 18:00-19:30 FrPOS-38.3
An Interference Mitigation Method of Body Area Network for Medical and Healthcare Application
 Tanaka, Hirokazu* (*Hiroshima City University*); Yamanaka, Masaaki (*Japan Coast Guard Academy*)
- 18:00-19:30 FrPOS-38.4
IMU-Based Joint Kinematics for Connected Segments
 Weygers, Ive* (*KU Leuven*); Kok, Manon (*Delft University of Technology*); De Vroey, Henri (*KU Leuven*); Hallez, Hans (*KU Leuven*); Versteheyne, Mark (*KU Leuven*); Claeys, Kurt (*Dept. of Rehabilitation Sciences – KU Leuven Campus Bruges*)
- 18:00-19:30 FrPOS-38.5
Experimental Results on a Real-Time Vital Data Collection from a Group of Persons making a Variety of Exercises
 Hamagami, Takuma* (*Oki Electric Industry Co., Ltd.*); Kawamoto, Yasukata (*Oki Electric Industry Co., Ltd.*); Yomo, Hiroyuki (*Kansai Univ.*); Miyamoto, Ryusuke (*Meiji Univ.*); Shimazaki, Takunori (*Osaka City Univ.*); Okuhata, Hiroyuki (*Soliton Systems K.K.*); Hara, Shinsuke (*Osaka City Univ.*)

- 18:00-19:30 FrPOS-38.6
Interference Prediction at 2.4GHz ISM Band for Reliable Signal Transmission in Medical BAN using Machine Learning
 Yamanaka, Masaaki* (*Japan Coast Guard Academy*); Tanaka, Hirokazu (*Hiroshima City University*)
- 18:00-19:30 FrPOS-38.7
Cross-Layer Evaluation of ETSI SmartBAN PHY and MAC
 Takabayashi, Kento* (*Okayama Prefectural University*); Tanaka, Hirokazu (*Hiroshima City University*); Sakakibara, Katsumi (*Okayama Prefectural University*)
- 18:00-19:30 FrPOS-38.8
Parabolic Antenna Comprising a Multilayered Printed Circuit Board for Heartbeat and Respiration Sensing
 Matsuo, Yoshiki* (*Tokyo Polytechnic Univ.*); Koshiji, Fukuro (*Tokyo Polytechnic Univ.*); Koshiji, Kohji (*Tokyo Univ. of Science*)
- 18:00-19:30 FrPOS-38.9
Development of Swimwear-Type Electrode for Electrocardiogram Measurement under the Water
 Nakatani, Minoru* (*Ritsumeikan Univ.*); Yamamoto, Keisuke (*Ritsumeikan Univ.*); Goto, Daisuke (*Ritsumeikan Univ.*); Toyoshi, Takuya (*Ritsumeikan Univ.*); Taki, Chinami (*Kobe Univ*); Shiozawa, Naruhiro (*Ritsumeikan Univ.*)
- 18:00-19:30 FrPOS-38.10
Flexible Cuff-Integrated ECG Amplifier with Active Dry Electrodes
 Kreuzer, Samuel* (*Bern University of Applied Sciences*); Niederhauser, Thomas (*Bern University of Applied Sciences*)
- 18:00-19:30 FrPOS-38.11
Proposal of an Optically-Operated, Sticker-Like Device Platform for Health Monitoring
 Wuthibenjaphonchai, Nattakarn* (*Nara Institutes of Science & Tech.*); Haruta, Makito (*Nara Institute of Science & Tech.*); Sasagawa, Kiyotaka (*Nara Institute of Science & Tech.*); Tokuda, Takashi (*Nara Institute of Science & Tech.*); Carrara, Sandro (*EPFL – Swiss Federal Institute of Tech. – Lausanne*); Ohta, Jun (*Nara Institute of Science & Tech.*)
- 18:00-19:30 FrPOS-38.12
A Novel Low-Voltage Capacitively Coupled Bulk-Driven Instrumentation Amplifier for Wearable Biomedical Sensors
 Liu, Huaiyu* (*Shanghai Jiao Tong Univ.*); Wu, Chungdong (*Shanghai Hai Jiao Tong Univ.*); Chen, Mingyi (*Shanghai Jiao Tong Univ.*); Wang, Guoxing (*Shanghai Jiao Tong Univ.*)
- 18:00-19:30 FrPOS-38.13
A Headset-Type EEG and ECG System for Healthcare Application
 Ahn, Joong Woo (*Seoul National University Hospital*); Ku, Yunseo (*Chungnam National University College of Medicine*); Kim, Hee Chan* (*Seoul National University*)
- 18:00-19:30 FrPOS-38.14
Design of an Energy-Harvesting Arm Brace
 Schuchmann, Jake (*Missouri Univ. of Science & Technology*); Song, Yun Seong* (*Missouri Univ. of Science & Technology*)
- 18:00-19:30 FrPOS-38.15
Investigation of Recognition Rate of Grasping Force Produced by Wrist/Ankle Attachment Device for Prosthetic Hand Feedback
 Sekine, Masashi* (*Chiba Univ.*); Yu, Wenwei (*Univ. of Chiba*)
- 18:00-19:30 FrPOS-38.16
Wearable Sensor System Architecture for Monitoring Long-Term Psychological Health
 Arquilla, Katya* (*University of Colorado Boulder*); Anderson, Allison (*University of Colorado Boulder*); Webb, Andrea (*The Charles Stark Draper Laboratory*)
- 18:00-19:30 FrPOS-38.17
Development of a Fugl-Meyer Assessment Evaluation Support System using Wearable Mocap
 Watanabe, Masaya (*Tokyo Univ. of Agriculture & Tech.*); Yamamoto, Naoya (*Tokyo Univ. of Agriculture & Tech.*); Ishii, Yuki (*Tokyo Univ. of Agriculture & Tech.*); Inamura, Tetsunari (*National Institute of Informatics*); Kaneko, Fuminari (*Keio Univ.*); Yano, Shiro (*Tokyo Univ. of Agriculture & Tech.*); Kondo, Toshiyuki* (*Tokyo Univ. of Agriculture & Tech.*)
- 18:00-19:30 FrPOS-38.18
Practical UCD in Hand and Arm Function Training for Children
 Mittag, Christina* (*Technische Universität Berlin*); Lorenz, Katharina (*Technische Universität Berlin*); Leiss, Regina (*Technische Universität Berlin*)
- 18:00-19:30 FrPOS-38.19
Assessment of Human Response of Laser-Based Tactile Actuator
 Ji-Hun, Jo (*Konkuk Univ.*); Chung, Soon-Cheol (*Konkuk Univ.*); Choi, Mi-Hyun (*Konkuk Univ.*); Hyung-Sik, Kim* (*Konkuk Univ.*)
- 18:00-19:30 FrPOS-38.20
Audomni: Towards a Primary Mobility Aid for Blind and Low Vision Individuals using Super Scale Sensory Supplementation
 Isaksson, Johan* (*Lund University*); Jansson, Tomas (*Lund University*); Nilsson, Johan (*Dept. Biomedical Engineering, LTH, Lund University*)
- 18:00-19:30 FrPOS-38.21
Technical Validation of Sensor Dot: A Wearable for Ambulatory Monitoring of Epileptic Seizures
 Dan, Jonathan (*KU Leuven*); Weckhuysen, Dorien (*KU Leuven*); Cleeren, Evy (*KU Leuven*); Van Paesschen, Wim (*Katholieke Universiteit Leuven*); Vandendriessche, Benjamin* (*Case Western Reserve University*)
- 18:00-19:30 FrPOS-38.22
Improving Emotions Prediction with Sequence Representations of Psychophysiological Data
 Hernández-Guillamet, Guillem (*Pompeu Fabra University*); Lopez, Beatriz* (*University of Girona*)
- 18:00-19:30 FrPOS-38.23
Unobtrusive and Wireless ECG and Pulse Oximetry System
 Laroche, Jonathan* (*Université Laval*); Doucet, Mélanie (*Université Laval*); Gosselin, Benoit (*Laval University*)
- 18:00-19:30 FrPOS-38.24
Wearable Thermo-Hygro Sensor for Monitoring Heat Stress in Human Body
 Hashimoto, Yuki* (*NTT Corp.*); Matsuoka, Hiroto (*Nippon Telegraph & Telephone Corp.*); Ishihara, Takako (*NTT Device Innovation Center, NTT Corp.*); Tokura, Akio (*NTT Device Innovation Center, NTT Corp.*); Kuwabara, Kei (*Nippon Telegraph & Telephone Corp.*); Ootsuka, Yosuke (*ASICS Corp.*); Koshida, Manami (*ASICS Corp.*); Uzawa, Hiroki (*ASICS Corp.*); Tagawa, Takehiro (*ASICS Corp.*)
- 18:00-19:30 FrPOS-38.25
Classification of Involuntary Movements of the Distal Arm in Dyskinetic Cerebral Palsy Wheelchair Users with Inertial Sensors
 Nica, Ioana* (*KU Leuven*); Cuyvers, Benoit (*KU Leuven*); Bekteshi, Saranda (*KU Leuven, Dept. of Rehabilitation Sciences, Campus Bruges.*); Gakopoulos, Sotirios (*KU Leuven*); Hallez, Hans (*KU Leuven*); Monbaliu, Elegast (*KU Leuven, Dept. Rehabilitation Sciences Campus Bruges*); Aerts, Jean-Marie (*KU Leuven*)
- 18:00-19:30 FrPOS-38.26
A Wearable Obstacle Detection System for Visually Impaired People
 Kurz, Jennifer* (*Friedrich-Alexander-Univ. Erlangen-Nürnberg*); Tharmalingam, Varun (*Friedrich-Alexander-Univ. Erlangen-Nürnberg*); Pryakhina, Natalia (*Friedrich-Alexander-Univ. Erlangen-Nürnberg*); Hunger, Andre (*Friedrich-Alexander-Univ. Erlangen-Nürnberg*); Ollenschläger, Malte (*Friedrich-Alexander-Univ. Erlangen-Nürnberg*); Eskofier, Bjoern M (*Friedrich-Alexander-Univ. Erlangen-Nürnberg*)

- 18:00-19:30 FrPOS-38.27
Smartwatch Application to Assist Intermittent Fasting of Acute Stroke Patients: A Pilot Study
 Son, Hyewon (*Univ. of Ulsan, Ulsan*); Lee, HyoSeok (*Univ. of Ulsan*); Phan, Huu Lam (*Ulsan Univ.*); Lee, Suwon (*Univ. of Ulsan*); Duong, Thuy (*Univ. of Ulsan*); Nguyen, Trung (*Univ. of Ulsan*); Nguyen, Hang Phuong (*Univ. of Ulsan*); Le, Thi Huong (*Univ. of Ulsan*); Oh, Seok (*Univ. of Ulsan*); Hwang, Changho (*Ulsan Univ. Hospital*); Koo, Kyoin* (*Univ. of Ulsan*)
- 18:00-19:30 FrPOS-38.28
End-User Evaluation of a Smart Knee Brace
 Alder, Andrew (*Univ. of Colorado Boulder*); Ward, Sarah (*Univ. College Dublin*); McDaid, Andrew* (*The Univ. of Auckland*)
- 18:00-19:30 FrPOS-38.29
Digital Technology to Monitor Rehabilitation Outcomes after Knee Injury: A Case Study
 McDaid, Andrew* (*The Univ. of Auckland*); Alder, Andrew (*Univ. of Colorado Boulder*); Ward, Sarah (*Univ. College Dublin*)
- 18:00-19:30 FrPOS-38.30
Development of Grip Force Estimation Glove for Finger Assist Hand
 Maeda, Tamon* (*Ritsumeikan University*); Okada, Shima (*Ritsumeikan University*)
- 18:00-19:30 FrPOS-38.31
A Comparison Study of Wearable Sensing based Classifier Algorithms for Physical Activity Recognition in Elderly Person Monitoring
 Newcombe, Lee* (*Liverpool John Moores University*); Yang, Po (*Liverpool John Moores University*); Carter, Chris (*Liverpool John Moores University*); Hanneghan, Martin (*Liverpool John Moores University*); Simpson, Andrew (*Liverpool John Moores University*); Qi, Jun (*Liverpool John Moores University*)
- 18:00-19:30 FrPOS-38.32
Using Wearable Sensors to Quantify Torso Compensatory Motion in Post-Stroke Patients during Occupational Therapy
 Nguyen, Golda* (*Massachusetts Institute of Technology*); Fineman, Richard (*Massachusetts Institute of Technology*); MacLean, Julie (*Massachusetts General Hospital*); Stirling, Leia (*Massachusetts Institute of Technology*)
- 18:00-19:30 FrPOS-38.33
Comparison of Eye Blink in Daily-Living Tasks with Emotional States
 Laohakangvalvit, Tipporn* (*National Institute of Advanced Industrial Science & Tech.*); Ito, Kodai (*National Institute of Advanced Industrial Science & Tech.*); Tada, Mitsunori (*National Institute of Advanced Industrial Science & Tech.*)
- 18:00-19:30 FrPOS-38.34
Detection of Laryngeal Elevation Time for Mendelsohn Maneuver by Band-Shaped Device
 Nakamoto, Hiroyuki* (*Kobe Univ.*); Katsuno, Yuki (*Kobe Univ.*); Yamamoto, Akio (*Kobe Univ.*); Umehara, Ken (*Kobe Univ.*); Bessho, Yusuke (*Bando Chemical Industries, LTD*); Kobayashi, Futoshi (*Kobe Univ.*); Ishikawa, Akira (*Kobe Univ.*)
- 18:00-19:30 FrPOS-38.35
Low-Cost Wearable Set-Up for Stimulation and Detection of Steady-State Visual Evoked Potentials
 Gillies, Audrey H. (*University of Strathclyde*); Kahani, Danial (*University of Strathclyde*); Lakany, Heba (*University of Strathclyde*); Giardini, Mario Ettore* (*University of Strathclyde*)
- 18:00-19:30 FrPOS-38.36
Slicer Module for Segmentation of Cerebral Vasculature and Aneurysms Detection in 3D Rotational Angiography
 Abinahed, Julien* (*Hamad Medical Corp.*); Dakua, Sarada (*Hamad Medical Corp.*); Balakrishnan, Shidin (*Hamad Medical Corp.*); Younes, Georges (*Hamad Medical Corp.*); Baobeid, Abdulla (*Hamad Medical Corp.*); Zakaria, Ayman (*Hamad Medical Corp.*); Al-Ansari, Abdulla (*Hamad Medical Corp.*); Soheilian Esfahani, Sahar (*Qatar Univ.*); Zhai, Xiaojun (*Qatar Univ.*); Chen, Minsi (*Univ. of Huddersfield*); Amira, Abbes (*Univ. of the West of Scotland*); Bensaali, Faycal (*Qatar Univ.*); Richardson, Robin (*Univ. College London*); Peter, Coveney (*Univ. College London*)
- 18:00-19:30 FrPOS-38.37
Red Fluorescent Carbon Dots for Sentinel Lymph Node Mapping
 Li, Wen-Tyng* (*Chung-Yuan Christian University*)
- 18:00-19:30 FrPOS-38.38
Fast Detection of Opioids from a Small Blood Sample
 Mynttinen, Elsi* (*Aalto Univ.*); Wester, Niklas (*Aalto Univ.*); Lilius, Tuomas (*Univ. of Helsinki, Univ. of Helsinki & Helsinki Univ.*); Kalso, Eija (*Univ. of Helsinki, Univ. of Helsinki & Helsinki Univ.*); Mikladal, Björn (*Canatu Oy*); Varjos, Ilkka (*Canatu Oy*); Kauppinen, Esko (*Aalto Univ.*); Koskinen, Jari (*Aalto Univ.*); Laurila, Tomi (*Aalto Univ.*)

SaA01: 08:30-10:00 Hall A6+A7 – Level 1
Brain-Computer Interface (I) (Oral Session)
Chair: Carrozza, Maria Chiara (*Scuola Superiore Sant'Anna*)

08:30-08:45 SaA01.1
Decoding Speech from Single Trial MEG Signals using Convolutional Neural Networks and Transfer Learning
 Dash, Debadatta* (*The University of Texas at Dallas*); Ferrari, Paul (*University of Texas at Austin*); Heitzman, Daragh (*Texas Neurology*); Wang, Jun (*University of Texas at Dallas*)

08:45-09:00 SaA01.2
Investigating Evoked EEG Responses to Targets Presented in Virtual Reality
 Lapborisuth, Pawan (*Columbia Univ.*); Faller, Josef (*Columbia Univ.*); Koss, Jonathan* (*Columbia Univ.*); Waytowich, Nicholas (*Army Research Laboratory*); Touryan, Jonathan (*U.S. Army Research Laboratory*); Sajda, Paul (*Columbia Univ.*)

09:00-09:15 SaA01.3
Enhancing Mu-Based BCI Performance with Rhythmic Electrical Stimulation at Alpha Frequency
 Zhang, XiangZi (*Jinan Univ.*); Guo, Yaqiu (*Jinan Univ.*); Gao, BoYu (*Jinan Univ.*); Long, Jinyi* (*Jinan Univ.*)

09:15-09:30 SaA01.4
Trajectory Decoding of Arm Reaching Movement Imageries for Brain-Controlled Robot Arm System
 Jeong, Ji-Hoon (*Korea Univ.*); Shim, Kyung-Hwan (*Korea Univ.*); Kim, Dong-Joo (*Korea Univ.*); Lee, Seong-Whan* (*Korea Univ.*)

09:30-09:45 SaA01.5
An SVEP-BCI in Augmented Reality
 Liu, Pengxiao (*Tianjin Univ.*); Ke, Yufeng* (*Tianjin Univ.*); Du, Jiale (*Tianjin Univ.*); Liu, Wentao (*Tianjin Univ.*); Kong, Linghan (*Tianjin Univ.*); Wang, Ningci (*Tianjin Univ.*); Xu, Minpeng (*Tianjin Univ.*); An, Xingwei (*Tianjin Univ.*); Ming, Dong (*Tianjin Univ.*)

09:45-10:00 SaA01.6
Estimation of Mental Workload Induced by Different Presentation Rates in Rapid Serial Visual Presentation Tasks
 Yi, Weibo* (*Beijing Machine & Equipment Institute*); Qiu, Shuang (*Institute of Automation, Chinese Academy of Science*); Fan, Xin-An (*Beijing Machine & Equipment Institute*); Zhang, Lijian (*Beijing Machine & Equipment Institute*)

SaA02: 08:30-10:00 Hall A8 – Level 1
Signal Processing and Classification of Photoplethysmographic Signals (Oral Session)
Chair: Faes, Luca (*University of Palermo*)

08:30-08:45 SaA02.1
RespNet: A Deep Learning Model for Extraction of Respiration from Photoplethysmogram
 R, Vignesh* (*Healthcare Tech. Innovation Center, IIT Madras*); Murugesan, Balamurali (*Indian Institute of Tech. Madras*); Balakarthikeyan, Vaishali (*Healthcare Tech. Innovation Centre*); M Shankaranarayana, Sharath (*Indian Institute of Tech. Madras*); SP, Preejith (*Healthcare Tech. Innovation Center – IIT Madras*); Ram, Keerthi (*IIT Madras*); Joseph, Jayaraj (*HTIC, Indian Institute of Tech. Madras*); Sivaprakasam, Mohanasankar (*Indian Institute of Tech. Madras*)

08:45-09:00 SaA02.2
PPG-Based Blood Pressure Monitoring by Pulse Wave Analysis: Calibration Parameters are Stable for Three Months
 Proenca, Martin* (*CSEM SA*); Bonnier, Guillaume (*CSEM SA*); Ferrario, Damien (*CSEM*); Verjus, Christophe (*CSEM*); Lemay, Mathieu (*CSEM*)

09:00-09:15 SaA02.3
Sleep-Wake Classification using Statistical Features Extracted from Photoplethysmographic Signals
 Motin, Mohammad Abdul (*PhD Student, Univ. of Melbourne*); Karmakar, Chandan* (*Deakin Univ.*); Penzel, Thomas (*Charité Univ. Berlin*); Palaniswami, Marimuthu (*The Univ. of Melbourne*)

09:15-09:30 SaA02.4
A Validity and Reliability Study of Conditional Entropy Measures of Pulse Rate Variability
 Pernice, Riccardo* (*Univ. of Palermo*); Javorka, Michal (*Comenius Univ., Jessenius Faculty of Medicine*); Krohova, Jana (*Comenius Univ. in Bratislava*); Czippelova, Barbora (*Dept. of Physiology, Comenius Univ., Jessenius Faculty*); Turianikova, Zuzana (*Dept. of Physiology, Comenius Univ., Jessenius Faculty*); Busacca, Alessandro (*Università degli Studi di Palermo*); Faes, Luca (*Univ. of Palermo*)

09:30-09:45 SaA02.5
Photoplethysmography Signal Analysis to Assess Obesity, Age Group and Hypertension
 Ferdinando, Hany* (*University of Oulu*); Huotari, Matti (*University of Oulu*); Myllylä, Teemu (*University of Oulu*)

09:45-10:00 SaA02.6
Motion Artifact Removal of Photoplethysmogram (PPG) Signal
 Abdul Majeed, Ibrahim* (*Samsung R&D India – Bangalore*); Sujit, Jos (*Samsung Research India-Bangalore*); Arora, Rahul (*Samsung R&D Institute India Bangalore*); Karam, Choi (*Samsung Advanced Institute of Technology*); Bae, Sang Kon (*Samsung Advanced Inst of Tech*)

SaA03: 08:30-10:00 Hall A3 – Level 1
Optical Imaging – Coherence Tomography (Oral Session)

08:30-08:45 SaA03.1
Glaucoma Assessment from OCT using Capsule Network
 Gaddipati, Divya Jyothi* (*International Institute of Information Tech.*); Desai, Alakh (*International Institute of Information Tech., Hyderabad*); Sivaswamy, Jayanthi (*International Institute of Information Tech.-Hyderabad*); Vermeer, Koenraad A. (*Rotterdam Ophthalmic Institute, Rotterdam Eye Hospital*)

08:45-09:00 SaA03.2
Super-Resolution OCT using Sparse Representations and Heavy-Tailed Models
 Valdez Zermeno, Daniel (*University of Bristol*); Mayo, Perla* (*University of Bristol*); Nicholson, Lindsay (*University of Bristol*); Achim, Alin (*University of Bristol*)

09:00-09:15 SaA03.3
Speckle Reduction in Optical Coherence Tomography via Super-Resolution Reconstruction
 Zhao, Rui (*Shenyang Jianzhu Univ.*); Zhao, Yitian* (*Chinese Academy of Sciences*); Chen, Zhili (*Shenyang Jianzhu Univ.*); Zhao, Yifan (*Cranfield Univ.*); Yang, Jianlong (*Cixi Institute of Biomedical Engineering, Chinese Academy of Sci*); Hu, Yan (*Chinese Academy of Sciences*); Cheng, Jun (*Institute of Biomedical Engineering, Chinese Academy of Sciences*); Liu, Jiang (*Ningbo Institute of Materials Tech. & Engineering, CAS*)

09:15-09:30 SaA03.4
Relation between Retinal Vasculature and Retinal Thickness in Macular Edema
 Ajaz, Aqsa* (*RMIT Univ.*); Aliahmad, Behzad (*RMIT Univ.*); Sarossy, Marc (*RMIT Univ.*); Kant Kumar, Dinesh (*RMIT Univ.*)

09:30-09:45 SaA03.5
Using Convolutional Neural Networks for Classification of Bifurcation Regions in IVOCT Images
 Miyagawa, Makoto (*Federal Univ. of Amazonas*); Costa, Marly G. F. (*Federal Univ. of Amazonas – UFAM*); Gutierrez, Marco (*Heart Institute, Univ. of Sao Paulo Medical School*); Costa, Joao Pedro (*Universidade Federal do Amazonas*); Costa Filho, Cicero F. F.* (*Universidade Federal do Amazonas*)

09:45-10:00 SaA03.6
Optical Coherence Tomography Image Reconstruction using Morphological Component Analysis
 Rabbani, Hossein* (*Isfahan Univ. of Medical Sciences*); Mokhtary, Marzieh (*Isfahan University of Medical Sciences*)

SaA04: 08:30-10:00	Hall A1 – Level 1	09:15-09:30	SaA05.4
Bio-Electric Monitoring Applications (Oral Session)		Spectro-Temporal Feature based Multi-Channel Convolutional Neural Network for ECG Beat Classification	
Co-Chair: Kidmose, Preben (<i>Aarhus University, Denmark</i>)		Chen, Hao (<i>Biofourmis</i>); Wibowo, Sandi (<i>Biofourmis</i>); Majmudar, Maulik (<i>Massachusetts General Hospital</i>); Rajput, Kuldeep Singh* (<i>Biofourmis</i>)	
08:30-08:45	SaA04.1	09:30-09:45	SaA05.5
EEG-Based Mental Workload Estimation		Cardiotocograph Data Classification Improvement by using Empirical Mode Decomposition	
Samima, Shabnam (<i>Indian Institute of Technology Kharagpur</i>); Sarma, Monalisa* (<i>Indian Institute of Technology Kharagpur</i>)		Fuentealba, Patricio* (<i>Otto von Guericke Universität, Magdeburg.</i>); Illanes, Alfredo (<i>Otto-von-Guericke University of Magdeburg</i>); Ortmeier, Frank (<i>Otto von Guericke Universität, Magdeburg.</i>)	
08:45-09:00	SaA04.2	09:45-10:00	SaA05.6
Emotional State Estimation using Sensor Fusion of EEG and EDA		Estimation of Beat-to-Beat Interval and Systolic Time Intervals using Phono and Seismocardiograms	
Yasemin, Mine* (<i>Istanbul Technical University</i>); Sarikaya, Mehmet Ali (<i>Istanbul Technical University</i>); Ince, Gökhan (<i>Istanbul Technical University</i>)		Ahmaniemi, Teemu* (<i>VTT Technical Research Center of Finland</i>); Rajala, Satu (<i>Nokia Technologies</i>); Lindholm, Harri (<i>Nokia Technologies</i>)	
09:00-09:15	SaA04.3	SaA06: 08:30-10:00	Hall A5 – Level 1
Generic Dry-Contact Ear-EEG		Novel Multimodal Neural Interfaces for High Resolution Recording and Stimulation (Minisymposium)	
Rands Bertelsen, Astrid (<i>Aarhus Univ.</i>); Blatt, Henriette (<i>Aarhus Univ.</i>); Christensen, Christian Bech (<i>Aarhus Univ.</i>); Kappel, Simon Lind (<i>Univ. of Moratuwa</i>); Toft, Hans Olaf (<i>Widex A/S</i>); Rank, Mike Lind (<i>Widex A/S</i>); Mikkelsen, Kaare (<i>Univ. of Aarhus</i>); Kidmose, Preben* (<i>Aarhus Univ., Denmark</i>)		Chair: Chamanzar, Maysamreza (<i>Carnegie Mellon University</i>)	
09:15-09:30	SaA04.4	Co-Chair: Kuzum, Duygu (<i>University of California San Diego</i>)	
An Efficient Algorithm for the Extraction of Fetal ECG from Standard and Non-Standard Multi Abdominal Maternal Leads		08:30-08:45	SaA06.1
Pini, Nicolò* (<i>Politecnico di Milano</i>); Magenes, Giovanni (<i>University of Pavia</i>); Fanelli, Andrea (<i>Massachusetts Institute of Technology</i>); Signorini, Maria G. (<i>Politecnico di Milano</i>)		Organic Materials for Neuromorphic Devices and Architectures	
09:30-09:45	SaA04.5	Gkoupidenis, Paschalis* (<i>Max Planck Institute for Polymer Research</i>)	
Capacitive Multi-Electrode Array with Real-Time Electrode Selection for Unobtrusive ECG and BIOZ Monitoring		08:45-09:00	SaA06.2
Castro, Ivan D. (<i>KU Leuven & imec</i>); Patel, Aakash* (<i>imec</i>); Torfs, Tom (<i>imec</i>); Puers, Robert (<i>Catholic University of Leuven</i>); Van Hoof, Chris (<i>imec</i>)		Multimodal Readout and Control Technologies for the Deep Brain	
09:45-10:00	SaA04.6	Pisanello, Marco (<i>Istituto Italiano di Tecnologia</i>); Pisano, Filippo (<i>Istituto Italiano di Tecnologia</i>); Pisanello, Ferruccio (<i>Istituto Italiano di Tecnologia</i>); De Vittorio, Massimo* (<i>Istituto Italiano di Tecnologia</i>)	
Characterization of Implanted Stents through Neointimal Tissue Bioimpedance Simulations		09:00-09:15	SaA06.3
Portillo-Anaya, Jose María (<i>Univ. de Sevilla</i>); Perez, Pablo (<i>Instituto de Microelectronica de Sevilla / Univ. de Sevilla</i>); Huertas, Gloria (<i>Instituto de Microelectronica de Sevilla / Univ. de Sevilla</i>); Olmo, Alberto (<i>Univ. de Sevilla</i>); Serrano, Juan A. (<i>Instituto de Microelectrónica de Sevilla (IMSE/US)</i>); Andres, Maldonado-Jacobi (<i>Instituto de Microelectronica de Sevilla / Univ. de Sevilla</i>); Yufera, Alberto* (<i>Univ. of Seville</i>)		Flexible Neural Interfaces for Multimodal Recording and Stimulation	
		Stieglitz, Thomas* (<i>University of Freiburg</i>)	
SaA05: 08:30-10:00	Hall A2 – Level 1	09:15-09:30	SaA06.4
Time-Frequency Analysis of Cardiovascular Signals (Oral Session)		Soft Neural Implants with Light Delivery to Study the Somatosensory System	
Chair: Augustyniak, Piotr (<i>AGH University of Science and Tech</i>)		Michoud, Frederic (<i>EPFL</i>); Seehus, Corey (<i>Harvard Medical School</i>); Schönle, Philipp (<i>Integrated Systems Laboratory (IIS), ETH Zurich</i>); Huang, Qiuting (<i>Integrated Systems Laboratory (IIS), ETH Zurich</i>); Woolf, Clifford (<i>Harvard Medical School</i>); Lacour, Stéphanie* (<i>EPFL</i>)	
Co-Chair: Hernández, Alfredo I. (<i>Univ. of Rennes 1 & INSERM U1099</i>)		09:30-09:45	SaA06.5
08:30-08:45	SaA05.1	Rapid Volumetric Optoacoustic Imaging of Calcium Dynamics across the Mouse Brain	
A Direct Transform of Discrete Non-Uniform ECG to a Time-Scale Representation		Mc Larney, Ben (<i>Technical Univ. of Munich & Helmholtz Center Munich</i>); Gottschalk, Sven (<i>Biological & Medical Imaging, Technical Univ. of Munich a</i>); Degtyaruk, Oleksij (<i>Helmholtz Zentrum Muenchen GmbH</i>); Rebling, Johannes (<i>Univ. & ETH Zurich</i>); Deán-Ben, X. Luis (<i>Biological & Medical Imaging, Technical Univ. of Munich a</i>); Shoham, Shy (<i>Technion-Israel Institute of Technology</i>); Razansky, Daniel* (<i>Univ. & ETH Zurich</i>)	
Augustyniak, Piotr* (<i>AGH University of Science & Tech</i>)			
08:45-09:00	SaA05.2	SaA07: 08:30-10:00	Hall A4 – Level 1
ECG Delineation using a Piecewise Gaussian Derivative Model with Parameters Estimated from Scale-Dependent Algebraic Expressions		Micro/Nano-Bioengineering (Oral Session)	
Spicher, Nicolai* (<i>Univ. of Applied Sciences & Arts Dortmund</i>); Kukuk, Markus (<i>Univ. of Applied Sciences & Arts Dortmund</i>)		Chair: Bansod, Yogesh (<i>University of Rostock</i>)	
09:00-09:15	SaA05.3	Co-Chair: Weizel, Alina (<i>University of Rostock</i>)	
Differences in Brugada Syndrome Patients through Ventricular Repolarization Analysis during Sleep		08:30-08:45	SaA07.1
Romero, Daniel (<i>Institute for Bioengineering of Catalonia</i>); Béhar, Nathalie (<i>Université de Rennes 1</i>); Mabo, Philippe (<i>Université de Rennes 1</i>); Hernández, Alfredo I* (<i>Univ. of Rennes 1 & INSERM U1099</i>)		High Density Nanowire Electrodes for Intracortical Microstimulation	
		Puttaswamy, Srinivasu Valagerahally* (<i>Ulster Univ.</i>); Shi, Qiongfeng (<i>National Univ. of Singapore</i>); Steele, David (<i>Ulster Univ.</i>); Fishlock, Sam (<i>Ulster Univ.</i>); Lee, Chengkuo (<i>National Univ. of Singapore</i>); McLaughlin, James (<i>Univ. of Ulster</i>)	

08:45-09:00	SaA07.2	09:30-09:45	SaA08.5
Development of Size-Selective Microfluidic Platform Chen, Zheyuan* (<i>Texas A&M Univ.</i>); Yamaguchi, Hirohito (<i>Hamad Bin Khalifa Univ.</i>); Kameoka, Jun (<i>Texas A&M Univ.</i>)		A Sustainable HL7 FHIR based Ontology for PHR Data Kilintzis, Vassilis* (<i>Aristotle University of Thessaloniki</i>); Kosvyra, Alexandra (<i>Aristotle University of Thessaloniki</i>); Beredimas, Nikolaos (<i>Aristotle University of Thessaloniki</i>); Natsiavas, Pantelis (<i>Aristotle University of Thessaloniki</i>); Maglaveras, Nikolaos (<i>Aristotle University of Thessaloniki</i>); Chouvarda, Ioanna (<i>Aristotle University</i>)	
09:00-09:15	SaA07.3	09:45-10:00	SaA08.6
Evaluating Plasma Skimming with Whole Blood in Small Gap Region Imitating Clearance of Blood Pumps Jiang, Ming* (<i>Tokyo Inst. of Tech.</i>); Murashige, Tomotaka (<i>Tokyo Inst. of Tech.</i>); Sakota, Daisuke (<i>Natl. Inst. of Advanced Industrial Science & Tech.</i>); Hijikata, Wataru (<i>Tokyo Inst. of Tech.</i>)		Predicting Stroke from Electronic Health Records Chidozie Shamrock, Nwosu (<i>NCIRL</i>); Dev, Soumyabrata (<i>The ADAPT Centre</i>); Bhardwaj, Peru (<i>Trinity College Dublin</i>); Veeravalli, Bharadwaj (<i>National Univ. of Singapore</i>); John, Deepu* (<i>UCD</i>)	
09:15-09:30	SaA07.4	SaA09: 08:30-10:00	M1 – Level 3
Rapid Label-Free DNA Quantification by Multi-Frequency Impedance Sensing on a Chip Sui, Jianye* (<i>Rutgers, the State University of New Jersey</i>); Gandotra, Neeru (<i>Yale University</i>); Scharfe, Curt (<i>Yale University</i>); Javanmard, Mehdi (<i>Rutgers University New Bru</i>)		Research on Electrically Active Implants: Theory, Models, Experiments and Clinical Applications (Invited Session) Chair: van Rienen, Ursula (<i>Univ. of Rostock</i>) Co-Chair: Bader, Rainer (<i>Univ. Medicine of Rostock, Dept. of Orthopaedics</i>)	
09:30-09:45	SaA07.5	08:30-08:45	SaA09.1
Computational Simulation of Electromagnetic Fields on Human Targets for Magnetic Targeting Applications Fiocchi, Serena* (<i>Consiglio Nazionale delle Ricerche CNR</i>); Chiaramello, Emma (<i>IEIIT Institute of Electronics, Computers & Telecommunication</i>); Bonato, Marta (<i>IEIIT Institute of Electronics, Computers & Telecommunication</i>); Tognola, Gabriella (<i>CNR IEIIT – Istituto di Elettronica e di Ingegneria dell'Informa</i>); Catalucci, Daniele (<i>Consiglio Nazionale delle Ricerche, Istituto di Ricerca Genetica</i>); Parazzini, Marta (<i>Consiglio Nazionale delle Ricerche</i>); Ravazzani, Paolo (<i>Consiglio Nazionale delle Ricerche CNR</i>)		The Mechanical Regulation of Neuronal Growth and Regeneration Franze, Kristian* (<i>University of Cambridge</i>)	
09:45-10:00	SaA07.6	08:45-09:00	SaA09.2
A Novel Spinal Cord Surrogate for the Study of Compressive Traumatic Spinal Cord Injuries Diotalevi, Lucien (<i>École de Technologie Supérieure</i>); Petit, Yvan* (<i>École de Technologie Supérieure</i>); Peyrache, Louis-Marie (<i>École de Technologie Supérieure</i>); Facchinello, Yann (<i>École de Technologie Supérieure</i>); Mac-Thiong, Jean-Marc (<i>Dept. of Surgery, Faculty of Medicine, University of Montre</i>); Wagnac, Eric (<i>Ecole de Technologie Superieure</i>)		Towards an Energy Autonomous Platform for Electrically Active Implants Niemann, Christoph (<i>University of Rostock</i>); Plocksties, Franz (<i>University of Rostock</i>); Heller, Jakob (<i>University of Rostock</i>); Timmermann, Dirk* (<i>University of Rostock</i>)	
SaA08: 08:30-10:00	M8 – Level 3	09:00-09:15	SaA09.3
Health Informatics – Health Data Acquisition, Transmission, Management and Visualization (Oral Session)		Design Trade-Offs in Neural Interface ICs Reich, Stefan (<i>Univ. of Ulm</i>); Sporer, Markus (<i>Univ. of Ulm</i>); Haas, Michael (<i>Univ. of Ulm</i>); Ortmanns, Maurits* (<i>Univ. of Ulm</i>)	
08:30-08:45	SaA08.1	09:15-09:30	SaA09.4
Differential Watermarking of Multilead ECG Baseline Augustyniak, Piotr* (<i>AGH University of Science & Tech</i>)		Computational Modelling of Closed-Loop Deep Brain Stimulation Lowery, Madeleine* (<i>University College Dublin</i>); Fleming, John (<i>University College Dublin</i>); Dunn, Eleanor (<i>University College Dublin</i>); Sridhar, Karthik (<i>University College Dublin</i>)	
08:45-09:00	SaA08.2	SaA10: 08:30-10:00	M2 – Level 3
Fully Automated Subtraction of Heart Activity for Fetal Magnetoencephalography Data Sippel, Katrin* (<i>Univ. of Tübingen</i>); Moser, Julia (<i>Univ. of Tübingen</i>); Schleger, Franziska (<i>Univ. of Tübingen</i>); Escalona-Vargas, Diana Irazú (<i>Univ. of Arkansas for Medical Sciences</i>); Preissl, Hubert (<i>Univ. of Tübingen</i>); Rosenstiel, Wolfgang (<i>Dept. of Computer Engineering, Univ. Tübingen, Germany</i>); Spüler, Martin (<i>Univ. of Tübingen</i>)		The Science and Engineering of Tumor Treating Fields (TTFields) (Invited Session) Chair: Bomzon, Ze'ev (<i>Novocure</i>) Co-Chair: Makarov, Sergey (<i>Electrical and Computer Engineering, Worcester Polytechnic Institute</i>)	
09:00-09:15	SaA08.3	08:30-08:45	SaA10.1
A Mixed Reality System for the Simulation of Emergency and First-Aid Scenarios Girau, Elisa (<i>University of Genoa</i>); Mura, Fabrizio (<i>University of Genoa</i>); Bazurro, Simone (<i>University of Genoa – Centro di Ateneo di Simulazione e Formazio</i>); Casadio, Maura (<i>University of Genoa</i>); Chirico, Marco (<i>University of Genoa – Centro di Ateneo di Simulazione e Formazio</i>); Solari, Fabio (<i>University of Genoa</i>); Chessa, Manuela* (<i>University of Genoa</i>)		Advanced Imaging for Monitoring Response to TTFields in Glioblastoma Patients Mohan, Suyash* (<i>University of Pennsylvania</i>)	
09:15-09:30	SaA08.4	08:45-09:00	SaA10.2
An Artificial Intelligence-Based System for Nutrient Intake Assessment of Hospitalised Patients Lu, Ya (<i>Univ. of Bern</i>); Stathopoulou, Thomai (<i>Univ. of Bern</i>); Vasiloglou, Maria F. (<i>Univ. of Bern</i>); Christodoulidis, Stergios (<i>Univ. of Bern</i>); Blum, Beat (<i>Univ. Hospital Bern</i>); Walsler, Thomas (<i>Inselspital, Bern Univ. Hospital, Univ. of Bern</i>); Meier, Vinzenz (<i>Inselspital, Bern Univ. Hospital, Univ. of Bern</i>); Stanga, Zeno (<i>Bern Univ. Hospital, Univ. of Bern</i>); Mougiakakou, Stavroula* (<i>Univ. of Bern</i>)		The Dielectric Properties of Brain Tumor Tissue Proescholdt, Martin (<i>Univ. Regensburg Medical Center</i>); Haj, Amer (<i>Dept. of Neurosurgery; Univ. Regensburg Medical Center</i>); Lohmeier, Annette (<i>Dept. of Neurosurgery; Univ. Regensburg Medical Center</i>); Stoerr Eva-Maria, Eva-Maria (<i>Dept. of Neurosurgery; Univ. Regensburg Medical Center</i>); Eberl, Petra (<i>Dept. of Neurosurgery; Univ. Regensburg Medical Center</i>); Brawanski, Alexander (<i>Univ. Hospital Regensburg</i>); Bomzon, Ze'ev* (<i>Novocure</i>); Hershkovich, Hadas Sara (<i>Novocure Ltd., Haifa, Israel</i>)	
		09:00-09:15	SaA10.3
		Determination of Parameter Values for Conductivity, Capacitance and Inductance of Microtubules and a Refined Model of their Bioelectric Circuitry Elucidate the Mode of Action of TTFields Tuszynski, Jack Adam* (<i>University of Alberta</i>)	

09:15-09:30	SaA10.4	Potential of Cortical Neurons Modeling with Boundary Element Fast Multipole Method Makarov, Sergey* (<i>Electrical & Computer Engineering, Worcester Polytechnic Institute</i>); Noetscher, Gregory (<i>Worcester Polytechnic Institute</i>); Alexiou, Ioannis (<i>Worcester Polytechnic Institute</i>); Sundaram, Padmavathi (<i>Massachusetts General Hospital</i>); Nummenmaa, Aapo (<i>Massachusetts General Hospital</i>)	SaA12: 08:30-10:00 Imaging for Surgery and Intervention (Oral Session) Co-Chair: Friebe, Michael (<i>Otto-von-Guericke-University</i>)	M6 – Level 3
09:30-09:45	SaA10.5	A Theory Connecting Mechanisms Underlying 200 kHz AC Electric Fields Effects on Tumor Cell Structures Carlson, Kris* (<i>BIDMC/Harvard Medical School</i>); Tuszynski, Jack Adam (<i>University of Alberta</i>); Paudel, Nirmal (<i>IEEE</i>); Bomzon, Ze'ev (<i>Novocure</i>)	08:30-08:45 RASNet: Segmentation for Tracking Surgical Instruments in Surgical Videos using Refined Attention Segmentation Network Ni, ZhenLiang (<i>Institute of Automation, Chinese Academy of Sciences</i>); Bian, Gui-Bin (<i>Institute of Automation, Chinese Academy of Sciences</i>); Xie, Xiao-Liang (<i>Chinese Academy of Sciences</i>); Hou, Zeng-Guang* (<i>Institute of Automation, Chinese Academy of Sciences</i>); Zhou, Xiaohu (<i>Institute of Automation, Chinese Academy of Sciences</i>); Zhou, Yanjie (<i>Institute of Automation, Chinese Academy of Sciences</i>)	SaA12.1
09:45-10:00	SaA10.6	A Computational Study of Joule Heating during TTFIELDS Therapy Miranda, Pedro Cavaleiro* (<i>Faculdade de Ciências, Univ. de Lisboa</i>); Gentilal, Nichal (<i>IBEB, Faculdade de Ciências, Univ. de Lisboa</i>); Salvador, Ricardo (<i>Neuroelectrics</i>)	08:45-09:00 Novel Similarity Metric for Image-Based Out-of-Plane Motion Estimation in 3D Ultrasound Balakrishnan, Sathish* (<i>Otto von Guericke University Magdeburg</i>); Patel, Rajan (<i>Otto von Guericke University Magdeburg</i>); Illanes, Alfredo (<i>Otto-von-Guericke University of Magdeburg</i>); Friebe, Michael (<i>Otto-von-Guericke-University</i>)	SaA12.2
SaA11: 08:30-10:00	M4 – Level 3	Sleep Apnea (Oral Session) Chair: Penzel, Thomas (<i>Charité Universitätsmedizin Berlin</i>) Co-Chair: Khoo, Michael (<i>University of Southern California</i>)	09:00-09:15 Quantifying Dermatology: Method and Device for User-Independent Ultrasound Measurement of Skin Thickness Beaudoin, Judith (<i>Massachusetts Institute of Technology</i>); Anthony, Brian W.* (<i>Massachusetts Institute of Technology</i>)	SaA12.3
08:30-08:45	SaA11.1	An Investigation of the Relationship between the Apnoea Hypopnoea Index and Apnoea Hypopnoea Duration Per Hour de Chazal, Philip* (<i>Univ. of Sydney</i>); Sadr, Nadi (<i>Univ. of Sydney</i>)	09:15-09:30 Towards Validating Stent Induced Micro Flow Patterns in Left Main Coronary Artery Bifurcations Masoud-Ansari, Sina (<i>The Univ. of Auckland</i>); Ormiston, John (<i>Mercy Angiography</i>); Webster, Mark (<i>Auckland District Health Board</i>); Pontre, Beau (<i>Univ. of Auckland</i>); Cowan, Brett (<i>Univ. of Auckland</i>); Beier, Susann* (<i>Univ. of New South Wales</i>)	SaA12.4
08:45-09:00	SaA11.2	Recognition of Sleep/Wake States Analyzing Heart Rate, Breathing and Movement Signals Gaiduk, Maksym* (<i>HTWG Konstanz</i>); Seepold, Ralf (<i>HTWG Konstanz</i>); Penzel, Thomas (<i>Charité Univ. Berlin</i>); Ortega, Juan Antonio (<i>Univ. de Sevilla</i>); Glos, Martin (<i>Charité-Univ. Berlin</i>); Martinez Madrid, Natividad (<i>Reutlingen Univ.</i>)	09:30-09:45 Susceptibility-Based MR Imaging of Nitinol Stent Shi, Caiyun (<i>Shenzhen Institutes of Advanced Technology, Lauterbur Research C</i>); Wang, Haifeng (<i>Shenzhen Institutes of Advanced Technology, Chinese Academy of S</i>); Xie, Guoxi (<i>Shenzhen Institutes of Advanced Technology, Lauterbur Research C</i>); Su, Shi (<i>Shenzhen Institutes of Advanced Technology, Chinese Academy of S</i>); Huang, Yi (<i>Guangzhou Panyu Central Hospital</i>); Chen, Hanwei (<i>Guangzhou Panyu Central Hospital</i>); Liu, Xin (<i>Shenzhen Institutes of Advanced Technology, Chinese Academy of Sc</i>); Zheng, Hairong (<i>Shenzhen Inst of Advanced Tech</i>); Liang, Dong* (<i>Shenzhen Institutes of Advanced Technology</i>)	SaA12.5
09:00-09:15	SaA11.3	Trend Statistics Network and Channel Invariant EEG Network for Sleep Arousal Study Rao M V, Achuth (<i>Indian Institute of Science</i>); Ghosh, Prasanta (<i>Indian Institute of Science</i>); Bhattacharjee, Tanuka* (<i>Research & Innovation, TATA Consultancy Services, India</i>); Dutta Choudhury, Anirban (<i>Tata Consultancy Services Ltd.</i>)	09:45-10:00 A New Method for the 3D Reconstruction of Coronary Bifurcations Pre and Post the Angioplasty Procedure using the QCA Andrikos, Ioannis (<i>University of Ioannina</i>); Sakellarios, Antonis* (<i>Forth-Biomedical Research Institute</i>); Siogkas, Panagiotis (<i>Forth-IMBB</i>); Tsompou, Panagiota (<i>Unit of Medical Technology & Intelligent Information Systems.</i>); Kigka, Vassiliki (<i>University of Ioannina</i>); Michalis, Lampros (<i>University of Ioannina</i>); Fotiadis, Dimitrios I. (<i>University of Ioannina</i>)	SaA12.6
09:15-09:30	SaA11.4	Effects of Optimized Heart Failure Medication on Central Sleep Apnea with Cheyne-Stokes Respiration Pattern in Chronic Heart Failure with Reduced Left-Ventricular Ejection Fraction Schoebel, Christoph* (<i>Charité Universitaetsmedizin Berlin</i>); Fietze, Ingo (<i>Charité-Universitaetsmedizin Berlin</i>); Penzel, Thomas (<i>Charité Universitätsmedizin Berlin</i>)	SaA13: 08:30-10:00 New Sensing Technologies (Oral Session) Co-Chair: Cisotto, Giulia (<i>University of Padova</i>)	R2 – Level 3
09:30-09:45	SaA11.5	Dynamic Estimation of Cerebral Blood Flow using Photo-Plethysmography Signal during Simulated Apnea Soltan Zadi, Armin (<i>University of Texas at Arlington</i>); Alex, Raichel (<i>University of Texas Arlington</i>); Zhang, Rong (<i>University of Texas Southwestern Medical Center at Dallas</i>); Watenpugh, Donald (<i>Sleep Consultants Inc.</i>); Behbehani, Khosrow* (<i>University of Texas at Arlington</i>)	08:30-08:45 A Reconfigurable, Pulse-Shaping Potentiometric Readout System for Bio-Sensing Transistors Lu, Shao-Yung (<i>National Chiao Tung Univ.</i>); Shan, Siang-Sin (<i>National Chiao Tung Univ.</i>); Liao, Yu-Te* (<i>National Chiao Tung Univ.</i>); Yang, Jiancheng (<i>Univ. of Florida</i>); Ren, Fan (<i>Univ. of Florida</i>); Chang, Chin-Wei (<i>Univ. of Florida</i>); Lin, Jenshan (<i>Univ. of Florida</i>); Pearton, Stephen (<i>Univ. of Florida</i>)	SaA13.1
09:45-10:00	SaA11.6	Linear Mixed Effects Modelling of Oxygen Desaturation after Sleep Apneas and Hypopneas: A Pilot Study Solà-Soler, Jordi* (<i>Institut de Bioenginyeria de Catalunya (IBEC)</i>); Giraldo, Beatriz (<i>Universitat Politècnica de Catalunya</i>); Jané, Raimon (<i>Institut de Bioenginyeria de Catalunya (IBEC)</i>)		

08:45-09:00	SaA13.2	09:45-10:00	SaA14.6
A Simple and Accessible Inkjet Platform for Ultra-Short Concept-to-Prototype sEMG Electrodes Production Cisotto, Giulia* (<i>University of Padova</i>); Rosati, Giulio (<i>University of Padova</i>); Paccagnella, Alessandro (<i>University of Padova</i>)		Drug-Specific Models Improve the Performance of an EEG-Based Automated Brain-State Prediction System Kashkooli, Kimia* (<i>Tufts University School of Medicine</i>); Polk, Sam, L (<i>Tufts University</i>)	
09:00-09:15	SaA13.3	SaA15: 08:30-10:00 M3 – Level 3 Ultrasound Imaging – Cardiac and Vascular Applications (Oral Session) Chair: Stieglitz, Thomas (<i>University of Freiburg</i>) Co-Chair: Fotiadis, Dimitrios I. (<i>University of Ioannina</i>)	
Near Infrared Spectrometric Investigations on the Behaviour of Lactate Baishya, Nystha* (<i>City, Univ. of London</i>); Budidha, Karthik (<i>City Univ.</i>); Mamouei, MohammadHossein (<i>City, Univ. of London</i>); Gassem, Meha (<i>City Univ. London</i>); Vadgama, Pankaj (<i>Queen Mary Univ. of London</i>); Kyriacou, Panayiotis (<i>City Univ. London</i>)		08:30-08:45	SaA15.1
09:15-09:30	SaA13.4	A Comparison of Three Multimodality Coronary 3D Reconstruction Methods Tsompou, Panagiota (<i>Unit of Medical Technology & Intelligent Information Systems.</i>); Siogkas, Panagiotis (<i>Forth-IMBB</i>); Sakellarios, Antonis* (<i>Forth-Biomedical Research Institute</i>); Andrikos, Ioannis (<i>Univ. of Ioannina</i>); Kigka, Vassiliki (<i>Univ. of Ioannina</i>); Lemos, Pedro (<i>Dept. of Interventional Cardiology at the Heart Institute (InCor)</i>); Michalis, Lampros (<i>Univ. of Ioannina</i>); Fotiadis, Dimitrios I. (<i>Univ. of Ioannina</i>)	
Towards the Design of an Impedance-Controlled HD-sEMG Amplifier: A Feasibility Study Cerone, Giacinto Luigi* (<i>Politecnico di Torino</i>); Gazzoni, Marco (<i>Politecnico di Torino</i>)		08:45-09:00	SaA15.2
09:30-09:45	SaA13.5	Left Ventricular Vortices in Myocardial Infarction Observed with Echodynamography Oktamuliani, Sri (<i>Graduate School of Biomedical Engineering, Tohoku University</i>); Hasegawa, Kaoru (<i>Tohoku University</i>); Saijo, Yoshifumi* (<i>Tohoku University</i>)	
Hearables: Feasibility and Validation of In-Ear Electrocardiogram Hammour, Ghena (<i>Imperial College London</i>); Yari, Metin* (<i>Imperial College London</i>); von Rosenberg, Wilhelm (<i>Imperial College London</i>); Mandic, Danilo (<i>Imperial College</i>)		09:00-09:15	SaA15.3
09:45-10:00	SaA13.6	Experimental Characterization of Optoacoustic Phantoms in Gel Wax and Polyvinyl Alcohol for Blood Pressure Measurements Amado Rey, Ana Belén* (<i>Univ. of Freiburg</i>); Mitnacht, Annette (<i>Univ. of Freiburg</i>); Stieglitz, Thomas (<i>Univ. of Freiburg</i>)	
Wearable Multimodal Stethoscope Patch for Wireless Biosignal Acquisition and Long-Term Auscultation Klum, Michael* (<i>Technische Univ. Berlin</i>); Leib, Fabian (<i>Technische Univ. Berlin</i>); Oberschelp, Casper (<i>Technische Univ. Berlin</i>); Martens, David (<i>Technische Univ. Berlin</i>); Pielmus, Alexandru Gabriel (<i>Technische Univ. Berlin</i>); Tigges, Timo (<i>Technical University Berlin</i>); Penzel, Thomas (<i>Charité Univ. Berlin</i>); Orglmeister, Reinhold (<i>Technische Univ. Berlin</i>)		09:15-09:30	SaA15.4
SaA14: 08:30-10:00 R3 – Level 3 Time-Frequency Analysis of Electrophysiological Signals (Oral Session) Chair: Hornero, Roberto (<i>University of Valladolid</i>) Co-Chair: Boylan, Geraldine (<i>University College Cork</i>)		09:30-09:45 SaA15.5 Patch based Texture Classification of Thyroid Ultrasound Images using Convolutional Neural Network Poudel, Prabal* (<i>Otto-von-Guericke-Universität Magdeburg</i>); Illanes, Alfredo (<i>Otto-von-Guericke Univ. of Magdeburg</i>); Sadeghi, Maryam (<i>Otto-von-Guericke Univ., Institute of Medical Technology, I</i>); Friebe, Michael (<i>Otto-von-Guericke-Universität</i>)	
08:30-08:45	SaA14.1	SaA16: 08:30-10:00 M5 – Level 3 Surgical Robotics (Oral Session) Chair: Casals, Alicia (<i>Center of Research in Biomedical Engineering, Universitat Politècnica de Catalunya, Barcelona Tech</i>) Co-Chair: Esfahani, Ehsan (<i>University at Buffalo, SUNY</i>)	
Characterization of EEG Resting-State Activity in Alzheimer's Disease by Means of Recurrence Plot Analyses Núñez, Pablo (<i>Univ. of Valladolid</i>); Poza, Jesus* (<i>Univ. of Valladolid</i>); Gomez, Carlos (<i>Univ. of Valladolid</i>); Barroso-García, Verónica (<i>Univ. of Valladolid</i>); Ruiz-Gómez, Saúl J. (<i>Biomedical Engineering Group, Univ. of Valladolid</i>); Maturana-Candelas, Aarón (<i>Univ. of Valladolid</i>); Tola-Arribas, Miguel A. (<i>Dept. of Neurology, Hospital Universitario Río Hortega</i>); Cano, Mónica (<i>Dept. of Clinical Neurophysiology, Hospital Universitario R</i>); Hornero, Roberto (<i>Univ. of Valladolid</i>)		09:45-10:00	SaA15.6
08:45-09:00	SaA14.2	Higher Order Statistical Analysis for Thyroid Texture Classification and Segmentation in 2D Ultrasound Images Mahmoodian, Naghme* (<i>Otto-von-Guericke-Universität Magdeburg</i>); Poudel, Prabal (<i>Otto-von-Guericke-Universität Magdeburg</i>); Illanes, Alfredo (<i>Otto-von-Guericke Univ. of Magdeburg</i>); Friebe, Michael (<i>Otto-von-Guericke-Universität</i>)	
Correntropy based Robust Decomposition of Neuromodulations Akella, Shailaja (<i>University of Florida, Gainesville</i>); Principe, Jose* (<i>University of Florida</i>)		08:30-08:45	SaA16.1
09:00-09:15	SaA14.3	Mechanical Design and Modeling of a Manipulator Tool for a Compact Multiple-Tool Single Port Laparoscopic Robot Platform Wang, Fanxin* (<i>University of Illinois at Urbana-Champaign</i>); Toombs, Nicholas (<i>University of Illinois at Urbana-Champaign</i>); Kesavadas, Thenkurussi (<i>UIUC/HCESC</i>); Ferreira, Placid (<i>University of Illinois at Urbana-Champaign</i>)	
State-Space Global Coherence to Estimate the Spatio-Temporal Dynamics of the Coordinated Brain Activity Yousefi, Ali* (<i>Massachusetts General Hospital & Harvard Medical School</i>); Saadati Fard, Reza (<i>Isfahan Univ. of Technology</i>); Eden, Uri (<i>Boston Univ.</i>); Brown, Emery (<i>MIT</i>)		09:30-09:45 SaA16.1 Multitaper Infinite Hidden Markov Model for EEG Song, Andrew* (<i>Massachusetts Institute of Technology</i>); Chlon, Leon (<i>MIT</i>); Soulat, Hugo (<i>MGH – MIT</i>); Tauber, John (<i>Massachusetts Institute of Technology</i>); Subramanian, Sandya (<i>Massachusetts Institute of Technology</i>); Ba, Demba (<i>MIT</i>); Prerau, Michael (<i>Massachusetts General Hospital</i>)	
09:15-09:30	SaA14.4	09:30-09:45 SaA16.1 Multitaper Infinite Hidden Markov Model for EEG Song, Andrew* (<i>Massachusetts Institute of Technology</i>); Chlon, Leon (<i>MIT</i>); Soulat, Hugo (<i>MGH – MIT</i>); Tauber, John (<i>Massachusetts Institute of Technology</i>); Subramanian, Sandya (<i>Massachusetts Institute of Technology</i>); Ba, Demba (<i>MIT</i>); Prerau, Michael (<i>Massachusetts General Hospital</i>)	
09:30-09:45	SaA14.5	09:30-09:45 SaA16.1 Multitaper Infinite Hidden Markov Model for EEG Song, Andrew* (<i>Massachusetts Institute of Technology</i>); Chlon, Leon (<i>MIT</i>); Soulat, Hugo (<i>MGH – MIT</i>); Tauber, John (<i>Massachusetts Institute of Technology</i>); Subramanian, Sandya (<i>Massachusetts Institute of Technology</i>); Ba, Demba (<i>MIT</i>); Prerau, Michael (<i>Massachusetts General Hospital</i>)	

- 08:45-09:00 SaA16.2
Surgical Skill Assessment using Motor Control Features and Hidden Markov Model
 Gorantla, Kuber Reddy (*University at Buffalo*); Esfahani, Ehsan* (*University at Buffalo, SUNY*)
- 09:00-09:15 SaA16.3
Determination of a Tactile Feedback Strategy for use in Robotized Percutaneous Procedures
 Zhu, Rui* (*Hochschule Furtwangen*); Rubbert, Lennart (*INSA Strasbourg*); Renaud, Pierre (*INSA Strasbourg*); Mescheder, Ulrich (*Institute for Microsystems Technology (IMST), Furtwangen Univ.*)
- 09:15-09:30 SaA16.4
Development of a Transoral Robotic Surgery Training Platform
 Geoghegan, Rory* (*Univ. of California, Los Angeles*); Song, Jonathan (*Univ. of California, Los Angeles*); Singh, Aadesh (*Univ. of California, Los Angeles*); Le, Tyler (*Univ. of California, Los Angeles*); Abiri, Ahmad (*Univ. of California, Los Angeles*); Mendelsohn, Abie H (*UCLA School of Medicine*)
- 09:30-09:45 SaA16.5
Vision based Robot Assistance in TTTS Fetal Surgery
 Sayols, Narcís (*Univ. Politècnica de Catalunya*); Hernansanz, Albert (*Technical Univ. of Catalonia*); Parra, Johanna (*Fetal i+D Fetal Medicine Research Center, BCNatal*); Eixarch, Elisenda (*BCNatal, Hospital Clínic, Hospital Sant Joan de Déu*); Gratacós, Eduard (*Fetal i+D Fetal Medicine Research Center, BCNatal – Barcelona Ce*); Amat, Josep (*Univ. Politècnica de Catalunya, Barcelona Tech.*); Casals, Alicia* (*Center of Research in Biomedical Engineering, Univ. Politè*)
- 09:45-10:00 SaA16.6
Quantitative Evaluation of Bleeding during Blood Vessel Puncture Caused by Fine Needle in Lower Abdomen
 Izumi, Koki* (*Waseda University*); Tsumura, Ryosuke (*Waseda University*); Iwata, Hiroyasu (*Waseda University*)
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- SaA17: 08:30-10:00 R12 – Level 3
Wearable Inertial Sensors and Systems (Oral Session)
Co-Chair: Beudel, Martijn (*Amsterdam University Medical Center*)
- 08:30-08:45 SaA17.1
A Clinical Applicable Smartwatch Application for Measuring Hyperkinetic Movement Disorder Severity
 Vocteloo, Martijn (*Hanze Univ. of Applied Sciences*); Tijssen, Marina AJ (*Dept Neurology, UMCG, Univ. of Groningen*); Beudel, Martijn* (*Amsterdam Univ. Medical Center*)
- 08:45-09:00 SaA17.2
Estimating Movements of Human Body for the Shirt-Type Wearable Device Mounted on the Strain Sensors based on Convolutional Neural Networks
 Ogata, Kunihiro* (*National Institute of Advanced Industrial Science & Technology*); Matsumoto, Yoshio (*Advanced Industrial Science & Technology*)
- 09:00-09:15 SaA17.3
IMU Sensor Fusion Algorithm for Monitoring Knee Kinematics in ACL Reconstructed Patients
 Bravo, Graciela (*Pontificia Universidad Católica de Chile*); Halvorson, Ryan* (*UCSF*); Matthew, Robert, P (*UC Berkeley*); Lansdown, Drew (*UCSF*); Ma, Benjamin (*UCSF*); Bajcsy, Ruzena (*UC Berkeley, CITRIS*)
- 09:15-09:30 SaA17.4
Techniques for Improving the Reliability of Prosthesis Wearer Muscle Signals using Pressure and EMG Sensors
 Shin, Jin Woo (*Korea Polytechnic University*); Eom, Su Hong (*Korea Polytechnic University*); Lee, Chol U (*Korea Polytechnic University*); Lee, Eung Hyuk* (*Korea Polytechnic University*)
- 09:30-09:45 SaA17.5
Gut-Brain Computer Interfacing (GBCI): Wearable Monitoring of Gastric Myoelectric Activity
 Vujic, Angela* (*MIT*); Krause, Christopher (*MIT*); Georgette, Tso (*MIT*); Lin, Jiaqi (*Dept. of Chemical Eng., David H. Koch Insti. for*); Han, Bicheng (*Harvard Univ.*); Maes, Pattie (*MIT Media Lab*)
- 09:45-10:00 SaA17.6
A Novel Parameterisation of Phase Plots for Monitoring of Parkinson's Disease
 Dunne-Willows, Michael* (*EPSRC Centre for Doctoral Training in Cloud Computing for Big Data*); Watson, Paul (*School of Computing Science, Newcastle Univ., Newcastle Upo*); Shi, Jian (*School of Mathematics & Statistics, Newcastle Univ.*); Rochester, Lynn (*Newcastle Univ.*); Del Din, Silvia (*Newcastle Univ.*)
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- SaA18: 08:30-10:00 R13 – Level 3
Neural Stimulation (I) (Oral Session)
- 08:30-08:45 SaA18.1
Constrained Maximum Intensity Optimized Multi-Electrode tDCS Targeting of Human Somatosensory Network
 Khan, Asad* (*Univ. Klinikum Münster, Univ. of Münster*); Antonakakis, Marios (*Univ. of Muenster*); Vogenauer, Nikolas (*Univ. of Münster*); Wollbrink, Andreas (*Univ. of Muenster*); Suntrup-Krueger, Sonja (*Univ. Hospital Muenster*); Schneider, Till (*Dept. of Neurophysiology & Pathophysiology, Univ. Me*); Herrmann, Christoph (*Research Center Neurosensory Science, European Medical School, U*); Nitsche, Michael A. (*Georg-August-Univ., Goettingen*); Paulus, Walter (*Georg-August-Univ., Goettingen*); Haueisen, Jens (*Technische Univ. Ilmenau*); Wolters, Carsten (*Univ. of Muenster*)
- 08:45-09:00 SaA18.2
Electric Field Distribution during Non-Invasive Electric and Magnetic Stimulation of the Cervical Spinal Cord
 Fernandes, Sofia Rita (*Faculdade de Ciências e Faculdade de Medicina da Univ. de*); Salvador, Ricardo (*Neuroelectrics*); de Carvalho, Mamede (*IMM Molecular Medicine Institute, Faculty of Medicine, Univ.*); Miranda, Pedro Cavaleiro* (*Faculdade de Ciências, Univ. de Lisboa*)
- 09:00-09:15 SaA18.3
Beta Power May Meditate the Effect of Gamma-TACS on Motor Performance
 Mastakouri, Atalanti Anastasia* (*Max Planck Institute for Intelligent Systems*); Schölkopf, Bernhard (*MPI for Biological Cybernetics*); Grosse-Wentrup, Moritz (*Max Planck Institute for Intelligent Systems*)
- 09:15-09:30 SaA18.4
Towards Safe Infrared Nerve Stimulation: A Systematic Experimental Approach
 Schlett, Paul* (*Uniklinik Freiburg*); Wegner, Celine (*inomed Medizintechnik GmbH*); Krueger, Thilo B (*inomed Medizintechnik GmbH*); Hofmann, Ulrich G. (*University of Freiburg*)
- 09:30-09:45 SaA18.5
A Computational Analysis of the Electric Field Components in Transcranial Direct Current Stimulation
 Callejón Leblic, María Amparo* (*Faculty of Sciences. University of Lisbon*); Miranda, Pedro Cavaleiro (*Faculdade de Ciências, Universidade de Lisboa*)
- 09:45-10:00 SaA18.6
The Lasting Effects of 1Hz Repetitive Transcranial Magnetic Stimulation on Resting State EEG in Healthy Subjects
 Qiu, Shuang* (*Institute of Automation, Chinese Academy of Science*); Wang, Shengpei (*Research Center for Brain-inspired Intelligence & National Lab*); Yi, Weibo (*Beijing Machine & Equipment Institute*); Zhang, Chunheng (*Institute of Automation, Chinese Academy of Sciences*); He, Huiguang (*Institute of Automation, Chinese Academy of Sciences*)
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- SaA19: 08:30-10:00 R4 – Level 3
Image Segmentation (I) (Oral Session)
- 08:30-08:45 SaA19.1
Epistemic Uncertainty Modeling for Vessel Segmentation
 Martin, Rémi* (*Ecole de Technologie Supérieure*); Miró, Joaquim (*Dept. of Pediatrics, CHU Sainte-Justine*); Duong, Luc (*Ecole de Technologie Supérieure*)

- 08:45-09:00 SaA19.2
Simultaneous Tissue Classification and Lateral Ventricle Segmentation via a 2D U-Net Driven by a 3D Fully Convolutional Neural Network
 Wu, Jiong (*Sun Yat-Sen University*); Zhang, Yue (*Southern University of Science & Technology*); Tang, Xiaoying* (*Southern University of Science & Technology*)
- 09:00-09:15 SaA19.3
Instance Segmentation of Nematode Cysts in Microscopic Images of Soil Samples
 Chen, Long* (*RWTH Aachen University, Aachen, Germany*); Strauch, Martin (*RWTH Aachen University*); Daub, Matthias (*Julius Kühn Institute: Federal Research Centre for Cultivated Pl*); Jansen, Marcus (*LemnaTec GmbH, Aachen, Germany*); Luigs, Hans-Georg (*LemnaTec GmbH, Aachen, Germany*); Merhof, Dorit (*RWTH Aachen University*)
- 09:15-09:30 SaA19.4
Pancreas Segmentation in Abdominal CT Scans using Inter-/Intra-Slice Contextual Information with a Cascade Neural Network
 Yang, Zhengzheng (*Northwest Univ.*); Zhang, Lei (*Northwest Univ.*); Zhang, Min* (*Northwest Univ., China*); Feng, Jun (*Northwest Univ.*); Wu, Zheng (*First Affiliated Hospital of Xi'an Jiao Tong Univ.*); Ren, Fenggang (*First Affiliated Hospital of Xi'an Jiao Tong Univ.*); Lv, Yi (*First Affiliated Hospital of Xi'an Jiao Tong Univ.*)
- 09:30-09:45 SaA19.5
Electroanatomic Mapping to Determine Scar Regions in Patients with Atrial Fibrillation
 He, Jiyue* (*Univ. of Pennsylvania*); Jang, Kuk Jin (*Univ. of Pennsylvania*); Walsh, Katie (*Hospital of The Univ. of Pennsylvania*); Liang, Jackson (*Hospital of The Univ. of Pennsylvania*); Dixit, Sanjay (*Hospital of The Univ. of Pennsylvania*); Mangharam, Rahul (*Univ. of Pennsylvania*)
- 09:45-10:00 SaA19.6
Localization of Small Neoplastic Lesions in Colonoscopy by Estimating Edge, Texture and Motion Saliency
 Ruano, Josue (*Univ. Nacional de Colombia*); Barrera, Cristian (*Univ. Nacional de Colombia*); Bravo, Diego (*Univ. Nacional de Colombia*); Gomez, Martin (*Univ. Nacional de Colombia*); Romero, Eduardo* (*Univ. Nacional de Colombia*)
- SaB01: 10:30-12:00 Hall A6+A7 – Level 1
Brain-Computer Interface (II) (Oral Session)
- 10:30-10:45 SaB01.1
Applying Intuitive EEG-Controlled Grasp Neuroprostheses in Individuals with Spinal Cord Injury: Preliminary Results from the MoreGrasp Clinical Feasibility Study
 Müller-Putz, Gernot* (*Graz Univ. of Technology*); Ofner, Patrick (*Graz Univ. of Technology*); Pereira, Joana (*Graz Univ. of Technology*); Pinegger, Andreas (*Graz Univ. of Technology*); Schwarz, Andreas (*Graz Univ. of Technology*); Zube, Marcel (*Graz Univ. of Technology*); Eck, Ute (*Heidelberg Univ. Hospital*); Hessing, Björn (*Heidelberg Univ. Hospital*); Schneiders, Matthias (*Heidelberg Univ. Hospital*); Rupp, Rüdiger (*Heidelberg Univ. Hospital*)
- 10:45-11:00 SaB01.2
Effects of Stimulus Position on the Classification of Miniature Asymmetric VEPs for Brain-Computer Interfaces
 Xu, Minpeng (*Tianjin Univ.*); Zhou, Xiaoyu* (*Tianjin Univ.*); Xiao, Xiaolin (*Tianjin Univ.*); Wang, Yijun (*Institute of Semiconductors, Chinese Academy of Sciences*); Jung, Tzyy-Ping (*Univ. of California San Diego*); Ming, Dong (*Tianjin Univ.*)
- 11:00-11:15 SaB01.3
Comparison of Visual and Auditory Modalities for Upper-Alpha EEG-Neurofeedback
 Bucho, Teresa* (*Instituto Superior Técnico, Universidade de Lisboa*); Caetano, Gina (*Instituto Superior Técnico, Univ. de Lisboa*); Vourvopoulos, Athanasios (*Univ. of Southern California*); Accoto, Floriana (*Univ. of Salento*); Esteves, Inês (*Instituto Superior Técnico, Univ. de Lisboa*); Badia, Sergi Bermúdez i (*Faculdade de Ciências Exatas e da Engenharia, Univ. da Ma*); Rosa, Agostinho Claudio da (*Technical Univ. of Lisbon*); Figueiredo, Patricia (*Instituto Superior Técnico, Univ. de Lisboa*)
- 11:15-11:30 SaB01.4
A Eye Drive: Gaze-Based Semi-Autonomous Wheelchair Interface
 Subramanian, Mahendran (*Imperial College London*); Songur, Noyan (*Imperial College London*); Adjei, Darrell (*Imperial College London*); Orlov, Pavel (*Imperial College London*); Faisal, A. Aldo* (*Imperial College London*)
- 11:30-11:45 SaB01.5
Tensor Discriminant Analysis for MI-EEG Signal Classification using Convolutional Neural Network
 Huang, Shoulin (*Harbin Institute of Tech.*); Peng, Hao (*Dept. of Electronic & Information Engineering, Harbin Ins*); Chen, Yang (*Harbin Institute of Tech., Shenzhen*); Sun, Kai (*Dept. of Electronic & Information Engineering, Harbin Insti*); Fang, Shen (*Dept. of Electronic & Information Engineering, Harbin Insti*); Wang, Tong (*Harbin Institute of Tech., Shenzhen*); Ma, Ting* (*Harbin Institute of Tech. at Shenzhen*)
- 11:45-12:00 SaB01.6
A Multifocal SSVEPs-Based Brain-Computer Interface with Less Calibration Time
 Tang, Jiabei (*Tianjin University*); Xu, Minpeng (*Tianjin University*); Liu, Zheng (*Tianjin University*); Meng, Jiayuan (*Tianjin University*); Chen, Shanguang (*China Astronaut Research & Training Center*); Ming, Dong* (*Tianjin University*)
- SaB02: 10:30-12:00 Hall A8 – Level 1
Signal Processing and Classification in Fetal and Neonatal Physiology (Oral Session)
 Chair: Signorini, Maria G. (*Politecnico di Milano*)
- 10:30-10:45 SaB02.1
Influence of Averaged Fetal Heart Rate in Heart Rate Variability Analysis
 De Jonckheere, Julien* (*CHRU de Lille*); Logier, Regis (*CHRU de Lille*)
- 10:45-11:00 SaB02.2
Fetal Heart Rate Estimation from a Single Phonocardiogram Signal using Non-Negative Matrix Factorization
 Dia, Nafissa* (*Univ. Grenoble Alpes, CNRS, CHU Grenoble Alpes, Grenoble INP, TI*); Fontcave-Jallon, Julie (*Univ. Grenoble Alpes, TIMC – IMAG*); Gumery, Pierre-Yves (*Univ. Joseph Fourier*); Rivet, Bertrand (*Grenoble Univ.*)
- 11:00-11:15 SaB02.3
Characterization of EHG Contractions at Pregnancy and Term Labor by Multiscale Entropy Analysis
 Garcia-Gonzalez, Maria-Teresa* (*Universidad Autonoma Metropolitana*); Charleston-Villalobos, Sonia (*Universidad Autonoma Metropolitana*); Gonzalez-Camarena, Ramon (*Universidad Autonoma Metropolitana*); Garcia-Ruiz, Ashmed-Claudio (*Universidad Autónoma Metropolitana*); Aljama-Corrales, Tomas (*Universidad Autonoma Metropolitana*)
- 11:15-11:30 SaB02.4
Hybrid Neonatal EEG Seizure Detection Algorithms Achieve the Benchmark of Visual Interpretation of the Human Expert
 Stevenson, Nathan* (*QIMR Berghofer*); Tapani, Karoliina (*Aalto University*); Vanhatalo, Sampsa (*Helsinki University Central Hospital & University of Helsinki*)
- 11:30-11:45 SaB02.5
Automatic and Continuous Discomfort Detection for Premature Infants in a NICU using Video-Based Motion Analysis
 Sun, Yue* (*Eindhoven Univ. of Tech.*); Kommers, Deedee (*Maxima Medical Center, Veldhoven; Eindhoven Univ. of Tech.*); Wang, Wenjin (*Philips Research*); Joshi, Rohan (*Philips Research*); Shan, Caifeng (*Philips Research*); Tan, Tao (*Eindhoven Univ. of Tech.*); Aarts, Ronald M. (*Philips*); van Pul, Carola (*Maxima Medical Center*); Andriessen, Peter (*Maxima Medical Center*); de With, Peter (*Eindhoven Univ. of Tech.*)

11:45-12:00	SaB02.6	10:45-11:00	SaB04.2
The Implementation of an Apnea-Based Perinatal Stress Calculator Lavanga, Mario* (<i>KU Leuven</i>); De Wel, Ofelie (<i>KU Leuven</i>); Caicedo, Alexander (<i>Univ. del Rosario</i>); Deviaene, Margot (<i>KU Leuven</i>); Moeyersons, Jonathan (<i>KU Leuven</i>); Varon, Carolina (<i>Katholieke Univ. Leuven</i>); Bollen, Bieke (<i>UZ Leuven</i>); Jansen, Katrien (<i>Dept. of Pediatrics, Univ. Hospital Gasthuisberg, Leuven</i>); Ortibus, Els (<i>UZ Leuven</i>); Naulaers, Gunnar (<i>Univ. Hospitals Leuven</i>); Van Huffel, Sabine (<i>KU Leuven</i>)		Bioimpedance Method for Human Body Hydration Assessment Leonov, Vladimir* (<i>imec</i>); Lee, Seulki (<i>imec</i>); Londergan, Ana (<i>Qualcomm Technology, Inc.</i>); Martin, Russel A. (<i>Qualcomm Technology, Inc.</i>); De Raedt, Walter (<i>imec</i>); Van Hoof, Chris (<i>imec</i>)	
SaB03: 10:30-12:00 Hall A3 – Level 1 Optical Imaging and Microscopy (Oral Session)		11:00-11:15	SaB04.3
10:30-10:45	SaB03.1	A Wearable Wireless Armband Sensor for High-Density Surface Electromyography Recording Tam, Simon* (<i>Laval Univ.</i>); Bilodeau, Guillaume (<i>Laval Univ.</i>); Brown, Jérémy (<i>Laval Univ.</i>); Gagnon-Turcotte, Gabriel (<i>Univ. Laval</i>); Campeau-Lecours, Alexandre (<i>Univ. Laval</i>); Gosselin, Benoit (<i>Laval Univ.</i>)	
Quantitative Analysis of 3D Artery Volume Reconstructions using Biplane Angiography and Intravascular OCT Imaging Latus, Sarah* (<i>Hamburg Univ. of Technology</i>); Neidhardt, Maximilian (<i>Hamburg Univ. of Technology, Institute of Medical Technology</i>); Lutz, Matthias (<i>Univ. Schleswig-Holstein</i>); Gessert, Nils (<i>Hamburg Univ. of Technology, Institute of Medical Technology</i>); Frey, Norbert (<i>Univ. Schleswig-Holstein</i>); Schlaefer, Alexander (<i>Hamburg Univ. of Technology</i>)		11:15-11:30	SaB04.4
10:45-11:00	SaB03.2	Tissue Paper as a Substrate for Electronic Biosensing Sardar, Sakshi* (<i>Rutgers University</i>); Javanmard, Mehdi (<i>Rutgers University New Bru</i>)	
Ultrasonically Steerable Graded-Index Optical Waveguides for Deep Tissue Light Delivery: Theory and Applications Scopelliti, Matteo Giuseppe (<i>Carnegie Mellon University</i>); Karimi, Yasin (<i>Carnegie Mellon University</i>); Chamanzar, Maysamreza* (<i>Carnegie Mellon University</i>)		11:30-11:45	SaB04.5
11:00-11:15	SaB03.3	Imaging of a Dielectric Inclusion using a Contactless Radio-Frequency Inductive Probe for Tissue Diagnosis Pasquier, Alexiane* (<i>Centre de Nanosciences et de NanoTechnologies, CNRS, Univ. Paris</i>); Le Diraison, Yohan (<i>SATIE, CNRS, Univ. de Cergy-Pontoise</i>); Joubert, Pierre-Yves (<i>Centre de Nanosciences et de NanoTechnologies, CNRS, Univ. Paris</i>); Serfaty, Stéphane (<i>SATIE, CNRS, Univ. de Cergy-Pontoise</i>)	
Fractal Characterization of Subviral Particle Motion: On the Influence of Spatio-Temporal Interpolation Methods Rausch, Andreas* (<i>Technische Hochschule Mittelhessen</i>); Schanze, Thomas (<i>Technische Hochschule Mittelhessen (THM), FB LSE, IBMT</i>)		11:45-12:00	SaB04.6
11:15-11:30	SaB03.4	Development of a Low Cost and Low Noise Amplification System for in Vitro Neuronal Recording through Microelectrode Arrays Agrawe, Zaid* (<i>University of Auckland</i>); Patel, Nitish (<i>University of Auckland</i>); Montgomery, Johanna (<i>The University of Auckland, Centre for Brain Research</i>); Travas-Sejdic, Jadranka (<i>The University of Auckland</i>); Svirskis, Darren (<i>The University of Auckland, School of Pharmacy</i>)	
Tracking and Line Integration of Diffuse Cellular Subdomains by Mesh Advection Boquet-Pujadas, Aleix* (<i>Institut Pasteur</i>); Grimaldi, Cecilia (<i>Institute for Cell Biology, ZMBE</i>); Raz, Erez (<i>Institute for Cell Biology, ZMBE</i>); Olivo-Marin, Jean-Christophe (<i>Institut Pasteur</i>)		SaB05: 10:30-12:00 Hall A2 – Level 1 Signal Processing and Classification for Contactless Measurements (Oral Session) Chair: McDuff, Daniel Jonathan (<i>Microsoft</i>)	
11:30-11:45	SaB03.5	10:30-10:45	SaB05.1
Rotation Invariant Clustering of 3D Cell Nuclei Shapes Wagner, Patrick (<i>Fraunhofer Heinrich Hertz Institute</i>); Morath, Jakob Paul (<i>Max Planck Institute for Infection Biology</i>); Zychlinsky, Arturo (<i>Max Planck Institute for Infection Biology</i>); Müller, Klaus-Robert (<i>Technical University of Berlin</i>); Samek, Wojciech* (<i>Fraunhofer Heinrich Hertz Institute</i>)		Exploiting Weak Head Movements for Camera-Based Respiration Detection Schrumpp, Fabian* (<i>Leipzig Univ. of Applied Sciences (HTWK)</i>); Mönch, Christoph (<i>Leipzig Univ. of Applied Sciences</i>); Bausch, Gerold (<i>Leipzig Univ. of Applied Sciences</i>); Fuchs, Mirco (<i>Laboratory for Biosignal Processing, Leipzig Univ. of Appli</i>)	
11:45-12:00	SaB03.6	10:45-11:00	SaB05.2
Dynamic Activation Patterns of the Motor Brain Revealed by Diffuse Optical Tomography Khan, Ali Fahim* (<i>University of Oklahoma</i>); Zhang, Fan (<i>University of Oklahoma</i>); Yuan, Han (<i>University of Oklahoma</i>); Ding, Lei (<i>University of Oklahoma</i>)		Classifying Individuals with ASD through Facial Emotion Recognition and Eye-Tracking Jiang, Ming (<i>Univ. of Minnesota</i>); Francis, Sunday* (<i>Univ. of Minnesota</i>); Srishyla, Diksha (<i>Univ. of Minnesota</i>); Conelea, Christine (<i>Univ. of Minnesota</i>); Zhao, Qi (<i>Univ. of Minnesota</i>); Jacob, Suma (<i>Univ. of Minnesota</i>)	
SaB04: 10:30-12:00 Hall A1 – Level 1 Bio-Electric Sensing (Oral Session) Co-Chair: Leonov, Vladimir (<i>imec</i>)		11:00-11:15	SaB05.3
10:30-10:45	SaB04.1	Number and Angle Analysis in UWB Radar Deployment for Vital Sign Monitoring Yu, Yibo* (<i>Beijing Univ. of Posts & Telecommunications</i>); Yang, Xiuzhu (<i>Beijing Univ. of Posts & Telecommunications</i>); Qian, Hongyu (<i>Beijing Univ. of Posts & Telecommunications</i>); Zhang, Xinyue (<i>Beijing Univ. of Posts & Telecommunications</i>); Li, Lei (<i>Beijing Univ. of Posts & Telecommunications</i>); Zhang, Lin (<i>Beijing Univ. of Posts & Telecommunications</i>)	
Feasibility Experiments to Detect Skin Hydration using a Bio-Impedance Sensor Sunny, Ali Imam* (<i>King's College London</i>); Rahman, Mohammed (<i>King's College London</i>); Koutsoupidou, Maria (<i>King's College London</i>); Cano-Garcia, Helena (<i>King's College London, Medical Wireless Sensing Ltd.</i>); Thanou, Maya (<i>King's College London</i>); Rafique, Waqas (<i>King's College London</i>); Lipscombe, Oliver (<i>Mediwise</i>); Kassanos, Panagiotis (<i>Imperial College London</i>); Triantis, Iasonas (<i>City, University of London</i>); Kallos, Efthymios (<i>MediWise, Medical Wireless Sensing Ltd.</i>); Kosmas, Panos (<i>King's College London</i>)		11:15-11:30	SaB05.4
		MUSIC-Based Non-Contact Heart Rate Estimation with Adaptive Window Size Setting Yamamoto, Kohei* (<i>Keio University</i>); Toyoda, Kentaroh (<i>Keio University</i>); Ohtsuki, Tomoaki (<i>Keio University</i>)	

11:30-11:45	SaB05.5	Contactless Anesthesia Monitoring in Spontaneously Breathing Rodents Kunczik, Janosch* (RWTH Aachen University, Faculty of Medicine); Barbosa Pereira, Carina (RWTH Aachen University); Wassermann, Laura (Hannover Medical School); Häger, Christine (Hannover Medical School); Bleich, André (Hannover Medical School); Ziegowski, Leonie (University Hospital RWTH Aachen); Tolba, Rene (RWTH Aachen University); Czaplik, Michael (University Hospital RWTH Aachen)	11:00-11:15	SaB07.3	Modelling the Crosstalk between Immune Cells and Bone Lang, Annemarie* (Charité-Univ. Berlin); Pfeiffenberger, Moritz (Charité-Univ. Berlin); Damerou, Alexandra (Charité-Univ. Berlin); Buttgerit, Frank (Charité-Univ. Berlin); Gaber, Timo (Charité-Univ. Berlin)
11:45-12:00	SaB05.6	Doppler Radar System for In-Home Gait Characterization using Wavelet Transform Analysis Soubra, Racha* (Université de Technologie de Troyes); Chkeir, Aly (University of Technology of Troyes); Mourad-Chehade, Farah (Université de Technologie de Troyes); Alshama, Daniel (University of Technology of Troyes)	11:15-11:30	SaB07.4	Mechanical Loading of Human Osteoblasts in a Bone-on-a-Chip Schulze, Frank* (German Federal Institute for Risk Assessment)
10:30-10:45	SaB06.1	Guiding Head Model Selection for tDCS Current Flow Models Cinelli, Ilaria* (Tufts University); Dorfmann, Luis (Tufts University); Hussey, Erika (Tufts University)	11:30-11:45	SaB07.5	Development of Personalized Therapies for Cancer with 3D Tumor Spheroids Brischwein, Martin* (Technische Universität München); Wiest, Joachim (cellasys GmbH)
10:45-11:00	SaB06.2	Open Issues in E-Field Modeling of Transcranial Electric Stimulation Callejón Leblic, María Amparo* (Faculty of Sciences. Univ. of Lisbon); Miranda, Pedro Cavaleiro (Faculdade de Ciências, Univ. de Lisboa)	SaB08: 10:30-12:00	M8 – Level 3	General and Theoretical Informatics – Natural Language Processing (Oral Session)
11:00-11:15	SaB06.3	Model-Driven Optimization of Multichannel Transcranial Current Stimulation Sanchez-Todo, Roser* (Neuroelectrics Barcelona); Salvador, Ricardo (Neuroelectrics); Santarnecchi, Emiliano (Berenson-Allen Center for Non-Invasive Brain Stimulation, Beth I); Wendling, Fabrice (INSERM – Université de Rennes 1); Deco, Gustavo (Center for Brain & Cognition, Universitat Pompeu Fabra (UPF)); Ruffini, Giulio (Starlab Barcelona SL)	10:30-10:45	SaB08.1	FREGEX: A Feature Extraction Method for Biomedical Text Classification using Regular Expressions Flores, Christopher A.* (Univ. de Concepción); Figueroa, Rosa (Univ. de Concepción); Pezoa, Jorge E. (Univ. de Concepción)
11:15-11:30	SaB06.4	Enhancing Accuracy and Application of Individualized MRI Derived Computational Models through 3D-Capture of tES Electrode Positioning Woods, Adam J.* (University of Florida); Indahlastari, Aprinda (University of Florida); Albizu, Alejandro (University of Florida); Nissim, Nicole (University of Florida); Traeger, Kelsey (University of Florida); O'Shea, Andrew (University of Florida)	10:45-11:00	SaB08.2	UMLS Mapping and Word Embeddings for ICD Code Assignment using the MIMIC-III Intensive Care Database Schäfer, Henning (Dept. of Computer Science, University of Applied Sciences a); Friedrich, Christoph M.* (University of Applied Sciences & Arts Dortmund; Dept. of)
11:30-11:45	SaB06.5	Inter-Individual Variation from MRI Derived Computational Models: Comparison across Pediatric, Adults, Elderly, Ethnic and Gender Factors Datta, Abhishek* (Soterix Medical, Inc.); Thomas, Chris (Soterix Medical, Inc.); Huang, Yu (City College of New York)	11:00-11:15	SaB08.3	Prediction of Personal Experience Tweets of Medication use via Contextual Word Representations Jiang, Keyuan* (Purdue Univ. Northwest); Chen, Tingyu (Purdue Univ. Northwest); Calix, Ricardo (Purdue Univ. Northwest); Bernard, Gordon R. (Vanderbilt Univ. Medical Center)
10:30-10:45	SaB07.1	New Magnetic Field Device for Application with Laser Microscopes Koch, Martin* (Feldkraft Ltd.); Wiest, Joachim (cellasys GmbH)	11:15-11:30	SaB08.4	Analyzing Progression of Motor and Speech Impairment in ALS Agurto, Carla* (IBM); Pietrowicz, Mary (IBM); Eyigoz, Elif (IBM); Mosmiller, Elizabeth (Johns Hopkins Univ.); Baxi, Emily (Johns Hopkins Univ.); Rothstein, Jeffrey D. (Johns Hopkins Univ.); Roy, Promit (Johns Hopkins Univ.); Berry, James (Massachusetts General Hospital); Maragakis, Nicholas (Johns Hopkins Univ.); Ahmad, Omar (Kata, Johns Hopkins School of Medicine); Cecchi, Guillermo (IBM T. J. Watson Research Center, Yorktown Heights, NY); Norel, Raquel (IBM)
10:45-11:00	SaB07.2	Tissue-on-a-Chip Wiest, Joachim* (cellasys GmbH)	11:30-11:45	SaB08.5	Natural Language Processing of Clinical Notes for Improved Early Prediction of Septic Shock in the ICU Liu, Ran* (The Johns Hopkins Univ.); Greenstein, Joseph L (The Johns Hopkins Univ.); Sarma, Sridevi V. (Johns Hopkins Univ.); Winslow, Raimond L. (Johns Hopkins Univ.)
			11:45-12:00	SaB08.6	Geospatial Suicide Clusters and Emergency Responses: An Analysis of Text Messages to a Crisis Service Larsen, Mark Erik* (University of New South Wales); Torok, Michelle (University of New South Wales); Huckvale, Kit (University of New South Wales); Reda, Bilal (University of New South Wales); Berrouiguet, Sofian (Bilateral Hospital of Brest); Christensen, Helen (University of New South Wales)
			SaB09: 10:30-12:00	M1 – Level 3	Models of Organs and Physiology (Oral Session)
			10:30-10:45	SaB09.1	Anatomical Characterization of Frontal Sinus and Development of Representative Models Coemert, Suat* (Technical Univ. of Munich); Veith, Larissa (Technical Univ. of Munich); Strauss, Gero (Univ. of Leipzig); Schmitz, Pia M. (IRDC GmbH International Reference & Dev. Centre for Sur); Lueth, Tim (Technical Univ. of Munich)

- 10:45-11:00 SaB09.2
Accurate Anatomical Head Segmentations: A Data Set for Biomedical Simulations
 Farcito, Silvia (*IT'IS Foundation*); Puonti, Oula (*Copenhagen Univ. Hospital Hvidovre, Denmark*); Montanaro, Hazael (*IT'IS Foundation for Research on Information Technologies in Soc*); Bicalho Saturnino, Guilherme (*Technical Univ. of Denmark*); Nielsen, Jesper D. (*Copenhagen Univ. Hospital Hvidovre, Denmark & Dept. of App*); Madsen, Camilla (*DRCRM, Technical Univ. Denmark*); Siebner, Hartwig R. (*Hvidovre Hospital, Danish Research Center for Magnetic Resonance*); Neufeld, Esra (*Foundation for Research on Information Technologies in Society ()*); Kuster, Niels (*Foundation*); Lloyd, Bryn (*Foundation for Information Technology in Society (IT'IS)*); Thielscher, Axel* (*Copenhagen Univ. Hospital Hvidovre, Denmark & Biomedical En*)
- 11:00-11:15 SaB09.3
A Shape Optimization Technique to Predict Left Ventricle Ischemic Tissue Damage
 Dempsey, Sergio C. H.* (*Western University*); So, Aaron (*Western University*); Samani, Abbas (*Western University*)
- 11:15-11:30 SaB09.4
A Geometrical Approach to Human Saccade Simulation
 Gunawardane, Palpolage Don Shehan Hiroshan* (*University of British Columbia*); Chiao, Mu (*University of British Columbia*); W de Silva, Clarence (*University of British Columbia*)
- 11:30-11:45 SaB09.5
Real-Time Subject-Specific Head and Facial Mimic Animation System using a Contactless Kinect Sensor and System of Systems Approach
 Nguyen, Tan-Nhu* (*Univ. de Technologie de Compiègne*); Dakpé, Stéphanie (*CHU Amiens- Service Chirurgie Maxillo-Faciale*); Ho Ba Tho, Marie-Christine (*Univ. de Technologie de Compiègne*); Dao, Tien-Tuan (*Univ. of Technology of Compiègne*)
- 11:45-12:00 SaB09.6
Modelling Optogenetic Subthreshold Effects
 Luo, JunWen* (*Newcastle Univ.*); Nikolic, Konstantin (*Imperial College London*); Degenaar, Patrick (*Newcastle Univ.*)
- SaB10: 10:30-12:00 M2 – Level 3
Neural and Muscle Stimulation (Oral Session)
 Chair: Panescu, Dorin (*Zidan Medical, Inc.*)
- 10:30-10:45 SaB10.1
A Minimally Invasive Wirelessly Powered Brain Stimulation System for Treating Neurological Disorders
 Lee, Hyungwoo* (*Samsung Advanced Institute of Technology*); Lee, Jin San (*KyungHee Univ. Medical Center*); Chung, Yeongu (*Asan Medical Center*); Jung, Wooram (*Samsung Medical Center*); Kang, Joonseong (*Samsung Advanced Institute of Technology*); Seo, Dae Won (*Samsung Medical Center*); Shon, Young-Min (*Samsung Medical Center*); Na, Duk-Lyul (*Samsung Medical Center*); Kim, Sang Joon (*Samsung Electronics*)
- 10:45-11:00 SaB10.2
Task-Based Automatic Evaluation of People with Intellectual Disabilities Performed on a Robotic Table Soccer
 Reis Gomes, Pedro Miguel Pinto* (*Lusiada Univ.*); Lima, Carlos Manuel Gregorio Santos (*Univ. of Minho*); Portela de Lemos, Ana F. (*Universidade Lusíada*); Nicolau V Costa, António (*Universidade Lusíada*); P M Torrinha, Ângela (*APPACDM Braga*); Fatima P. S. Moreira, Maria (*APPACDM Braga*); G Dantas, Odete (*APPACDM Braga*); Daniel Lopes dos Santos, Filipe (*Universidade Lusíada*); Oliveira, Rui Pedro (*Universidade Lusíada*); Costa, José Miguel (*Univ. Lusíada*)
- 11:00-11:15 SaB10.3
Electrical Safety and Performance of the G.L.O.V.E Relative to Relevant Requirements of International Electrical Standards
 Jiang, Zhiyong (*Shenzhen Senxunda Electronic Tech. Co., Ltd., Shenzhen, Chi*); Panescu, Dorin* (*Zidan Medical, Inc.*)
- 11:15-11:30 SaB10.4
Toward Miniaturization of Defibrillators: Design of a Defibrillation Charge/Discharge Circuit
 Huang, Yanqi (*Fudan University*); Wen, Xin (*Fudan University*); Wang, Jianfei* (*Fudan University*); Jin, Lian (*Fudan University*); Qian, Li (*Fudan University*); Wu, Xiaomei (*Fudan University*)
- 11:30-11:45 SaB10.5
Towards Automated Patient-Specific Optimization of Deep Brain Stimulation for Movement Disorders
 Sarikhani, Parisa (*Emory University*); Miocinovic, Svtjetlana (*Emory University*); Mahmoudi, Babak* (*Emory University*)
- 11:45-12:00 SaB10.6
Efficient Thermobonding Process Forming a Polyurethane based Diagnostic Catheter with Liquid Crystal Polymer
 Kuert, Gerhard* (*Berner Fachhochschule*); Jacomet, Marcel (*Institute for Human Centered Engineering, Bern Univ. of App*); Niederhauser, Thomas (*Bern Univ. of Applied Sciences*)
- SaB11: 10:30-12:00 M4 – Level 3
Identification of Cardiopulmonary Function (Invited Session)
 Chair: Karbing, Dan Stieper (*Aalborg University*)
 Co-Chair: Badnjevic, Almir (*Medical Devices Verification Lab Verlab*)
- 10:30-10:45 SaB11.1
Computational Simulation of Continuous Positive Airway Pressure in Casualties Suffering from Primary Blast Lung Injury
 Scott, Timothy (*Academic Dept. of Military Anaesthesia & Critical Care, R*); Haque, Mainul (*Univ. of Nottingham*); Das, Anup (*Univ. of Warwick*); Cliff, Ian (*Univ. Hospital North Midlands, Stoke-On-Trent, UK.*); Bates, Declan Gerard* (*Univ. of Warwick*); Hardman, Jonathan G. (*Univ. of Nottingham*)
- 10:45-11:00 SaB11.2
A Predictive Model of the Stochastic and Temporally Scaled Characteristics of Cardiorespiratory Activity
 BuSha, Brett* (*The College of New Jersey*)
- 11:00-11:15 SaB11.3
Model-Based Decision Support for Support Mode Mechanical Ventilation
 Karbing, Dan Stieper* (*Aalborg University*)
- 11:15-11:30 SaB11.4
Analysis of CT Images with a Pseudo-Three Dimensional Multiscale Fuzzy Entropy Measure: Applications to Lung Diseases
 Hilal, Mirvana* (*University of Angers*); Thomsen, Lars Pilegaard (*Aalborg University*); Azami, Hamed (*Harvard University*); Humeau-Heurtier, Anne (*University of Angers*)
- 11:30-11:45 SaB11.5
Correlation between Valve Event Amplitudes in the Seismocardiogram and VO2-Max
 Sørensen, Kasper* (*Aalborg University*); Poulsen, Mathias Krogh (*Respiratory & Critical Care Group at Dept. of Health Scie*); Karbing, Dan Stieper (*Aalborg University*); Søgaard, Peter (*Aalborg University Hospital*); Struijk, Johannes (*Aalborg University*); Schmidt, Samuel Emil (*Aalborg University*)
- SaB13: 10:30-12:00 R2 – Level 3
Computational Human Models for In- and On-Body Communications (Invited Session)
 Chair: Noetscher, Gregory (*Worcester Polytechnic Institute*)
 Co-Chair: Sayrafian, Kamran (*NIST*)
- 10:30-10:45 SaB13.1
A Preliminary Study of Capsule Endoscopy Orientation Estimation using a Computational Human Body Model
 Krhac, Katjana (*University of Zagreb, Faculty of Electrical Engineering & Comp*); Sayrafian, Kamran* (*NIST*); Simunic, Dina (*University of Zagreb*)
- 10:45-11:00 SaB13.2
Sensitivity of Bio-Loading Effect on Hearable Antennas
 Chen, Louis* (*Bose Corporation*); Noetscher, Gregory (*Worcester Polytechnic Institute*); Makarov, Sergey (*Electrical & Computer Engineering, Worcester Polytechnic Institute*)

11:00-11:15	SaB13.3	Human Phantom Models for Numerical Modeling of in and On-Body Antennas Noetscher, Gregory* (<i>Worcester Polytechnic Institute</i>); Makarov, Sergey (<i>Electrical & Computer Engineering, Worcester Polytechnic Institute</i>)	
SaB14: 10:30-12:00	R3 – Level 3	Signal Processing and Classification for BCIs and Motor Imagery (Oral Session) Co-Chair: Faes, Luca (<i>University of Palermo</i>)	
10:30-10:45	SaB14.1	Using Discriminative Lasso to Detect a Graph Fourier Transform (GFT) Subspace for Robust Decoding in Motor Imagery BCI Georgiadis, Kostas* (<i>Aristotle Univ. of Thessaloniki – Information Technologies</i>); Laskaris, Nikos (<i>Aristotle Univ. of Thessaloniki</i>); Nikolopoulos, Spiros (<i>Information Technologies Institute, Centre for Research & Tech</i>); Adamos, Dimitrios (<i>School of Music Studies, Faculty of Fine Arts, Aristotle Univ.</i>); Kompatsiaris, Ioannis (Yannis) (<i>Information Technologies Institute, CERTH</i>)	
10:45-11:00	SaB14.2	Level-Wise Subject Adaptation to Improve Classification of Motor and Mental EEG Tasks Sharon, Rini A (<i>Indian Institute of Technology, Madras</i>); Aggarwal, Sidharth* (<i>Indian Institute of Technology, Madras</i>); Goel, Purvi (<i>Indian Institute of Technology, Madras</i>); Joshi, Raviraj (<i>Indian Institute of Technology, Madras</i>); Sur, Mriganka (<i>MIT</i>); Murthy, Hema (<i>Indian Institute of Technology Madras</i>); Ganapathy, Sriram (<i>Indian Institute of Science, Bangalore</i>)	
11:00-11:15	SaB14.3	Mutual Information Analysis of Brain-Body Interactions during Different Levels of Mental Stress Pernice, Riccardo* (<i>University of Palermo</i>); Zanetti, Matteo (<i>Dipartimento di Ingegneria Industriale, Università di Trento</i>); Nollo, Giandomenico (<i>University of Trento</i>); De Cecco, Mariolino (<i>Dipartimento di Ingegneria Industriale, Università di Trento</i>); Busacca, Alessandro (<i>Università degli Studi di Palermo</i>); Faes, Luca (<i>University of Palermo</i>)	
11:15-11:30	SaB14.4	Weighted Sparse Representation for Classification of Motor Imagery EEG Signals Sreeja, S R (<i>Indian Institute of Technology, Kharagpur</i>); Himanshu, . (<i>Indian Institute of Technology, Kharagpur</i>); Samanta, Debasis* (<i>Indian Institute of Technology Kharagpur</i>); Sarma, Monalisa (<i>Indian Institute of Technology Kharagpur</i>)	
11:30-11:45	SaB14.5	High-Frequency SSVEP Stimulation Paradigm based on Dual Frequency Modulation Liang, Li Yan (<i>Tsinghua Univ., Dept. of Biomedical Engineering</i>); Yang, Chen (<i>Tsinghua Univ.</i>); Wang, Yijun (<i>Institute of Semiconductors, Chinese Academy of Sciences</i>); Gao, Xiaorong* (<i>Tsinghua Univ.</i>)	
11:45-12:00	SaB14.6	Multiple-Instance Learning for In-the-Wild Parkinsonian Tremor Detection Papadopoulos, Alexandros* (<i>Aristotle Univ. of Thessaloniki</i>); Kyritsis, Konstantinos (<i>Aristotle Univ. of Thessaloniki</i>); Bostanjopoulou, Sevasti (<i>Dept. of Neurology, Hippokratia Hospital, Thessalonik</i>); Klingelhoefer, Lisa (<i>Dept. of Neurology Technical Univ. Dresden, Dresden, G</i>); Chaudhuri, Ray (<i>International Parkinson Excellence Research Centre, King's Colle</i>); Delopoulos, Anastasios (<i>Aristotle Univ. of Thessaloniki</i>)	
SaB15: 10:30-12:00	M3 – Level 3	Ultrasound Imaging (I) (Oral Session)	
10:30-10:45	SaB15.1	3D-Rendered Electromechanical Wave Imaging for Localization of Accessory Pathways in Wolff-Parkinson-White Minors Melki, Lea (<i>Columbia Univ.</i>); Grubb, Christopher (<i>Columbia Univ. Medical Center</i>); Weber, Rachel (<i>Columbia Univ.</i>); Nauleau, Pierre (<i>Columbia Univ.</i>); Garan, Hasan (<i>Columbia Univ.</i>); Wan, Elaine (<i>Columbia Univ.</i>); Silver, Eric S. (<i>Columbia Univ. Medical Center</i>); Liberman, Leonardo (<i>Columbia Univ. Medical Center</i>); Konofagou, Elisa* (<i>Columbia Univ.</i>)	
10:45-11:00	SaB15.2	Breast Calcifications Detection based on Radiofrequency Signals by Quantitative Ultrasound Multi-Parameter Fusion Qiao, Mengyun (<i>Fudan University</i>); Guo, Yi* (<i>Fudan University</i>); Zhou, Shichong (<i>Fudan University</i>); Chang, Cai (<i>Fudan University</i>); Wang, Yuanyuan (<i>Fudan University</i>)	
11:00-11:15	SaB15.3	Atherosclerotic Plaque Mechanical Characterization Coupled with Vector Doppler Imaging in Atherosclerotic Carotid Arteries in-Vivo Karageorgos, Grigorios Marios (<i>Columbia Univ.</i>); Apostolakis, Iason-Zacharias (<i>Columbia Univ.</i>); Nauleau, Pierre (<i>Columbia Univ.</i>); Gatti, Vittorio (Mr.); Weber, Rachel (<i>Columbia Univ.</i>); Konofagou, Elisa* (<i>Columbia Univ.</i>)	
11:15-11:30	SaB15.4	Fast Approximate Time-Delay Estimation in Ultrasound Elastography using Principal Component Analysis Zayed, Abdelrahman* (<i>Concordia University</i>); Rivaz, Hassan (<i>Concordia University</i>)	
11:30-11:45	SaB15.5	An Instrumented Ultrasound Probe for Shear Wave Elastography with Uneven Force Distribution Huang, Athena Y. (<i>Massachusetts Institute of Technology</i>); Anthony, Brian W.* (<i>Massachusetts Institute of Technology</i>)	
11:45-12:00	SaB15.6	A Convolutional Neural Network for 250-MHz Quantitative Acoustic-Microscopy Resolution Enhancement Mamou, Jonathan* (<i>Riverside Research</i>); Pellegrini, Thomas (<i>Univ. de Toulouse III ; IRIT</i>); Kouamé, Denis (<i>Univ. de Toulouse III, IRIT UMR CNRS</i>); Basarab, Adrian (<i>Univ. de Toulouse</i>)	
SaB16: 10:30-12:00	M5 – Level 3	Wearable Robotic Systems – Orthotics (Oral Session) Co-Chair: Liarokapis, Minas (<i>The University of Auckland</i>)	
10:30-10:45	SaB16.1	An Assistance Approach for a Powered Knee Exoskeleton during Level Walking and the Effects on Metabolic Cost Jang, Junwon* (<i>Samsung Electronics</i>); Lim, Bokman (<i>Samsung Electronics Co., Ltd</i>); Shim, Youngbo (<i>Samsung Advanced Institute of Technology</i>)	
10:45-11:00	SaB16.2	Optimized Design of a Variable Viscosity Link for Robotic AFO Hassan, Modar* (<i>University of Tsukuba</i>); Yagi, Keisuke (<i>Ibaraki University</i>); Kadone, Hideki (<i>University of Tsukuba</i>); Ueno, Tomoyuki (<i>University of Tsukuba Hospital</i>); Mochiyama, Hiromi (<i>University of Tsukuba</i>); Suzuki, Kenji (<i>University of Tsukuba</i>)	
11:00-11:15	SaB16.3	An Underactuated, Tendon-Driven, Wearable Exo-Glove with a Four-Output Differential Mechanism Gerez, Lucas (<i>University of Auckland</i>); Liarokapis, Minas* (<i>The University of Auckland</i>)	
11:15-11:30	SaB16.4	Effect of Segmentation Parameters on Classification Accuracy of High-Density EMG Recordings Lara, Jaime* (<i>The University of Auckland</i>); Paskaranandavadivel, Niranchan (<i>The University of Auckland</i>); Cheng, Leo K (<i>The University of Auckland</i>)	

11:30-11:45	SaB16.5	10:45-11:00	SaB18.2
A Shoulder Mechanism for Assisting Upper Arm Function with Distally Located Actuators Jones, Michael (<i>University of Maine</i>); Bouffard, Connor (<i>University of Maine</i>); Hejrati, Babak* (<i>University of Maine</i>)		Extracellular Stimulation of Neural Tissues: Activating Function and Sub-Threshold Potential Perspective Appali, Revathi* (<i>Univ. of Rostock</i>); Sriperumbudur, Kiran K (<i>Univ. of Rostock</i>); van Rienen, Ursula (<i>Univ. of Rostock</i>)	
11:45-12:00	SaB16.6	11:00-11:15	SaB18.3
A Pneumatic-Muscle-Actuator-Driven Knee Rehabilitation Device for CAM Therapy Martens, Mirco (<i>Technische Universität Berlin</i>); Zawatzki, Johannes* (<i>Beuth Hochschule für Technik Berlin</i>); Seel, Thomas (<i>Technische Universität Berlin</i>); Boblan, Ivo (<i>Beuth Hochschule für Technik Berlin</i>)		Extraction of Evoked Compound Nerve Action Potentials from Vagus Nerve Recordings Chang, Yao-Chuan* (<i>Feinstein Institute for Medical Research</i>); Ahmed, Umair (<i>Feinstein Institute for Medical Research</i>); Tomaiio, Jacquelyn (<i>The Feinstein Institute for Medical Research</i>); Rieth, Loren (<i>University of Utah</i>); Datta-Chaudhuri, Timir (<i>Feinstein Institute for Medical Research</i>); Zanos, Stavros (<i>Feinstein Institute for Medical Research</i>)	
SaB17: 10:30-12:00	R12 – Level 3		
CT Imaging (Oral Session)			
10:30-10:45	SaB17.1	11:15-11:30	SaB18.4
Hybrid Neural Networks for Mortality Prediction from LDCT Images Yan, Pingkun* (<i>Rensselaer Polytechnic Institute</i>); Guo, Hengtao (<i>Rensselaer Polytechnic Institute</i>); Wang, Ge (<i>Rensselaer Polytechnic Institute</i>); De Man, Ruben (<i>Massachusetts General Hospital</i>); Kalra, Mannudeep (<i>Massachusetts General Hospital & Harvard Medical School</i>)		Mobile Wireless Low-Intensity Transcranial Ultrasound Stimulation System for Freely Behaving Small Animals Kim, Evgenii* (<i>Korea Institute of Science & Tech.</i>); Sanchez-Casanova, Jorge (<i>Carlos III Univ. of Madrid, Univ. Group for Identifica</i>); Anguluan, Eloise (<i>Gwangju Institute of Science & Tech.</i>); Kim, Hyungmin (<i>Korea Institute of Science & Tech.</i>); Kim, Jae Gwan (<i>Gwangju Institute of Science & Tech.</i>)	
10:45-11:00	SaB17.2	11:30-11:45	SaB18.5
Low-Dose CT Denoising using Edge Detection Layer and Perceptual Loss Gholizadeh-Ansari, Maryam (<i>Ryerson University</i>); Alirezaie, Javad* (<i>Ryerson University, Univ. of Waterloo</i>); Babyn, Paul (<i>University of Saskatchewan</i>)		Targeted Vagus Nerve Stimulation Does Not Disrupt Cardiac Function in the Diabetic Rat Dirr, Elliott* (<i>University of Florida</i>); Patel, Yogi (<i>Johns Hopkins University</i>); Lester, Lauren (<i>University of Florida</i>); Delgado, Francisco (<i>Dr.</i>); Otto, Kevin (<i>University of Florida</i>)	
11:00-11:15	SaB17.3	11:45-12:00	SaB18.6
Inner Focus Iterative Reconstruction Method with the Interlaced Phase Stepping Scanning for Grating-Based Phase Contrast Tomography Hou, Zhishang (<i>Shanghai Jiao Tong Univ.</i>); Zhao, Jun (<i>Shanghai Jiao Tong Univ.</i>); Sun, Jianqi* (<i>Shanghai Jiao Tong Univ.</i>)		Optimized Transcutaneous Spinal Cord Direct Current Stimulation using Multiple Electrodes from 3/9/7 System Huang, Yu (<i>City College of New York</i>); Thomas, Chris (<i>Soterix Medical, Inc.</i>); Datta, Abhishek* (<i>Soterix Medical, Inc.</i>)	
11:15-11:30	SaB17.4	SaB19: 10:30-12:00	R4 – Level 3
Quantitative Pathologic Analysis of Pulmonary Nodules using Three-Dimensional Computed Tomography Images based on Latent Dirichlet Allocation Gao, Mengdi (<i>Sino-Dutch Biomedical & Information Engineering School, Northe</i>); Jiang, Hongyang* (<i>Sino-Dutch Biomedical & Information Engineering School, Northe</i>); Zhang, Dongdong (<i>Beijing ZhiZhen Internet Technology Co., Ltd.</i>); Ma, He (<i>Northeastern Univ.</i>); Qian, Wei (<i>Univ. of Texas at El Paso</i>)		Image Segmentation (II) (Oral Session) Co-Chair: Soroushmehr, S.M. Reza (<i>Univ. of Michigan, Ann Arbor</i>)	
11:30-11:45	SaB17.5	10:30-10:45	SaB19.1
Lung Nodule Classification using a Novel Two-Stage Convolutional Neural Networks Structure An, Yang (<i>Univ. of Technology Sydney</i>); Hu, Tianren (<i>Univ. of Technology Sydney</i>); Wang, Jiaqi (<i>Univ. of Technology Sydney</i>); Lyu, Juan (<i>Harbin Engineering Univ.</i>); Banerjee, Sunetra (<i>Univ. of Technology Sydney</i>); Ling, Sai Ho, Steve* (<i>Univ. of Technology Sydney</i>)		Cascaded CNN for View Independent Breast Segmentation in Thermal Images Kakileti, Siva Teja* (<i>Niramai Health Analytix Pvt. Ltd.</i>); Manjunath, Geetha (<i>Niramai Health Analytix</i>); Madhu, Himanshu (<i>Niramai Health Analytix</i>)	
11:45-12:00	SaB17.6	10:45-11:00	SaB19.2
4DCT Ventilation Map Construction using Biomechanics-Based Image Registration and Enhanced Air Segmentation Jafari, Parya* (<i>Western Univ.</i>); Yaremko, Brian (<i>London Regional Cancer Program</i>); Parraga, Grace (<i>Robarts Research Institute</i>); Hoover, Douglas (<i>London Health Sciences Centre</i>); Sadeghi-Naini, Ali (<i>York Univ.</i>); Samani, Abbas (<i>Western Univ.</i>)		Automatic Corneal Ulcer Segmentation Combining Gaussian Mixture Modeling and Otsu Method Liu, Zhenrong (<i>Southern University of Science & Technology</i>); Shi, Yankun (<i>Southern University of Science & Technology</i>); Zhan, Pengji (<i>Southern University of Science & Technology</i>); Zhang, Yue (<i>Southern University of Science & Technology</i>); Gong, Yi (<i>Southern University of Science & Technology</i>); Tang, Xiaoying* (<i>Southern University of Science & Technology</i>)	
SaB18: 10:30-12:00	R13 – Level 3	11:00-11:15	SaB19.3
Neural Stimulation (II) (Oral Session)		An Effective Encoder-Decoder Network for Neural Cell Bodies and Cell Nucleus Segmentation of EM Images Jiang, Yi (<i>Institute of Automation, Chinese Academy of Sciences</i>); Xiao, Chi (<i>Institute of Automation, Chinese Academy of Sciences</i>); Li, Linlin (<i>Institute of Automation Chinese Academy of Sciences</i>); Chen, Xi (<i>Institute of Automation, Chinese Academy of Sciences</i>); Shen, Lijun (<i>Institute of Automation, Chinese Academy of Sciences</i>); Han, Hua* (<i>Institute of Automation, Chinese Academy of Sciences</i>)	
10:30-10:45	SaB18.1	11:15-11:30	SaB19.4
Modulation of Reciprocal Inhibition at the Wrist as a Neurophysiological Correlate of Tremor Suppression: A Pilot Healthy Subject Study Pascual Valdunciel, Alejandro (<i>CSIC</i>); Oliveira Barroso, Filipe* (<i>Spanish National Research Council (CSIC)</i>); Muceli, Silvia (<i>Imperial College London</i>); Taylor, Julian S (<i>Hospital Nacional de Paraplégicos</i>); Farina, Dario (<i>Imperial College London</i>); Pons, Jose Luis (<i>Cajal Institute, Spanish Research Council</i>)		An Augmented Cell Segmentation in Fluorescent in Situ Hybridization Images Shen, Jianhuo (<i>Anhui Univ.</i>); Li, Teng (<i>Anhui University</i>); Hu, Chuanrui (<i>Anhui University</i>); He, Hong (<i>Xiamen Chokhmah Biotechnology Co., Ltd.</i>); Jiang, Dashan (<i>Electrical Engineering & Automation, Anhui University</i>); Liu, Jianfei* (<i>Anhui University</i>)	

11:30-11:45	SaB19.5	13:15-13:30	SaC02.2
Liver Segmentation in Abdominal CT Images using Probabilistic Atlas and Adaptive 3D Region Growing Rafiei, Shima (<i>IUT</i>); Karimi, Nader (<i>Isfahan University of Technology</i>); Mirmahboub, Behzad (<i>Istituto Italiano di Tecnologia (IIT)</i>); Najarian, Kayvan (<i>University of Michigan – Ann Arbor</i>); Felfeliyan, Banafsheh (<i>Isfahan University of Technology</i>); Samavi, Shadrokh (<i>McMaster University</i>); Soroushmehr, S.M.Reza* (<i>University of Michigan, Ann Arbor</i>)		Modeling Framework for the Generation of Synthetic RR Series during Atrial Arrhythmias Masè, Michela* (<i>University of Trento</i>); Marsili, Italo Augustin (<i>Medicaltech srl</i>); Nollo, Giandomenico (<i>University of Trento</i>); Ravelli, Flavia (<i>University of Trento</i>)	
11:45-12:00	SaB19.6	13:30-13:45	SaC02.3
Aided Hand Detection in Thermal Imaging using RGB Stereo Vision Smieschek, Manfred* (<i>RWTH Aachen University</i>); Kobsik, Gregor (<i>Informatik 11 – Embedded Software, RWTH Aachen</i>); Stollenwerk, Andre (<i>RWTH Aachen</i>); Kowalewski, Stefan (<i>RWTH Aachen University</i>); Orlikowsky, Thorsten (<i>Uniklinik RWTH Aachen</i>); Mark, Schoberer (<i>Uniklinik RWTH Aachen</i>)		Can the Detrended Fluctuation Analysis Reveal Nonlinear Components of Heart Rate Variability? Castiglioni, Paolo* (<i>Fondazione Don Carlo Gnocchi ONLUS</i>); Parati, Gianfranco (<i>University of Milano-Bicocca & Istituto Auxologico Italiano, M</i>); Faini, Andrea (<i>Istituto Auxologico Italiano</i>)	
SaC01: 13:00-14:30 Hall A6+A7 – Level 1 Brain-Computer Interface (III) (Oral Session)		13:45-14:00	SaC02.4
13:00-13:15	SaC01.1	A Correlation-Based Algorithm for Beat-to-Beat Heart Rate Estimation from Ballistocardiograms Wen, Xin (<i>Fudan Univ.</i>); Huang, Yanqi (<i>Fudan Univ.</i>); Wu, Xiaomei* (<i>Fudan Univ.</i>); Zhang, Biyong (<i>BOBO Technology Ltd.</i>)	
Development of a High-Speed Mental Spelling System Combining Eye Tracking and SSVEP-Based BCI with High Scalability Lin, Xinyuan (<i>Zhejiang Univ.</i>); Chen, Zhenyi (<i>Zhejiang Univ.</i>); Xu, Kedi (<i>Qiushi Academy for Advanced Studies, Zhejiang Univ., Hangzhou</i>); Zhang, Shaomin* (<i>Zhejiang Univ.</i>)		14:00-14:15	SaC02.5
13:15-13:30	SaC01.2	Temporal Cardiovascular Causality during Orthostatic Stress by Extended Partial Directed Coherence Reulecke, Sina (<i>Univ. Autónoma Metropolitana</i>); Charleston-Villalobos, Sonia* (<i>Univ. Autónoma Metropolitana</i>); Voss, Andreas (<i>Univ. of Applied Sciences Jena</i>); Gonzalez-Camarena, Ramon (<i>Univ. Autónoma Metropolitana</i>); Gaitan-Gonzalez, Mercedes (<i>Univ. Autónoma Metropolitana</i>); Gonzalez-Hermosillo, Jesus Antonio (<i>Instituto Nacional de Cardiología</i>); Hernandez-Pacheco, Guadalupe (<i>Instituto Nacional de Cardiología "Ignacio Chavez"</i>); Aljama-Corrales, Tomas (<i>Univ. Autónoma Metropolitana</i>)	
A Convolutional Neural Network for Enhancing the Detection of SSVEP in the Presence of Competing Stimuli Ravi, Aravind (<i>University of Waterloo</i>); Manuel, Jacob (<i>University of Waterloo</i>); Heydari, Nargess (<i>University of Waterloo</i>); Jiang, Ning* (<i>University of Waterloo</i>)		14:15-14:30	SaC02.6
13:30-13:45	SaC01.3	Are we Training our Heartbeat Classification Algorithms Properly? Villa, Amalia* (<i>Biomed, ESAT-STADIUS, KU Leuven</i>); Deviaene, Margot (<i>KU Leuven</i>); Willems, Rik (<i>KU Leuven</i>); Van Huffel, Sabine (<i>KU Leuven</i>); Varon, Carolina (<i>Katholieke Univ. Leuven</i>)	
State-Space Modeling and Fuzzy Feedback Control of Cognitive Stress Fekri Azgomi, Hamid (<i>Univ. of Houston</i>); Wickramasuriya, Dilranjan (<i>Univ. of Houston</i>); Faghih, Rose T.* (<i>Univ. of Houston</i>)		SaC03: 13:00-14:30 Hall A3 – Level 1 Photoacoustic/Optoacoustic/Thermoacoustic Imaging (Oral Session) Co-Chair: Thittai, Arun Kumar (<i>IIT MADRAS</i>)	
13:45-14:00	SaC01.4	13:00-13:15	SaC03.1
A Four-Class Phase-Coded SSVEP BCI at 60Hz using Refresh Rate Jiang, Lu (<i>Institute of Semiconductors, Chinese Academy of Sciences</i>); Wang, Yijun* (<i>Institute of Semiconductors, Chinese Academy of Sciences</i>); Pei, Weihua (<i>Institute of Semiconductors, CAS</i>); Chen, Hongda (<i>Institute of Semiconductors, CAS</i>)		Hybrid Neural Network for Photoacoustic Imaging Reconstruction Lan, Hengrong* (<i>ShanghaiTech University</i>); Zhou, Kang (<i>ShanghaiTech University</i>); Yang, Changchun (<i>ShanghaiTech University</i>); Liu, Jiang (<i>Ningbo Institute of Materials Technology & Engineering, CAS</i>); Gao, Shenghua (<i>ShanghaiTech University</i>); Gao, Fei (<i>ShanghaiTech University</i>)	
14:00-14:15	SaC01.5	13:15-13:30	SaC03.2
A Visual-Haptic Neurofeedback Training Improves Sensorimotor Cortical Activations and BCI Performance Wang, Zhongpeng (<i>Tianjin University</i>); Zhou, Yijie (<i>Tianjin University</i>); Chen, Long (<i>Tianjin University</i>); Gu, Bin (<i>Tianjin University</i>); Liu, Shuang (<i>Tianjin University</i>); Xu, Minpeng (<i>Tianjin University</i>); Qi, Hongzhi (<i>Tianjin University</i>); He, Feng (<i>Tianjin University</i>); Ming, Dong* (<i>Tianjin University</i>)		Accelerated Photoacoustic Tomography Reconstruction via Recurrent Inference Machines Yang, Changchun (<i>ShanghaiTech University</i>); Lan, Hengrong* (<i>ShanghaiTech University</i>); Gao, Fei (<i>ShanghaiTech University</i>)	
14:15-14:30	SaC01.6	13:30-13:45	SaC03.3
Toward Comparison of Cortical Activation with Different Motor Learning Methods using Event-Related Design: EEG-fNIRS Study Jeong, Hojun* (<i>DGIST (Daegu Gyeongbuk Institute of Science & Technology)</i>); Song, Minsu (<i>DGIST (Daegu Gyeongbuk Institute of Science & Technology)</i>); Oh, Seunghue (<i>DGIST</i>); Kim, Jongbum (<i>DGIST</i>); Kim, Jonghyun (<i>DGIST</i>)		Non-Invasive Remote Temperature Monitoring using Microwave-Induced Thermoacoustic Imaging Nan, Hao (<i>Stanford University</i>); Fitzpatrick, Aidan* (<i>Stanford University</i>); Wang, Ke (<i>University of California, Berkeley</i>); Arbabian, Amin (<i>Stanford University</i>)	
SaC02: 13:00-14:30 Hall A8 – Level 1 Signal Processing and Classification of Heart Rate Variability: Methods (Oral Session) Chair: Voss, Andreas (<i>University of Applied Sciences Jena</i>) Co-Chair: Masè, Michela (<i>University of Trento</i>)		13:45-14:00	SaC03.4
13:00-13:15	SaC02.1	Enhancing Depth of Penetration in PLD-Based Photoacoustic Imaging: Preliminary Results Chandramoorthi, Sowmiya (<i>IIT Madras</i>); Thittai, Arun Kumar* (<i>IIT MADRAS</i>)	
A Novel Algorithm for HRV Estimation from Short-Term Acoustic Recordings at Neck Sharma, Piyush* (<i>Imperial College London</i>); Rodriguez-Villegas, Esther (<i>Imperial College London</i>)		14:00-14:15	SaC03.5
		Adjustable Handheld Probe Design for Photoacoustic Imaging: Mathematical Modelling and Simulation Study Zhao, Yongjian* (<i>School of Information Science & Technology, ShanghaiTech Univ.</i>); Tao, Ben (<i>Tongji Univ.</i>); Yu, Shaohui (<i>ShanghaiTech Univ.</i>); Gao, Fei (<i>ShanghaiTech Univ.</i>)	

- 14:15-14:30 SaC03.6
Ultrasound-Based Regularized Log Spectral Difference Method for Monitoring Microwave Hyperthermia
 Kothawala, AliArshad (*Indian Institute of Technology Madras*); Baskaran, Divya Baskaran (*Indian Institute of Technology Madras*); Arunachalam, Kavitha (*Duke University*); Thittai, Arun Kumar* (*IIT MADRAS*)
- SaC04: 13:00-14:30 Hall A1 – Level 1
Biomechanical Analysis (Oral Session)
Chair: Cereatti, Andrea (*University of Sassari*)
Co-Chair: Doheny, Emer (*University College Dublin*)
- 13:00-13:15 SaC04.1
Synthesising Motion Sensor Data from Biomechanical Simulations to Investigate Motion Sensor Placement and Orientation Variations
 Derungs, Adrian* (*Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU)*); Amft, Oliver (*Friedrich-Alexander Universität Erlangen-Nürnberg (FAU)*)
- 13:15-13:30 SaC04.2
IMU-Based Assessment of Ankle Inversion Kinematics and Orthosis Migration
 Betz, Johannes (*TU Berlin*); Klingspor, Christoph (*TU Berlin*); Seel, Thomas* (*Technische Universität Berlin*)
- 13:30-13:45 SaC04.3
Three-Dimensional GRF and CoP Estimation during Stair and Slope Ascent/Descent with Wearable IMUs and Foot Pressure Sensors
 Fukushi, Kenichiro* (*NEC Corporation*); Sekiguchi, Yusuke (*Tohoku Univ.*); Honda, Keita (*Tohoku Univ.*); Yaguchi, Haruki (*Tohoku Univ.*); Izumi, Shin-ichi (*Tohoku Univ.*)
- 13:45-14:00 SaC04.4
Hand Motion Measurement using Inertial Sensor System and Accurate Improvement by Extended Kalman Filter
 Kitano, Keisuke* (*Doshisha University*); Ito, Akihito (*Doshisha University*); Tsujiuchi, Nobutaka (*Doshisha University*)
- 14:00-14:15 SaC04.5
Regression-Based Analysis of Front Crawl Swimming using Upper-Arm Mounted Accelerometers
 Doheny, Emer* (*Univ. College Dublin*); Goulding, Cathy (*Univ. College Dublin*); Lowery, Madeleine (*Univ. College Dublin*)
- 14:15-14:30 SaC04.6
Inter-Leg Distance Measurement as a Tool for Accurate Step Counting in Patients with Multiple Sclerosis
 Bertuletti, Stefano* (*University of Sassari*); Salis, Francesca (*University of Sassari*); Cereatti, Andrea (*University of Sassari*); Angelini, Lorenza (*University of Sheffield*); Buckley, Ellen (*University of Sheffield*); Nair, K.P.S. (*Sheffield Teaching Hospitals NHS Foundation Trust*); Mazzà, Claudia (*University of Sheffield*); Della Croce, Ugo (*University of Sassari*)
- SaC05: 13:00-14:30 Hall A2 – Level 1
Connectivity and Causality (Oral Session)
Chair: Astolfi, Laura (*University of Rome Sapienza*)
- 13:00-13:15 SaC05.1
Recurrent Neural Networks for Reconstructing Complex Directed Brain Connectivity
 Duggento, Andrea* (*University of Rome "Tor Vergata"*); Guerrisi, Maria (*University of Rome "Tor Vergata"*); Toschi, Nicola (*University of Rome "Tor Vergata", Faculty of Medicine*)
- 13:15-13:30 SaC05.2
Single-Trial Connectivity Estimation through the Least Absolute Shrinkage and Selection Operator
 Antonacci, Yuri* (*University of Rome Sapienza*); Toppi, Jlenia (*University of Rome "Sapienza"*); Mattia, Donatella (*Fondazione Santa Lucia IRCCS*); Pietrabissa, Antonio (*University of Rome Sapienza*); Astolfi, Laura (*University of Rome Sapienza*)
- 13:30-13:45 SaC05.3
Effect of Connectivity Measures on the Identification of Brain Functional Core Network at Rest
 Rizkallah, Jennifer* (*LTSI Inserm U1099, Univ. de Rennes 1*); Amoud, Hassan (*Lebanese Univ.*); Wendling, Fabrice (*INSERM – Univ. de Rennes 1*); Hassan, Mahmoud (*Univ. de Rennes 1*)
- 13:45-14:00 SaC05.4
Tracking Changes in Brain Network Connectivity under Transcranial Current Stimulation
 Jami, Apoorva Sargarwal (*New York Univ.*); Guo, Xinling (*Zhejiang Univ.*); Kulkarni, Prathamesh (*Univ. of Houston*); Henin, Simon (*NYU School of Medicine*); Liu, Anli (*New York Univ. Langone Health*); Chen, Zhe* (*New York Univ. School of Medicine*)
- 14:00-14:15 SaC05.5
Analysis of Volume Conduction Effects on Different Functional Connectivity Metrics: Application to Alzheimer's Disease EEG Signals
 Ruiz-Gómez, Saúl J. (*Biomedical Engineering Group, Univ. of Valladolid*); Gomez, Carlos* (*Univ. of Valladolid*); Poza, Jesus (*Univ. of Valladolid*); Maturana-Candelas, Aarón (*Univ. of Valladolid*); Rodríguez-González, Víctor (*Biomedical Engineering Group, Univ. of Valladolid*); Garcia, Maria (*Univ. of Valladolid*); Tola-Arribas, Miguel A. (*Dept. of Neurology, Hospital Universitario Rio Hortega*); Cano, Mónica (*Dept. of Clinical Neurophysiology, Hospital Universitario R*); Hornero, Roberto (*Univ. of Valladolid*)
- 14:15-14:30 SaC05.6
Time-Varying Effective EEG Source Connectivity: The Optimization of Model Parameters
 Rubega, Maria* (*Univ. of Geneva*); Pascucci, David (*Univ. of Fribourg*); Rué Queralt, Joan (*Dept. of Radiology, Lausanne Univ. Hospital & Univer*); van Mierlo, Pieter (*Ghent Univ., Epilog NV*); Hagmann, Patric (*Dept. of Radiology, Univ. Hospital Center (CHUV) & U*); Plomp, Gijs (*Univ. of Fribourg*); Michel, Christoph (*Univ. of Geneva*)
- SaC06: 13:00-14:30 Hall A5 – Level 1
Neural Stimulation (III) (Oral Session)
- 13:00-13:15 SaC06.1
High-Resolution Head Model of Transcranial Direct Current Stimulation: A Labeling Analysis
 Thomas, Chris (*Soterix Medical, Inc.*); Huang, Yu (*City College of New York*); Faria, Paula Cristina (*ESTG, CDRSP, IPLeiria*); Datta, Abhishek* (*Soterix Medical, Inc.*)
- 13:15-13:30 SaC06.2
Cortical Stimulation Induces Network-Wide Coherence Change in Non-Human Primate Somatosensory Cortex
 Bloch, Julien (*Univ. of Washington, Seattle*); Khateeb, Karam (*Univ. of Washington*); Silversmith, Daniel (*Univ. of California, San Francisco*); O'Doherty, Joseph E. (*Univ. of California, San Francisco*); Sabes, Philip N. (*Univ. of California, San Francisco*); Yazdan-Shahmorad, Azadeh* (*Univ. of Washington*)
- 13:30-13:45 SaC06.3
Quantification of Neural Conduction Block on the Rat Sciatic Nerve based on EMG Response
 Pérez, Diego (*Univ. Rennes, CHU Rennes, Inserm, LTSI UMR 1099, Rennes*); Dieuset, Gabriel (*LTSI, Inserm UMR 1099, Rennes, France; University Rennes 1, Fran*); Yochum, Maxime (*Université de Rennes 1*); Senhadji, Lotfi (*Université de Rennes 1 & INSERM*); Martin, Benoit (*INSERM; Université de Rennes 1; LTSI*); Le Rolle, Virginie (*University of Rennes 1*); Hernández, Alfredo I* (*Univ. of Rennes 1 & INSERM U1099*)
- 13:45-14:00 SaC06.4
Learning State-Dependent Neural Modulation Policies with Bayesian Optimization
 Connolly, Mark* (*Emory University*); Park, Sang-Eon (*Georgia Institute of Technology*); Gross, Robert (*Emory University*)
- 14:00-14:15 SaC06.5
Referred Sensation Areas in Transpelvic Amputee
 Lontis, Eugen Romulus* (*Aalborg University*); Yoshida, Ken (*Indiana University-Purdue University Indianapolis*); Jensen, Winnie (*Center for Sensory-Motor Interaction*)

14:15-14:30	SaC06.6	A Sub-Millimeter Lateral Resolution Ultrasonic Beamforming System for Brain Stimulation in Behaving Animals Seok, Chunkyun* (<i>North Carolina State Univ.</i>); Yamaner, Feysel Yalcin (<i>North Carolina State Univ.</i>); Sahin, Mesut (<i>New Jersey Institute of Tech.</i>); Oralkan, Omer (<i>North Carolina State Univ.</i>)	13:15-13:30	SaC08.2	Privacy-Preserving Artificial Intelligence: Application to Precision Medicine Vizitiu, Anamaria* (<i>Transilvania University of Brasov, Brasov, Romania</i>); Nita, Cosmin (<i>Transilvania University of Brasov</i>); Puiu, Andrei (<i>Transilvania University of Brasov, Brasov, Romania</i>); Suci, Constantin (<i>Siemens Corporate Technology</i>); Itu, Lucian (<i>Transilvania University of Brasov</i>)
SaC07: 13:00-14:30		Hall A4 – Level 1			
Tissue Engineering (Oral Session)					
Co-Chair: Majd, Sheereen (<i>University of Houston</i>)					
13:00-13:15	SaC07.1	Numerical Analysis of Electromechanically Driven Bone Remodeling using the Open-Source Software Framework Bansod, Yogesh* (<i>University of Rostock</i>); van Rienen, Ursula (<i>University of Rostock</i>)	13:30-13:45	SaC08.3	On Anonymizing Medical Microdata with Large-Scale Missing Values – A Case Study with the FAERS Dataset Hsiao, Mei-Hui (<i>National Univ. of Kaohsiung</i>); Lin, Wen-Yang* (<i>National Univ. of Kaohsiung</i>); Hsu, Kuang-Yung (<i>National Univ. of Kaohsiung</i>); Shen, Zih-Xun (<i>National Univ. of Kaohsiung</i>)
13:15-13:30	SaC07.2	Study of Contraction Profile of Cardiomyocytes by using a Piezoelectric Membrane Yang, Chiou-Fong (<i>National Taiwan University</i>); Hsu, Yu-Hsiang* (<i>National Taiwan University</i>)	13:45-14:00	SaC08.4	Exploring Users' Willingness to Share their Health and Personal Data under the Prism of the New GDPR: Implications in Healthcare Karampela, Maria* (<i>IT Univ. of Copenhagen</i>); Ouhbi, Sofia (<i>UAE Univ.</i>); Minna, Isomursu (<i>IT Univ. of Copenhagen</i>)
13:30-13:45	SaC07.3	Initial Bacterial Adhesion Properties of Anodically Oxidized Ti6Al4V Doll, Patrick W.* (<i>Karlsruhe Institute of Tech. (KIT), Institute of Microstruc</i>); Wolf, Monika (<i>Karlsruhe Institute of Tech. (KIT)</i>); Guttman, Markus (<i>Karlsruhe Institute of Tech. (KIT)</i>); Thelen, Richard (<i>Karlsruhe Institute of Tech. (KIT)</i>); Ahrens, Ralf (<i>Karlsruhe Institute of Tech.</i>); Spindler, Bruno (<i>Fräszenrum Ortenau GmbH & Co KG</i>); Guber, Andreas E. (<i>Karlsruhe Institute of Tech.</i>); Al-Ahmad, Ali (<i>Univ. Freiburg</i>)	14:00-14:15	SaC08.5	A Deep Learning Technique for Imputing Missing Healthcare Data Phung, Le Son (<i>University of Sydney</i>); Kumar, Ashnil* (<i>University of Sydney</i>); Kim, Jinman (<i>University of Sydney</i>)
13:45-14:00	SaC07.4	Numerical Simulation of the Electric Field Distribution in an Electrical Stimulation Device for Scaffolds Settled with Cartilaginous Cells Weizel, Alina* (<i>Univ. of Rostock</i>); Zimmermann, Julius (<i>Univ. of Rostock</i>); Riess, Alexander (<i>Univ. of Rostock</i>); Krüger, Simone (<i>Univ. Medicine Rostock</i>); Bader, Rainer (<i>Univ. Medicine of Rostock, Dept. of Orthopaedics</i>); van Rienen, Ursula (<i>Univ. of Rostock</i>); Seitz, Hermann (<i>Univ. of Rostock</i>)	14:15-14:30	SaC08.6	A Mobile Cloud based IoMT Framework for Automated Health Assessment and Management C. Nguyen, Dinh* (<i>Deakin University</i>); Nguyen, Khoa D. (<i>Deakin University</i>); Pathirana, Pubudu N (<i>Deakin University</i>)
SaC09: 13:00-14:30		M1 – Level 3			
Modelling and Measurement of Skeletal Muscle Activity for Applications in Soft Tissue Robotics (Minisymposium)					
Chair: Cheng, Leo K. (<i>The University of Auckland</i>)					
Co-Chair: Röhrle, Oliver (<i>University of Stuttgart</i>)					
14:00-14:15	SaC07.5	Electrical Impedance Spectroscopy for Characterization of Prostate PC-3 and DU 145 Cancer Cells Silva Teixeira, Viviane* (<i>Hamburg Univ. of Technology</i>); Barth, Tobias (<i>Hamburg Univ. of Technology</i>); Labitzky, Vera (<i>Univ. Medical Center Hamburg-Eppendorf (UKE)</i>); Schumacher, Udo (<i>Univ. Medical Center Hamburg-Eppendorf (UKE)</i>); Krauschneider, Wolfgang H. (<i>Hamburg Univ. of Technology</i>)	13:00-13:15	SaC09.1	Computational Skeletal Muscle Models for Signal Identification and Sensor Development Saini, Harnoor* (<i>University of Stuttgart</i>); Liu, Andi (<i>University of Auckland</i>); Gizzi, Leonardo (<i>University of Stuttgart</i>); Röhrle, Oliver (<i>University of Stuttgart</i>)
14:15-14:30	SaC07.6	Tissue Phantom to Mimic the Dielectric Properties of Human Muscle within 20 Hz and 100 kHz for Biopotential Sensing Applications Yu, Yang (<i>Institute of Biomedical Technologies, Auckland University of Tec</i>); Lowe, Andrew (<i>Auckland University of Technology</i>); Anand, Gautam* (<i>Auckland University of Technology</i>); Kalra, Anubha (<i>AUT University</i>)	13:15-13:30	SaC09.2	Neuromechanical Modelling of Neuromuscular Impairment for the Online Control of Wearable Robots Sartori, Massimo* (<i>University of Twente</i>)
SaC08: 13:00-14:30		M8 – Level 3			
Health Informatics – Information Technologies for Healthcare Delivery and Management (Oral Session)					
Chair: Dunn, Jessilyn (<i>Duke University</i>)					
13:00-13:15	SaC08.1	Secure Processing of Stream Cipher Encrypted Data Issued from IOT: Application to a Connected Knee Prosthesis Pistono, Maxime* (<i>Institut Mines-Telecom; Telecom Bretagne</i>); Bellafqira, Reda (<i>Institut Mines-Telecom; Telecom Bretagne</i>); Coatrieux, Gouenou (<i>Institut Telecom, Telecom Bretagne, Inserm</i>)	13:30-13:45	SaC09.3	Influence of Segmentation Parameters on Classification Accuracy of High-Density EMG Recordings Lara, Jaime* (<i>Univ. of Auckland</i>); Paskaranandavadi, Niranchan (<i>Univ. of Auckland</i>); Cheng, Leo K (<i>Univ. of Auckland</i>)
SaC10: 13:00-14:30		M2 – Level 3			
Neuromodulation Technologies: Rewiring the Human Brain (Minisymposium)					
Chair: Milosevic, Luka (<i>University of Tübingen</i>)					
Co-Chair: Popovic, Milos R. (<i>University of Toronto</i>)					
13:00-13:15	SaC10.1	How Deep Brain Stimulation Modulates Synaptic Plasticity on a Neuronal Level Milosevic, Luka* (<i>Univ. of Tübingen</i>); Popovic, Milos R. (<i>Univ. of Toronto</i>); Hutchison, William (<i>Univ. of Toronto</i>)			

13:15-13:30	SaC10.2	Neuroplasticity after Electrical Stimulation of Muscles and Nerves: Implications for Recovery of Voluntary Function Milosevic, Matija* (<i>Osaka University</i>)	14:15-14:30	SaC11.6	Heart Rate Extraction from Novel Neck Photoplethysmography Signals Garcia Lopez, Irene (<i>Imperial College of London</i>); Sharma, Piyush* (<i>Imperial College London</i>); Rodriguez-Villegas, Esther (<i>Imperial College London</i>)
13:30-13:45	SaC10.3	Human in-Vivo Machine Learning based Acute Brain Stimulation for Epilepsy O Leary, Gerard (<i>University of Toronto</i>); Groppe, David (<i>Krembil Neuroscience Center</i>); Barkley, Victoria (<i>Krembil Neuroscience Center</i>); Genov, Roman (<i>University of Toronto</i>); Valiante, Taufik A.* (<i>University of Toronto</i>)	SaC12: 13:00-14:30 M6 – Level 3 Fetal and Pediatric Imaging (Oral Session) Chair: Signorini, Maria G. (<i>Politecnico di Milano</i>) Co-Chair: Balestra, Gabriella (<i>Politecnico di Torino</i>)		
13:45-14:00	SaC10.4	Use of Functional Electrical Stimulation Therapy to Treat Major Depressive Disorder Popovic, Milos R.* (<i>University of Toronto</i>)	13:00-13:15	SaC12.1	Fetal Ultrasound Image Segmentation for Measuring Biometric Parameters using Multi-Task Deep Learning Sobhani-Nia, Zahra (<i>Isfahan Univ. of Technology, Iran</i>); Rafiei, Shima (<i>IUT</i>); Emami, Ali (<i>Isfahan Univ. of Technology</i>); Karimi, Nader (<i>Isfahan Univ. of Technology</i>); Najarian, Kayvan (<i>Univ. of Michigan – Ann Arbor</i>); Samavi, Shadrokh (<i>McMaster Univ.</i>); Soroushmehr, S.M.Reza* (<i>Univ. of Michigan, Ann Arbor</i>)
14:00-14:15	SaC10.5	State-Dependent Neuromodulation for the Restoration of Motor Function Alireza, Gharabaghi* (<i>Universität Tübingen</i>)	13:15-13:30	SaC12.2	Automated Detection of Fetal Brain Signals with Principal Component Analysis Moser, Julia* (<i>University of Tübingen</i>); Sippel, Katrin (<i>University of Tübingen</i>); Schleger, Franziska (<i>University of Tübingen</i>); Preissl, Hubert (<i>University of Tübingen</i>)
14:15-14:30	SaC10.6	Deep Brain Stimulation of the Posterior Hypothalamic Area for Refractory Aggressive Behavior Hutchison, William* (<i>University of Toronto</i>)	13:30-13:45	SaC12.3	Evaluation of Cortical Segmentation Pipelines on Clinical Neonatal MRI Data Tor-Díez, Carlos (<i>IMT Atlantique</i>); Pham, Chi-Hieu (<i>Télécom Bretagne</i>); Meunier, Hélène (<i>Service de Médecine Néonatale et Réanimation Pédiatrique, CHU de</i>); Faisan, Sylvain (<i>ICube, Strasbourg Univ.</i>); Bloch, Isabelle (<i>Télécom ParisTech – CNRS UMR 5141 LTCI</i>); Bednarek, Nathalie (<i>Service de Médecine Néonatale et Réanimation Pédiatrique, CHU de</i>); Passat, Nicolas* (<i>Reims Univ.</i>); Rousseau, François (<i>Telecom Bretagne</i>)
SaC11: 13:00-14:30 M4 – Level 3 Unobtrusive Cardiorespiratory Monitoring (Oral Session) Chair: Di Rienzo, Marco (<i>IRCCS Fondazione Don Carlo Gnocchi</i>) Co-Chair: Mukkamala, Ramakrishna (<i>Michigan State University</i>)			13:45-14:00	SaC12.4	Pediatric Brain Tissue Segmentation from MRI using Clustering: A Preliminary Study Rosati, Samanta (<i>Politecnico di Torino</i>); Toselli, Benedetta (<i>University of Genova</i>); Fato, Marco Massimo (<i>University of Genoa</i>); Tortora, Domenico (<i>IRCCS Istituto Giannina Gaslini</i>); Severino, Maria Savina (<i>IRCCS Istituto Giannina Gaslini</i>); Rossi, Andrea (<i>IRCCS Istituto Giannina Gaslini</i>); Balestra, Gabriella* (<i>Politecnico di Torino</i>)
13:00-13:15	SaC11.1	IPhys: An Open Non-Contact Imaging-Based Physiological Measurement Toolbox McDuff, Daniel Jonathan* (<i>Microsoft</i>); Blackford, Ethan Brian (<i>Ball Aerospace</i>)	14:00-14:15	SaC12.5	Fully Automatic Pediatric Echocardiography Segmentation using Deep Convolutional Networks based on BiSeNet Hu, Yujin (<i>School of Biomedical Engineering, Health Science Center, Shenzhen</i>); Guo, Libao (<i>Shen Zhen Univ.</i>); Lei, Baiying (<i>Shenzhen Univ.</i>); Mao, Muyi (<i>Shenzhen Children Hospital</i>); Jin, Zelong (<i>Shenzhen Children Hospital</i>); Elazab, Ahmed (<i>Shenzhen Univ.</i>); Xia, Bei (<i>Shenzhen Children Hospital, Hospital of Shantou Univ.</i>); Wang, Tianfu* (<i>Shenzhen Univ.</i>)
13:15-13:30	SaC11.2	Inter-Beat Interval Estimation from Facial Video based on Reliability of BVP Signals Maki, Yuichiro* (<i>Tokyo Institute of Technology</i>); Monno, Yusuke (<i>Tokyo Institute of Technology</i>); Yoshizaki, Kazunori (<i>Olympus Corporation</i>); Tanaka, Masayuki (<i>National Institute of Advanced Industrial Science & Technology</i>); Okutomi, Masatoshi (<i>Tokyo Institute of Technology</i>)	14:15-14:30	SaC12.6	A Video Database of Neonatal Facial Expression based on Painful Clinical Procedures Chen, Shuohui* (<i>Zhejiang Univ.</i>); Luo, Feixiang (<i>Zhejiang Univ.</i>); Chen, Xiaofei (<i>Zhejiang Univ.</i>); Yan, Jiayi (<i>Hangzhou Proton Technology Co., Ltd.</i>); Zhong, Yizhou (<i>Hangzhou Proton Technology Co., Ltd.</i>); Pan, Yun (<i>Zhejiang Univ.</i>)
13:30-13:45	SaC11.3	A Vision-Based System for Breathing Disorder Identification: A Deep Learning Perspective Martinez, Manuel (<i>Karlsruhe Institute of Technology</i>); Ahmedt-Aristizabal, David* (<i>Queensland University of Technology</i>); Väh, Tilmann (<i>Karlsruhe Institute of Technology.</i>); Fookes, Clinton (<i>Queensland University of Technology</i>); Benz, Andreas (<i>Universität Heidelberg</i>); Stiefelwagen, Rainer (<i>Karlsruhe Institute of Technology</i>)	SaC13: 13:00-14:30 R2 – Level 3 Non Invasive Monitoring (Oral Session) Co-Chair: Bujnowski, Adam (<i>Gdansk University of Technology</i>)		
13:45-14:00	SaC11.4	Respiration Extraction from Radar Heart Sound Measurements Schellenberger, Sven* (<i>Brandenburg University of Technology</i>); Shi, Kilin (<i>Friedrich-Alexander-Universität Erlangen-Nürnberg</i>); Michler, Fabian (<i>Friedrich-Alexander-Universität Erlangen-Nürnberg</i>); Lurz, Fabian (<i>Friedrich-Alexander-Universität Erlangen-Nürnberg</i>); Weigel, Robert (<i>University of Erlangen Nuremberg</i>); Koelplin, Alexander (<i>Chair for Electronics & Sensor Systems, Brandenburg University</i>)	13:00-13:15	SaC13.1	Effects of Bio-Impedance Sensor Placement Relative to the Arterial Sites for Capturing Hemodynamic Parameters Ibrahim, Bassem* (<i>Texas A&M Univ.</i>); Mrugala, Dariusz (<i>Texas A&M Univ.</i>); Jafari, Roozbeh (<i>Texas A&M Univ.</i>)
14:00-14:15	SaC11.5	Heart Rate Variability for Driver Sleepiness Classification in Real Road Driving Conditions Anna, Persson (<i>Dept. of Biomedical Engineering, Linköping University</i>); Jonasson, Hanna (<i>Dept. of Biomedical Engineering, Linköping University</i>); Fredriksson, Ingemar (<i>Dept. of Biomedical Engineering, Linköping University</i>); Wiklund, Urban (<i>Umea University</i>); Ahlström, Christer* (<i>Swedish National Road & Transport Research Institute (VTI)</i>)			

- 13:15-13:30 SaC13.2
Non-Invasive, Continuous, Pulse Pressure Monitoring Method
 Kuwahara, M.* (*Univ. of Hawaii at Manoa*); Yavari, E. (*Univ. of Hawaii Manoa*); Boric-Lubecke, O. (*Univ. of Hawaii Manoa*)
- 13:30-13:45 SaC13.3
UWB Radar for Non-Contact Heart Rate Variability Monitoring and Mental State Classification
 Han, Yang (*Imperial College London*); Lauteslager, Timo* (*Imperial College London*); Lande, Tor Sverre (*University of Oslo*); Constandinou, Timothy (*Imperial College of Science, Technology & Medicine*)
- 13:45-14:00 SaC13.4
Electrodes Array for Contactless ECG Measurement of a Bathing Person – A Sensitivity Analysis
 Osiński, Kamil (*Gdansk Univ. of Technology*); Bujnowski, Adam* (*Gdansk Univ. of Technology*); Przystup, Piotr (*Gdansk Univ. of Technology*); Wtorek, Jerzy (*Gdansk Univ. of Technology*)
- 14:00-14:15 SaC13.5
Capacitive Coupled Electrodes based Non-Contact ECG Measurement System with Real-Time Wavelet Denoising Algorithm
 Peng, Shun (*Fudan University*); Bao, Shenjie (*Fudan University*); Chen, Wei* (*Fudan University*)
- 14:15-14:30 SaC13.6
On the use of Non-Contact Capacitive Sensors for the Assessment of Postural Hand Tremor of Individuals with Parkinson's Disease
 Oliveira, Fabio Henrique M (*Federal Univ. of Uberlândia*); Rabelo, Amanda (*Univ. Federal de Uberlândia*); Luiz, Luiza Maire (*Univ. Federal de Uberlândia*); Pereira, Adriano A. (*Federal Univ. of Uberlândia*); Vieira, Marcus (*Federal Univ. de Goias*); Andrade, Adriano* (*Federal Univ. of Uberlândia*)
- SaC14: 13:00-14:30 R3 – Level 3
Signal Processing and Classification of Electromyographic Signals (Oral Session)
 Chair: Ramakrishnan, Swaminathan (*IIT Madras, India*)
 Co-Chair: Nguyen, Hung T. (*Swinburne University of Technology*)
- 13:00-13:15 SaC14.1
Relationship between Offline and Online Metrics in Myoelectric Pattern Recognition Control based on Target Achievement Control Test
 Lyu, Bo* (*Shanghai Jiao Tong Univ.*); Sheng, Xinjun (*Shanghai Jiao Tong Univ.*); Hao, Dehong (*Shanghai Jiao Tong Univ.*); Zhu, Xiangyang (*Shanghai Jiao Tong Univ.*)
- 13:15-13:30 SaC14.2
Exploring Intrinsic Triggers for Functional Facial Electrostimulation based on Intramuscular Electromyography Recordings
 Leistritz, Lutz* (*Jena University Hospital, Friedrich Schiller University Jena*); Poeschl, Christiane (*MED-EL Medical Electronics*); Volk, Gerd Fabian (*Jena University Hospital*)
- 13:30-13:45 SaC14.3
Smoothed Arg Max Extreme Learning Machine: An Alternative to Avoid Classification Ripple in sEMG Signals
 Cene, Vinicius H. (*Univ. Federal do Rio Grande do Sul*); Machado, Juliano* (*Instituto Federal Sul-Riograndedense (IFSul)*); Balbinot, Alexandre (*Federal Univ. of Rio Grande do Sul (UFRGS)*)
- 13:45-14:00 SaC14.4
Estimation of Motor Unit Global Firing Rate by Features of EMG in Frequency Domain
 Ma, Shihan* (*Shanghai Jiao Tong University*); Chen, Chen (*Shanghai Jiao Tong University*); Lyu, Bo (*Shanghai Jiao Tong University*); Sheng, Xinjun (*Shanghai Jiao Tong University*); Zhu, Xiangyang (*Shanghai Jiao Tong University*)
- 14:00-14:15 SaC14.5
Exploiting the Intertemporal Structure of the Upper-Limb sEMG: Comparisons between an LSTM Network and Cross-Sectional Myoelectric Pattern Recognition Methods
 Olsson, Alexander (*Lund Univ.*); Malesevic, Nebojsa (*Lund Univ.*); Björkman, Anders (*Lund Univ.*); Antfolk, Christian* (*Lund Univ.*)
- 14:15-14:30 SaC14.6
The Influence of Force Level and Motor Unit Coherence on Nonlinear Surface EMG Features Examined using Model Simulation
 McManus, Lara* (*Univ. College Dublin*); Pereira Botelho, Diego (*Univ. College Dublin*); Flood, Matthew W. (*Univ. College Dublin*); Lowery, Madeleine (*Univ. College Dublin*)
- SaC15: 13:00-14:30 M3 – Level 3
Ultrasound Imaging (II) (Oral Session)
 Chair: Konofagou, Elisa (*Columbia University*)
 Co-Chair: Beg, Mirza Faisal (*Simon Fraser University*)
- 13:00-13:15 SaC15.1
Morphological Characterization of Breast Tumors using Conventional B-Mode Ultrasound Images
 El-Azizy, Ahmed R. M. (*Dept. of Biomedical Engineering, Cairo University Faculty o*); Salaheldien, Mohamed (*Dept. of Biomedical Engineering, Cairo University Faculty o*); Rushdi, Muhammad (*Cairo University*); Gewefel, Hanan (*Radiographic Imaging Technology, Faculty of Applied Medical Scie*); Mahmoud, Ahmed M.* (*Cairo University Faculty of Engineering*)
- 13:15-13:30 SaC15.2
Quantitative Ultrasound Imaging for the Differentiation between Fresh and Decellularized Mouse Kidneys
 Alnazer, Israa (*Lebanese Univ.*); Falou, Omar* (*Lebanese Univ.*); Nasr, Remie (*Lebanese Univ.*); Azar, Danielle (*Lebanese American Univ.*); Hysi, Eno (*Ryerson Univ.*); Wirtzfeld, Lauren (*Ryerson Univ.*); Berndl, Elizabeth (*Ryerson Univ.*); Koliou, Michael (*Ryerson Univ.*)
- 13:30-13:45 SaC15.3
Ultrasound Segmentation using U-Net: Learning from Simulated Data and Testing on Real Data
 Behboodi, Bahareh* (*Concordia University*); Rivaz, Hassan (*Concordia University*)
- 13:45-14:00 SaC15.4
Fully Automated Segmentation of Alveolar Bone using Deep Convolutional Neural Networks from Intraoral Ultrasound Images
 Duong, Dat (*Univ. of Alberta*); Nguyen, Kim-Cuong T (*Univ. of Alberta*); Kaipatur, Neelambar (*Univ. of Alberta*); Lou, Edmond H. (*Univ. of Alberta*); Noga, Michelle (*Univ. of Alberta*); Major, Paul (*Univ. of Alberta*); Punithakumar, Kumaradevan* (*Univ. of Alberta*); Le, Lawrence H (*Univ. of Alberta*)
- 14:00-14:15 SaC15.5
Automated Diagnosis of Cardiovascular Disease through Measurement of Intima Media Thickness using Deep Neural Networks
 Chinnappan, Rajasekaran* (*K.S.Rangasamy College of Technology*); Krishnasamy Balasundaram, Jayanthi (*K.S.Rangasamy College of Technology*); Subramaniam, Sudha (*K.S.Rangasamy College of Technology*); Kuchelar, Ramani (*Apollo Hospitals, Chennai*)
- 14:15-14:30 SaC15.6
A Novel Transcranial Ultrasound Imaging Method with Diverging Wave
 Du, Bin (*Shenzhen Univ.*); Zheng, Haoteng (*Shenzhen Univ.*); Siyuan, Fang (*Shenzhen Univ.*); Chen, Siping (*Shenzhen Univ.*); Lu, Minhua* (*Shenzhen Univ.*); Mao, Rui (*Shenzhen Univ.*)
- SaC16: 13:00-14:30 M5 – Level 3
Wearable Robotic Systems – Prosthetics (Oral Session)
 Chair: Sanguineti, Vittorio (*University of Genoa*)
- 13:00-13:15 SaC16.1
A Control Method for Transfemoral Prosthetic Knees based on Thigh Angular Motion
 Inoue, Koh* (*Kagawa University*); Fukuda, Tetsuya (*Kagawa University*); Wada, Takahiro (*Ritsumeikan University*)
- 13:15-13:30 SaC16.2
A Dynamic Model of Hand Movements for Proportional Myoelectric Control of a Hand Prosthesis
 Sanguineti, Vittorio* (*University of Genoa*); Beninati, Giovanna (*University of Genoa*)

13:30-13:45	SaC16.3	Robotic Prosthesis that Maintains Flexion Posture Katsumura, Motoyu* (<i>Mie Univ.</i>); Obayashi, Shuya (<i>Mie Univ.</i>); Yano, Kenichi (<i>Mie Univ.</i>); Hamada, Atsushi (<i>Imasen Engineering Corp.</i>); Nakao, Tomoyuki (<i>Imasen Engineering Corp.</i>); Torii, Katsuhiko (<i>Imasen Engineering Corp.</i>)	14:00-14:15	SaC17.5	An Approach for Automatic Identification of Fundamental and Additional Sounds from Cardiac Sounds Recordings Dwivedi, Amit Krishna* (<i>Imperial College London</i>); Rodriguez-Villegas, Esther (<i>Imperial College London</i>)
13:45-14:00	SaC16.4	Adaptive, Tendon-Driven, Affordable Prostheses for Partial Hand Amputations: On Body-Powered and Motor Driven Implementations Gao, Geng (<i>The Univ. of Auckland</i>); Gerez, Lucas (<i>Univ. of Auckland</i>); Liarokapis, Minas* (<i>The Univ. of Auckland</i>)	14:15-14:30	SaC17.6	Multi-Source Signal Processing in Phonocardiography: Comparison among Signal Selection and Signal Enhancement Techniques Giordano, Noemi (<i>Politecnico di Torino</i>); Knaflitz, Marco* (<i>Politecnico di Torino</i>)
14:00-14:15	SaC16.5	Rehand II: Wire-Driven Five-Fingered Electric Prosthetic Hand Utilizing Elasticity of a Cosmetic Glove Odagaki, Narinobu* (<i>Osaka Institute of Technology</i>); Yoshikawa, Masahiro (<i>Osaka Institute of Technology</i>); Tanaka, Yoshihiro (<i>Nagoya Institute of Technology</i>); Kawashima, Noritaka (<i>Research Institute, National Rehab. Center for Persons wi</i>)	SaC18: 13:00-14:30	R13 – Level 3	Wearable Sleep Monitoring (Oral Session) Co-Chair: Kidmose, Preben (<i>Aarhus University, Denmark</i>)
14:15-14:30	SaC16.6	Compact and Lightweight Transradial Electric Prosthesis for Children with Forearm Deficiency Kobayashi, Toya* (<i>Osaka Institute of Technology</i>); Yoshikawa, Masahiro (<i>Osaka Institute of Technology</i>); Ogawa, Kazunori (<i>Daiya Industry Co., Ltd.</i>); Ohmatsu, Satoko (<i>Research Institute of National Rehabi. Center for the Dis</i>); Kawashima, Noritaka (<i>Research Institute, National Rehabi. Center for Persons wi</i>)	13:00-13:15	SaC18.1	A Graphene-Based Sleep Mask for Comfortable Wearable Eye Tracking Beach, Christopher* (<i>University of Manchester</i>); Karim, Nazmul (<i>University of Manchester</i>); Casson, Alexander James (<i>The University of Manchester</i>)
SaC17: 13:00-14:30	R12 – Level 3	Signal Processing and Classification of Phonocardiographic Signals (Oral Session)	13:15-13:30	SaC18.2	Discrimination of Sleep Spindles in Ear-EEG Mikkelsen, Kaare (<i>University of Aarhus</i>); Kappel, Simon Lind (<i>University of Moratuwa</i>); Hemmsen, Martin Christian (<i>T&W Engineering</i>); Rank, Mike Lind (<i>Widex A/S</i>); Kidmose, Preben* (<i>Aarhus University, Denmark</i>)
13:00-13:15	SaC17.1	Using Soft Attention Mechanisms to Classify Heart Sounds Oliveira, Jorge (<i>Instituto de Telecomunicações, Faculdade de Ciências da Universi</i>); Nogueira, Diogo Marcelo (<i>INESC TEC</i>); Ramos, Cleber (<i>Univ. of Porto</i>); Renna, Francesco (<i>Instituto de Telecomunicações e Faculdade de Ciências da Univers</i>); Ferreira, Carlos (<i>LIAAD – INESC TEC</i>); Coimbra, Miguel* (<i>Instituto de Telecomunicações / Universidade do Porto</i>)	13:30-13:45	SaC18.3	Detection of Sleep and Wake States based on the Combined use of Actigraphy and Ballistocardiography Jaworski, Dominic* (<i>Simon Fraser University</i>); M. Roshan, Yaser (<i>CannSight Technologies</i>); Tae, Chul-Gyu (<i>Bigmotion Technologies</i>); Park, Edward J. (<i>Simon Fraser University</i>)
13:15-13:30	SaC17.2	Fully-Automated Diagnosis of Aortic Stenosis using Phonocardiogram-Based Features Saraf, Kanav* (<i>Univ. of California Los Angeles</i>); Baek, Christopher Inhwan (<i>Sensydia Corporation</i>); Wasko, Michael (<i>Sensydia Corporation</i>); Zhang, Xu (<i>Univ. of California, Los Angeles</i>); Zheng, Yi (<i>Sensydia Corporation</i>); Borgstrom, Per Henrik (<i>Sensydia Corporation</i>); Mahajan, Aman (<i>Univ. of Pittsburgh</i>); Kaiser, William (<i>Univ. of California, Los Angeles</i>)	13:45-14:00	SaC18.4	Novel Active ECG Electrode and Membrane Pressure Sensor-Based Unconstrained Cardiorespiratory System for Sleep Monitoring Wang, Zeyu (<i>Fudan University</i>); Chen, Chen (<i>Fudan University</i>); Tao, Linkai (<i>Eindhoven University of Technology</i>); Yuan, Wei (<i>Printable Electronics Research Centre, Suzhou Institute of Nanot</i>); Li, Wei (<i>Fudan University</i>); Sun, Chenglu (<i>Fudan University</i>); Chen, Wei* (<i>Fudan University</i>)
13:30-13:45	SaC17.3	Segmentation of Radar-Recorded Heart Sound Signals using Bidirectional LSTM Networks Shi, Kilin* (<i>Friedrich-Alexander-Universität Erlangen-Nürnberg</i>); Schellenberger, Sven (<i>Brandenburg University of Technology</i>); Weber, Leon (<i>Humboldt-Universität zu Berlin</i>); Wiedemann, Jan Philipp (<i>Friedrich-Alexander-Universität Erlangen-Nürnberg</i>); Michler, Fabian (<i>Friedrich-Alexander-Universität Erlangen-Nürnberg</i>); Steigleder, Tobias (<i>Universitätsklinikum Erlangen</i>); Malessa, Anke (<i>Universitätsklinikum Erlangen</i>); Lurz, Fabian (<i>Friedrich-Alexander-Universität Erlangen-Nürnberg</i>); Ostgathe, Christoph (<i>Universitätsklinikum Erlangen</i>); Weigel, Robert (<i>University of Erlangen Nuremberg</i>); Koelpin, Alexander (<i>Chair for Electronics & Sensor Systems, Brandenburg University</i>)	14:00-14:15	SaC18.5	Can we Monitor Breathing during Sleep via Wi-Fi on Smartphone? Tataraidze, Alexander* (<i>Huawei Technologies Co. Ltd.</i>); Pikhletsky, Mikhail (<i>Huawei Technologies</i>); Olesyuk, Roman (<i>Huawei Technologies Co., Ltd.</i>)
13:45-14:00	SaC17.4	Improved Segmentation with Dynamic Threshold Adjustment for Phonocardiography Recordings Ozkan, Ibrahim* (<i>Hacettepe Univ.</i>); Yilmaz, Atila (<i>Hacettepe Univ.</i>); Celebi, Gulsen (<i>ESEN System Integration</i>)	14:15-14:30	SaC18.10	Adaptive Accelerometry Derived Respiration: Comparison with Respiratory Inductance Plethysmography during Sleep Bricout, Aurélien* (<i>Université Grenoble Alpes</i>); Fontecave-Jallon, Julie (<i>Univ. Grenoble Alpes, CNRS, CHU Grenoble Alpes, Grenoble INP</i>); Colas, Damien (<i>Holi</i>); Gerard, Gregoire (<i>Holi</i>); Pepin, Jean-Louis (<i>Grenoble University Hospital</i>); Gumery, Pierre-Yves (<i>Université Grenoble Alpes</i>)
			SaC19: 13:00-14:30	R4 – Level 3	Image Segmentation with Neural Networks (I) (Oral Session) Chair: Cardoso, Jaime S. (<i>INESC TEC and University of Porto</i>)
			13:00-13:15	SaC19.1	Automated Placenta Segmentation with a Convolutional Neural Network Weighted by Acoustic Shadow Detection Hu, Ricky* (<i>University of British Columbia</i>); Singla, Rohit (<i>University of British Columbia</i>); Yan, Ryan (<i>University of British Columbia</i>); Mayer, Chantal (<i>University of British Columbia</i>); Rohling, Robert (<i>University of British Columbia</i>)

- 13:15-13:30 SaC19.2 **Using Synthetic Training Data for Deep Learning-Based GBM Segmentation**
Lindner, Lydia (*Graz University of Technology*); Narnhofer, Dominik (*Graz University of Technology*); Weber, Maximilian* (*TU Graz*); Gsaxner, Christina (*TU Graz*); Kolodziej, Malgorzata (*UKGM Giessen*); Egger, Jan (*Graz University of Technology*)
- 13:30-13:45 SaC19.3 **Delineation of Ischemic Core and Penumbra Volumes from MRI using MSNet Architecture**
Gupta, Akshat (*IIT Kharagpur*); Vupputuri, Anusha* (*Indian Institute of Technology Kharagpur*); Ghosh, Nirmalya (*Indian Institute of Technology (IIT), Kharagpur*)
- 13:45-14:00 SaC19.4 **Quality-Based Regularization for Iterative Deep Image Segmentation**
Rebelo, José (*INESC TEC & University of Porto*); Fernandes, Kelwin (*INESC TEC & University of Porto*); Cardoso, Jaime S.* (*INESC TEC & University of Porto*)
- 14:00-14:15 SaC19.5 **Cascaded Multi-Scale Convolutional Encoder-Decoders for Breast Mass Segmentation in High-Resolution Mammograms**
Yan, Yutong (*IMT Atlantique, LaTIM*); Conze, Pierre-Henri* (*IMT Atlantique, LaTIM*); Decenciere, Etienne (*MINES ParisTech, PSL Research University*); Lamard, Mathieu (*Université de Bretagne Occidentale*); Quellec, Gwenole (*Inserm*); Cochener, Béatrice (*CHU Morvan*); Coatrieux, Gouenou (*Institut Telecom – Telecom Bretagne – Inserm*)
- 14:15-14:30 SaC19.6 **Deep Neural Network based Polyp Segmentation in Colonoscopy Images using a Combination of Color Spaces**
Bagheri, Mahnoosh (*Isfahan Univ. of Technology, Iran*); Mohrekesh, Majid (*Isfahan Univ. of Technology*); Tehrani, Milad (*Isfahan Univ. of Technology, Iran*); Najarian, Kayvan (*Univ. of Michigan – Ann Arbor*); Karimi, Nader (*Isfahan Univ. of Technology*); Samavi, Shadrokh (*McMaster Univ.*); Soroushmehr, S.M.Reza* (*Univ. of Michigan, Ann Arbor*)
- SaD01: 14:30-16:00 Hall A6+A7 – Level 1 **Brain-Computer Interface (IV)** (Oral Session)
- 14:30-14:45 SaD01.1 **Investigating Sex Differences in Classification of Five Emotions from EEG and Eye Movement Signals**
Bao, Lan-Qing* (*East China Univ. of Science & Technology*); Qiu, Jieli (*Shanghai Jiao Tong Univ.*); Tang, Hao (*Shanghai Jiao Tong Univ.*); Zheng, Wei-Long (*Shanghai Jiao Tong Univ.*); Lu, Bao-Liang (*Shanghai Jiao Tong Univ.*)
- 14:45-15:00 SaD01.2 **The Effect of Vibrotactile Feedback on ErrP-Based Adaptive Classification of Motor Imagery**
Schiatti, Lucia* (*Istituto Italiano di Tecnologia*); Barresi, Giacinto (*Istituto Italiano di Tecnologia*); Tessadori, Jacopo (*IIT – Italian Institute of Technology*); King, Louis Charles (*Istituto Italiano di Tecnologia*); Mattos, Leonardo (*Istituto Italiano di Tecnologia*)
- 15:00-15:15 SaD01.3 **A Novel Feature Extraction Framework for Four Class Motor Imagery Classification using Log Determinant Regularized Riemannian Manifold**
Bandaru, Jagadish* (*Indian Institute of Technology Hyderabad*); P, Rajalakshmi (*Indian Institute of Technology Hyderabad*)
- 15:15-15:30 SaD01.4 **Influence of User Tasks on EEG-Based Classification Performance in a Hazard Detection Paradigm**
Kolkhorst, Henrich* (*University of Freiburg*); Kärkkäinen, Saku (*University of Freiburg*); Raheim, Amund Faller (*University of Freiburg*); Burgard, Wolfram (*University of Freiburg*); Tangermann, Michael (*University of Freiburg*)
- 15:30-15:45 SaD01.5 **Cortical Activations and BCI Performances at Different Speeds of Visual and Proprioceptive Stimulation**
Wang, Mengya (*Tianjin University*); Chen, Long (*Tianjin University*); Wang, Zhongpeng (*Tianjin University*); Zhang, Lei (*Tianjin University*); Gu, Xiaosong (*Tianjin University*); Ming, Dong* (*Tianjin University*)
- 15:45-16:00 SaD01.6 **Comparison of Classifiers for the Transfer Learning of Affective Auditory P300-Based BCIs**
Onishi, Akinari* (*Chiba Univ.*); Nakagawa, Seiji (*Chiba Univ.*)
- SaD02: 14:30-16:00 Hall A8 – Level 1 **Signal Processing and Classification of Heart Rate Variability: Applications** (Oral Session)
Chair: Laguna, Pablo (*Zaragoza University and CIBER-BBN*)
Co-Chair: Voss, Andreas (*University of Applied Sciences Jena*)
- 14:30-14:45 SaD02.1 **Heart Rate Variability Analysis to Predict Onset of Ventricular Tachyarrhythmias in Implantable Cardioverter Defibrillators**
Parsi, Ashkan* (*National University of Ireland Galway*); O'Loughlin, Declan (*National University of Ireland Galway*); Glavin, Martin (*National University of Ireland*); Jones, Edward (*National University of Ireland Galway*)
- 14:45-15:00 SaD02.2 **Pre-Ictal Time Assessment using Heart Rate Variability Features in Drug-Resistant Epilepsy Patients**
Leal, Adriana (*University of Coimbra*); Pinto, Mauro (*University of Coimbra*); Henriques, Jorge (*University of Coimbra*); Ruano, M. Graça (*FCT, University of Algarve & CISUC-University of Coimbra*); de Carvalho, Paulo* (*University of Coimbra*); Teixeira, César (*University of Coimbra*)
- 15:00-15:15 SaD02.3 **Effect of EKG Sampling Rate on Heart Rate Variability Analysis**
Govindan, Rathinaswamy* (*Children's National Health System*); Massaro, An (*Children's National Health System*); Kota, Srinivas (*UT Southwestern Medical Center*); Grabowski, Reagan (*Children's National Health System*); Wilson, James (*University of Arkansas at Little Rock*); DuPlessis, Adre (*Children's National Medical Center*)
- 15:15-15:30 SaD02.4 **Heart Rate Variability at Bedtime Predicts Subsequent Sleep Features**
Tramonti Fantozzi, Maria Paola* (*Università di Pisa*); Artoni, Fiorenzo (*Center for Neuroprosthetics, Institute of Biengineering, School*); Faraguna, Ugo (*Dept. of Translational Research & of New Surgical & Med*)
- 15:30-15:45 SaD02.5 **Multivariable Relationships between Autonomic Nervous System Related Indices in Hyperbaric Environments**
Pérez Martínez, Cristina* (*University of Zaragoza*); Peláez Coca, María Dolores (*Centro Universitario de la Defensa*); Hernando, Alberto (*BSICoS Group, CIBER-BBN*); Gil, Eduardo (*Zaragoza University & CIBER-BBN*); Sanchez, Carlos (*Defense University Centre, University of Zaragoza*)
- 15:45-16:00 SaD02.6 **Risk Detection in Patients with Obstructive Sleep Apnea Syndrome based on Cardiovascular Time Series Analysis**
Schulz, Steffen (*University of Applied Sciences Jena*); Ritter, Julia (*University Hospital Jena, Dept. of Otorhinolaryngology, Jen*); Schneider, Gerlind (*Jena University Hospital, Dept. of Otorhinolaryngology*); Guntinas-Lichius, Orlando (*University Hospital Jena, Dept. of Otorhinolaryngology, Jen*); Voss, Andreas* (*University of Applied Sciences Jena*)

SaD03: 14:30-16:00 MRI-RF and New Imaging Technologies (Oral Session) Chair: Rispoli, Joseph Vincent (<i>Purdue University</i>) Co-Chair: Cheng, Jing (<i>Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences</i>)	Hall A3 – Level 1	15:00-15:15 Using Non-Contact Imaging Photoplethysmography to Recover Diurnal Patterns in Heart Rate McDuff, Daniel Jonathan* (<i>Microsoft</i>)	SaD04.3
14:30-14:45 Stitching Stretchable Radiofrequency Coils for MRI: A Conductive Thread and Athletic Fabric Approach Vincent, Jana* (<i>Purdue University</i>); Rispoli, Joseph Vincent (<i>Purdue University</i>)	SaD03.1	15:15-15:30 Cuff-Less Blood Pressure Monitoring with a 3-Axis Accelerometer Chang, Eric (<i>UC San Diego</i>); Cheng, Chung-Kuan (<i>Univ. of California, San Diego</i>); Gupta, Anushka (<i>UC San Diego</i>); Hsu, Po-Han (<i>National Taipei Univ.</i>); Hsu, Po-Ya* (<i>UC San Diego</i>); Liu, Hsin-Li (<i>Central Taiwan Univ. of Science & Technology</i>); Moffitt, Amanda (<i>UC San Diego</i>); Ren, Alissa (<i>UC San Diego</i>); Tsaur, Irene (<i>UC San Diego</i>); Wang, Samuel (<i>UC San Diego</i>)	SaD04.4
14:45-15:00 Dual-Tuned Removable Common-Mode Current Trap for Magnetic Resonance Imaging and Spectroscopy Enriquez, Angel (<i>Purdue University</i>); Vincent, Jana* (<i>Purdue University</i>); Rispoli, Joseph Vincent (<i>Purdue University</i>)	SaD03.2	15:30-15:45 The Cuffless Blood Pressure Measurement with Multi-Dimension Regression Model based on Characteristics of Pulse Waveform Liu, Shing-Hong* (<i>Chaoyang University of Technology, Taichung, Taiwan, ROC</i>); Wang, Jia-Jung (<i>I-Shou University</i>); Tan, Tan-Hsu (<i>National Taipei University of Technology</i>); Huang, Yung-Fa (<i>Chaoyang University of Technology</i>)	SaD04.5
15:00-15:15 Feasibility of using a 1T Extremity Scanner with a Four-Element Array to Detect 31P in the Human Calf Carrell, Travis* (<i>Texas A&M University</i>); Gu, Minyu (<i>Texas A&M University</i>); McDougall, Mary (<i>Texas A&M University</i>); Wright, Steven M. (<i>Texas A&M University</i>)	SaD03.3	15:45-16:00 A Wireless Wearable Sensor Patch for the Real-Time Estimation of Continuous Beat-to-Beat Blood Pressure Qiu, Chunkai* (<i>Monash University</i>); Wu, Taiyang (<i>Monash University</i>); Redouté, Jean-Michel (<i>Monash University</i>); Yuce, Mehmet (<i>Monash University</i>)	SaD04.6
15:15-15:30 Metasurface Resonator for 1.5 T MRI based on BaTiO3 Host Material Koutsoupidou, Maria (<i>King's College London</i>); Saha, Shimul C. (<i>MediWise, Medical Wireless Sensing Ltd.</i>); Pricci, Roberto L. (<i>MediWise, Medical Wireless Sensing Ltd.</i>); Cano-Garcia, Helena* (<i>King's College London, Medical Wireless Sensing Ltd.</i>); Palikaras, George (<i>MediWise, Medical Wireless Sensing Ltd.</i>); Kosmas, Panagiotis (<i>Kings College London</i>); Kallos, Efthymios (<i>MediWise, Medical Wireless Sensing Ltd.</i>)	SaD03.4	SaD05: 14:30-16:00 Signal Processing and Classification of Movement-Related Signals (Oral Session)	Hall A2 – Level 1
15:30-15:45 Radio-Frequency Coil Array for Improved Concurrent Transcranial Magnetic Stimulation and Functional Magnetic Resonance Imaging Mathieu, William (<i>McGill University</i>); Popovich, Milica* (<i>McGill University</i>); Farivar, Reza (<i>McGill University</i>)	SaD03.5	14:30-14:45 Automated Evaluation of Upper Limb Motor Impairment in Patient with Cerebellar Ataxia Tran, Ha* (<i>Deakin University</i>); Pathirana, Pubudu N (<i>Deakin University</i>); Horne, Malcolm (<i>Florey Institute of Neuroscience & Mental Health</i>); Power, Laura (<i>Royal Victorian Eye & Ear Hospital</i>); Szmulewicz, David (<i>Victorian Eye & Ear Hospital</i>)	SaD05.1
15:45-16:00 Accelerating MR Imaging via Deep Chambolle-Pock Network Wang, Haifeng (<i>Shenzhen Institutes of Advanced Technology, Chinese Academy of S</i>); Cheng, Jing (<i>Shenzhen Institutes of Advanced Technology, Chinese Academy of S</i>); Jia, Sen (<i>Shenzhen Institutes of Advanced Technology, Chinese Academy of S</i>); Qiu, Zhilang (<i>Shenzhen Institutes of Advanced Technology, Chinese Academy of S</i>); Shi, Caiyun (<i>Shenzhen Institutes of Advanced Technology, Lauterbur Research C</i>); Zou, Lixian (<i>Shenzhen Institutes of Advanced Technology, Chinese Academy of S</i>); Su, Shi (<i>Shenzhen Institutes of Advanced Technology, Chinese Academy of S</i>); Chang, Yuchou (<i>Univ. of Houston – Downtown</i>); Zhu, Yanjie (<i>Shenzhen Institutes of Advanced Technology, Chinese Academy of S</i>); Ying, Leslie (<i>The State Univ. of New York at Buffalo</i>); Liang, Dong* (<i>Shenzhen Institutes of Advanced Technology</i>)	SaD03.6	14:45-15:00 Quantitative Assessment of Cerebellar Ataxia, through Automated Limb-Coordination Tests Krishna, Ragil* (<i>Deakin Univ.</i>); Pathirana, Pubudu N (<i>Deakin Univ.</i>); Horne, Malcolm (<i>Florey Institute of Neuroscience & Mental Health</i>); Power, Laura (<i>Royal Victorian Eye & Ear Hospital</i>); Szmulewicz, David (<i>Victorian Eye & Ear Hospital</i>)	SaD05.2
SaD04: 14:30-16:00 Cardiovascular Monitoring (Oral Session) Co-Chair: McDuff, Daniel Jonathan (<i>Microsoft</i>)	Hall A1 – Level 1	15:00-15:15 Estimating Center of Mass Trajectory in Quiet Standing: A Review Nicolai, Alice* (<i>CMLA, ENS Paris Saclay, CNRS</i>); Audiffren, Julien (<i>CMLA, ENS Paris Saclay, CNRS</i>)	SaD05.3
14:30-14:45 Identification and Tracking of Physiological Parameters from Skin using Video Photoplethysmography Barbieri, Riccardo* (<i>Politecnico di Milano</i>); Levi, Riccardo (<i>Politecnico di Milano</i>); Negro, Matteo (<i>Politecnico di Milano, Milan, Italy</i>); Ficarelli, Luca (<i>Politecnico di Milano</i>); Cerina, Luca (<i>Politecnico di Milano</i>); Mainardi, Luca (<i>Politecnico di Milano</i>)	SaD04.1	15:15-15:30 Relationship between Medial Gastrocnemius Muscle Stiffness and the Angle between the Rearfoot and Floor Uchiyama, Takanori* (<i>Keio Univ.</i>); Hamada, Eiki (<i>Keio Univ.</i>)	SaD05.4
14:45-15:00 Continuous Tracking of Changes in Systolic Blood Pressure using BCG and ECG He, Shan* (<i>Univ. of Ottawa</i>); Dajani, Hilmi (<i>Univ. of Ottawa</i>); Meade, Robert (<i>Univ. of Ottawa</i>); Kenny, Glen Patrick (<i>Univ. of Ottawa</i>); Bolic, Miodrag (<i>Univ. of Ottawa</i>)	SaD04.2	15:30-15:45 Gesture Classification using LSTM Recurrent Neural Networks Cifuentes Quintero, Jenny Alexandra* (<i>Univ. de La Salle</i>); Boulanger, Pierre (<i>Univ. of Alberta</i>); Pham, Minh Tu (<i>Institut National des Sciences Appliquées (INSA de Lyon)</i>); Prieto, Flavio (<i>Univ. Nacional de Colombia</i>); Moreau, Richard (<i>INSA-Lyon</i>)	SaD05.5
		15:45-16:00 Cortical Reactive Balance Responses to Unexpected Slippages while Walking: A Pilot Study Mezzina, Giovanni* (<i>Politecnico di Bari</i>); Aprigliano, Federica (<i>The BioRobotics Institute of Scuola Superiore Sant'Anna, Pisa</i>); Micera, Silvestro (<i>Scuola Superiore Sant'Anna, Pisa</i>); Monaco, Vito (<i>Scuola Superiore Sant'Anna, Pisa</i>); De Venuto, Daniela (<i>Politecnico di Bari</i>)	SaD05.6

SaD06: 14:30-16:00 Hall A5 – Level 1
Neural Stimulation (IV) (Oral Session)

14:30-14:45 SaD06.1
A Simulation Study of Light Propagation in the Spinal Cord for Optogenetic Surface Stimulation
Chang, Shih-Yin* (*The University of Tokyo*); Nishikawa, Satoshi (*The University of Tokyo*); Sekino, Masaki (*The University of Tokyo*); Onodera, Hiroshi (*University of Tokyo Graduate School of Engineering*); Kuniyoshi, Yasuo (*University of Tokyo*)

14:45-15:00 SaD06.2
A Distributed Wireless Network of Implantable Sub-Mm Cortical Microstimulators for Brain-Computer Interfaces
Laiwalla, Farah (*Brown Univ.*); Lee, Jihun (*Brown Univ.*); Lee, Ah-Hyoung (*Seoul National Univ.*); Mok, Ethan (*Brown Univ.*); Leung, Vincent (*Qualcomm Institute*); Shellhammer, Steven (*Qualcomm*); Song, Yoon-Kyu (*Seoul National Univ.*); Larson, Lawrence (*Brown Univ.*); Nurmikko, Arto* (*Brown Univ.*)

15:00-15:15 SaD06.3
Sinusoidal Stimulation on Afferent Fibers Can Selectively Activate Different Types of Neurons in Rat Hippocampus
Wang, Zhaoxiang (*Zhejiang Univ.*); Feng, Zhouyan* (*Zhejiang Univ.*); Hu, Hanhan (*Zhejiang Univ.*); Yuan, Yue (*Zhejiang Univ.*)

15:15-15:30 SaD06.4
Excitation Comparison between Multi-Site Stimulation using Network-Based tDCS and Focal Stimulation using High-definition tDCS
Chen, Cheng* (*The Chinese Univ. of Hong Kong*); Fang, Yuqi (*Chinese Univ. of Hong Kong*); Wang, Xin (*The Chinese Univ. of Hong Kong*); Bao, Shi-Chun (*The Chinese Univ. of Hong Kong*); Tang, Zhiqiang (*The Chinese Univ. of Hong Kong*); Tong, Kai Yu, Raymond (*The Chinese Univ. of Hong Kong*)

15:30-15:45 SaD06.5
Extracellular and Intracellular Fluid Shifts on the Onset of Transcutaneous Auricular Vagus Nerve Stimulation
Ülgen, Yekta* (*Bahcesehir University*); Solmaz, Hakan (*Bahcesehir University*); Tunç, Burcu (*Bahcesehir University*); Buyuksarac, Bora (*Bogazici University*)

15:45-16:00 SaD06.6
Investigation of Architectures for Models of Neural Responses to Electrical Brain Stimulation
Steinhardt, Cynthia* (*Johns Hopkins University*); Sacré, Pierre (*University of Liège*); Inati, Sara (*National Institute of Health*); Sarma, Sridevi V. (*Johns Hopkins University*); Zaghoul, Kareem (*National Institute of Health*)

SaD07: 14:30-16:00 Hall A4 – Level 1
Physiological Systems Modeling (Oral Session)
Co-Chair: Wessel, Niels (*Humboldt-Universität zu Berlin*)

14:30-14:45 SaD07.1
A System Theoretic Investigation of Cortisol Dysregulation in Fibromyalgia Patients with Chronic Fatigue
Pednekar, Divesh Deepak* (*University of Houston*); Amin, Md. Rafiul (*University of Houston*); Fekri Azgomi, Hamid (*University of Houston*); Aschbacher, Kirstin (*University of California, San Francisco*); Crofford, Leslie J. (*Vanderbilt University*); Faghih, Rose T. (*University of Houston*)

14:45-15:00 SaD07.2
A Systematic Method for Preprocessing and Analyzing Electrodermal Activity
Subramanian, Sandya* (*Massachusetts Institute of Technology*); Barbieri, Riccardo (*Politecnico di Milano*); Brown, Emery N (*MGH-Harvard Medical School-MIT*)

15:00-15:15 SaD07.3
A Convolutional Neural Network-Based Model of Neural Pathways in the Retina
Zamani, Yasin (*Univ. of Utah*); Nategh, Neda* (*Univ. of Utah*)

15:15-15:30 SaD07.4
Assessment of Children Exposure Variability to Near-Field Sources using Stochastic Dosimetry
Bonato, Marta* (*IEIT Institute of Electronics, Computers & Telecommunication*); Chiaramello, Emma (*IEIT Institute of Electronics, Computers & Telecommunication*); Fiocchi, Serena (*Consiglio Nazionale delle Ricerche CNR*); Tognola, Gabriella (*CNR IEIT – Istituto di Elettronica e di Ingegneria dell'Informa*); Parazzini, Marta (*Consiglio Nazionale delle Ricerche*); Ravazzani, Paolo (*Consiglio Nazionale delle Ricerche CNR*)

15:30-15:45 SaD07.5
A Bayesian Framework to Identify Type 1 Diabetes Physiological Models using Easily Accessible Patient Data
Cappon, Giacomo* (*Univ. of Padova*); Facchinetti, Andrea (*Univ. of Padova*); Sparacino, Giovanni (*Univ. of Padova*); Del Favero, Simone (*Univ. of Padova, Padova, Italy*)

15:45-16:00 SaD07.6
EOG-Based Gaze Angle Estimation using a Battery Model of the Eye
Barbara, Nathaniel* (*Univ. of Malta*); Camilleri, Tracey (*Univ. of Malta*); Camilleri, Kenneth Patrick (*Univ. of Malta*)

SaD08: 14:30-16:00 M8 – Level 3
Health Informatics – Mobile Health (Oral Session)

14:30-14:45 SaD08.1
Developing a Smartphone Application to Support Smoking Behavior Change through Social Comparison
Maramis, Christos (*Aristotle Univ. of Thessaloniki*); Mylonopoulou, Vasiliki (*Univ. of Oulu*); Stibe, Agnis (*ESLSCA Business School Paris*); Minna, Isomursu (*IT Univ. of Copenhagen*); Chouvarda, Ioanna* (*Aristotle Univ.*)

14:45-15:00 SaD08.2
Detection and Classification of Multidirectional Steps for Motor-Cognitive Training in Older Adults using Shoe-Mounted Inertial Sensors
Guimarães, Vânia* (*Fraunhofer Portugal AICOS*); Sousa, Inês (*Fraunhofer Portugal AICOS*); Correia, Miguel (*Universidade do Porto, Faculdade de Engenharia*)

15:00-15:15 SaD08.3
Monitoring and Prediction of Mood in Elderly People during Daily Life Activities
Bautista-Salinas, Daniel (*The Hamlyn Centre for Robotic Surgery, Imperial College London*); Roca-González, Joaquín (*Universidad Politécnica de Cartagena – UPCT*); Méndez, Inmaculada (*Universidad de Murcia*); Martínez Mozos, Oscar* (*Technical University of Cartagena*)

15:15-15:30 SaD08.4
Inferring Respiratory Minute Volume from Wrist Motion
Alam, Ridwan* (*University of Virginia*); Peden, David (*University of North Carolina at Chapel Hill*); Ghaemmaghami, Benjamin (*University of Virginia*); Lach, John (*University of Virginia*)

15:30-15:45 SaD08.5
Assessment of In-Meal Eating Behaviour using Fuzzy SVM
Sarafis, Ioannis* (*Aristotle Univ. of Thessaloniki*); Diou, Christos (*Aristotle Univ. of Thessaloniki*); Ioakimidis, Ioannis (*Karolinska Institute, NVS, Division of Applied Neuroendocrinology*); Delopoulos, Anastasios (*Aristotle Univ. of Thessaloniki*)

15:45-16:00 SaD08.6
Health-E Minds: A Participatory Personalised and Gamified mHealth Platform to Support Healthy Living Behaviours for People with Mental Illness
Varnfield, Marlien* (*CSIRO*); Rajesh, Kausthubram (*CSIRO*); Redd, Christian Brandt (*Commonwealth Scientific & Industrial Research Organisation*); Gibson, Simon (*CSIRO*); Gwillim, Lisa (*Queensland Health*); Polkinghorne, Stuart (*Queensland Health*)

SaD09: 14:30-16:00 M1 – Level 3
Models of Tissue, Organs, and Devices (Oral Session)
Co-Chair: Fotiadis, Dimitrios I. (*University of Ioannina*)

14:30-14:45 SaD09.1
The Geometric Effects on the Stress of Arterial Atherosclerotic Plaques: A Computational Study

Liu, Haipeng (*Anglia Ruskin Univ.*); Leung, Thomas (*The Chinese Univ. of Hong Kong*); Wong, Adrian (*The Chinese Univ. of Hong Kong*); Chen, Fei (*Southern Univ. of Science & Technology*); Zheng, Dingchang* (*Anglia Ruskin Univ.*)

14:45-15:00 SaD09.2
Computational Modelling of the Effect of Infarct Stiffness on Regional Myocardial Mechanics

Leong, Chen Onn* (*Univ. of Malaya*); Leong, Chin Neng (*Univ. of Malaya*); Al Abed, Amr (*Univ. of New South Wales*); Ahmad Bakir, Azam (*The Univ. of New South Wales*); Liew, Yih Miin (*Univ. of Malaya*); Dokos, Socrates (*Univ. of New South Wales*); Lim, Einly (*Univ. of Malaya*)

15:00-15:15 SaD09.3
Functional Requirements of a Mathematical Model of Muscle Contraction
Palladino, Joseph* (*Trinity College*)

15:15-15:30 SaD09.4
Numerical Evaluation of the Mechanical Environment of a Fractured Long Bone for Osteoporotic and Non-Osteoporotic Subjects

Potsika, Vassiliki (*Unit of Medical Technology & Intelligent Information Systems.*); Tachos, Nikolaos (*Unit of Medical Technology & Intelligent Information Systems.*); Pakos, Emiliios (*Laboratory of Biomechanics, School of Medicine, University of Io*); Fotiadis, Dimitrios I.* (*University of Ioannina*)

15:30-15:45 SaD09.5
Incorporating Pathology-Induced Heterogeneities in a Patient-Specific Biomechanical Model of the Lung for Accurate Tumor Motion Estimation

Jafari, Parya* (*Western Univ.*); Hoover, Douglas (*London Health Sciences Centre*); Yaremko, Brian (*London Regional Cancer Program*); Parraga, Grace (*Robarts Research Institute*); Samani, Abbas (*Western Univ.*); Sadeghi-Naini, Ali (*York Univ.*)

15:45-16:00 SaD09.6
Fast Simulation of Stent Deployment with Plastic Beam Elements

Krewcun, Camille* (*Institut Pascal*); Sarry, Laurent (*Université d'Auvergne*); Combaret, Nicolas (*Institut Pascal*); Pery, Emilie (*Université d'Auvergne*)

SaD10: 14:30-16:00 M2 – Level 3
Therapeutic and Diagnostic Modeling (Oral Session)
Chair: Makarov, Sergey (*Electrical and Computer Engineering, Worcester Polytechnic Institute*)

14:30-14:45 SaD10.1
Multi-Modal Framework for Image-Guided Trans-Oral Surgery with Intraoperative Imaging and Deformation Modeling

Wu, Xiaotian* (*Thayer School of Engineering at Dartmouth College*); Sánchez, Antonio (*University of British Columbia*); Kahng, Peter (*Geisel School of Medicine*); Rees, Christiaan (*Geisel School of Medicine*); Ponukumati, Aravind (*Geisel School of Medicine*); Eisen, Eric (*Dartmouth-Hitchcock Medical Center*); Pastel, David (*Dartmouth-Hitchcock Medical Center*); Borgard, Heather (*University of British Columbia*); Lloyd, John E. (*The University of British Columbia*); Fels, Sidney (*The University of British Columbia*); Paydarfar, Joseph (*Dartmouth-Hitchcock Medical Center*); Halter, Ryan (*Dartmouth College*)

14:45-15:00 SaD10.2
A New 3D Printed Applicator with Radioactive Gel for Conformal Brachytherapy of Superficial Skin Tumor

Pashazadeh, Ali* (*Otto-von-Guericke-University of Magdeburg, Germany*); Castro, Nathan (*George Washington University*); Boese, Axel (*Dept. of Medical Engineering, Otto-von-Guericke-University*); Hutmacher, Dietmar W. (*Queensland University of Technology*); Friebe, Michael (*Otto-von-Guericke-University*)

15:00-15:15 SaD10.3
Optimizing Configurations for 7-DoF Robotic Ultrasound Guidance in Radiotherapy of the Prostate

Schlüter, Matthias* (*Hamburg Univ. of Technology*); Fürweger, Christoph (*Europäisches Cyberknife Zentrum München-Großhadern*); Schlaefer, Alexander (*Hamburg Univ. of Technology*)

15:15-15:30 SaD10.4
Evaluation of Laser-Induced Plasma Ablation Focusing on the Difference in Pulse Duration

Akimoto, Kohei* (*Tokyo University of Science*); Tsuichihara, Satoki (*Tokyo University of Science*); Takamatsu, Toshihiro (*Tokyo University of Science*); Soga, Kohei (*Tokyo University of Science*); Yokota, Hideo (*RIKEN Center for Advanced Photonics*); Ito, Masaaki (*National Cancer Center Hospital East*); Gotoda, Naoto (*National Cancer Center Hospital East*); Takemura, Hiroshi (*Tokyo University of Science*)

15:30-15:45 SaD10.5
Development and Preliminary Evaluation of a Novel Adaptive Staircase Procedure for Automated Speech-in-Noise Testing

Zanet, Marco (*Politecnico di Milano*); Polo, Edoardo Maria (*Politecnico di Milano*); Rocco, Giulia (*Politecnico di Milano*); Paglialonga, Alessia* (*CNR National Research Council of Italy*); Barbieri, Riccardo (*Politecnico di Milano*)

15:45-16:00 SaD10.6
Enhancing Tumor Treating Fields Therapy with Skull-Remodeling Surgery. The Role of Finite Element Methods in Surgery Planning and Treatment Evaluation

Korshoej, Anders R. (*Aarhus University Hospital*); Bicalho Saturnino, Guilherme (*Technical University of Denmark*); Mikic, Nikola (*Aarhus University Hospital, Dept. of Neurosurgery*); Thielscher, Axel (*Copenhagen University Hospital Hvidovre, Denmark & Biomedical En*); Bomzon, Ze'ev* (*Novocure*)

SaD11: 14:30-16:00 M4 – Level 3
Vascular Mechanics and Hemodynamics – Vascular Disease (Oral Session)
Chair: Fotiadis, Dimitrios I. (*University of Ioannina*)
Co-Chair: Kerkhof, Peter LM (*VU University Medical Center*)

14:30-14:45 SaD11.1
Site Specific Prediction of Atherosclerotic Plaque Progression using Computational Biomechanics and Machine Learning

Kigka, Vassiliki (*Univ. of Ioannina*); Sakellarios, Antonis* (*Forth-Biomedical Research Institute*); Tsompou, Panagiota (*Unit of Medical Technology & Intelligent Information Systems.*); Kyriakidis, Savvas (*Institute of Molecular Biology & Biotechnology, FORTH*); Siogkas, Panagiotis (*Forth-IMBB*); Andrikos, Ioannis (*Univ. of Ioannina*); Michalis, Lampros (*Univ. of Ioannina*); Fotiadis, Dimitrios I. (*Univ. of Ioannina*)

14:45-15:00 SaD11.2
Predictive Models of Coronary Artery Disease based on Computational Modeling: The SMARTool System

Sakellarios, Antonis* (*Forth-Biomedical Research Institute*); Tsompou, Panagiota (*Unit of Medical Technology & Intelligent Information Systems.*); Siogkas, Panagiotis (*Forth-IMBB*); Kigka, Vassiliki (*Univ. of Ioannina*); Andrikos, Ioannis (*Univ. of Ioannina*); Tachos, Nikolaos (*Unit of Medical Technology & Intelligent Information Systems.*); Georga, Eleni I. (*Univ. of Ioannina*); Kyriakidis, Savvas (*Institute of Molecular Biology & Biotechnology, FORTH*); Rocchiccioli, Silvia (*Institute of Clinical Physiology, National Research Council, Pis*); Pelosi, Gualtiero (*Institute of Clinical Physiology, National Research Council*); Fotiadis, Dimitrios I. (*Univ. of Ioannina*)

15:00-15:15 SaD11.3
Sex-Specific Interpretation of Coronary Flow Reserve and Fractional Flow Reserve Metrics, Including their Companions

Kerkhof, Peter LM* (*VU University Medical Center*); Osto, Elena (*Dept. Clinical Chemistry, University of Zurich*); Tona, Francesco (*University of Padova*); Heyndrickx, Guy R. (*Cardiovascular Center, OLV Clinic, Aalst*); Handy, Neal (*Dept. Emergency Medicine, Drexel University College of Medicine.*)

15:15-15:30 SaD11.4
Recognition of Endovascular Manipulations using Recurrent Neural Networks
 Li, Rui-Qi (*Institute of Automation, Chinese Academy of Sciences*); Zhou, Xiaohu (*Institute of Automation, Chinese Academy of Sciences*); Bian, Gui-Bin (*Institute of Automation, Chinese Academy of Sciences*); Xie, Xiao-Liang (*Chinese Academy of Sciences*); Hou, Zeng-Guang* (*Institute of Automation, Chinese Academy of Sciences*)

15:30-15:45 SaD11.5
Model-Free Cardiorespiratory Motion Prediction from X-Ray Angiography Sequence with LSTM Network
 Azizmohammadi, Fariba* (*Ecole de Technologie Supérieure*); Martin, Rémi (*Ecole de Technologie Supérieure*); Miró, Joaquim (*Dept. of Pediatrics, CHU Sainte-Justine*); Duong, Luc (*Ecole de Technologie Supérieure*)

15:45-16:00 SaD11.6
Three Dimensional Fluid Structure Interaction Analysis of Carotid Artery Models with Different Calcification Patterns
 Mahmoud, Aya H. (*Cairo Univ., Faculty of Engineering*); Hassan, Noha (*Biomedical Engineering Dept., Cairo Univ.*); Mahmoud, Ahmed M.* (*Cairo Univ. Faculty of Engineering*)

SaD12: 14:30-16:00 M6 – Level 3
Digital Pathology (Oral Session)
Chair: Maglogiannis, Ilias (*University of Piraeus*)
Co-Chair: Ramakrishnan, Swaminathan (*IIT Madras, India*)

14:30-14:45 SaD12.1
Breast Cancer Image Classification via Multi-Level Dual-Network Features and Sparse Multi-Relation Regularized Learning
 Wang, Yongjun (*Shenzhen University*); Huang, Fanglin (*Shenzhen University*); Zhang, Yongtao (*Shenzhen University*); Zhang, Rugang (*Shenzhen University*); Lei, Baiying (*Shenzhen University*); Wang, Tianfu* (*Shenzhen University*)

14:45-15:00 SaD12.2
WBCaps: A Capsule Architecture-Based Classification Model Designed for White Blood Cells Identification
 Liu, Yan (*Sichuan Univ.*); Fu, Ying (*Chengdu Univ. of Information Technology*); Chen, Pu* (*Zhongshan Hospital Fudan Univ.*)

15:00-15:15 SaD12.3
Classification of Elastic and Collagen Fibers in H&E Stained Hyperspectral Images
 Septiana, Lina* (*Tokyo Institute of Technology, Krida Wacana Christian Univ.*); Suzuki, Hiroyuki (*Tokyo Institute of Technology*); Ishikawa, Masahiro (*Saitama Medical Univ.*); Obi, Takashi (*Tokyo Institute of Technology*); Kobayashi, Naoki (*Saitama Medical Univ.*); Ohyama, Nagaaki (*Tokyo Institute of Technology*); Erning, Wihardjo (*Krida Wacana Christian Univ.*); Andiani, Dini (*Indonesian Institute of Sciences*)

15:15-15:30 SaD12.4
Creating Visual Vocabularies for the Retrieval and Classification of Histopathology Images
 Kallipolitis, Athanasios (*University of Piraeus*); Maglogiannis, Ilias* (*University of Piraeus*)

15:30-15:45 SaD12.5
Binary Grey Wolf Optimizer based Feature Selection for Nucleolar and Centromere Staining Pattern Classification in Indirect Immunofluorescence Images
 Devanathan, Kanchana* (*Indian Institute of Technology Madras*); Ganapathy, Nagarajan (*Indian Institute of Technology Madras*); Ramakrishnan, Swaminathan (*IIT Madras, India*)

15:45-16:00 SaD12.6
Automated Pap Smear Cervical Cancer Screening using Deep Learning
 Sompawong, Nitiwat (*Thammasat Univ.*); Mopan, Jintapatee (*Thammasat Univ.*); Pooprasert, Pakinee (*Cardiff Univ. School of Medicine*); Himakhun, Wanwisa (*Thammasat Univ.*); Suwannarurk, Komsun (*Thammasat Univ.*); Ngamvirojcharoen, Jarun (*Sertis, Co., Ltd.*); Vachiramon, Tee (*Sertis, Co., Ltd.*); Tantibundhit, Charturong* (*Thammasat Univ.*)

SaD13: 14:30-16:00 R2 – Level 3
Novel Methods for Physiological Monitoring (Oral Session)
Co-Chair: Chung, Wan-Young (*Pukyong National University*)

14:30-14:45 SaD13.1
An Earbud-Type Wearable (A Hearable) with Vital Parameter Sensors for Early Detection and Prevention of Heat-Stroke
 Matsumoto, Keiji* (*IBM Research Tokyo*); Temiz, Yuksel (*IBM Research-Zurich*); Taghavi, Hamidreza (*Sonion*); Cornelius, Elrick Lennaert (*Sonion – In-Ear Technology Dev. & Man. Partner*); Mori, Hiroyuki (*IBM Research Tokyo, IBM Japan Ltd.*); Michel, Bruno (*IBM Research – Zurich*)

14:45-15:00 SaD13.2
Stress and Anxiety Measurement "In-the-Wild" using Quality-Aware Multi-Scale HRV Features
 Tiwari, Abhishek* (*Institut National de la Recherche Scientifique*); Narayanan, Shrikanth (*University of Southern California*); Falk, Tiago (*Institut National de la Recherche Scientifique*)

15:00-15:15 SaD13.3
Estimation of the Blood Pressure Waveform using Electrocardiography
 Landry, Cederick* (*University of Waterloo*); D. Peterson, Sean (*University of Waterloo*); Arami, Arash (*University of Waterloo*)

15:15-15:30 SaD13.4
An Ultrasonically Powered Wireless System for in-Vivo Gastric Slow-Wave Recording
 Meng, Miao (*The Pennsylvania State University*); Graybill, Philip (*Penn State University*); Ramos, Raddy (*NYIT College of Osteopathic Medicine*); Javan-Khoshkholgh, Amir (*New York Institute of Technology*); Farajidavar, Aydin (*New York Institute of Technology*); Kiani, Mehdi* (*Pennsylvania State University*)

15:30-15:45 SaD13.5
Insights into Oscillometry: An Experimental Study for Improvement of Cuff-Based Blood Pressure Measurement Technology
 Bogatu, Laura* (*Philips Research, Eindhoven University of Technology*); Bresch, Erik (*Philips*); Muehlsteff, Jens (*Philips*); Smink, Jouke (*Philips*); Woerlee, Pierre (*TUe Eindhoven*)

15:45-16:00 SaD13.6
Compressive Sensing of Cuff-Less Biosensor for Energy-Efficient Blood Pressure Monitoring
 Rachim, Vega Pradana (*Pukyong National University*); Chung, Wan-Young* (*Pukyong National University*)

SaD14: 14:30-16:00 R3 – Level 3
Signal Processing and Classification of Electrophysiological Signals (Oral Session)
Chair: Nguyen, Hung T. (*Swinburne University of Technology*)

14:30-14:45 SaD14.1
A Hidden Semi-Markov Model for Estimating Burst Suppression EEG
 Chakravarty, Sourish* (*Massachusetts Institute of Technology*); Baum, Taylor Elise (*The Pennsylvania State University*); An, Jingzhi (*MIT*); Kahali, Pegah (*Picower Institute for Learning & Memory*); Brown, Emery N (*MGH-Harvard Medical School-MIT*)

14:45-15:00 SaD14.2
Sigmoid Wake Probability Model for High-Resolution Detection of Drowsiness using Electroencephalogram
 Hassan, Ahnaf Rashik (*North South Univ., Dhaka, Bangladesh*); Kabir, Muammar Muhammad (*Toronto Rehabilitation Institute, Univ. Health Network*); Keshavarz, Behrang (*Toronto Rehab, Ryerson Univ.*); Taati, Babak* (*Toronto Rehabilitation Institute & Univ. of Toronto*); Yadollahi, Azadeh (*Univ. of Toronto*)

15:00-15:15 SaD14.3
Automatically Identified Micro-Scale Sharp-Wave Transients in the Early-Latent Phase of Hypoxic-Ischemic EEG from Preterm Fetal Sheep Reveal Timing Relationship to Subcortical Neuronal Survival
 Abbasi, Hamid* (*University of Auckland*); Bennet, Laura (*The University of Auckland*); Gunn, Alistair Jan (*University of Auckland*); Unsworth, Charles Peter (*University of Auckland*)

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15:15-15:30 SaD14.4
A Hybrid Physiological Approach of Emotional Reaction Detection using Combined FCM and SVM Classifier
Guo, Kairui (*Univ. of Technology, Sydney*); Yu, Hairong* (*Univ. of Technology, Sydney*); Chai, Rifai (*Swinburne Univ. of Technology*); Nguyen, Hung T. (*Swinburne Univ. of Technology*); Su, Steven Weidong (*Univ. of Technology, Sydney*)

15:30-15:45 SaD14.5
Mixed-Norm based Broad Learning System for EEG Classification
Zheng, Yunfei* (*Xi'an Jiao Tong University*); Qin, Xuemei (*Xi'an Jiao Tong University*); Xi, Zhengkai (*Xi'an Jiao Tong University*); Chen, Badong (*Xi'an Jiao Tong University*)

15:45-16:00 SaD14.6
Wavelet P-Leader Non-Gaussian Multiscale Expansions for EEG Series: An Exploratory Study on Cold-Pressor Test
Catrambone, Vincenzo* (*Università di Pisa*); Valenza, Gaetano (*University of Pisa*); Scilingo, Enzo Pasquale (*University of Pisa*); Vanello, Nicola (*University of Pisa*); Wendt, Herwig (*CNRS, University of Toulouse*); Barbieri, Riccardo (*Politecnico di Milano*); Abry, Patrice (*ENS Lyon, CNRS*)

SaD15: 14:30-16:00 M3 – Level 3
Ultrasound Imaging – Reconstruction, Modeling and Simulation (Oral Session)
Co-Chair: Gao, Fei (*ShanghaiTech University*)

14:30-14:45 SaD15.1
Finite Element Breast Simulation for Sonography Image Registration
Esslinger, Dominik (*Univ. of Stuttgart*); Bacher, Neal (*Univ. of Stuttgart*); Rapp, Philipp (*Univ. of Stuttgart*); Preibsch, Heike (*Dept. of Diagnostic & Interventional Radiology, Eberhard-*); Tarin, Cristina* (*Univ. of Stuttgart*); Sawodny, Oliver (*Institute for System Dynamics, Univ. of Stuttgart*); Brucker, Sara (*Univ. Hospital Tübingen*); Hahn, Markus (*Dept. of Women's Health, Research Centre for Women's Health*)

14:45-15:00 SaD15.2
Quantitative Quasi-Static Ultrasound Elastography using Reference Layer: Ex-Vivo Study
Selladurai, Sathiyamoorthy (*IIT MADRAS*); Thittai, Arun Kumar* (*IIT MADRAS*)

15:15-15:30 SaD15.4
Novel Ultrasound Texture based Similarity Metric using Autoregressive Modelling
Balakrishnan, Sathish* (*Otto von Guericke University Magdeburg*); Illanes, Alfredo (*Otto-von-Guericke University of Magdeburg*); Friebe, Michael (*Otto-von-Guericke-University*)

15:30-15:45 SaD15.5
Reconstruct the Photoacoustic Image based on Deep Learning with Multi-Frequency Ring-Shape Transducer Array
Lan, Hengrong* (*ShanghaiTech University*); Yang, Changchun (*ShanghaiTech University*); Jiang, Daohuai (*ShanghaiTech University*); Gao, Fei (*ShanghaiTech University*)

15:45-16:00 SaD15.6
Adjustable Handheld Probe Design for Photoacoustic Imaging: Experimental Validation
Zhao, Yongjian* (*School of Information Science & Technology, ShanghaiTech Univ.*); Yu, Shaohui (*ShanghaiTech Univ.*); Tao, Ben (*Tongji Univ.*); Gao, Fei (*ShanghaiTech Univ.*)

SaD16: 14:30-16:00 M5 – Level 3
Wearable Sensors and Systems (Oral Session)
Chair: Di Rienzo, Marco (*IRCCS Fondazione Don Carlo Gnocchi*)
Co-Chair: Redd, Christian Brandt (*Commonwealth Scientific and Industrial Research Organization*)

14:30-14:45 SaD16.1
The Effect of Expertise on Gaze Behaviour in Laparoscopic Cholecystectomy
Gunawardena, Nishan* (*Johannes Kepler Univ.*); Matscheko, Michael (*Institute of Pervasive Computing, Johannes Kepler Univ.*); Bernhard, Anzengruber (*Institute of Pervasive Computing, Johannes Kepler Univ.*); Alois, Ferscha (*Institute of Pervasive Computing, Johannes Kepler Univ.*); Schobesberger, Martin (*Institute of Pervasive Computing, Johannes Kepler Univ.*); Shamiyeh, Andreas (*2nd Surgical Dept., Kepler Univ. Clinic, Linz*); Klugsberger, Bettina (*2nd Surgical Dept., Kepler Univ. Clinic, Linz*); Solleder, Peter (*Karl Storz SE & Co. KG*)

14:45-15:00 SaD16.2
Bone Conduction Headphones for Force Feedback in Robotic Surgery
Mikic, Marko* (*University of Toronto, CIGITI, Hospital for Sick Children*); Francis, Peter (*University of Toronto*); Looi, Thomas (*CIGITI, Hospital for Sick Children*); Gerstle, J. Ted (*University of Toronto, Hospital for Sick Children, CIGITI*); Drake, James (*University of Toronto, CIGITI, Hospital for Sick Children*)

15:00-15:15 SaD16.3
Development of a Wearable Sensor Network for Quantification of Infant General Movements for the Diagnosis of Cerebral Palsy
Redd, Christian Brandt* (*Commonwealth Scientific & Industrial Research Organisation*); Barber, Lee (*Central Queensland Univ.*); Boyd, Roslyn (*Univ. of Queensland*); Varnfield, Marlien (*CSIRO*); Karunanithi, Mohanraj (*CSIRO Digital Productivity Flagship*)

15:15-15:30 SaD16.4
Measurement of Three-Dimensional Force Applied to Elastic Suture Training Pads for Laparoscopic Suturing
Fukuda, Kohei* (*Osaka University*); Kawasetsu, Takumi (*Osaka University*); Ishihara, Hisashi (*Osaka University*); Horii, Takato (*The University of Electro-Communications*); Nakamura, Ryoichi (*Chiba University*); Kawahira, Hiroshi (*Jichi Medical University*); Asada, Minoru (*Osaka University*)

15:30-15:45 SaD16.5
Orientation-Based Food Image Capture for Head Mounted Egocentric Camera
Hassan, Mohamed (*University of Alabama*); Sazonov, Edward* (*University of Alabama*)

15:45-16:00 SaD16.6
The Ambulatory Eye Shield Head Tracking Device with Real-Time Feedback for Gas Filled Eye Patients
Thanawattano, Chusak* (*National Science & Tech. Dev. Agency*); Buekban, Chatchai (*National Science & Tech. Dev. Agency*); Dumnin, Songphon (*National Electronics & Computer Tech. Center*); Limsuknirun, Wannasiri (*Chulalongkorn Univ. & King Chulalongkorn Memorial Hospital*); Waradisai, Adisai (*Chulalongkorn Univ.*); Pongsachareonnont, Pear (*Chulalongkorn Univ. & King Chulalongkorn Memorial Hospital*)

SaD17: 14:30-16:00 R12 – Level 3
Time-Frequency Analysis of Biosignals (Oral Session)

14:30-14:45 SaD17.1
Automatic Cough Detection in Acoustic Signal using Spectral Features
Pramono, Renard Xaviero Adhi* (*Imperial College London*); Imtiaz, Syed Anas (*Imperial College London*); Rodriguez-Villegas, Esther (*Imperial College London*)

14:45-15:00 SaD17.2
Detection of Monophasic Slow-Wave Activation Phase using Wavelet Decomposition
Han, Baozeng (*Univ. of Auckland*); Cheng, Leo K (*Univ. of Auckland*); Angeli, Timothy Robert (*Auckland Bioengineering Institute, Univ. of Auckland*); Paskaranandavadivel, Niranchan* (*Univ. of Auckland*)

- 15:00-15:15 SaD17.3
Feature Space Reduction for Single Trial EEG Classification based on Wavelet Decomposition
 Shahtalebi, Soroosh (*Concordia University*); Mohammadi, Arash* (*Concordia University*)
- 15:15-15:30 SaD17.4
Order Frequency Spectral Correlation based Cyclo-Nonstationary Analysis of Surface EMG Signals in Biceps Brachii Muscles
 Sam Jeeva Raj, Edward Jero* (*Indian Institute of Technology Madras*); Ramakrishnan, Swaminathan (*IIT Madras, India*)
- 15:30-15:45 SaD17.5
Time-Frequency Relevancy Analysis between Local Field Potentials and Lever Pressing Motion of Rats
 Huang, Yifan* (*Hong Kong Univ. of Science & Technology*); Shen, Xiang (*Hong Kong Univ. of Science & Technology*); Wang, Yiwen (*Hong Kong Univ. of Science & Technology*); Chen, Shuhang (*Hong Kong Univ. of Science & Technology*); Zhang, Xiang (*The Hong Kong Univ. of Science & Technology*)
- 15:45-16:00 SaD17.6
Automated Tongue-Twister Phrase-Based Screening for Cerebellar Ataxia using Vocal Tract Biomarkers
 Kashyap, Bipasha* (*Deakin Univ.*); Pathirana, Pubudu N (*Deakin Univ.*); Szmulewicz, David (*Victorian Eye & Ear Hospital*); Horne, Malcolm (*Florey Institute of Neuroscience & Mental Health*); Power, Laura (*Royal Victorian Eye & Ear Hospital*)
- SaD18: 14:30-16:00 R13 – Level 3
Wearable or Portable Devices for Bio-Monitoring (Oral Session)
 Chair: Chen, Jie (*University of Alberta*)
 Co-Chair: Leonhardt, Steffen (*RWTH Aachen University*)
- 14:30-14:45 SaD18.1
Nocturnal Hypoglycemia Detection using EEG Spectral Moments under Natural Occurrence Conditions
 Ngo, Cuong Q.* (*Swinburne University of Technology*); Chai, Rifai (*Swinburne University of Technology*); Nguyen, Tuan V. (*University of Technology, Sydney, Australia*); Jones, Timothy (*Princess Margaret Hospital for Children*); Nguyen, Hung T. (*Swinburne University of Technology*)
- 14:45-15:00 SaD18.2
Development of a Low-Cost, Portable, Pediatric Infection Screening System using Simultaneous Measurement of Multiple Vital Signs
 Dagdanpurev, Sumiyakhand* (*Tokyo Metropolitan Univ.*); Tsogzolmaa, Udval (*Tokyo Metropolitan Univ.*); Sun, Guanghao (*The Univ. of Electro-Communications*); Choimaa, Lodoiravsal (*National Univ. of Mongolia*); Abe, Shigeto (*Takasaka Clinic*); Matsui, Takemi (*Tokyo Metropolitan Univ.*)
- 15:00-15:15 SaD18.3
Fast Assessment of Glycemic Control based on Continuous Glucose Monitoring Data
 Mohebbi, Ali* (*Technical University of Denmark*); Tarp, Jens (*Novo Nordisk*); Jensen, Morten Lind (*Novo Nordisk A/S*); Puthusserypaday, Sadasivan (*Technical University of Denmark*); Hachmann-Nielsen, Elise (*MD; Novo Nordisk*); Bengtsson, Henrik (*Novo Nordisk A/S*); Morup, Morten (*DTU Compute*)
- 15:15-15:30 SaD18.4
Implementation of a Virtual Reality Rendered in Portable Devices for Strabismus Treatment based on Conventional Visual Therapy
 Cepeda-Zapata, Luis Kevin (*Tecnológico de Monterrey*); Romero Soto, Fabian Oswaldo (*Instituto Tecnológico de Estudios Superiores de Monterrey*); Diaz-de-Leon, Victor Abdiel (*Tecnológico de Monterrey*); Roa, Jessica Lorena (*Tecnológico de Monterrey*); Naal-Ruiz, Norberto Emmanuel (*Tecnológico de Monterrey*); Ibarra Zarate, David Isaac (*ITESM*); Alonso-Valerdi, Luz Maria* (*Tecnológico de Monterrey*)
- 15:30-15:45 SaD18.5
Detection of Sleep Apnea using Sonar Smartphone Technology
 Lyon, Graeme* (*ResMed Inc.*); Tiron, Roxana (*ResMed Inc.*); Zaffaroni, Alberto Antonio (*ResMed Inc.*); Osman, Ahmed (*ResMed Inc.*); Kilroy, Hannah (*ResMed*); Lederer, Katharina (*Advanced Sleep Research Berlin*); Fietze, Ingo (*Charité-Univ. Berlin*); Penzel, Thomas (*Charité Univ. Berlin*)
- 15:45-16:00 SaD18.6
Removing Subject Dependencies on Non-Invasive Blood Glucose Measurement using Hybrid Techniques
 Pathirage, Kasun Dushmantha* (*University of Moratuwa*); Roopasinghe, Pubudu (*University of Moratuwa*); Sooriyaarachchi, Jinani Janahansi (*University of Moratuwa*); Weththasinghe, Rasangika (*University of Moratuwa*); Nanayakkara, Nuwan Dayananda (*University of Moratuwa*)
- SaD19: 14:30-16:00 R4 – Level 3
Image Segmentation with Neural Networks (II) (Oral Session)
 Chair: Korbicz, Józef (*University of Zielona Góra*)
- 14:30-14:45 SaD19.1
Polyp Segmentation using Generative Adversarial Network
 J M, Poorneshwaran* (*Healthcare Technology Innovation Centre (HTIC), Indian Institute*); Sukumar, Santhosh Kumar (*Healthcare Technology Innovation Centre, IIT Madras*); Ram, Keerthi (*IIT Madras*); Joseph, Jayaraj (*HTIC, Indian Institute of Technology Madras*); Sivaprakasam, Mohanasankar (*Indian Institute of Technology Madras*)
- 14:45-15:00 SaD19.2
U-NetPlus: A Modified Encoder-Decoder U-Net Architecture for Semantic and Instance Segmentation of Surgical Instruments from Laparoscopic Images
 Hasan, S. M. Kamrul* (*Rochester Institute of Technology*); Linte, Cristian A. (*Rochester Institute of Technology*)
- 15:00-15:15 SaD19.3
Feedback-Based Self-Improving CNN Algorithm for Breast Cancer Lymph Node Metastasis Detection in Real Clinical Environment
 Sadeghi, Maryam* (*Otto-von-Guericke University, Institute of Medical Technology, I*); Maldonado, Ivan (*OVGU, INKA*); Abele, Niklas (*Dept. of Pathology, Otto-von-Guericke University Magdeburg,*); Haybaeck, Johannes (*Dept. of Pathology, Otto-von-Guericke University Magdeburg,*); Boese, Axel (*Dept. of Medical Engineering, Otto-von-Guericke-University*); Poudel, Prabal (*Otto-von-Guericke-Universität Magdeburg*); Friebe, Michael (*Otto-von-Guericke-University*)
- 15:15-15:30 SaD19.4
Refinement of Convolutional Neural Network based Cell Nuclei Detection using Bayesian Inference
 Kowal, Marek* (*University of Zielona Góra*); Korbicz, Józef (*University of Zielona Góra*)
- 15:30-15:45 SaD19.5
Psi-Net: Shape and Boundary Aware Joint Multi-Task Deep Network for Medical Image Segmentation
 Murugesan, Balamurali* (*Indian Institute of Technology Madras*); Sarveswaran, Kaushik (*Healthcare Technology Innovation Centre, IIT Madras Research Par*); M Shankaranarayana, Sharath (*Indian Institute of Technology Madras*); Ram, Keerthi (*IIT Madras*); Joseph, Jayaraj (*HTIC, Indian Institute of Technology Madras*); Sivaprakasam, Mohanasankar (*Indian Institute of Technology Madras*)
- 15:45-16:00 SaD19.6
Low Complexity CNN Structure for Automated Bleeding Zone Detection in Wireless Capsule Endoscopy Imaging
 Hajabdollahi, Mohsen (*Isfahan Univ. of Technology*); Esfandiarpour, Reza (*Isfahan Univ. of Technology*); Najarian, Kayvan (*Univ. of Michigan – Ann Arbor*); Karimi, Nader (*Isfahan Univ. of Technology*); Samavi, Shadrokh (*McMaster Univ.*); Soroushmehr, S.M.Reza* (*Univ. of Michigan, Ann Arbor*)

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Alaa, Asem	WePOS-22.4	24	Alshabrawy, Hesham	FrC10.1	98
Alabd, Roumani	FrPOS-10.3	106	Alshaer, Hisham	ThA14.4	42
Al-Abed, Mohammad	FrPOS-17.6	108		ThA14.5	43
Al-Ahmad, Ali	SaC07.3	143	Alshama, Daniel	ThPOS-28.6	69
Alahmadi, Husam	ThC11.4	54		SaB05.6	137
Alam, Ridwan	WePOS-21.4	24	Alshebelli, Saleh	ThC14.2	55
	SaD08.4	149	Alsunaydih, Fahad Nasser	ThPOS-25.9	67
Alamoudi, Omar	FrA05.1	83	Altaf-UI-Amin, MD.	ThPOS-31.4	70
	FrB05.4	90	Althoff, Daniel	ThA03.1	39
Al-Ansari, Abdulla	ThPOS-33.1	72	Álvarez González, Daniel	FrA02.6	82
	ThPOS-33.41	74		FrPOS-02.1	102
	FrPOS-33.44	118	Alvarez, Tara	WeA08.1	2
	FrPOS-38.36	128	Alvarez-Jimenez, Charlems	ThPOS-08.1	60
Alashqar, Zaid	ThA16.5	43	Alves Salgado Azoni, Cíntia	WePOS-33.27	36
Alawieh, Hussein	WeA05.6	2	Alvis, Bret	WeA20.4	7
Al-Bashir, Areen	FrPOS-17.6	108	Al-Zu'bi, Muneer	ThPOS-17.1	63
Albera, Laurent	WeC05.6	9	Alzyoud, Sukaina	FrPOS-17.6	108
Alberts, Jay	ThB13.4	49	Amada, En	ThPOS-33.26	74
Albizu, Alejandro	SaB06.4	137	Amado Rey, Ana Belén	SaA15.3	133
Al-Bluwi, Rania	FrPOS-17.6	108	Amador, Alejandro	ThPOS-35.2	77
Albuquerque, Daniella	WeA17.4	6		ThPOS-35.3	77
Alder, Andrew	FrPOS-38.28	128		ThPOS-35.4	78
	FrPOS-38.29	128		ThPOS-35.5	78
Alem, Orang	ThA04.1	40		ThPOS-35.6	78
	ThPOS-33.25	73	Amano, Ryota	WeC19.2	13
Alemneh, Tewodros	FrPOS-09.7	105	Amat, Josep	SaA16.5	134
Alex, Anna Mol	WeC14.4	12	Amato, Francesco	ThB04.5	47
Alex, Raichel	FrPOS-17.3	108	Amato, Marcelo Brito Passos	ThA11.4	41
Alexiou, Ioannis	SaA11.5	132	Ambikairajah, E	WeA14.1	5
Alfayad, Abdulrahman	SaA10.4	132	Ambrosini, Emilia	WeA14.1	C
Al-Fayad, Samer	ThPOS-33.41	74		WeA14.2	5
Algarni, Saleh	ThPOS-33.32	74	Ameler, Tim	WePOS-27.7	26
Al-Gharabli, Samer	WePOS-31.11	31	Amemori, Hiroki	FrPOS-36.31	123
	WePOS-14.6	20	Ames, Gregory R.	WeC08.5	10
	WePOS-15.2	21	Amft, Oliver	SaC04.1	142
Al-Halhouli, Alaaldeen	WePOS-14.6	20	Amidi, Yalda	ThPOS-17.4	63
Al-Handarish, Yousef	FrPOS-28.13	113	Amin, Md. Rafiul	WeC06.3	9
Alhazmi, Fahd	WeC16.3	12		WePOS-06.2	16
Ali, Afaq	FrPOS-23.4	111		SaD07.1	149
Ali, Gharaviri	WeC09.4	10	Amini, Mohammad	FrB15.4	93
Ali, Muhammad	WePOS-06.1	16	Amini, Zahra	ThPOS-07.1	60
	ThB09.6	48	Aminifar, Amir	ThB20.3	51
Aliahmad, Behzad	ThPOS-13.1	61	Amira, Abbes	FrPOS-33.44	118
	SaA03.4	129		FrPOS-38.36	128
Aliakbaryhosseinabadi, Susan	WeA17.5	6	Amiri, Paria	WePOS-25.3	25
	FrPOS-12.1	106	Amiri, Pouya	FrPOS-20.1	109
Alici, Gursel	FrPOS-27.12	112	Amiri, Saba	FrC12.3	98
Alighaleh, Saeed	FrPOS-33.49	118	Amores Fernandez, Judith	WePOS-27.5	25
Alink, Laurens	ThC03.3	52	Amorim, André	ThPOS-17.9	63
Alireza, Gharabaghi	SaC10.5	144	Amorim, Paula	ThPOS-28.4	69
Alirezaie, Javad	SaB17.2	140	Amorim-de-Sousa, Ana	ThPOS-17.9	63
Aljama-Corrales, Tomas	SaB02.3	135	Amoud, Hassan	SaC05.3	142
	SaC02.5	141	An, Guangzhou	ThB12.6	49
Al-Jumaily, Adel	ThB06.1	CC		ThPOS-12.3	61
	ThPOS-06.9	59	An, Jianping	FrB14.1	92
	FrB18.1	CC	An, Jieun	FrPOS-33.11	116
Allab, Amiel	FrPOS-11.3	106	An, Jingzhi	SaD14.1	151
Allegaert, Karel	WePOS-03.3	15	An, Junmo	WeA08.2	2
Alle-Jan, van der Veen	WeA17.1	6		ThPOS-36.35	81
Allen, Bradley	FrPOS-35.1	120	An, Pengcheng	WePOS-21.3	23
Allen, John	ThA02.1	C	An, Qi	WeA08.4	3
	ThA02.4	39	An, Xingwei	WeA18.6	6
Allexandre, Didier	ThA12.2	42		ThPOS-20.3	64
Alluri, Sindhu Reddy	FrPOS-35.5	120		ThPOS-20.20	65
Al-Maatoq, Marwah	ThB10.5	48		ThPOS-21.4	65
Almajidy, Rand Kasim	FrPOS-08.10	105		FrPOS-08.9	105
	FrPOS-08.11	105		SaA01.5	129
Almeida, Tiago P	ThC05.3	53	An, Yang	SaB17.5	140
Alnazer, Israa	SaC15.2	145	Ana Rosa, Victoria	ThA20.5	45
Alois, Ferscha	SaD16.1	152	Anagnostopoulos, Constantinos	FrPOS-18.1	108
Al-Omari, Wafaa	FrPOS-17.6	108	Anand, Ajay	WeA03.1	C
Alonso, Erik	WeA02.5	1		WeA03.1	1
	ThB05.6	47	Anand, Gautam	SaC07.6	143
Alonso, Fabiola	FrPOS-23.8	111	Anand, Vivek	ThC02.3	52
Alonso-Valerdi, Luz Maria	SaD18.4	153	Anastasiou, Athanasios	ThB19.4	51
Alotaiby, Turkey	ThC14.2	55		ThPOS-28.5	69
Alqahatani, Abdulrahman	ThPOS-15.5	62	Ancu, Oana	WePOS-16.7	22
Al-Qazzaz, Noor	FrPOS-06.9	104	Anderl, Reiner	WeA21.1	7
Alrofati, Wahib	ThPOS-24.9	67	Andersen, Lau Moller	ThA04.4	40
Al-Rumaihi, Khalid	ThPOS-33.1	72	Andersen, Tomas	WeA06.2	2
AlRyalat, Saif AlDeen	FrPOS-17.6	108	Anderson, Allison	FrPOS-38.16	127

Anderson, Martha	WePOS-21.4	24	Apollonio, Francesca	WeA09.2	3
Andiani, Dini	SaD12.3	151		ThA17.3	44
Andrade, Adriano	SaC13.6	145		ThPOS-16.6	63
Andre, Franck	WeA09.2	3		FrB09.4	91
Andreakos, Evangelos	FrPOS-37.40	126	Apostolakis, Iason-Zacharias	SaB15.3	139
Andreas, Menychtas	ThPOS-30.5	69	Appali, Revathi	SaB18.2	140
Andreikanich, Anna	ThPOS-28.4	69	Appapogu, Divya Spoorthy	FrPOS-08.13	105
Andreozzi, Emilio	ThA20.3	45	Aprigliano, Federica	ThC16.3	56
Andres, Maldonado-Jacobi	SaA04.6	130		ThC16.6	56
Andrews, Chris	ThA21.2	45		SaD05.6	148
	ThA21.6	45	Aqrawe, Zaid	WePOS-29.30	28
Andriessen, Peter	SaB02.5	135		FrPOS-36.21	123
Andrikos, Ioannis	FrPOS-18.2	108		SaB04.6	136
	SaA12.6	132	Aqueveque, Pablo	WePOS-17.1	22
	SaA15.1	133	Aquilante, Lorenzo	FrC16.1	100
	SaD11.1	150	Arafune, Tatsuhiko	WePOS-32.11	33
	SaD11.2	150	Arai, Ryota	WePOS-33.49	37
Androutsou, Thelma	ThB19.4	51	Arakawa, Mototaka	FrPOS-09.10	106
Andrewis, Ghaith	WeC08.3	10	Araki, Daichi	WePOS-34.9	37
	FrC16.6	100	Araki, Osamu	ThPOS-21.6	65
	FrPOS-35.6	120	Aramendi, Elisabete	WeA02.1	C
	FrPOS-35.9	121		WeA02.5	1
	FrPOS-35.10	121		ThA05.5	40
Andrushevich, Alexey	WePOS-24.2	25		ThB05.2	47
Andrzejak, Ralph	FrPOS-33.10	116		ThB05.6	47
Ang, Emily	ThPOS-33.38	74	Arami, Arash	SaD13.3	151
Ang, Wei Tech	WePOS-17.2	22	Arantes, Ana Paula Bittar Britto	ThPOS-36.23	80
	ThB15.1	50	Arbabi, Mohammad	FrC12.3	98
	FrPOS-03.5	103	Arbaban, Amin	FrPOS-08.1	104
Angeli, Timothy Robert	WeA10.5	3		SaC03.3	141
	ThB21.2	52	Arbeiter, Daniela	WePOS-14.5	20
	FrPOS-04.1	103	Arbeitman, Claudia	WeC17.6	13
	FrPOS-33.49	118	Arce-Diego, José L.	ThPOS-33.2	72
	SaD17.2	152		ThPOS-34.43	77
Angelini, Lorenza	SaC04.6	142	Archer, Lewis	FrB14.4	92
Angelino, Keith	FrC15.3	100	Archodogeorgis, Konstantinos	FrPOS-17.7	108
Angelone, Leonardo M.	FrA09.2	84	Ardekani, Siamak	FrC18.3	101
Angrick, Miguel	ThPOS-20.24	65	Arefin, Md Shamsul	ThPOS-25.9	67
Anguluan, Eloise	SaB18.4	140	Arends, Johan B.A.M.	FrPOS-34.27	119
Anh Le, Tuan	WePOS-32.26	34	Arens, Christoph	ThPOS-08.3	60
Anna Maria, Visco	FrA17.2	87	Arens, Jutta	FrPOS-13.2	107
Anna, Persson	SaC11.5	144	Argent, Rob	WeC20.2	13
Annamalai, Priyanka	ThA13.2	42	Argha, Ahmadreza	WeA14.1	5
Annen, Jitka	FrPOS-01.11	102		WeC01.1	8
Annovazzi, Valerio	WePOS-32.2	33		ThB02.1	46
Annweiler, Cédric	WePOS-05.4	16	Arico, Pietro	ThC18.2	56
Anopas, Dollaporn	FrPOS-03.5	103		FrPOS-01.12	102
Ansari-Asl, Karim	WeC05.6	9	Arima, Yuto	WePOS-29.22	27
Antani, Sameer	WePOS-11.1	17	Aristovich, Kirill	ThPOS-35.12	78
	FrA15.1	C		ThPOS-36.21	80
	FrA15.6	86	Arkun, Yaman	ThPOS-17.5	63
	FrC18.1	CC	Arle, Jeffrey	ThA09.1	41
	FrC18.2	101		ThA09.2	41
Antfolk, Christian	SaC14.5	145		ThA09.3	41
Anthony, Brian W.	SaA12.3	132	Armanfard, Narges	WeC13.1	11
	SaB15.5	139	Armentano, Ricardo Luis	WeC17.6	13
Antico, Maria	WePOS-11.29	19		ThPOS-15.6	62
Antonacci, Yuri	WePOS-02.4	14		FrPOS-18.6	109
	SaC05.2	142	Armitstead, Jeffrey Peter	FrB11.2	91
Antonakakis, Marios	ThA01.1	39	Armstrong, Delwyn	ThB19.5	51
	SaA18.1	134	Armstrong, Niall	WeA20.6	7
Antonelli, Sofia Lara	WePOS-34.26	38	Arnal, Pierrick Jacques	ThA14.3	42
Antoni, Shaula	ThB21.3	52	Arnold, Marleen	FrPOS-36.20	123
Antonietti, Alberto	ThPOS-19.5	64	Arnoux, Pierre-Jean	FrPOS-28.17	114
	FrPOS-20.13	110	Aromataris, Giuseppe	WePOS-32.2	33
Antônio Freire Teixeira, Marcos	ThPOS-32.23	71	Arora, Rahul	FrPOS-37.15	125
	ThPOS-32.40	72		SaA02.6	129
Antoniou, Zinonas	WePOS-33.35	36	Aroudi, Ali	FrB10.1	91
Anwar, Syed	WePOS-17.4	22	Arquilla, Katya	FrPOS-38.16	127
	WePOS-18.6	22	Arrais, Marouan	FrPOS-23.7	111
Anwarul, Hasan	WePOS-13.8	20	Arredondo Waldmeyer, María Teresa	WeA18.1	6
	FrB07.5	90	Arriazu Galindo, Mario	WeC17.6	13
	FrB07.6	90	Arroyo, Vicente	WePOS-23.4	24
Anzai, Daisuke	ThC04.1	CC	Arrúe, Mónica	WePOS-23.10	25
	ThC04.3	53	Arsalan, Aamir	WePOS-18.6	22
Anzai, Hidenobu	WePOS-34.19	38	Artés-Ibáñez, Emilio	FrC09.1	97
Aoki, Hirooki	WePOS-34.13	38	Artola, Garazi	WePOS-23.10	25
Aoki, Ryosuke	WePOS-33.25	36	Artori, Fiorenzo	SaD02.4	147
	ThPOS-25.6	67	Arunachalam, Kavitha	SaC03.6	142
Aoyagi, Kei	WeA08.4	3			

Arza Valdés, Adriana	ThB20.3	51	Azizi, Shahla	WeA08.6	3
	ThPOS-26.4	68	Azizmohammadi, Fariba	SaD11.5	151
	FrA19.3	87	Azocar, Alejandro	WePOS-29.32	28
Asada, Minoru	SaD16.4	152	Azarin, Jose M.	WeC01.4	8
Asai, Yoshiyuki	ThPOS-34.14	75	Azpeitia Garcia, Agueda	WePOS-29.26	27
Asakawa, Kiyoshi	WePOS-33.31	36	Azpiroz-Leehan, Joaquin	FrPOS-32.4	115
	WePOS-33.32	36	Azuma, Shozo	WePOS-33.42	36
Asama, Hajime	WeA08.4	3	Azzolin, Luca	ThPOS-34.33	76
Asami, Nao	WePOS-30.13	29	Azzolino, Domenico	WeA14.2	5
Asan, Ahmet	FrPOS-23.3	111			
Asan, Onur	WeA19.4	7			
Aschbacher, Kirstin	SaD07.1	149	B		
Asgari, Shadnaz	ThA05.6	40	B. e Silva, Ana Luíza	WePOS-33.30	36
Ashby, Joanna L.	ThB21.5	52		ThPOS-32.40	72
Ashouri, Zahra	WePOS-10.5	17	B. Fernandes, João Paulo	WePOS-33.30	36
Ashraf, Monib	ThPOS-33.1	72	B. S. Campelo, Rebecca	ThPOS-32.25	71
Asif, Afia	ThPOS-34.3	75	B., Smitha	WePOS-11.24	18
Asirvatham, Samuel	WeA10.5	3	Ba, Demba	SaA14.5	133
	WePOS-30.43	30	Baba, Kazutomo	WePOS-14.8	21
Askaripoor, Hadi	FrPOS-28.14	113	Babadi, Behtash	FrB18.1	94
Asogbon, Mojisola Grace	ThPOS-06.1	59	Babahosseini, Hesam	WePOS-13.5	20
Asplund, Maria	ThPOS-35.17	78	Babilon, Sebastian	FrPOS-33.22	116
Assef, Amauri Amorin	ThPOS-12.5	61	Babiloni, Fabio	ThC18.2	56
Asselborn, Thibault	FrPOS-27.13	112		FrPOS-01.12	102
Assuncao, Pedro	FrB03.3	89	Babyn, Paul	SaB17.2	140
Astolfi, Laura	WePOS-02.1	14	Bacher, Neal	SaD15.1	152
	WePOS-02.4	14	Bachler, Martin	WePOS-31.1	30
	FrPOS-34.31	119	Bader, Almke	ThPOS-34.38	77
	SaC05.1	C	Bader, Rainer	WePOS-31.34	32
	SaC05.2	142		ThPOS-34.27	76
Astrid Kemperman, Astrid D.A.M.	FrA08.4	84		ThPOS-34.30	76
Atanasoski, Vladimir	ThA21.4	45		SaA09.1	CC
Atashzar, Seyed Farokh	ThPOS-35.28	79		SaC07.4	143
Athanasiou, Maria	WePOS-24.1	25	Badia, Sergi Bermúdez i	SaB01.3	135
Atieh, Mirna	FrA17.5	87	Badier, Jean-Michel	FrA05.4	83
Atienza, David	ThB20.3	51	Badnjevic, Almir	SaB11.1	CC
	ThPOS-26.4	68	Badon, Amaury	ThC12.3	55
	FrA19.3	87	Badstübner-Meeske, Kathrin	ThPOS-36.14	80
Atsuumi, Keita	ThPOS-34.21	76	Bae, ChiSung	WePOS-15.9	21
Au, Jason Ka Man	WePOS-11.19	18	Bae, Sang Kon	FrPOS-37.15	125
Auat Cheein, Fernando A.	WePOS-11.28	19		SaA02.6	129
Aubry, Alexandre	ThC12.3	55	Bae, So Hyun	ThC12.4	55
Audiffren, Julien	SaD05.3	148		FrC15.5	100
Auguste, Koh	FrB06.2	90		FrPOS-31.6	115
Augustin, Christoph M	WeC09.1	10	Bae, Ye Seul	FrPOS-34.46	120
Augustine, Jonathan	WeC08.4	10	Baek, Changhoon	FrPOS-21.2	110
Augustine, Robin	WePOS-13.8	20		FrPOS-27.9	112
	FrB07.5	90	Baek, Christopher Inhwan	SaC17.2	146
	FrB07.6	90	Bagci, Ulas	WePOS-17.4	22
Augustyniak, Piotr	SaA05.1	C		WePOS-18.6	22
	SaA05.1	130	Bagh, Niraj	ThPOS-20.15	64
	SaA08.1	131	Bagheri, Mahnoosh	SaC19.6	147
Auzias, Guillaume	FrB19.1	94	Bahadur, Rabya	ThPOS-06.4	59
Avci, Okan	SaC09.4	143	Bahloul, Mohamed A.	WeC16.1	12
Avci, Recep	WePOS-05.3	16		FrPOS-18.4	108
	WePOS-31.32	32	Bahls, Christian Rüdiger	ThB18.1	50
	ThC09.5	54		ThPOS-36.14	80
	FrPOS-04.1	103	Bahmer, Andreas	FrB10.2	91
	FrPOS-33.49	118	Bai, Siwei	WeC10.1	CC
Averna, Alberto	ThPOS-36.2	79		WeC10.1	10
Averta, Giuseppe	FrC01.1	95		WeC10.6	11
Avila Mireles, Edwin Johnatan	FrPOS-29.5	114		ThB04.4	46
Avila-Navarro, Ernesto	WePOS-15.1	21	Baig, Mirza Mansoor	WePOS-34.2	37
	FrPOS-33.13	116		ThB19.5	51
Avolio, Alberto P	WeC13.2	11	Baik, Jin Woo	FrPOS-37.29	125
	ThPOS-11.3	61		FrPOS-37.30	125
	FrC04.4	96	Baik, Jinhwan	WePOS-31.27	32
Avolio, Alberto P.	WeC17.1	C	Bailey, Jeannie	FrB16.2	93
	FrC04.1	C	Bailey, Richard Geoffrey	FrA17.6	87
Awad, Mohamad	WePOS-14.6	20	Bailon, Raquel	WeA20.4	7
Awasthi, Abhilash	FrPOS-33.47	118		ThA14.1	C
Aydin, Serap	WePOS-04.2	15		ThA14.1	42
Ayusawa, Ko	ThPOS-34.26	76	Baird, Austin	WeA16.1	5
Azadmanesh, Matin	FrPOS-35.30	122		FrPOS-34.1	118
Azamar, Cristian	WePOS-09.4	17		FrPOS-36.35	124
Azami, Hamed	SaB11.4	138	Baird, Benjamin	ThPOS-27.1	68
Azar, Danielle	SaC15.2	145	Baishya, Nystha	WePOS-17.5	22
Azarsa, Mohammad Hassan	FrPOS-28.16	113		ThPOS-24.2	67
Azat, Anvar	FrA06.2	83		SaA13.3	133
Azevedo, Ana	ThPOS-17.7	63			
Azevedo-Coste, Christine	FrPOS-30.9	114			

Bajcsy, Ruzena	WePOS-12.3	19	Barbieri, Riccardo	ThA05.1	C
	ThPOS-33.22	73		ThB05.1	CC
	FrB16.2	93		ThB11.6	49
	FrC16.3	100		FrA14.2	86
	SaA17.3	134		FrC12.1	CC
Bajelan, Soheil	ThPOS-34.25	76		FrC12.2	98
Bajic, Dragana	WePOS-05.1	16		FrPOS-15.1	107
Baker, Fiona	ThPOS-03.1	58		FrPOS-15.3	107
	ThPOS-05.5	59		SaD04.1	148
Bakkes, Tom Hendricus Gerardus F.	ThB19.1	51		SaD07.2	149
	ThPOS-32.16	71		SaD10.5	150
Baklushev, Mikhail	ThC19.2	56		SaD14.6	152
Balachandran, Pradeep	WeC21.4	14	Barbosa Pereira, Carina	SaB05.5	137
Balaji, Sripathy	FrC10.1	98	Barbour, Randall	FrPOS-33.18	116
Balakarthikeyan, Vaishali	FrPOS-02.4	102	Barca-Mayo, Olga	ThPOS-34.9	75
	SaA02.1	129	Bardakjian, Berj Luther	FrPOS-22.2	110
Balakrishnan, Ganesh	ThPOS-25.2	67	Barefoot, Megan	WePOS-22.3	24
Balakrishnan, Preethiya	FrB09.5	91	Bargiotas, Ioannis	WePOS-32.9	33
Balakrishnan, Sathish	SaA12.2	132	Bargsten, Lennart	WePOS-12.4	19
	SaD15.4	152	Bari, Vlasta	ThB11.1	48
Balakrishnan, Shidin	ThPOS-33.1	72		ThB11.3	48
	ThPOS-33.41	74		FrPOS-15.5	107
	FrPOS-33.44	118	Barisano, Giuseppe	ThPOS-33.19	73
	FrPOS-38.36	128	Barker, Alex	FrA12.3	85
Balasingham, Ilangko	ThC04.1	C	Barkley, Victoria	SaC10.3	144
	ThC04.5	53	Barletta, Valeria	WeA12.6	4
	ThC04.6	53	Barney, Anna	FrPOS-06.6	104
Baláz, Marek	FrPOS-33.1	115	Barolle, Victor	ThC12.3	55
Balbinot, Alexandre	FrA13.2	85	Barone, Lorenzo	WeC09.2	10
	SaC14.3	145	Barra, Beatrice	ThPOS-34.46	77
Balcaen, Ruben	FrPOS-28.9	113	Barrera, Cristian	ThPOS-08.1	60
Baldassini, Nicole	FrPOS-35.9	121		SaA19.6	135
Baldwin, Bryant	ThPOS-17.12	63	Barresi, Giacinto	WePOS-30.39	30
Balestra, Gabriella	WePOS-23.1	24		SaD01.2	147
	SaC12.1	CC	Barrett-Jolley, Richard	ThPOS-35.25	79
	SaC12.4	144	Barriga-Rivera, Alejandro	WePOS-32.18	34
Balkin, Thomas	WeC11.4	11	Barroso-García, Verónica	FrA02.6	82
Ballo, Matthew	FrA09.3	84		FrPOS-02.1	102
Bambang Oetomo, Sidarto	WePOS-19.3	23		SaA14.1	133
Bamidis, Panagiotis	WePOS-23.9	24	Barry, M.A.	WeA10.1	3
	FrB14.5	93	Barth, Tobias	SaC07.5	143
Bañares, Rafael	WePOS-23.4	24	Bartkowski, Christian Henry	FrPOS-33.18	116
Bandaru, Jagadish	SaD01.3	147	Bartling, Soenke	FrC20.4	101
Bandla, Aishwarya	ThPOS-33.38	74		FrC20.5	101
	ThPOS-35.7	78	Bartsch, Adam	ThB13.4	49
	FrPOS-36.45	124	Basarab, Adrian	ThPOS-14.4	62
Banerjee, Sunetra	FrPOS-09.3	105		SaB15.6	139
	SaB17.5	140	Basaralu Sheshachala, Mithun	WePOS-21.2	23
Banerjee, Tanushree	ThB20.4	51	Baselli, Giuseppe	WeA05.1	CC
	FrPOS-05.3	103		WePOS-12.10	19
Baniasad, Fatemeh	WePOS-02.2	14	Bashar, Syed Khairul	WeA17.4	6
Bankole, Azziza	WePOS-21.4	24		FrC10.2	98
Bansal, Avinash	ThPOS-33.17	73		FrC10.3	98
Bansal, Mahima	FrPOS-36.21	123	Bashiri, Mohammad	WeC10.1	10
Bansod, Yogesh	ThPOS-34.30	76	Baskaran, Divya Baskaran	SaC03.6	142
	SaA07.1	C	Baskaran, Lohendran	WePOS-31.7	31
	SaC07.1	143	Basla, Ibrahim	FrPOS-27.3	112
Bao, Lan-Qing	SaD01.1	147	Bastos, Teodiano	ThPOS-20.17	65
Bao, Shenjie	WePOS-19.3	23	Basu, Anup	FrB08.6	91
	SaC13.5	145	Bates, Declan Gerard	WePOS-31.11	31
Bao, Shi-Chun	SaD06.4	149		ThC11.4	54
Baobeid, Abdulla	FrPOS-33.44	118		FrPOS-16.3	108
	FrPOS-38.36	128		SaB11.1	138
Bapineedu, Radhika	WeC08.5	10	Batista, Joao	FrB03.5	89
Baptista, Ricardo	FrPOS-35.21	121	Battaglia, Alberto	WePOS-30.45	30
Baqai, Faiz	ThPOS-04.1	58	Bauch, Andreas	FrPOS-26.3	112
Bär, Karl-Jürgen	WePOS-05.2	16	Bauch, Gerhard	FrB13.3	92
Bara Ledesma, Nuria	WeC17.6	13	Baucum, Matthew	WePOS-33.10	35
Baran, Agnes	ThPOS-08.2	60	Baud, Maxime	FrA05.2	83
	ThPOS-32.18	71	Bauer, Bernhard	FrC17.5	100
Baratham, Vyassa	FrC14.4	99	Baum, Mario	FrA21.2	88
Barbara, Nathaniel	SaD07.6	149		FrPOS-36.41	124
Barber, Lee	SaD16.3	152	Baum, Taylor Elise	SaD14.1	151
Barberio, Manuel	WeA10.3	3	Baumann, Sebastien	FrPOS-34.40	120
	ThB03.2	46	Baumert, Mathias	WeA05.2	2
				ThB02.6	46
				ThC05.6	53
				FrA14.5	86
				FrC05.2	96

Baumgarten, Daniel	FrC09.1	C	Berdondini, Luca	ThPOS-34.9	75
	FrC09.2	97	Berdouses, Elias	ThA15.2	43
	FrC09.4	98	Beredimas, Nikolaos	SaA08.5	131
Baumgartner, Werner	ThPOS-34.24	76	Berenfeld, Omer	WeC09.5	10
Bausch, Gerold	SaB05.1	136	Berens, Patrick	FrA17.1	87
Bautista-Salinas, Daniel	SaD08.3	149	Beretta, Elena	WeA16.3	6
Bavi, Mohammad Reza	FrPOS-06.1	103	Berezhnoi, Andrei	FrPOS-33.39	117
Baxi, Emily	SaB08.4	137	Berg, Philipp	WePOS-31.10	31
Bayon, Cristina	WePOS-29.32	28	Bergeles, Christos	ThA16.4	43
Bayram, Mehmed Bugrahan	WePOS-31.42	32	Berger, Theodore	ThB09.2	48
Bazuin, Loes	ThPOS-34.41	77		ThPOS-17.14	63
Bazurro, Simone	SaA08.3	131		FrB06.3	90
Bazzi, Farah	ThPOS-14.4	62	Bergmann, Jeroen	ThA08.1	40
Beach, Christopher	SaC18.1	146	Berkelmann, Lukas	ThPOS-34.38	77
Bearden, Carrie	ThPOS-33.18	73	Bermejo, Natividad	FrPOS-33.13	116
Beatriz Cavalcante Souza, Flavia	WePOS-33.33	36	Bernard, Gordon R.	SaB08.3	137
Beauchamp, James A.	ThC06.3	53	Bernard, Jean-Gael	ThB03.6	46
Beauchene, Christine	ThC09.2	54	Berndl, Elizabeth	SaC15.2	145
Beaudoin, Judith	SaA12.3	132	Bernhard, Anzengruber	SaD16.1	152
Beausejour, Marie-Helene	FrPOS-28.17	114	Bernsdorff, Felix	ThPOS-36.14	80
Becher, Tobias	FrPOS-05.1	103	Berrouiguet, Sofian	SaB08.6	137
Bechlioulis, Aris	WePOS-23.6	24	Berry, James	SaB08.4	137
Beck, Christopher	FrPOS-26.3	112	Berson, Eric	WePOS-31.39	32
Becker, Klaus	FrPOS-33.38	117	Bertagnoli, Laura	WeA14.2	5
Beckert, Lutz	ThA18.5	44	Bertalan, Gergely	WeC03.1	CC
	FrB18.2	94		WeC03.5	9
	FrC11.4	98	Bertomeu-Motos, Arturo	WePOS-29.11	27
Bednarek, Nathalie	SaC12.3	144	Bertrand Charette, Michaël	FrPOS-34.29	119
Beekman, Marian	ThC20.4	57	Bertrand, Alexander	FrC14.1	CC
Beg, Mirza Faisal	SaC15.1	CC		FrC14.1	99
Begg, Rezaul	ThPOS-34.25	76		FrPOS-36.12	122
	ThPOS-36.40	81	Bertschi, Mattia	WeA13.2	4
Begin, Marc-Andre	WePOS-18.3	22	Bertuletti, Stefano	SaC04.6	142
Béhar, Nathalie	SaA05.3	130	Berwanger, Daniel	FrPOS-08.14	105
Behbehani, Khosrow	ThPOS-26.3	68	Besio, W. G.	WeC02.3	8
	FrPOS-17.3	108	Bessho, Yusuke	FrPOS-38.34	128
	SaA11.5	132	Betti, Viviana	WeC02.4	8
Behboodi, Bahareh	SaC15.3	145	Betz, Johannes	SaC04.2	142
Beheshti, Soosan	ThA18.1	44	Beudel, Martijn	SaA17.1	CC
Behjat, Hamid	WeC12.5	11		SaA17.1	134
Behr, Volker Christian	ThA03.1	39	Beuing, Oliver	WePOS-31.10	31
	ThA03.2	39	Beuke, Jonas	ThA03.2	39
Beier, Susann	WePOS-31.15	31	Bevilacqua, Antonio	WeC20.2	13
	SaA12.4	132	Beyder, Arthur	WeA10.5	3
Beiramvand, Matin	FrPOS-06.1	103		FrPOS-09.1	105
Beirut, Sally	FrA17.4	87	Beymer, David	WePOS-11.21	18
Beitel-White, Natalie	FrPOS-32.2	115	Bezerianos, Anastasios	WeA19.1	6
Bekteshi, Saranda	FrPOS-35.17	121		ThC18.1	C
	FrPOS-38.25	127		ThC18.1	56
Belgiovine, Giulia	FrA06.6	83		ThC18.5	56
	FrPOS-20.12	109		FrPOS-01.12	102
Belkhatir, Zehor	WeC16.3	12		FrPOS-22.7	110
Belkin, Shimshon	FrC07.1	97	Bezerra Soares, Heliana	WePOS-33.27	36
Bellafqira, Reda	SaC08.1	143		WePOS-33.30	36
Bellagambi, Francesca	WePOS-29.6	26		WePOS-33.33	36
	ThB21.3	52		ThPOS-32.23	71
Bellazzi, Riccardo	WeA19.3	7		ThPOS-32.25	71
Belsare, Prajakta	ThPOS-24.7	67		ThPOS-32.26	71
	FrA04.2	83		ThPOS-32.40	72
Beltrami, Giorgio	ThPOS-35.27	79		ThPOS-32.46	72
Ben Salem, Douraied	ThB16.2	50		ThPOS-33.13	73
	FrB12.2	92		FrPOS-29.3	114
Bénar, Christian G.	FrA05.4	83	Bhardwaj, Peru	SaA08.6	131
Ben-Cohen, Avi	WePOS-11.11	18	Bhargava, Lava	ThPOS-33.47	75
	WePOS-11.13	18	Bhaskar, Suryanarayanan	FrPOS-33.47	118
Benedetti, Bruno	FrPOS-33.38	117	Bhat, Bindu	ThPOS-32.3	70
Bengtsson, Henrik	SaD18.3	153	Bhatnagar, Archit	ThC09.1	54
Benhamou, Pierre Yves	FrPOS-30.7	114	Bhattacharjee, Tanuka	WePOS-21.2	23
Beninati, Giovanna	SaC16.2	145		FrPOS-15.4	107
Benini, Luca	WeC04.1	9		SaA11.3	132
Benito, Salvador	WePOS-31.5	31	Bhattacharya, Sakyajit	FrPOS-18.5	108
Benjaber, Moaad	FrA21.4	88		FrPOS-30.5	114
Bennet, Laura	ThB02.2	46	Bhattacharyay, Shubhayu	FrPOS-35.22	121
	SaD14.3	151	Bhattacharyya, Saugat	ThPOS-20.21	65
Bennett, Stephanie Louise	FrC18.6	101	Bhattacharyya, Sharmodeep	ThB09.4	48
Bensaali, Faycal	FrPOS-33.44	118	Bhatti, Pamela	FrA17.1	CC
	FrPOS-38.36	128	Bhemavarapu, Lalitha Pratyusha	FrPOS-30.3	114
Bensamoun, Sabine	FrPOS-28.3	113	Bhushan, Braj	WePOS-20.2	23
Bentum, Mark	ThPOS-24.8	67	Bi, Lei	FrA15.5	86
Benz, Andreas	SaC11.3	144	Biagi, Maria Chiara	ThA01.3	39
Benzel, Edward	ThB13.4	49			

Biagini, Denise	WePOS-29.6	26	Bo, Bin	FrB03.6	89
	ThB21.3	52	Boasen, Jared	WePOS-30.12	28
Biallawons, Oliver	FrA17.1	87		ThA18.6	44
Bian, Di	WePOS-23.7	24	Bob, Petr	FrPOS-33.1	115
Bian, Gui-Bin	SaA12.1	132	Boblan, Ivo	SaB16.6	140
	SaD11.4	151	Bocan, Kara	ThPOS-16.1	62
Biancardi, Arcangelo	ThA20.3	45		FrPOS-37.20	125
	ThPOS-25.3	67	Boccaccini, Aldo R.	WePOS-29.27	27
Bianchi, Anna Maria	ThA19.1	CC	Boccara, Albert Claude	ThC12.3	55
	FrA14.1	CC	Bocchi, Leonardo	WePOS-29.26	27
	FrB01.3	88		ThPOS-21.5	65
	FrC01.1	C		ThPOS-22.1	66
	FrPOS-01.6	102	Bočková, Martina	FrPOS-33.1	115
Bianchi, Luigi	WeC21.3	14	Bodenheimer, Robert	WeA19.2	7
Bianchi, Matteo	FrC01.1	95	Boeck, Carl	FrPOS-37.5	124
	FrPOS-15.2	107	Boehler, Christian	ThPOS-35.17	78
Bibbo, Daniele	WePOS-18.1	22	Boese, Axel	WePOS-19.1	22
Bibineyshivili, Elena	FrPOS-24.1	111		ThA21.3	45
Bicalho Saturnino, Guilherme	WeC10.2	10		ThB10.5	48
	FrA09.1	84		ThPOS-08.3	60
	SaB09.2	138		ThPOS-34.39	77
	SaD10.6	150		SaD10.2	150
Bicchi, Antonio	FrC01.1	95		SaD19.3	153
Bieler, Lara	FrPOS-33.38	117	Bogatu, Laura	FrB12.4	92
Bielmann, Mathieu	FrPOS-34.29	119		SaD13.5	151
Biffi, Emilia	FrC16.1	100	Boger, Jennifer	WeC13.1	11
Bighamian, Ramin	WeC17.2	12	Bohi, Amine	WeA09.5	3
Bille, Andrea	ThPOS-33.36	74		WeC12.1	11
Billig, Daniel	ThPOS-36.40	81	Böhme, Martina	FrPOS-20.8	109
Bilodeau, Guillaume	SaB04.3	136	Boisselier, Elodie	WePOS-13.6	20
Bilucaglia, Marco	WeC18.3	13	Bolic, Miodrag	SaD04.2	148
Bin Bashar, Sarforaz	ThB12.4	49	Boljevic, Darko	FrPOS-30.11	114
	ThB15.3	50	Bollen, Bieke	SaB02.6	136
Bingham, Adrian	FrA01.4	82	Bollheimer, Cornelius	FrB03.5	89
Binici, Sophia	WeA17.4	6	Bologna, Marco	WeA21.6	8
Birrer, Edith	WePOS-24.2	25	Boly, Melanie	ThPOS-27.1	68
Bise, Ryoma	WePOS-12.13	20		FrB01.3	88
	FrA15.4	86	Bomzon, Ze'ev	WeC10.3	10
Bishop, Kaia	ThA17.4	44		WeC10.4	10
Biswal, Bharat	WeA08.1	2		FrA09.1	84
Biswas, Dwaipayan	FrC02.5	96		FrA09.3	84
Biswas, Karabi	WePOS-31.28	32		SaA10.1	C
Biswas, Sangeeta	ThPOS-09.6	60		SaA10.2	131
Bizopoulos, Paschalis	WeA15.4	5		SaA10.5	132
	WePOS-04.8	15		SaD10.6	150
	WePOS-22.1	24	Bonanno, Elena	WePOS-11.17	18
Björkman, Anders	SaC14.5	145	Bonato, Marta	SaA07.5	131
Black, David	ThB10.2	48		SaD07.4	149
Black, Richard Anthony	FrPOS-07.2	104	Bondia, Jorge	FrPOS-30.2	114
	FrPOS-33.15	116	Bonelli, Stefano	FrPOS-01.12	102
Blackford, Ethan Brian	SaC11.1	144	Bonini, Andrea	WePOS-16.1	21
Bladt, Henriette	SaA04.3	130		ThA13.1	42
Blanc, Romain	FrPOS-30.7	114	Bonitz, Lars	FrPOS-36.20	123
Blanco Ivorra, Andrea	WeC01.5	8	Bonmassar, Giorgio	FrB09.4	91
	WePOS-29.11	27	Bonnet, Stéphane	WeA02.2	1
Blanco, Roberto	ThC21.1	57	Bonnier, Guillaume	SaA02.2	129
Blanco-Almazán, Dolores	ThC11.6	54	Bonnis, Brendan	WeC11.3	11
Blanco-Angulo, Carolina	FrPOS-33.13	116	Boquet-Pujadas, Aleix	SaB03.4	136
Blank, Celine	ThPOS-32.16	71	Borchiellini, Alessandra	WePOS-23.1	24
Blanke, Olaf	ThA06.5	40	Borgard, Heather	SaD10.1	150
Blauth, Michael	ThPOS-21.11	65	Borghese, Nunzio Alberto	WeA14.2	5
Blazek, Vladimir	ThPOS-08.5	60	Borghini, Gianluca	ThC18.2	56
Bleich, André	SaB05.5	137		FrPOS-01.12	102
Bleichner, Martin G.	FrB10.5	91	Borgstrom, Per Henrik	SaC17.2	146
Blendinger, Felix	FrB07.2	90	Boric-Lubecke, Olga	SaC13.2	145
Bleuler, Hannes	ThA06.5	40	Bormans, Guy	ThA17.1	43
Bley, Thorsten A.	ThA03.1	39	Borotikar, Bhushan	ThB16.2	50
Blin, Guillaume	ThPOS-34.28	76		FrB12.2	92
Blinov, Michael	ThPOS-34.13	75		FrPOS-09.7	105
Bloch, Isabelle	SaC12.3	144	Borzée, Pascal	ThPOS-03.5	58
Bloch, Jocelyne	ThPOS-34.46	77	Bose, Rohit	ThC18.5	56
Bloch, Julien	SaC06.2	142		FrPOS-22.7	110
Bloch, Louise	ThC15.1	55	Bostanjopoulou, Sevasti	FrA02.1	82
Blohme, Kai	WePOS-27.7	26		SaB14.6	139
Blomstedt, Patric	ThPOS-36.13	80	Bote Chacón, Jorge	WePOS-29.26	27
Bloxton, Michael	ThA21.3	45	Botter, Alberto	WePOS-34.11	37
Blum, Andrew	ThPOS-31.6	70		FrA20.6	88
Blum, Beat	SaA08.4	131		FrPOS-20.15	110
Blum, Sarah	FrPOS-34.42	120	Böttrich, Marcel	WeA02.4	1
Blumrosen, Gaddi	WePOS-18.4	22	Botzheim, Lilla	WePOS-29.31	28
Bluvshstein, Vlad	WeA10.4	3	Bou i Hernandez, Albert	ThA14.3	42

Bouchard, Kristofer E.	ThB09.4	48	Brumm, Jan-Christoph	FrB13.3	92
	FrC14.4	99	Brüngel, Raphael	WePOS-27.7	26
Boucher, Francois	FrPOS-14.4	107	Brunner, Jens O.	FrC17.5	100
Boudali, A. Mounir	ThC16.2	56	Bruno, Rosa Maria	ThB11.4	49
Boudy, Jerome	ThPOS-31.5	70	Brunschwiler, Thomas	WeC04.3	9
Bouffard, Connor	SaB16.5	140	Bryant, Jennifer	WePOS-10.2	17
Boukadoum, Mounir	WePOS-13.6	20	Buarque de Lima Neto, Fernando	WePOS-32.28	34
Boulanger, Pierre	SaD05.5	148	Buccelli, Stefano	ThPOS-36.2	79
Bountouni, Nefeli	WePOS-24.1	25	Bucher, Volker	FrB07.1	C
Bourgeois, Florian	FrA21.6	88		FrB07.2	90
Bouri, Mohamed	ThA06.5	40	Büchner, Andreas	FrB10.1	CC
Boussé, Martijn	WeC05.1	9	Bucho, Teresa	SaB01.3	135
Boutamine, Sami	ThPOS-31.5	70	Buckley, Christopher	ThC20.3	57
Bouteiller, Jean-Marie Charles	ThB09.1	C	Buckley, Ellen	SaC04.6	142
	ThB09.2	48	Buckley, Russell	FrC11.4	98
Bouyer, Laurent	FrPOS-34.29	119	Budde, Kai	WePOS-14.3	20
Boyd, Roslyn	SaD16.3	152	Budidha, Karthik	WePOS-17.5	22
Boylan, Geraldine	FrB17.2	93		ThPOS-24.2	67
	FrPOS-01.13	102		SaA13.3	133
	FrPOS-34.30	119	Buekban, Chatchai	SaD16.6	152
	FrPOS-36.15	123	Bui, Alex	ThA19.3	44
	SaA14.1	CC	Bujnowski, Adam	WePOS-06.4	16
	SaA14.4	133		WePOS-19.4	23
Bracio, Boris Romanus	WePOS-29.9	26		WePOS-24.2	25
	WePOS-31.47	33		SaC13.1	CC
	ThPOS-32.39	72		SaC13.4	145
Bradley, Chris	WePOS-31.35	32	Bulacio, Juan	ThC09.3	54
	WePOS-31.36	32		FrB01.4	88
Bradshaw, Alan	ThC09.5	54		FrB01.6	88
Brage, Soren	FrPOS-35.18	121	Bulea, Thomas C.	WeA06.1	C
Braghin, Francesco	FrC16.1	100		WeA06.5	2
Brandl, Stephanie	FrPOS-37.12	125	Bumgardner, Joel	ThA17.2	43
Brandt, Alexander	FrA11.4	85	Bunescu, Razvan	WePOS-04.9	15
Brandt, Liliith	WePOS-27.7	26	Burack, Michelle	FrPOS-36.13	122
Braojos, Ruben	FrPOS-34.40	120	Burattini, Laura	WeA05.5	2
Braoudaki, Maria	WePOS-22.2	24		ThC05.2	53
Brattain, Laura	WePOS-12.5	19	Burdin, Valerie	FrPOS-09.7	105
Brattico, Elvira	FrPOS-37.12	125	Burgard, Wolfram	SaD01.4	147
Braun, Jurgen	WeC03.5	9	Burgmann, Sebastian	FrPOS-36.20	123
	WeC03.6	9	Buriro, Abdul Baseer	WeC18.2	13
Braunias, Kim	ThPOS-15.3	62	Burns, Devin	FrPOS-35.5	120
Bravo, Diego	SaA19.6	135	Burns, Owen	FrPOS-35.32	122
Bravo, Graciela	SaA17.3	134	Burrowes, Kelly Suzanne	ThPOS-34.34	76
Brawanski, Alexander	SaA10.2	131	Burström, Gustav	FrB03.4	89
Breault, Macauley S.	WeC06.2	9	Burunova, Evelena	FrA01.2	82
	WeC18.5	13	Busacca, Alessandro	FrC05.3	96
	ThB18.4	51		SaA02.4	129
Breedveld, Paul	ThPOS-34.41	77		SaB14.3	139
Breitkopf, Mario	ThPOS-10.4	61	BuSha, Brett	SaB11.2	138
Brennan, Louise	WeC20.2	13	Bussmann, Hans B.J.	ThB13.6	49
Bresing, Andreas	ThPOS-26.2	68	Butenko, Konstantin	ThB18.1	50
Bresch, Erik	FrB12.4	92	Butera, Robert	ThB18.1	C
	FrB14.2	92	Butler, John	FrC13.4	99
	SaD13.5	151	Butlin, Mark	WeC13.2	11
Bressan, Nadja	WeA22.1	C		ThPOS-11.3	61
	WeA22.1	8		FrC04.4	96
	WeA22.4	8	Butner, Joseph	ThPOS-15.1	62
	ThPOS-36.23	80	Buttgereit, Frank	SaB07.3	137
Breun, Sascha	FrPOS-26.3	112	Buurke, Jacob Hilbert	ThB13.6	49
Briand, Josselin	ThB01.3	45	Buyse, Bertien	ThA14.1	42
Bricout, Aurélien	SaC18.10	146		ThPOS-03.5	58
Brietzke, Andreas	WePOS-14.5	20	Buyuksarac, Bora	SaD06.5	149
Brischwein, Martin	SaB07.5	137	Buzug, Thorsten M.	ThA03.1	C
Brochard, Sylvain	ThB16.2	50		ThA03.1	39
	FrB12.2	92		ThA03.2	39
Broeckx, Mario	FrPOS-28.1	113	Byeon, Kyoungseob	WePOS-32.30	34
Brohus, Jakob Bredal	ThC11.2	54	Byun, Kyunghee	FrPOS-37.30	125
Bronchalo, Enrique	WePOS-15.1	21			
Brophy, Colleen	WeA20.4	7			
Brophy, Daniel R.	WeA20.4	7			
Brown, Emery	SaA14.3	133			
	SaD07.2	149			
	SaD14.1	151			
Brown, James	FrA09.4	84			
Brown, Jérémy	SaB04.3	136			
Brown, Richard	WePOS-31.17	31			
Bruce, Sprague	FrB19.5	94			
Brück, Rainer	ThC20.6	57			
Brucker, Sara	SaD15.1	152			
Brühl, Rüdiger	ThA04.3	40			
Brumberg, Jonathan	ThPOS-20.24	65			

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C. Nguyen, Dinh	SaC08.6	143
C. Telea, Alexandru	WeC12.3	11
Cabrera, David	FrC09.1	97
Cabrini, Alessandro	WePOS-32.2	33
Cadena, Miguel	FrPOS-32.4	115
Caetano, Gina	SaB01.3	135
Cafarelli, Andrea	ThC21.4	57
	ThC21.5	57
Caggiano, Vittorio	FrA02.2	82
Cai, Chang	FrPOS-09.4	105

Cai, Suping	FrPOS-01.5	102	Carek, Andrew	WeC13.4	11
Caicedo, Alexander	WePOS-03.3	15		WeC13.5	11
	SaB02.6	136		ThPOS-36.34	81
Caicedo, Julio César	FrPOS-35.11	121	Carette, Romuald	WePOS-25.1	25
Caielli, Matteo	WeA14.2	5	Carey, Carole C.	WeC21.1	C
Cairo, Beatrice	ThB11.1	48		WeC21.4	14
	ThB11.3	48	Carlen, Peter L.	FrPOS-22.2	110
	FrPOS-15.5	107	Carlson, Barbara	FrPOS-37.13	125
Calandra Buonaura, Giovanna	FrPOS-15.5	107	Carlson, Kris	ThA09.1	41
Calcagnini, Giovanni	FrPOS-34.3	118		ThA09.2	41
Caldas, Rafael	WePOS-32.28	34		SaA10.5	132
Calder, Stefan	ThC09.5	54	Carlson-Kuhta, Patricia	ThPOS-01.3	58
	FrPOS-09.1	105	Caroline, Dina	FrPOS-33.23	116
Caldwell, Brandon	WeC03.4	9	Carone Fabiani, Filippo	WePOS-32.2	33
Caldwell, Darwin G.	FrPOS-29.5	114	Carrara, Sandro	FrPOS-38.11	127
Calhoun, Vince	WeC05.2	9	Carrell, Travis	SaD03.3	148
	WePOS-02.3	14	Carrillo de Gea, Juan Manuel	WePOS-20.1	23
	FrB15.5	93		WePOS-23.3	24
	FrC15.2	100		FrB08.3	90
Calimeri, Francesco	ThB15.2	50		FrPOS-37.32	126
Calix, Ricardo	SaB08.3	137	Carrillo-Bermejo, Angel	FrPOS-37.23	125
Callara, Alejandro Luis	WePOS-09.3	17	Carro Domínguez, Manuel	ThA12.1	42
	FrPOS-09.2	105	Carrozza, Maria Chiara	WeA08.1	CC
Callejón Leblic, María Amparo	SaA18.5	134		SaA01.1	C
	SaB06.2	137	Carter, Chris	FrPOS-38.31	128
Calvillo, Maria	WeA12.5	4	Carter, Jennifer	FrPOS-36.35	124
Calvo, Mireia	ThPOS-29.5	69	Caruso, Marco	ThB13.1	49
Camargo, Erick Dario Leon Bueno	ThA11.4	41	Casadio, Maura	WePOS-30.39	30
Camerlingo, Nunzio	FrB17.4	93		FrB20.3	95
Camilleri, Kenneth Patrick	FrB02.6	89		SaA08.3	131
	SaD07.6	149	Casals, Alicia	SaA16.1	C
Camilleri, Tracey	SaD07.6	149		SaA16.5	134
Campeau-Lecours, Alexandre	SaB04.3	136	Cascella, Davide	WePOS-11.17	18
Campos Roca, Yolanda	FrPOS-36.1	122	Cascella, Giuseppe L.	WePOS-11.17	18
Campos, Mariana	WePOS-32.28	34	Casellato, Claudia	ThA16.1	43
Canale, Claudio	WePOS-13.1	20		ThPOS-19.5	64
Canfarotta, Francesco	WePOS-15.7	21		FrPOS-20.13	110
Cannella, Ferdinando	FrPOS-29.5	114	Casey, Marlene	ThPOS-33.19	73
Cano, Isaac	ThPOS-29.5	69	Cash, Sydney	ThC14.5	55
Cano, Mónica	SaA14.1	133		ThPOS-17.4	63
	SaC05.5	142	Casolo, Andrea	ThC06.4	53
Cano, Óscar	WeA05.3	2	Cassani, Raymundo	ThB20.6	51
Cano-Garcia, Helena	WePOS-16.7	22	Cassol, Helena	FrPOS-01.11	102
	SaB04.1	136	Casson, Alexander James	WePOS-18.7	22
	SaD03.4	148		WePOS-25.2	25
Cantow, Kathleen	ThA10.3	41		ThA08.1	CC
Cao, Hongbao	ThPOS-21.4	65		ThPOS-23.8	66
Cao, Hung	ThPOS-26.10	68		SaC18.1	146
Cao, Jiuwen	ThA05.2	40	Castaneda-Villa, Norma	ThC09.1	CC
	ThC14.4	55		ThC09.4	54
	ThC14.6	55		FrPOS-37.3	124
Cao, Shuai	ThPOS-06.3	59	Castaño-Candamil, Sebastián	ThPOS-16.2	62
Cao, Youfang	ThB09.5	48	Castelhana, João	WePOS-24.3	25
Capoglu, Seymanur	ThPOS-27.5	68	Castelli, Enrico	FrB01.1	88
Capogrosso, Marco	ThPOS-34.46	77		FrPOS-25.4	111
Cappon, Giacomo	WePOS-33.15	35	Castellino, Sean	FrPOS-27.5	112
	FrB17.4	93	Castelo-Branco, Miguel	WePOS-24.3	25
	SaD07.5	149	Castiglioni, Paolo	SaC02.3	141
Caramazza, Laura	ThA17.3	44	Castillo-Escario, Yolanda	FrPOS-17.2	108
Caramia, Carlotta	WePOS-18.1	22		FrPOS-17.4	108
Caravas, Pamela	FrPOS-03.3	103		FrPOS-20.14	110
Carbonaro, Marco	FrPOS-20.15	110	Castro, Eduardo	ThB15.6	50
Carbone, Vincenzo	FrA09.2	84	Castro, Ivan D.	SaA04.5	130
Cardarelli, Stefano	WePOS-17.7	22	Castro, Nathan	SaD10.2	150
	ThPOS-21.12	66	Castro-Lisboa, Pablo	FrA18.1	87
	FrA01.5	82	Catai, Aparecida	ThB11.3	48
	FrB16.5	93	Catalán Orts, José María	WeC01.5	8
	FrPOS-27.15	113		WePOS-29.11	27
Cárdenas, Antonio	FrB16.6	93	Catalucci, Daniele	SaA07.5	131
Cárdenas, Nicolás	ThPOS-14.1	62	Catrambone, Vincenzo	ThB11.6	49
Cardinale, Francesco	WePOS-12.10	19		SaD14.6	152
Cardinaux, Annie	FrPOS-15.3	107	Cattaneo, Giorgio	FrB09.3	91
Cardoso de Sousa, Ana Carolina	FrA20.5	88	Catthoor, Francky	ThC11.6	54
Cardoso, Jaime S.	WeA03.1	CC	Caulfield, Brian	WeC20.2	13
	WeA03.5	1		ThB13.2	49
	ThB15.1	CC		ThB13.3	49
	ThB15.6	50		ThPOS-31.7	70
	SaC19.1	C		FrA20.3	88
	SaC19.4	147	Cauwenberghs, Gert	WeA04.2	1
Cardoso, Márcio Neves	FrPOS-31.2	115	Cauzzo, Simone	WePOS-09.3	17
Cardoso, Teresa	ThPOS-28.4	69		FrPOS-09.2	105

Cavaliere, Carlo	WePOS-11.17	18	Chan, Chih-Hsiang Alexander	WeA10.5	3
Cavallo, Filippo	ThPOS-28.1	69		ThB21.2	52
	FrC10.5	98	Chan, Gloria	ThPOS-33.38	74
Cavallo, Gaia	ThPOS-33.15	73	Chan, Jason Ju In	FrPOS-37.26	125
Cavigelli, Lukas	WeC04.1	9	Chan, Ka Lung	ThC05.5	53
Cavinato, Lara	FrPOS-15.3	107	Chan, Kei Hang Katie	FrPOS-37.19	125
Ccorimanya, Luis	FrPOS-28.12	113	Chan, Kevin C.	WeC12.1	CC
Cecchi, Guillermo	SaB08.4	137		FrC12.1	C
Cecotti, Hubert	WePOS-20.2	23	Chan, Kim Chuan Casey	ThPOS-33.38	74
	FrB18.4	94	Chan, Leanne LH	ThB01.6	46
Cejnar, Michael	WeA17.2	6	Chan, Rachel S. L.	WeA15.1	5
Celebi, Gulsen	SaC17.4	146	Chan, Soon Chee	ThPOS-24.3	67
Celen, Sofie	ThA17.1	43		FrPOS-35.19	121
Celik, Numan	ThPOS-35.25	79	Chandar, Arjun	FrA17.4	87
Celler, Branko George	WeA14.1	CC	Chandel, Vivek	ThPOS-25.4	67
	WeA14.1	5	Chandola, Gaurav	WePOS-31.7	31
	WeC01.1	8	Chandramoorthi, Sowmiya	SaC03.4	141
	ThB02.1	C	Chandran, Arvind	WeC20.5	14
	ThB02.1	46	Chandrasekhar, Anand	WeA13.1	4
Cen, Xiaoping	WePOS-11.4	17		FrPOS-37.36	126
Cene, Vinicius H.	FrA13.2	85		FrPOS-37.38	126
	SaC14.3	145	Chang, Cai	WePOS-11.22	18
Cense, Barry	ThC12.2	55		SaB15.2	139
Censi, Federica	FrPOS-34.3	118	Chang, Chia-Yuan	FrPOS-36.5	122
Cepeda-Zapata, Luis Kevin	SaD18.4	153	Chang, Chin-Wei	SaA13.1	132
Cerda-Lugo, Angel	FrB16.6	93	Chang, Chi-Sen	ThC19.1	56
Cereatti, Andrea	ThB13.1	49	Chang, Chun-Min	ThPOS-28.2	69
	SaC04.1	C	Chang, Eric	SaD04.4	148
	SaC04.6	142	Chang, Hyuk-Jae	ThPOS-31.2	70
Ceresini, Rocco	WeC04.3	9	Chang, Isaac Sungjae	WeC13.1	11
Cerina, Luca	SaD04.1	148	Chang, Jin Woo	FrPOS-35.29	122
Cerone, Giacinto Luigi	WePOS-34.11	37		FrPOS-36.42	124
	FrA20.6	88	Chang, Joshua	ThA09.5	41
	SaA13.4	133	Chang, Kyung Hwa	WePOS-32.21	34
Cerrolaza, Juan J.	FrB19.5	94		WePOS-32.22	34
Cerutti, Sergio	FrPOS-01.6	102		WePOS-32.23	34
Cerveri, Pietro	ThA13.6	42		FrPOS-35.3	120
	FrPOS-28.14	113	Chang, Shih-Yin	SaD06.1	149
Cesarelli, Mario	ThA20.3	45	Chang, Wei	WePOS-30.16	29
	ThPOS-25.3	67	Chang, Won Seok	FrPOS-36.42	124
Cesareo, Massimo	FrC12.4	99	Chang, Won-Du	FrPOS-36.9	122
Cesari, Matteo	WeA14.2	5	Chang, Y. T.	FrPOS-34.2	118
	FrA14.3	86	Chang, Yao-Chuan	SaB18.3	140
Ceschin, Rafeal	FrB19.2	94	Chang, Yeonhee	FrPOS-33.40	117
Cesonis, Justinas	ThA06.1	40	Chang, Yuan-Hsiang	ThC15.6	56
	ThA06.2	40	Chang, Yuchou	SaD03.6	148
	ThB06.4	47	Chang, Yunhee	WePOS-33.44	37
	FrPOS-20.3	109		WePOS-33.45	37
Cestari, Manuel	WeA06.4	2	Chansangpetch, Sunee	WePOS-11.15	18
Cetin, Mujdat	WePOS-04.2	15	Chapuis, Valentin	WeA13.2	4
Ceyssens, Frederik	ThA17.1	43	Charafeddine, Jinan	ThPOS-33.32	74
Cha, Ho-Seung	FrPOS-33.4	115	Charisis, Vasileios	FrA02.1	82
	FrPOS-36.9	122	Charleston-Villalobos, Sonia	SaB02.3	135
Cha, Seongkwang	ThPOS-35.16	78		SaC02.5	141
Cha, Won Chul	ThPOS-32.11	70	Charlier, Pierre	WeA04.1	1
Cha, Yoon-Hee	ThPOS-36.3	79	Charmet, Jerome	ThA13.5	42
Chaaya, Pamela	WePOS-25.4	25	Charnnarong Suwanwela, Nijasri	FrC02.1	95
Chae, Dong-Sik	ThPOS-31.2	70	Charpentier, Guillaume	FrPOS-30.7	114
Chae, Hongsik	ThPOS-36.30	81	Chase, J. Geoffrey	WeA16.5	6
Chae, Younsoo	WePOS-34.21	38		ThA11.1	CC
	ThPOS-35.22	78		ThA11.1	41
Chahid, Abderrazak	ThC14.2	55		ThA11.2	41
Chai, Gang	ThPOS-12.2	61		ThA11.5	41
Chai, Guohong	ThB01.3	45		ThA17.4	44
Chai, Ping	WePOS-10.2	17		ThPOS-17.6	63
	WePOS-31.7	31		ThPOS-17.8	63
Chai, Rifai	WeC18.4	13	Chatelle, Camille	FrPOS-01.11	102
	WePOS-07.1	16	Chatterjee, Debatri	ThB20.4	51
	FrPOS-30.1	114		FrB16.4	93
	SaD14.4	152		FrPOS-05.3	103
	SaD18.1	153	Chatterjee, Jyotirmoy	WePOS-31.28	32
Chakraborty, Debsubhra	WeA14.5	5	Chatterjee, Soumick	ThPOS-10.4	61
Chakravarty, Kingshuk	FrB16.4	93	Chatterjee, Subhasri	WeA04.6	2
Chakravarty, Sourish	SaD14.1	151		ThPOS-24.1	66
Chalacheva, Patjanaporn	FrC11.2	98	Chatzichristos, Christos	WeC05.5	9
Chamanzar, Maysamreza	SaA06.1	C	Chaudhari, Nikhil	WeA12.5	4
	SaB03.2	136	Chaudhuri, Ray	FrA02.1	82
Chambon, Stanislas	WeC19.4	13		SaB14.6	139
Chan, Brandon	WeC19.6	13	Chbat, Nicolas W.	ThC11.1	C
	ThPOS-29.1	69		ThC11.5	54
			Chelian, Suhas	WeC18.1	13

Chembrammel, Pramod	ThPOS-33.42	74	Chen, Shixiong	ThPOS-06.1	59
Chen, Badong	SaD14.5	152	Chen, Shuhang	FrPOS-25.2	111
Chen, Bernard	FrA21.1	88	Chen, Shuohui	SaD17.5	153
Chen, Chao-Hsien	ThC11.3	54	Chen, Siping	SaC12.6	144
Chen, Chen	FrPOS-17.1	108	Chen, Sophie	SaC15.6	145
	SaC14.4	145	Chen, Szi-Wen	FrA05.4	83
	SaC18.4	146	Chen, Tainsong	ThPOS-34.8	75
Chen, Cheng	SaD06.4	149	Chen, Tingyu	FrPOS-34.2	118
Chen, Chen-Huan	FrPOS-37.36	126	Chen, Wanli	SaB08.3	137
Chen, Chen-Sheng	WePOS-34.24	38	Chen, Wanlin	WePOS-12.1	19
Chen, Chong-You	ThPOS-34.7	75	Chen, Wei	FrPOS-05.5	103
Chen, Eric Z.	ThPOS-11.4	61		WePOS-19.3	23
	ThPOS-12.1	61		SaC13.5	145
Chen, Fei	WeA18.2	6		SaC18.4	146
	ThA02.5	39	Chen, Wei Ling	WePOS-29.1	26
	ThC05.5	53	Chen, Wenhui	WeC01.1	8
	ThPOS-18.1	63	Chen, Wenjing	FrPOS-22.1	110
	ThPOS-21.2	65	Chen, Wenxi	FrA19.6	87
	ThPOS-21.14	66	Chen, Xi	ThB19.6	51
	SaD09.1	150		ThPOS-17.10	63
Chen, Gary C.-Y.	WePOS-29.3	26		SaB19.3	140
Chen, Gengbo	WePOS-33.16	35	Chen, Xiang	ThB06.1	47
	ThPOS-24.3	67		ThPOS-06.2	59
	FrPOS-35.19	121		ThPOS-06.3	59
Chen, Guan-Yu	ThPOS-32.9	70	Chen, Xiang-Zhong	FrA07.2	84
	ThPOS-32.28	71	Chen, Xiaobi	WePOS-31.44	32
	ThPOS-34.7	75		ThPOS-20.13	64
	ThPOS-35.14	78	Chen, Xiaofei	SaC12.6	144
Chen, Haibin	WeC15.1	12	Chen, Xinrui	FrPOS-08.9	105
	WeC15.2	12	Chen, Xinzhong	FrPOS-05.5	103
Chen, Hang	FrPOS-05.5	103	Chen, Xun	ThPOS-06.2	59
Chen, Hanwei	FrPOS-09.9	106		ThPOS-06.3	59
	SaA12.5	132	Chen, Yafen	ThPOS-36.3	79
Chen, Hao	SaA05.4	130	Chen, Yang	SaB01.5	135
Chen, Heping	FrB03.6	89	Chen, Yen-Wei	WePOS-11.8	18
Chen, Hong	ThB21.1	51		ThPOS-11.5	61
Chen, Hongda	ThPOS-20.11	64		FrPOS-11.8	106
	SaC01.4	141	Chen, Yifan	WePOS-06.1	16
Chen, Hong-Ren	FrPOS-34.4	118		WePOS-12.1	19
Chen, Hongyu	WePOS-19.3	23		ThB09.6	48
Chen, Huai	FrPOS-10.1	106	Chen, Ying	FrA19.1	C
Chen, Hung-Yi	ThPOS-32.9	70		FrA19.6	87
	ThPOS-32.28	71	Chen, You-Yu	WePOS-34.24	38
Chen, Jia-Jin Jason	FrC01.2	95	Chen, Yucheng	WePOS-10.2	17
Chen, Jle	SaD18.1	C	Chen, Yuxuan	FrPOS-08.12	105
Chen, Jin	ThPOS-24.3	67		FrPOS-33.41	117
Chen, Jing	ThPOS-20.10	64		FrPOS-37.13	125
Chen, Jingjing	ThPOS-20.19	65	Chen, Zhe	ThPOS-17.11	63
Chen, Jiyan	FrC05.4	96		SaC05.4	142
Chen, Jui-Cheng	ThPOS-28.2	69	Chen, Zhenyi	SaC01.1	141
Chen, Jyh-Horng	ThPOS-33.24	73	Chen, Zheyuan	SaA07.2	131
Chen, Kaiquan	FrPOS-08.3	104	Chen, Zhili	WePOS-11.3	17
Chen, Ko-Chiang	ThB02.5	46		FrPOS-08.4	104
	ThPOS-35.26	79		SaA03.3	129
	FrPOS-36.5	122	Chen, Zhuojun	FrA15.1	86
Chen, Liang	FrPOS-33.6	116	Chen, Zichu	FrPOS-22.1	110
Chen, Li-Reng	ThPOS-35.14	78	Cheng, Chung-Kuan	SaD04.4	148
Chen, Long	ThPOS-20.7	64	Cheng, Hao-Min	ThA12.4	42
	FrPOS-01.9	102		FrPOS-37.36	126
	SaA19.3	135	Cheng, Irene	FrB08.6	91
	SaC01.5	141	Cheng, JenFu	FrC16.4	100
	SaD01.5	147	Cheng, Jing	FrC18.4	101
Chen, Louis	SaB13.2	138		FrPOS-09.9	106
Chen, Mingli	WeC15.5	12		SaD03.1	CC
	WePOS-11.25	18		SaD03.6	148
Chen, Mingming	ThPOS-20.18	65	Cheng, Ji-Yen	FrC07.1	97
Chen, Mingyi	FrPOS-38.12	127	Cheng, Jun	FrC03.3	96
Chen, Minsi	FrPOS-38.36	128		FrC03.4	96
Chen, Nelson	ThPOS-35.14	78		SaA03.3	129
Chén, Oliver	ThB02.3	46	Cheng, Junhao	FrA15.1	86
Chen, Pin-Hsuan	ThPOS-34.23	76	Cheng, Kai	FrPOS-11.1	106
Chen, Pu	SaD12.2	151	Cheng, Leo K	WeA10.5	3
Chen, Qingqing	FrPOS-11.8	106		WePOS-05.3	16
Chen, Qingquan	FrPOS-12.2	106		WePOS-31.32	32
Chen, Riqing	WeA17.3	6		ThB21.2	52
	FrPOS-12.3	106		ThC09.5	54
Chen, Shali	FrPOS-05.5	103		FrPOS-04.1	103
Chen, Shanguang	ThPOS-20.7	64		FrPOS-33.49	118
	SaB01.6	135		SaB16.4	139
Chen, Sheng	FrPOS-25.5	111		SaC09.3	143
Chen, Shiue-Luen	ThPOS-34.7	75		SaD17.2	152

Cheng, Leo K.	SaC09.1	C	Choi, Dong-Ju	ThPOS-35.31	79
Cheng, Nina	WeA12.2	4	Choi, Eunjin	FrA16.6	86
	ThA15.1	43	Choi, Eunjoo	FrPOS-33.34	117
Cheng, Po-Wei	ThPOS-33.24	73	Choi, Eunpyo	WePOS-32.33	34
Cheng, Sheng-Jen	ThPOS-32.9	70		FrA16.5	86
	ThPOS-32.28	71	Choi, Ga-Young	WePOS-30.31	29
	ThPOS-34.7	75		ThPOS-36.4	79
Cheng, Tzong-Jih	WePOS-31.26	32	Choi, Gwang Jin	FrPOS-27.9	112
Cheng, Yu	FrA07.1	84	Choi, H. Alex	ThPOS-27.5	68
	FrA07.3	84	Choi, Hee-Jin	FrPOS-36.10	122
Cheong, Daniel	FrPOS-08.12	105	Choi, Inyong	WePOS-30.20	29
	FrPOS-33.41	117	Choi, Jin Ho	ThPOS-32.11	70
Cheong, Jason Kin Kit	ThPOS-15.8	62	Choi, Jin Woo	WeA13.3	4
Chericoni, Assia	FrA17.2	87	Choi, Jinwoo	FrPOS-36.34	123
Cherif, Amel	FrA06.6	83	Choi, Jongdoo	WePOS-32.16	33
	FrPOS-20.11	109		WePOS-32.17	33
Chesani, Federico	FrPOS-34.48	120	Choi, Junho	ThPOS-36.22	80
Chessa, Manuela	SaA08.3	131	Choi, Kang-Min	WePOS-30.25	29
Cheung, Jason Pui Yin	ThB04.4	46		WePOS-30.27	29
Cheung, Vincent CK	ThPOS-34.44	77	Choi, Kihwan	ThPOS-07.2	60
Chevallier, Sylvain	ThPOS-33.32	74		ThPOS-32.20	71
Chew, Sing Yian	FrPOS-03.5	103	Choi, Kup-Sze	WePOS-30.28	29
Chhablani, Jay	WeA03.6	1	Choi, Mi-Hyun	FrPOS-38.19	127
	ThB12.4	49	Choi, Min	WePOS-11.10	18
	ThB15.3	50	Choi, Saewon	WePOS-34.4	37
Chi, Chenyang	ThPOS-30.3	69	Choi, Sang Ho	WePOS-31.12	31
Chi, Seung-Wook	ThPOS-36.30	81		ThPOS-35.36	79
Chiang, AnnShyn	WePOS-30.16	29	Choi, SeongJun	FrPOS-33.4	115
Chiang, Kuan-Ting	FrPOS-34.5	118	Choi, Seongwook	FrPOS-37.29	125
Chiao, Mu	SaB09.4	138		FrPOS-37.31	126
Chiappalone, Michela	ThPOS-36.2	79	Choi, Seoyoung	WeC18.6	13
Chiaranello, Emma	SaA07.5	131		FrPOS-20.5	109
	SaD07.4	149	Choi, Seung-Won	WePOS-29.24	27
Chiaravalloti, Nancy	WeC08.3	10	Choi, Soo-In	WePOS-30.31	29
Chiarelli, Antonio	WeA04.3	1		ThPOS-36.4	79
Chiari, Lorenzo	FrPOS-34.28	119	Choi, Sung Hyouk	FrPOS-36.37	124
	FrPOS-34.48	120	Choi, Sung In	FrPOS-33.23	116
Chidozie Shamrock, Nwosu	SaA08.6	131	Choi, Wiha	FrPOS-27.6	112
Chiew, Yeong Shiong	ThA11.2	41	Choi, Yeon Shik	WePOS-29.21	27
Chihara, Yuma	FrB20.1	94	Choi, Young-Seok	FrPOS-33.8	116
Chikai, Manabu	WePOS-29.5	26	Choimaa, Lodoiravsal	SaD18.2	153
Chikaki, Shinichi	ThPOS-33.26	74	Choksatchawathi, Tanut	FrPOS-35.16	121
Chin, Chee Yang	WeA11.2	4	Chon, Ki	WeA17.1	CC
Chin, Kazuo	WePOS-33.42	36		WeA17.4	6
Chin, Richard	WeC05.3	9		ThPOS-24.5	67
	FrB02.4	89		FrC10.1	C
Chinnappan, Rajasekaran	SaC15.5	145		FrC10.2	98
Chinvarun, Yotin	FrPOS-22.2	110		FrC10.3	98
Chiofolo, Caitlyn	ThC11.5	54		FrC10.4	98
Chiou, Yu-An	FrPOS-37.22	125	Choo, Joan	ThPOS-33.38	74
Chiovato, Luca	WeA19.3	7	Choong, Peter	FrPOS-27.12	112
Chipperfield, Andrew John	ThB13.5	49	Chorherr, Philipp	WePOS-31.1	30
	ThC05.4	53	Chou, Chih-Hong	FrPOS-34.44	120
Chirico, Marco	SaA08.3	131	Chouhan, Tushar	ThC18.3	56
Chiu, Chien wen	FrPOS-36.44	124	Choupina, Hugo Miguel Pereira	FrPOS-31.2	115
Chiu, Hung-Wen	ThPOS-35.23	78	Chouvarda, Ioanna	WePOS-23.2	24
Chiueh, Tzi-Dar	ThPOS-33.24	73		ThB19.1	CC
Chkeir, Aly	ThPOS-28.6	69		ThC19.6	57
	FrA17.5	87		FrA10.4	85
	SaB05.6	137		FrPOS-17.7	108
Chladek, Jan	FrPOS-33.1	115		SaA08.5	131
Chlon, Leon	SaA14.5	133		SaD08.1	149
Chmelik, Jiri	ThC15.4	55	Chow, Billy Ho Yeung	FrPOS-28.7	113
	FrC15.1	CC	Chowdhury, Ananda	FrPOS-04.6	103
	FrC15.1	99	Chowdhury, Arijit	ThB20.4	51
Chmyrov, Andriy	ThC03.2	52		FrPOS-05.3	103
Cho, Baek Hwan	ThPOS-32.11	70		FrPOS-30.5	114
Cho, Chang-Hee	FrPOS-33.40	117	Chowdhury, Nahian F.	WeA12.5	4
Cho, Jeong-Hyun	ThPOS-20.1	64	Chriskos, Panteleimon	WePOS-23.9	24
Cho, Je-Yoel	ThB17.1	50		FrB14.5	93
Cho, Jinwoo	FrPOS-37.1	124	Christensen, Christian Bech	SaA04.3	130
Cho, Seonghee	FrPOS-37.29	125	Christensen, Helen	SaB08.6	137
Cho, Sung-Gwi	FrA13.4	85	Christensen, Julie Anja Engelhard	FrA14.3	86
Cho, Sung-Hwan	WeA13.3	4	Christiane, Nday	FrB14.5	93
Cho, Sung-Min	WeC02.1	8	Christodoulidis, Stergios	SaA08.4	131
Cho, Taeheum	ThPOS-35.33	79	Christodoulou, Costas	WePOS-33.35	36
Cho, Yoon Kyung	ThPOS-35.20	78	Chu, Jun-Uk	FrPOS-34.45	120
	FrPOS-35.29	122	Chu, Justin	FrPOS-37.9	124
Choe, Yoonsuck	WeA15.6	5	Chu, Li-An	WePOS-30.16	29
Choi, Ahyoung	FrPOS-37.1	124	Chu, Shi-Wei	WePOS-30.16	29
Choi, Changmok	WeA13.3	4	Chu, Slo-Li	ThC15.6	56

Chua, Terrance	WePOS-31.7	31	Colella, Micol	ThPOS-16.6	63
Chuang, Yao-Li	ThPOS-15.1	62		FrB09.4	91
Chung, Chi-Hsun	ThPOS-05.6	59	Colic, Sinisa	FrPOS-37.9	124
Chung, Chung- Min	ThPOS-34.7	75	Collier, David	FrPOS-33.7	116
Chung, Euisuk	ThPOS-32.15	71	Collinger, Jennifer	ThB06.2	47
	FrPOS-37.27	125	Collins, David J	FrPOS-33.36	117
Chung, Heewon	FrA13.5	85	Collins, Jeremy	FrPOS-35.1	120
Chung, Myung Jin	ThPOS-32.11	70	Colombo, Katia	WeA16.3	6
Chung, Soon-Cheol	FrPOS-38.19	127	Colominas, Marcelo Alejandro	WePOS-02.5	15
Chung, Sung-Taek	WePOS-30.4	28	Colonnelli, Michela	WeC09.2	10
	WePOS-33.48	37	Colopy, Glen Wright	ThA08.1	C
Chung, Wan-Young	SaD13.1	CC		ThA08.2	41
	SaD13.6	151		ThA08.3	41
Chung, Yeongu	SaB10.1	138		FrA03.5	83
Chung, Yueh-Jen	FrC01.2	95	Colrain, Ian	ThPOS-03.1	58
Chutinet, Aurauma	FrC02.1	95		ThPOS-05.5	59
Chytas, Achilleas	WePOS-23.2	24	Combaret, Nicolas	ThPOS-34.36	77
Ciampolini, Paolo	WeC04.3	9		SaD09.6	150
Cibis, Tobias	WeA22.3	8	Comfere, Nneka	FrC17.6	101
	WeC11.1	C	Conejero, Andres	ThPOS-21.8	65
	WeC11.1	11	Conelea, Christine	SaB05.2	136
	WeC11.6	11	Conforto, Silvia	WePOS-18.1	22
Cicchi, Riccardo	WePOS-29.26	27		FrB01.1	88
Cid, Manuel	WeA14.2	5	Cong, Fengyu	WeC05.4	9
Cifuentes Quintero, Jenny Alexandra	SaD05.5	148		ThA05.3	40
Cilia, Federica	WePOS-25.1	25	Connolly, Jack	WeA05.4	2
Cincotti, Febo	ThPOS-20.16	64	Connolly, Mark	FrB01.5	88
Cinel, Caterina	ThPOS-20.21	65		SaC06.4	142
Cinelli, Ilaria	SaB06.1	C	Connolly, Patricia	WeA04.4	2
	SaB06.1	137	Conrad, Nathalie	ThPOS-34.16	76
Cinquin, Philippe	FrPOS-14.4	107	Consejo, Alejandra	FrPOS-33.14	116
Circi, Riccardo	WeC18.3	13	Constantinou, Timothy	SaC13.3	145
Cisotto, Giulia	ThB02.4	46	Constant, Nicholas	ThA20.2	45
	SaA13.1	CC	Constantinou, Ioannis	WePOS-33.35	36
	SaA13.2	133	Conte, Giovanni	WePOS-11.17	18
Cistulli, Peter	ThA14.2	42	Conti, Allegra	FrC12.5	99
Citi, Luca	ThPOS-20.21	65	Conti, Sara	ThPOS-34.46	77
Claes, Johan	FrPOS-28.1	113	Contini, Davide	FrA03.1	82
Claes, Jomme	ThC19.6	57	Contreras-Vidal, José	WeA06.4	2
Claeys, Kurt	FrPOS-38.4	126		WeC06.6	10
Claiborne, John	FrC08.3	97		WePOS-01.6	14
Clark, Alys	ThPOS-34.34	76		ThPOS-20.8	64
	FrPOS-16.5	108	Convertino, Victor	ThB19.3	51
Clay, Ieuan	ThPOS-21.11	65	Conze, Pierre-Henri	SaC19.5	147
	FrPOS-31.4	115	Cop, Christopher P.	ThB16.3	50
Cleary, Kevin	ThB10.1	48		FrB16.3	93
	ThB10.3	48	Corben, Louise Anne	WeA18.3	6
	ThB10.4	48	Corbett, Brian	WeA20.6	7
Cleeren, Evy	FrPOS-38.21	127	Corbetta, Maurizio	WeC02.4	8
Cleland, Ian	ThA19.6	44	Corcuera, Carlos	ThA05.5	40
Clements, Eileen	FrC10.1	98	Cordone, Massimo	FrB20.3	95
Cliff, Ian	FrPOS-16.3	108	Corino, Valentina	WeA21.6	8
	SaB11.1	138	Corna, Andrea	ThPOS-35.18	78
Clifton, David	FrC05.4	96	Cornejo-Cruz, Juan Manuel	FrPOS-37.3	124
Clough, Geraldine Frances	ThC05.4	53	Cornelissen, Veronique	ThC19.6	57
Clough, James	ThPOS-09.3	60	Cornelius, Elrick Lennaert	SaD13.1	151
Cmielewski, Patricia Lucia	ThPOS-32.38	72	Correia, Miguel	ThPOS-33.34	74
Coates, Mark	ThPOS-22.4	66		FrPOS-34.32	119
Coates, Thomas	FrC11.2	98		SaD08.2	149
Coatrieux, Gouenou	SaC08.1	143	Correia, Ricardo	WePOS-15.7	21
	SaC19.5	147	Corsi, Cristiana	WeC09.2	10
Cocchiglia, Arianna	FrC08.5	97	Cortelli, Pietro	FrPOS-15.5	107
Cochener, Béatrice	SaC19.5	147	Cortes, Nelson	ThPOS-17.7	63
Coco, Joseph	WeA19.2	7	Cosentino, Carlo	ThB04.5	47
Coelho Borges, Renata	WePOS-01.3	14	Costa Filho, Cicero F. F.	SaA03.5	129
Coelho, Margarida	ThPOS-28.4	69	Costa Pereira, Jose	ThB15.6	50
Coelho, Teresa	FrPOS-31.2	115	Costa, Eduardo Tavares	ThPOS-12.5	61
Coelli, Stefania	FrB01.3	88	Costa, Joao Pedro	SaA03.5	129
Coemert, Suat	SaB09.1	137	Costa, José Miguel	SaB10.2	138
Coene, Annelies	FrC09.1	97	Costa, Marly G. F.	SaA03.5	129
Coenen, Frans	ThPOS-35.25	79	Costa, Pedro Filipe Fernandes	FrPOS-35.21	121
Coffey, Sam	ThB21.4	52	Costacurta, Julia	FrB01.6	88
Coghill, Ian	FrPOS-07.2	104	Costamagna, Guido	WeA10.3	3
	FrPOS-33.15	116	Costello, Richard	ThPOS-04.6	59
Cohen, Zoe	ThPOS-33.22	73	Costen, Nicholas Paul	FrPOS-33.25	117
Cohen-McFarlane, Madison	WePOS-19.2	23	Cotton, François	FrB02.3	89
Coimbra, Miguel	ThPOS-04.4	58	Couceiro, Ricardo	WePOS-24.3	25
	SaC17.1	146	Coughlan, Garrett	ThB13.3	49
Colachis, Sam	ThB06.2	47	Couillard-Despres, Sebastian	FrPOS-33.38	117
Colamarino, Emma	ThPOS-20.16	64	Coulon, Olivier	FrB19.1	94
Colas, Damien	SaC18.10	146	Courtine, Gregoire	ThPOS-34.46	77

Courty, Justine	ThA08.2	41	Dagdanpurev, Sumiyakhand	SaD18.2	153
	ThA08.3	41	Dahri-Correia, Latifa	FrPOS-29.4	114
Covello, Caterina	ThB04.5	47	Dajani, Hilmi	SaD04.2	148
Coviello, Luigi	ThPOS-28.1	69	Dakpé, Stéphanie	SaB09.5	138
Cowan, Brett	SaA12.4	132	Dakua, Sarada	FrPOS-33.44	118
Coy, Adam	WePOS-11.21	18		FrPOS-38.36	128
Craft, Melissa	FrPOS-37.13	125	Dalakleidi, Kalliopi	ThPOS-26.9	68
Craig, Ashley	WeC18.4	13		FrPOS-37.33	126
Craik, Alexander	ThPOS-20.8	64	D'Aleo, Raina	ThB09.3	48
Credi, Caterina	WePOS-29.26	27	Dalla Gasperina, Stefano	FrC16.1	100
Cree, Michael	WePOS-06.1	16	Dalla Mora, Alberto	FrA03.1	82
Creighton, Catherine	WeA22.1	CC	Damanti, Sarah	WeA14.2	5
	WeA22.1	8	Damerau, Alexandra	SaB07.3	137
	WeA22.4	8	Damialis, Athanasios	FrC17.5	100
Crepaldi Rodrigues, Eliane	FrPOS-20.4	109	Dan, Jonathan	FrPOS-36.12	122
Cresson, Thierry	ThPOS-09.9	60		FrPOS-38.21	127
	FrPOS-11.3	106	Dana, Copot	WeC16.2	12
Creylman, Veerle	FrPOS-28.1	113	Dang, Jie	WePOS-32.25	34
	FrPOS-28.9	113		ThPOS-34.2	75
Cristiano, Alessia	FrPOS-35.25	121	D'Angelo, Egidio	ThPOS-19.5	64
Cristini, Vittorio	ThPOS-15.1	62	D'Angelo, Maria Grazia	FrC16.1	100
Crocioni, Giulia	ThPOS-25.10	67	Dangi, Shusil	ThPOS-32.37	72
Crofford, Leslie J.	SaD07.1	149	Daniel Lopes dos Santos, Filipe	SaB10.2	138
Crone, Nathan E.	ThC09.3	54	D'Anna, Carmen	WePOS-18.1	22
Crupi, Riccardo	ThA20.1	44		FrB01.1	88
Cruz, Aniana	ThA16.3	43	Danner, Patrick	WePOS-31.29	32
Cruz, Ricardo	WeA03.5	1	Dansereau, Richard	WePOS-10.5	17
Cruz, Sónia	FrB03.5	89	Dansingani, Kunal	WeA03.6	1
Cruz, Theresa	WeA06.1	2		SaB09.5	138
Cserey, György	WePOS-34.12	37	Darweesh, Adham	ThPOS-33.1	72
Csoros, John	WePOS-16.2	21	Darwish, Raef	ThPOS-33.36	74
Cuervo, Gabriel	ThA20.1	44	Das Mandal, Shyamal Kumar	WePOS-33.47	37
	ThA20.5	45		WePOS-31.11	31
Cui, Can	WePOS-12.7	19		ThC11.4	54
Cui, Manman	WePOS-11.4	17		FrPOS-16.3	108
Cui, Yan	ThPOS-06.8	59		SaB11.1	138
Cullen, Kathryn R.	FrA01.1	82	Das, Deepan	WePOS-21.2	23
Culmone, Costanza	ThPOS-34.41	77	Das, Pankaj Kumar	WePOS-27.1	25
Cummings, Mark	FrB02.2	89	Daschner, Rosa	FrB09.3	91
Cundell, Jill	ThA19.6	44	Dash, Ashutosh	FrPOS-19.4	109
Cunha, André	ThPOS-34.3	75	Dash, Debadatta	SaA01.1	129
Cunha, Joao Paulo Silva	FrPOS-31.2	115	Datta, Abhishek	FrPOS-23.4	111
Cunningham, Miriam	FrC08.4	97		SaB06.5	137
Cunningham, Paul M.	FrC08.4	97		SaB18.6	140
Cuppens, Kris	FrPOS-28.1	113		SaC06.1	142
	FrPOS-28.9	113	Datta-Chaudhuri, Timir	SaB18.3	140
Curry, Timothy	ThB19.3	51	Daub, Matthias	SaA19.3	135
Curt, Armin	ThPOS-34.19	76	Dauwels, Justin	WeA14.5	5
Curtis, Louis	WeA16.4	6		ThC18.5	56
Curtze, Carolin	ThPOS-01.3	58		ThPOS-33.20	73
Cuyvers, Benoit	FrPOS-38.25	127		FrB18.5	94
Cyberknop, Leandro Javier	WeC17.6	13	Davalli, Angelo	FrPOS-34.48	120
	ThPOS-15.6	62	Davalos, Rafael	FrPOS-32.2	115
	FrPOS-18.6	109	Davaris, Nikolaos	ThPOS-08.3	60
Czanner, Silvester	FrPOS-33.25	117	David, Veronika	FrB20.4	95
Czaplik, Michael	SaB05.5	137	Davidson, Clare Muireann	FrPOS-14.5	107
Czerwin, Benjamin	ThC11.5	54	Davidson, Shaun	ThPOS-17.8	63
Czippelova, Barbora	SaA02.4	129	Davies, Harry	ThC02.6	52

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D. Peterson, Sean	SaD13.3	151		FrA14.1	86
D. Vilar Wanderley, Caroline	WePOS-33.30	36	Davila, Carlos	WePOS-03.2	15
	WePOS-33.33	36	Davis, Jesse	ThPOS-22.3	66
	ThPOS-32.23	71	Dawson, Martin D	WeA04.4	2
	ThPOS-32.25	71	Dawy, Zaher	WeA05.6	2
	ThPOS-32.26	71	De Angelis, Annalisa	WeA09.1	C
	ThPOS-32.40	72		WeA09.2	3
	ThPOS-32.46	72		ThA17.3	44
	ThPOS-33.13	73	de Araújo Barbosa, Alexandre Lucas	WePOS-33.27	36
	FrPOS-29.3	114	de Carvalho, Mamede	ThA01.5	39
d'Antonio-Bertagnolli, John Vito	WeA08.1	2		SaA18.2	134
da Cruz, Lyndon	ThA16.4	43	de Carvalho, Paulo	WePOS-24.3	25
da Silva, Rafael Luiz	ThPOS-26.7	68		WePOS-32.29	34
Dadashi, Farnoosh	WeC01.3	8		FrB08.1	90
	FrPOS-25.3	111		SaD02.2	147
	FrPOS-25.6	111	De Cata, Pasquale	WeA19.3	7
D'Addio, Giovanni	ThA20.3	45			
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	ThA14.1	CC	Degenaar, Patrick	WeA20.6	7
	ThA14.2	42		FrA17.6	87
	ThA14.6	43		FrB13.1	92
	FrA15.3	86		SaB09.6	138
	FrB02.1	CC	Degtyaruk, Oleksij	SaA06.5	130
	FrB02.1	89	Deiss, Steve	WeA04.2	1
	FrB11.4	92	Dejz Diez, Maria Cristina	WePOS-16.6	21
	FrB17.3	93	deKemp, Robert	WePOS-10.5	17
	SaA11.1	132	Dekker, Ronald	FrA21.6	88
de Chillou, Christian	WePOS-30.45	30	del Campo, Félix	FrA02.6	82
De Cooman, Thomas	FrB05.1	89		FrPOS-02.1	102
De Filippi, Giovanna	FrC06.2	97	del Campo, Martin	FrPOS-22.2	110
De Giovanni, Elisabetta	ThPOS-26.4	68	Del Din, Silvia	ThB02.4	46
de Graaf, Albert	ThC08.1	54		ThC20.3	57
De Greef, Bianca	FrPOS-36.36	124		SaA17.6	134
de Groot, Natasja	WeA17.1	6	Del Favero, Simone	WePOS-06.3	16
de Guise, Jacques	ThPOS-09.9	60		WePOS-29.10	26
	FrPOS-11.3	106		WePOS-33.15	35
De Jonckheere, Julien	WeA04.1	1		WePOS-33.21	35
	SaB02.1	135		WePOS-33.43	37
de Jong, Nico	ThB16.1	50		FrB17.4	93
de Jongh, Frans	ThPOS-03.3	58		SaD07.5	149
De la O, Esther	WePOS-32.3	33	Del Ser, Javier	ThA05.5	40
De la Rosa, Ana Maria	FrPOS-32.4	115	Del Vecchio, Alessandro	ThB06.2	47
De Landro, Martina	ThB03.2	46		ThC06.4	53
De Lathauwer, Lieven	WeC05.1	9	Delatycki, Martin	WeA18.3	6
	WeC05.5	9	Delbem, Alexandre	FrPOS-23.4	111
	WePOS-03.3	15	Delcio Parreira, Wemerson	WePOS-01.3	14
De Luca, Alessia	ThB04.5	47	Delgado, Francisco	ThB01.4	45
De Man, Ruben	SaB17.1	140		SaB18.5	140
De Marchis, Cristiano	WePOS-18.1	22	Delgado-Gonzalo, Ricard	ThPOS-30.1	69
De Marco, Bastien	WeA13.2	4	Delisle-Rodriguez, Denis	ThPOS-20.17	65
De Maria, Beatrice	ThB11.1	48	Delivopoulos, Evangelos	ThPOS-19.2	63
	ThB11.3	48	Della Croce, Ugo	ThB13.1	49
	FrPOS-15.5	107		SaC04.6	142
De Maria, Carmelo	FrA17.3	87	Della Penna, Stefania	WeC02.4	8
de Melo Oliveira, Isadora	ThC19.5	57	della Valle, Elena	ThA17.3	44
de Miguel, Pablo	ThA19.2	44	Dell'Agnola, Fabio	ThB20.3	51
De Momi, Elena	WePOS-12.10	19		FrA19.3	87
de Oliveira Francisco, Cristina	FrPOS-05.2	103	Delopoulos, Anastasios	FrA08.3	84
De Oliveira, Jonathan	ThPOS-12.5	61		FrC02.2	96
de Pasquale, Francesco	WeC02.4	8		SaB14.6	139
De Pietri Tonelli, Davide	ThPOS-34.9	75		SaD08.5	149
De Pooter, Jan	WeC09.6	10	DeLuca, John	WeC08.3	10
De Raedt, Walter	SaB04.2	136		ThPOS-19.6	64
De Raeve, Eveline	FrPOS-28.1	113		FrC16.6	100
	FrPOS-28.9	113	Demirel, Omer Burak	FrB12.1	92
De Rosa, Salvatore	ThB04.5	47	Demkó, László	ThPOS-34.19	76
de Sa, Virginia	FrPOS-01.7	102	Dempsey, Sergio C. H.	SaB09.3	138
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	WeC14.1	12	Deng, Chunfeng	FrB18.3	94
	FrC15.6	100	Deng, Hanjie	FrPOS-25.2	111
De Santis, Silvia	WeA12.6	4	Deng, Huihua	FrPOS-06.7	104
De Santis, Valerio	ThPOS-16.6	63	Deng, Muqing	ThA05.2	40
de Souza Costa, Priscila Caroline	ThPOS-32.23	71		ThC14.6	55
De Stefano, Paola	FrPOS-01.6	102	Deng, Zhi-De	WeC10.5	10
de Toledo, Paula	WeA19.6	7		ThA01.4	39
	ThA19.2	44	Denison, Timothy	FrA21.4	88
De Toma, Gianluca	ThA20.5	45	Denman, Simon	ThA15.4	43
De Venuto, Daniela	SaD05.6	148		ThB15.5	50
De Vita, Salvatore	ThB19.2	51	Denzi, Agnese	WeA09.2	3
De Vittorio, Massimo	SaA06.2	130		ThA17.3	44
De Vos, Maarten	ThB02.3	46	Deonarain, Ashley	ThPOS-33.45	75
De Vroey, Henri	FrPOS-38.4	126	Dequen, Gilles	WePOS-25.1	25
De Wel, Ofelie	WePOS-03.3	15		WePOS-33.17	35
	SaB02.6	136	Derakhshan, Amin	WePOS-25.3	25
de With, Peter	FrB03.4	89	Derksen, Harm	ThA05.1	40
	SaB02.5	135	Deruelle, Christine	FrB19.1	94
de Zambotti, Massimiliano	ThPOS-03.1	58	Derungs, Adrian	SaC04.1	142
	ThPOS-05.5	59	Desai, Alakh	SaA03.1	129
Deadwyler, Sam	FrB06.3	90	Desai, Jaydip	ThA16.1	C
Deán-Ben, X. Luis	ThC03.4	53		ThA16.5	43
	SaA06.5	130		FrB16.1	93
Debard, Glen	ThPOS-22.3	66		FrPOS-27.1	112
Debener, Stefan	FrB10.5	91	Desaive, Thomas	WeA16.5	6
	FrPOS-34.42	120		ThPOS-17.8	63
Decenciere, Etienne	SaC19.5	147	Deserno, Thomas	ThPOS-24.6	67
Dechenaud, Marcelline	ThPOS-09.10	60	Deshpande, Gauri	FrA08.5	84
	FrPOS-31.1	115	Deshpande, Sameer	WePOS-33.25	36

Detsch, Rainer	WePOS-29.27	27	Ding, Lei	WeC02.1	C
Dev, Chandar	ThB15.3	50		WeC02.5	8
Dev, Soumyabrata	SaA08.6	131		WePOS-30.1	28
Devanathan, Kanchana	SaD12.5	151		ThA12.1	C
Deviaene, Margot	ThA14.1	42		ThA18.3	44
	ThPOS-03.5	58		ThPOS-36.3	79
	SaB02.6	136		FrPOS-08.12	105
	SaC02.6	141		FrPOS-33.35	117
DeVoe, Don L.	WePOS-13.5	20		FrPOS-33.41	117
Dewald, Julius P. A.	ThA06.3	40		FrPOS-34.33	119
	ThC06.3	53		SaB03.6	136
	FrB02.2	89	Ding, Ming	FrA13.4	85
DeWolf, Aaron	FrC13.4	99	Dinh-Trung, Duc	FrPOS-34.6	118
Dey, Maitreyee	WePOS-08.2	16	Diniz, Anthony	ThPOS-32.23	71
Dhafer, Yasin	FrC16.1	C		ThPOS-32.25	71
Dhyani, Vaibhav	WeA09.3	3		ThPOS-32.26	71
	ThPOS-19.3	64		FrPOS-29.3	114
	FrPOS-08.13	105	Diniz, José Alves	FrA02.1	82
Di Camillo, Barbara	FrC08.5	97	Dinomais, Mickael	WeA09.5	3
Di Flumeri, Gianluca	ThC18.2	56		WeC12.1	11
	FrPOS-01.12	102	Dinstein, Ilan	ThPOS-04.3	58
Di Francesco, Fabio	WePOS-16.1	21		FrPOS-37.8	124
	WePOS-29.6	26	Diodato, Alessandro	ThC21.5	57
	ThA13.1	42	Dionisio, Sasha	ThA15.4	43
	ThB21.3	52		ThB15.5	50
Di Giuliano, Francesca	FrC12.4	99	Diotalevi, Lucien	SaA07.6	131
Di Matteo, Francesco Maria	WeA10.3	3	Diou, Christos	FrA08.3	84
Di Nardo, Francesco	WePOS-17.7	22		FrC02.2	96
	ThPOS-21.12	66		SaD08.5	149
	FrA01.5	82	Dirodi, Matilde	ThA12.5	42
	FrB16.5	93	Dirr, Elliott	SaB18.5	140
	FrPOS-27.15	113	Distler, Thomas	WePOS-29.27	27
Di Pietro, Licia	FrA17.3	87	Diwan, Ashish	ThB04.4	46
Di Poto, Cristina	WePOS-22.3	24	Dixit, Sanjay	SaA19.5	135
Di Rienzo, Marco	WeC13.3	11	DJ, Christopher	WeC14.4	12
	SaC11.1	C	D'Mello, Yannick	ThPOS-23.6	66
	SaD16.1	C		FrPOS-14.2	107
Di Sieno, Laura	FrA03.1	82	Do Trong, Tuan	FrPOS-34.6	118
Di Vece, Chiara	ThPOS-25.10	67	Do, Quan	WeC19.5	13
Dia, Nafissa	SaB02.2	135	Docherty, Paul David	FrA04.1	83
Diacon, Andreas	ThPOS-04.5	58		FrPOS-08.2	104
Diana, Michele	ThB03.2	46	Doclo, Simon	FrB10.1	91
Diane, Soares	FrPOS-35.2	120	Dodd, Stephen	ThB21.4	52
Dias, Paulo	ThPOS-28.4	69	Dotd, Hans-Ulrich	FrPOS-33.38	117
Dias, Sofia Balula	FrA02.1	82	Doessel, Olaf	WePOS-29.4	26
Diaz, Ivan	WePOS-31.5	31		WePOS-32.27	34
Diaz-Chito, Katerine	WeA21.4	7		ThA12.1	CC
Diaz-de-Leon, Victor Abdiel	SaD18.4	153		ThA12.3	42
Dichio, Giancarlo	FrPOS-28.10	113		ThA12.6	42
Dickhaus, Hartmut	WeA19.1	CC		ThC05.3	53
Dickinson, Alexander S.	ThB13.5	49		ThPOS-05.1	59
Dickson, Patricia	ThPOS-14.6	62		ThPOS-34.33	76
Diedrich, Christian	WeC20.5	14		FrB09.3	91
	FrA13.1	85		FrPOS-36.3	122
Diedrich, Mario	FrPOS-13.2	107	Dogan, Özgü	FrA21.2	88
Diener, Lorenz	ThPOS-20.24	65	Dogariu, Mihai	ThC14.3	55
Dietz, Marco	FrPOS-26.3	112	Dogra, Prashant	ThPOS-15.1	62
Dieuset, Gabriel	SaC06.3	142	Doheny, Emer	SaC04.1	CC
Díez de los Ríos, Iván	WePOS-32.18	34		SaC04.5	142
Díez Pomares, Jorge	WeC01.5	8	Doherty, Aiden	ThPOS-34.16	76
	WePOS-29.11	27	Doi, Kouki	WePOS-29.5	26
Diez, Jose Luis	FrPOS-30.2	114		WePOS-29.12	27
Dijk, Derk-Jan	ThPOS-21.1	65		WePOS-34.15	38
Dillenbourg, Pierre	FrPOS-27.13	112	Doig, Alexa	WeC19.5	13
Diller, Eric	ThPOS-33.35	74	Dokos, Socrates	WeC10.1	C
Dils, Christian	FrPOS-33.18	116		WeC10.6	11
Dimitri, Paul	ThB08.3	48		ThA09.1	C
D'Imperio, Mariapaola	FrPOS-29.5	114		ThA09.4	41
Ding, Eric	WeA17.4	6		ThB04.1	CC
	FrC10.2	98		ThB04.4	46
	FrC10.3	98		ThPOS-15.5	62
Ding, Guangxin	FrPOS-36.11	122		ThPOS-36.5	79
Ding, Jie	FrB12.5	92		ThPOS-36.6	80
Ding, Kan	ThPOS-26.3	68		SaD09.2	150
Ding, Keya	FrPOS-09.11	106	Dolesch, Lukas	FrB20.4	95
			Doll, Patrick W.	FrB07.1	CC
				SaC07.3	143
			Doman, Caitlin	FrPOS-20.16	110
			Dominguez, Enrique	WePOS-12.7	19
			Dominguez, Victoria	FrB03.3	89
			Dong, Minghao	WeA18.5	6

Dong, Qunxi	FrB19.2	94	Duggirala, Mayuri	FrA08.5	84
Dong, Tao	WePOS-15.6	21	Duignan, Ciara	FrA20.3	88
Dong, Xu	ThPOS-11.4	61	Duits, Annelien	FrPOS-36.36	124
Doniec, Rafal	WePOS-33.19	35	Dunnin, Songphon	SaD16.6	152
Donisi, Leandro	ThA20.3	45	Dümpelmann, Matthias	WePOS-31.40	32
	ThPOS-25.3	67		ThPOS-02.2	58
Donnan, Luke	ThC16.5	56	Dunkel, Alexander	ThPOS-09.10	60
Donnelley, Martin	ThPOS-32.38	72	Dunn, Eleanor	SaA09.4	131
Dopierala, Cindy	FrPOS-14.4	107	Dunn, Jessilyn	SaC08.1	C
Doppelhammer, Nikolaus	ThPOS-34.24	76	Dunne, Eoghan	FrPOS-34.36	120
D'Orazio, Lina	ThPOS-33.19	73	Dunne-Willows, Michael	SaA17.6	134
Dorfmann, Luis	SaB06.1	137	Duong, Dat	SaC15.4	145
Doron, Maeva	FrPOS-30.7	114	Duong, Luc	SaA19.1	134
Dorosz, Agata	FrPOS-33.43	117		SaD11.5	151
	FrPOS-35.7	120	Duong, Thuy	WePOS-29.35	28
Dorothy, Bulas	FrB19.5	94		WePOS-32.26	34
Dos Santos Canas, Liane	WeA16.3	6		ThPOS-34.10	75
dos Santos, Romilda Prado	WePOS-13.3	20		ThPOS-34.11	75
Dotan, Mae	WePOS-27.5	25		ThPOS-34.18	76
Doucet, Mélanie	FrPOS-38.23	127		ThPOS-36.27	81
Doudican, Benjamin	ThPOS-36.3	79		FrPOS-34.38	120
Dougherty, Darin	ThPOS-17.4	63		FrPOS-35.12	121
Dougherty, Edward	ThC09.6	54		FrPOS-35.13	121
Dougherty, Maximilian	FrC14.4	99		FrPOS-38.27	128
Douglas, Tania S	FrPOS-09.7	105	DuPlessis, Adre	SaD02.3	147
Douloudi, Marilina	FrPOS-03.3	103	Dupré, Luc	FrC09.1	97
Doyle, Gordon	WePOS-23.4	24	Durães, João	WePOS-24.3	25
Doyle, Ian	ThPOS-30.6	69	Durand, Dominique	ThPOS-36.15	80
Doyle, Julie	FrPOS-34.7	118	Durandau, Guillaume	ThB16.3	50
Dragomir, Andrei	ThC18.1	CC		FrB16.3	93
	ThC18.1	56	Durand-Dubief, Françoise	ThB15.2	50
	ThC18.4	56	Durgin, Natalie	FrPOS-08.7	104
	FrPOS-22.7	110	During, Emmanuel Hossein	ThA14.3	42
Drahansky, Martin	ThPOS-09.6	60	Durisin, Martin	FrB10.6	91
Draicchio, Fulvia	WePOS-16.7	22	Dusseldorp, Joe	WeA06.2	2
Drake, James	ThPOS-33.35	74	Dutta Choudhury, Anirban	WePOS-21.2	23
	ThPOS-33.45	75		FrPOS-04.6	103
	SaD16.2	152		FrPOS-15.4	107
Drakulic, Budimir	WePOS-30.43	30		FrPOS-19.4	109
Dravid, Anusha	WePOS-29.30	28		SaA11.3	132
Dreier, Mark	FrPOS-20.8	109	Dutta, Abhishek	ThPOS-36.16	80
Dremel, Kilian	ThA03.1	39		ThPOS-36.18	80
Drescher, Christian	WeA17.2	6	Dutta, Ashish	WePOS-20.2	23
Drews, Joshua	ThA19.1	44	Dutta, Gaurab	WePOS-16.2	21
Drews, Paul	WeA19.6	7	Duval, Guillaume	WePOS-05.4	16
Drissi, Nidal	FrC08.2	97	Duyschaever, Mattias	WeC09.6	10
Drobinsky, Sergey	FrPOS-27.2	112	Dwivedi, Amit Krishna	SaC17.5	146
Drogoul, Fabrice	FrPOS-01.12	102	Dwivedi, Sanjay Kumar	ThC06.2	53
Dron, Noramon	WeC05.3	9	Dwyer, Terence	ThPOS-34.16	76
	FrB02.4	89			
Droste, Wiebke	WePOS-28.2	26			
	FrB21.1	95			
Du, Bin	SaC15.6	145			
Du, Chi	WePOS-11.7	18	E		
Du, Jiale	WeA18.6	6	E. C. Silva, Samuel	WePOS-33.27	36
	ThPOS-20.3	64		ThPOS-32.46	72
	ThPOS-20.20	65	Earley, Eric J	ThA06.6	40
	SaA01.5	129	Ebel, Juliane	WePOS-05.2	16
Du, Jian	WePOS-13.9	20	Eberl, Petra	SaA10.2	131
	FrC01.4	95	Eck, Ute	SaB01.1	135
Du, Lei	ThPOS-02.6	58	Edamoto, Yoshihiro	SaA15.4	133
Du, Peng	ThC09.5	54	Eden, Uri	ThPOS-17.4	63
	ThPOS-10.3	61		SaA14.3	133
	FrPOS-09.1	105	Edlund, David	FrC15.3	100
Du, Tianming	WePOS-10.1	17	Edo, Yuki	ThC15.5	55
	WePOS-10.4	17	Edstrom, Erik	FrB03.4	89
Du, Wenjing	FrPOS-06.10	104	Edward, Deepak	ThA04.2	40
	FrPOS-28.13	113	Edwards, Natalie	ThC21.2	57
Du, Yuhui	FrC15.2	100	Eftestøl, Trygve	ThB05.2	47
Duarte, Carlos Henrique	FrB17.6	94	Egger, Jan	ThPOS-30.4	69
Duarte, Catarina	WePOS-24.3	25		SaC19.2	147
Duarte, Gonçalo	WePOS-24.3	25	Egia Bizkarralegorra, Ainara	WePOS-29.26	27
Duchesne, Luc	ThB03.6	46	Eguchi, Kana	WePOS-33.42	36
Duda, Niklas	WePOS-19.9	23		ThPOS-25.6	67
Dudek, Dariusz	ThPOS-11.2	61	Eguren, David	WeA06.4	2
Dudley, Sandra	WePOS-08.2	16	Ehara, Yoshito	WePOS-33.46	37
Duffy, Frank	WeA05.4	2	Ehrenberg, Naphtaly	FrC16.4	100
Duggan, Oisín	FrA01.3	82		FrPOS-20.6	109
Duggento, Andrea	WePOS-11.17	18	Ehrenfeld, Jesse M.	WeA19.2	7
	FrC12.2	98	Eiber, Matthias	WePOS-11.26	19
	SaC05.1	142	Eichenlaub, Manuel M.	WeA16.2	5
			Eickner, Thomas	WePOS-14.5	20

Eijsvogel, Michiel	ThPOS-03.3	58	Eskofier, Bjoern M	WeA18.1	6
Eisen, Eric	SaD10.1	150		WeC11.1	11
Eisen, Erik Sul	FrPOS-22.8	110		FrPOS-38.26	127
Eisenmenger, Laura	WeC03.3	8	Esiamian, Mohammadjavad	FrA16.1	86
Eisert, Peter	FrPOS-33.30	117	Esiampanah Sendi, Mohammad Sadegh	FrC17.3	100
Eixarch, Elisenda	SaA16.5	134	Esmaeili, Nazila	ThPOS-04.4	58
Eklund, Anders	WeC12.5	11		ThPOS-08.3	60
El Ansari, Walid	ThPOS-33.1	72	Esmailbeigi, Hananeh	ThPOS-25.10	67
El Fakhri, Georges	FrB12.3	92	Espinoza, Flor	WePOS-02.3	14
El Haddad, Milad	WeC09.6	10	Esposito, Dario	FrC10.5	98
El Hadji, Sara	WePOS-12.10	19	Esslinger, Dominik	SaD15.1	152
El Sayed Hussein Jomaa, Mohamad	WePOS-02.5	15	Estepp, Justin Ronald	FrA02.3	82
Elazab, Ahmed	WeA12.2	4	Esteves, Inês	SaB01.3	135
	WeA16.6	6	Estrada, Luis	ThC11.1	54
	SaC12.5	144	Estrada, Marvin	FrPOS-35.2	120
El-Azizy, Ahmed R. M.	SaC15.1	145	Eswaran, Hari	ThB03.3	46
Elbattah, Mahmoud	WePOS-25.1	25	Etemad, S. Ali	WePOS-03.1	15
	WePOS-33.17	35		WePOS-04.7	15
Elbaz, Mohammed S.M.	FrA12.1	85	Etienne-Cummings, Ralph	FrPOS-35.22	121
Eldeib, Ayman M.	WePOS-22.4	24	Etkin, Amit	FrA02.2	82
Elena, Mar	WePOS-32.18	34	Evangelista, Simone	ThA20.3	45
Elfadel, Ibrahim (Abe)	WePOS-04.6	15	Evans, Mihailo	FrPOS-35.32	122
	FrB13.4	92	Evers, Judith	ThPOS-17.13	63
El-Gohary, Mahmoud	ThPOS-01.3	58	Everson, Luke	FrC02.5	96
Eliadou, Eliana	WePOS-33.35	36	Evora, Arlette	FrPOS-27.5	112
Elias, Dante	FrPOS-05.4	103	Ewen, Joshua	WeA19.1	6
Elias, Leonardo	FrPOS-20.4	109	Exarchos, Themis P.	ThB19.2	51
El-Imad, Jamil	WeA05.6	2		FrPOS-37.40	126
Elkholy, Amr	FrPOS-29.2	114	Eyigoz, Elif	SaB08.4	137
Elle, Ole Jacob	FrPOS-14.3	107	Ezaki, Kodai	ThPOS-32.22	71
Ellerau, Mona	FrPOS-30.10	114	Ezaki, Takayuki	WePOS-32.4	33
Ellinwood, Matthew	ThPOS-14.6	62			
Elliott, Amy	WePOS-21.6	24	F		
Elliott, Jonathan	ThPOS-26.10	68	F. de Souza, Thalles M.	ThPOS-32.40	72
Elliott, Mark	ThB16.5	50	F.M.L. de Queiroz, Erik F. M. L.	ThPOS-32.46	72
Ellis, Charles	FrC17.3	100	Fabbri, Alan	ThB04.1	46
Ellis, Christopher	FrPOS-37.41	126	Fabbri, Daniel	WeA19.2	7
Elmi Terander, Adrian	FrB03.4	89	Fabius, Timon	ThPOS-03.3	58
Elola, Andoni	ThB05.2	47	Fabregate Fuente, Martín	WeC17.6	13
	ThB05.6	47	Facchinello, Yann	SaA07.6	131
Elsaid, Nahla M H	ThPOS-14.2	62	Facchinetti, Andrea	WePOS-06.3	16
Elsharkawy, Ahmed	WePOS-29.13	27		WePOS-29.10	26
Emami, Ali	WePOS-12.14	20		WePOS-33.15	35
	SaC12.1	144		WePOS-33.21	35
Embleton, Nicholas	FrPOS-30.8	114		WePOS-33.43	37
Emdin, Michele	WePOS-09.3	17		FrB17.4	93
	FrPOS-09.2	105		SaD07.5	149
Emili, Luca	FrA09.2	84	Fadda, Matteo	WeA21.3	7
Emily, Blum	FrB19.5	94	Fadini, Gian Paolo	FrC08.5	97
Emnéus, Jenny	ThPOS-34.3	75	Faes, Luca	ThB11.1	48
Eng, Lim Siew	ThPOS-33.38	74		FrB05.3	89
Eni, Marina	FrPOS-37.8	124		FrC05.3	96
Ennis, Daniel	WeA11.5	4		FrPOS-15.1	107
Enomoto, Umi	WePOS-31.22	31		SaA02.1	C
Enosawa, Shin	SaA15.4	133		SaA02.4	129
Enriquez, Angel	WePOS-31.23	31		SaB14.1	CC
	SaD03.2	148		SaB14.3	139
Eom, Heesang	ThC13.2	55	Faghih, Rose T.	WeA02.3	1
	ThPOS-32.47	72		WeC06.1	C
	ThPOS-35.32	79		WeC06.3	9
Eom, Su Hong	SaA17.4	134		WePOS-01.1	14
Eom, Taesik	WePOS-29.29	27		WePOS-06.2	16
	ThPOS-35.10	78		SaC01.3	141
Eom, Youngsub	ThA15.5	43		SaD07.1	149
Er, Tow Peh	FrPOS-03.5	103	Faim, Fátima	ThPOS-28.4	69
Eriksson, Sven	FrPOS-28.2	113	Faini, Andrea	SaC02.3	141
Erning, Wihardjo	SaD12.3	151	Faisal, A. Aldo	SaB01.4	135
Ernst, Lisa	FrA15.2	86	Faisan, Sylvain	SaC12.3	144
Ersoz, Alpaslan	FrPOS-23.5	111	Fakhar, Sina	WePOS-30.43	30
Escalona-Vargas, Diana	ThB03.3	46	Fakhoury, Farris N	WeC08.3	10
Escalona-Vargas, Diana Irazú	SaA08.2	131		FrC16.6	100
Eschenfeldt, Patrick	FrB08.4	90	Falcao, Alexandre Xavier	WeC12.3	11
Escobedo Cousin, Enrique	FrA17.6	87	Falk, Tiago	ThB20.6	51
Escudero, Javier	WeC05.3	9		SaD13.2	151
	ThC05.1	53	Fallahi, Alireza	WePOS-02.2	14
	FrB02.4	89	Faller, Josef	SaA01.2	129
Esfahani, Ehsan	WeA08.5	3	Fallet, Sibylle	WeA13.2	4
	SaA16.1	CC	Fallica, Piero Giorgio	WeA04.3	1
	SaA16.2	134	Falou, Omar	SaC15.2	145
Esfandiarpoor, Reza	WePOS-11.30	19			
	SaD19.6	153			

Falzon, Owen	FrB02.6	89	Ferdinando, Hany	SaA02.5	129
Fan, Chengcheng	WePOS-07.4	16	Fernandes, Beatriz	WePOS-13.3	20
Fan, Di	WeA12.5	4	Fernandes, José Maria	FrPOS-31.2	115
Fan, Jiamin	ThPOS-03.4	58	Fernandes, Kelwin	SaC19.4	147
Fan, Wenliang	ThPOS-17.10	63	Fernandes, Leandro A. F.	FrB15.1	93
Fan, Xiaobiao	FrPOS-12.2	106	Fernandes, Paulo	ThPOS-17.9	63
Fan, Xin-An	SaA01.6	129	Fernandes, Sofia Rita	ThA01.5	39
Fan, Ziling	WeA15.3	5		SaA18.2	134
Fanelli, Andrea	FrPOS-19.6	109	Fernandez Aleman, Jose Luis	WePOS-20.1	23
	SaA04.4	130		WePOS-23.3	24
Fang, Luping	WePOS-33.2	34		FrB08.3	90
Fang, Peng	ThPOS-06.1	59		FrPOS-37.32	126
	FrC10.6	98	Fernandez, Javier	WePOS-23.4	24
Fang, Shen	SaB01.5	135	Fernandez-Llatas, Carlos	WeA19.3	7
Fang, Wai-Chi	WePOS-03.4	15		WePOS-32.29	34
	FrPOS-08.8	105	Fernandez-Luque, Luis	ThB08.1	C
	SaD06.4	149		ThB08.1	47
Fang, Yuqi	ThPOS-33.2	72	Ferrante, Simona	WeA14.2	5
Fanjul-Vélez, Félix	ThPOS-34.43	77	Ferrari, Paul	SaA01.1	129
Farabbi, Andrea	ThA16.1	43	Ferrarini, Alessia	WePOS-22.3	24
Faraguna, Ugo	ThB11.4	49	Ferrario, Damien	SaA02.2	129
	SaD02.4	147	Ferreira, Carlos	SaC17.1	146
Farajidavar, Aydin	WePOS-15.4	21	Ferreira, Carlos Manuel Santos	WePOS-33.28	36
	ThPOS-24.9	67	Ferreira, Lino	FrA07.1	CC
	SaD13.4	151		FrA07.4	84
Farazmand, Meer	ThA13.5	42	Ferreira, Placid	SaA16.1	133
Farcito, Silvia	SaB09.2	138	Ferrera, Conrado	WePOS-31.43	32
Farella, Nicola	ThA16.1	43	Ferrer-Lluis, Ignasi	FrPOS-17.2	108
Farhadi, Hanieh	FrB07.4	90		FrPOS-17.4	108
Faria, Paula Cristina	SaC06.1	142	Fetzner, John	FrPOS-30.4	114
Faria, Sergio	FrB03.3	89	Feucht, Martha	FrB05.2	89
Farias de Oliveira, Flávia	ThPOS-32.46	72		FrB05.3	89
Farid, Mehajabeen	ThPOS-33.36	74	Fey, Nicholas	FrB16.1	CC
Farina, Dario	ThB06.2	47		FrPOS-27.14	112
	ThB06.5	47	Ficarelli, Luca	SaD04.1	148
	ThC06.4	53	Fici, Alessandro	WeC18.3	13
	ThPOS-20.16	64	Fietze, Ingo	ThB21.4	52
	FrB06.5	90		FrC11.1	98
	SaB18.1	140		FrC11.3	98
Farivar, Reza	SaD03.5	148		SaA11.4	132
Farnebo, Simon	ThPOS-33.7	73		SaD18.5	153
	FrC13.3	99	Fifer, William P.	WePOS-21.6	24
Farokhniaee, AmirAli	ThB18.3	51		FrA14.2	86
Farooqi, Abdul Razzaq	WePOS-31.34	32	Figarola, Maria	ThPOS-17.12	63
Farrell, Francesca	WeA04.1	CC	Figueiredo, Germano R.	FrPOS-29.1	114
	WeA04.4	2	Figueiredo, Patricia	SaB01.3	135
Farrugia, Gianrico	WeA10.5	3	Figueroa, Rosa	SaB08.1	137
	ThPOS-10.3	61	Filbin, Michael	WeC17.1	12
	FrPOS-09.1	105	Filipe, Jose	FrB03.3	89
Fasola, Jemina	ThA06.5	40	Filippidis, Aristotelis	FrPOS-19.6	109
Fasoula, Angie	ThB03.6	46	Filos, Dimitrios	ThC19.6	57
Fatima P. S. Moreira, Maria	SaB10.2	138		FrPOS-17.7	108
Fato, Marco Massimo	SaC12.4	144	Fineman, Richard	FrPOS-38.32	128
Fedorin, Illia	FrPOS-36.4	122	Fink, Mathias	ThC12.3	55
Feerick, Niamh	ThA12.1	42	Finke, Andrea	WePOS-30.6	28
Fei, Xiaoyan	WePOS-11.22	18		ThPOS-35.38	79
Fekri Azgomi, Hamid	SaC01.3	141	Finkelstein, Joseph	ThPOS-29.2	69
	SaD07.1	149	Finzel, Bettina	ThPOS-32.4	70
Felblinger, Jacques	WePOS-30.45	30	Fiocchi, Serena	SaA07.5	131
Feldheiser, Aarne	FrA19.1	87		SaD07.4	149
Felfeliyan, Banafsheh	SaB19.5	141	Fioretti, Sandro	WePOS-17.7	22
Fels, Sidney	SaD10.1	150		ThPOS-21.12	66
Felton, Christopher	ThB19.3	51		FrA01.5	82
Feng, Dagan	FrA15.5	86		FrB16.5	93
Feng, Jun	SaA19.4	135		FrPOS-27.15	113
Feng, Linqing	ThPOS-20.10	64	Fiorini, Laura	ThPOS-28.1	69
Feng, Mengling	WePOS-11.5	17		FrC10.5	98
	WePOS-15.8	21	Firfilionis, Dimitris	FrA17.6	87
Feng, Tiantian	ThPOS-01.2	58	Firth, Josiah	ThPOS-36.33	81
Feng, Xiaoreng	ThPOS-36.37	81	Fischer, Georg	ThC04.3	53
Feng, Xujian	ThB05.3	47		ThC04.4	53
Feng, Yao-Min	ThPOS-05.6	59	Fischer, Peer	FrA16.6	86
Feng, yaxing	WePOS-21.1	23	Fischi Sommer, Leonardo	FrPOS-28.5	113
Feng, Ying	FrPOS-05.5	103	Fishlock, Sam	WePOS-29.34	28
Feng, Yong	WeA18.2	6		SaA07.1	130
Feng, Yuan	FrPOS-36.23	123	Fitzgerald, Zachary	ThC09.3	54
Feng, Zhicheng	ThPOS-17.14	63		FrB01.6	88
Feng, Zhouyan	ThPOS-19.4	64	Fitzpatrick, Aidan	SaC03.3	141
	ThPOS-36.11	80	Fleischer, Monika	FrB07.2	90
	ThPOS-36.12	80	Fleming, John	FrPOS-22.10	110
	SaD06.3	149		SaA09.4	131

Fletcher, Richard Ribon	WeA13.5	5	Fraser, John F.	FrPOS-13.1	107
	ThB21.1	CC	Fred, Ana	FrA04.5	83
	ThB21.5	52	Fredricks, Michiru	FrPOS-35.22	121
Fleury, Anthony	WePOS-18.5	22	Fredriksson, Ingemar	SaC11.5	144
Flood, Matthew W.	FrPOS-03.1	102	Freestone, Dean Robert	WeA09.4	3
	SaC14.6	145		ThPOS-16.3	62
Flores, Christopher A.	SaB08.1	137	Frenz, Martin	FrPOS-33.50	118
Flores, Kevin M.	FrPOS-05.4	103	Frerichs, I.	ThA11.3	41
Flor-Henry, Pierre	FrPOS-37.9	124	Frese, Hanna	FrPOS-19.1	109
Floris, Roberto	FrC12.4	99	Frey, Norbert	SaB03.1	136
Fojtik, Karel	ThPOS-24.4	67	Fridman, Gene	FrA18.2	87
Folkert, Michael	ThB19.6	51	Friebe, Michael	WePOS-19.1	22
Fonseca Alva, Angel	FrPOS-32.4	115		ThA21.1	C
Fonseca-Pinto, Rui	FrB03.3	89		ThA21.3	45
Fontana, Francesco	ThC21.4	57		ThB10.5	48
Fontana, Sara	ThPOS-16.6	63		ThPOS-04.4	58
Fontanarosa, Davide	WePOS-11.29	19		ThPOS-08.3	60
Fontecave-Jallon, Julie	ThPOS-24.4	67		ThPOS-34.39	77
	FrPOS-14.4	107		FrC20.1	C
	SaB02.2	135		FrC20.1	101
	SaC18.10	146		FrC20.2	101
Foo, Ji Jinn	ThPOS-15.8	62		FrC20.4	101
Foo, Ming Jeat	WePOS-17.2	22		FrC20.5	101
Fookes, Clinton	ThA15.4	43		FrPOS-30.10	114
	ThB15.5	50		SaA12.1	CC
	SaC11.3	144		SaA12.2	132
Forjan, Mathias	FrB20.4	95		SaA15.5	133
	FrPOS-16.4	108		SaA15.6	133
Forner-Cordero, Arturo	ThC06.6	54		SaD10.2	150
	FrPOS-28.5	113		SaD15.4	152
Forouzanfar, Mohamad	ThPOS-03.1	58		SaD19.3	153
	ThPOS-05.5	59	Frieboes, Hermann	WeA16.4	6
Forrest, Gail F.	WeC08.2	10	Fried, Shelley	ThB01.5	46
	WeC08.3	10	Friedenberg, David	ThB06.2	47
	WeC08.4	10	Friedl, Karl	WeC11.4	11
Forrest, Gail F.	WeC08.1	CC	Friedrich, Christoph M.	WePOS-11.12	18
Forte, Giancarlo	WePOS-31.20	31		WePOS-27.7	26
Fortier, Marielle V.	WePOS-10.2	17		ThC15.1	55
Foschum, Florian	ThA10.1	41		SaB08.2	137
Fotiadis, Dimitrios I.	WePOS-16.4	21	Frikha, Mohamed-Ridha	FrPOS-14.4	107
	WePOS-23.6	24	Fritscher, Karl	FrA04.4	83
	WePOS-31.38	32	Froemke, Johannes	WePOS-27.7	26
	ThB19.2	51	Froese, Vera	WePOS-31.31	32
	FrPOS-18.1	108	Fu, Huazhu	WePOS-11.3	17
	FrPOS-18.2	108	Fu, Michael J.	WeA06.3	2
	FrPOS-37.40	126		WeA06.5	2
	FrPOS-37.41	126	Fu, Michael J.	WeA06.1	CC
	SaA12.6	132	Fu, Qiushi	FrA20.4	88
	SaA15.1	CC	Fu, Xingyu	FrA21.5	88
	SaA15.1	133	Fu, Ying	SaD12.2	151
	SaD09.1	CC	Fu, Zening	FrC15.2	100
	SaD09.4	150	Fuchs, Mirco	SaB05.1	136
	SaD11.1	C	Fuentealba, Patricio	SaA05.5	130
	SaD11.1	150	Fuenzalida-Werner, Juan Pablo	ThC03.2	52
	SaD11.2	150	Fuh, Manka M.	WeA10.2	3
Fouefack, Jean-Rassaire	FrPOS-09.7	105	Fuhrman, Nicole	ThA16.5	43
Fourie, Pieter Rousseau	WePOS-27.2	25	Fujie, Tatsuro	FrPOS-35.20	121
Fox, Kate	FrPOS-35.32	122	Fujihara, Ryo	ThPOS-36.39	81
Foxall, Tom	WePOS-30.43	30	Fujii, Junya	ThPOS-36.32	81
Fragkiadakis, Emmanouil	ThPOS-26.9	68	Fujii, Kimihito	ThPOS-17.3	63
Franc, Sylvia	FrPOS-30.7	114	Fujii, Minoru	FrA04.3	83
Franceschini, Giordano	FrPOS-28.10	113	Fujii, Nobutada	ThPOS-09.5	60
Francis, Joseph Thachil	WeC06.4	9	Fujimori, Toshihiko	WePOS-12.13	20
Francis, Peter	SaD16.2	152	Fujimoto, Hiroshi	WePOS-29.12	27
Francis, Sunday	SaB05.2	136		WePOS-34.15	38
Francois, Clementine	FrA11.2	85	Fujinuma, Takuya	ThB16.4	50
Franke, Jörg	ThPOS-15.3	62	Fujita, Hiroshi	ThPOS-32.34	71
Franke, Robert	WeA09.6	3		ThPOS-32.35	72
Franklin, Daniel R.	FrPOS-10.3	106	Fujiwara, Daichi	WePOS-34.25	38
Franklin, David W.	ThA06.1	40	Fujiwara, Koichi	ThPOS-34.35	77
	ThA06.2	40		FrB08.5	91
	ThB06.4	47	Fujiwara, Koji	ThPOS-34.12	75
	FrA06.4	83	Fujiwara, Tomoko	ThA17.2	43
	FrPOS-20.3	109	Fukase, Miyabi	ThA21.5	45
Franklin, Sae	ThA06.1	40	Fukaya, Aoi	WePOS-31.14	31
	ThA06.2	40	Fukuda, Keiko	WeC14.5	12
	ThB06.4	47		WePOS-32.31	34
	FrPOS-20.3	109	Fukuda, Kohei	SaD16.4	152
Frantzidis, Christos	WePOS-23.9	24	Fukuda, Naoki	ThPOS-20.23	65
	FrB14.5	93	Fukuda, Tetsuya	SaC16.1	145
Franze, Kristian	SaA09.1	131			

Fukuhara, Shinichi	WePOS-32.14	33
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Fukuma, Yuki	WePOS-31.21	31
Fukumori, Kosuke	ThPOS-35.35	79
	FrPOS-37.14	125
Fukumoto, Yuto	WePOS-31.2	30
	FrPOS-34.9	118
	FrPOS-34.10	118
Fukushi, Kenichiro	SaC04.3	142
Fulham, Michael	FrA15.5	86
Fulthorp, Elias Joseph	WePOS-33.5	35
Fumiaki, Iwase	WePOS-31.8	31
Funamoto, Kiyoe	ThA21.5	45
Fuoco, Roger	WePOS-29.6	26
	ThB21.3	52
Furui, Akira	ThB06.6	47
Furukawa, Ryo	WePOS-30.46	30
	FrPOS-33.31	117
	FrPOS-33.32	117
Fürweger, Christoph	SaD10.3	150
Fylstra, Bretta	ThPOS-21.13	66

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G. de Moura, Camila	ThPOS-32.46	72
Gabaldon, Felipe	ThPOS-15.6	62
	FrPOS-18.6	109
Gaber, Timo	SaB07.3	137
Gadaleta, Matteo	ThB02.4	46
Gaddipati, Divya Jyothi	SaA03.1	129
Gagnon-Turcotte, Gabriel	SaB04.3	136
Gaiduk, Maksym	SaA11.2	132
Gaitan-Gonzalez, Mercedes	SaC02.5	141
Gajecki, Tom	FrB18.6	94
Gakopoulos, Sotirios	FrPOS-35.17	121
	FrPOS-38.25	127
Galán de Isla, Carmen	WeA14.2	5
Galbiati, Susanna	WeA16.3	6
Gale, John	WeC06.5	10
	WeC18.5	13
	ThB18.4	51
Galka, Andreas	WePOS-01.5	14
Gallagher, Joseph	WePOS-23.6	24
Galliakis, Michael	ThPOS-30.5	69
Galna, Brook	ThC20.3	57
Gamba, Humberto	WePOS-27.9	26
	FrPOS-31.3	115
	FrPOS-28.8	113
Gan, Chee Wee	FrPOS-28.8	113
Ganapathy, Nagarajan	SaD12.5	151
Ganapathy, Sriram	SaB14.2	139
Ganatra, Dev	FrA18.5	87
	FrB10.6	91
Gandolla, Marta	FrC16.1	100
Gandotra, Neeru	SaA07.4	131
Ganegoda, Harsha	ThC20.1	57
Ganesan, Kavitha	WePOS-10.3	17
	ThPOS-11.1	61
Ganesan, Kumaravelu	FrPOS-35.32	122
	FrPOS-36.22	123
Ganesan, Prasanth	WePOS-11.1	17
	FrC18.2	101
Ganglberger, Wolfgang	FrPOS-36.17	123
Gao, BoYu	SaA01.3	129
Gao, Fei	SaC03.1	141
	SaC03.2	141
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Gao, Geng	SaC16.4	146
Gao, Mengdi	ThB12.5	49
	SaB17.4	140
	SaC03.1	141
Gao, Shenghua	ThPOS-32.14	71
Gao, Xiangzhen	ThPOS-20.19	65
Gao, Xiaorong	SaB14.5	139
Garaci, Francesco	FrC12.4	99
Garan, Hasan	SaB15.1	139
Garbarini, Erica	WeC08.4	10

Garcia Lopez, Elisabet	WePOS-23.4	24
Garcia Lopez, Irene	SaC11.6	144
Garcia Martinez, Hector	WePOS-15.1	21
	FrPOS-33.13	116
García Perez, José Vicente	WeC01.5	8
	WePOS-29.11	27
Garcia Ricardez, Gustavo Alfonso	FrA13.4	85
Garcia Van der Westen, Roberto	WePOS-19.8	23
Garcia, Maria	FrPOS-09.5	105
	SaC05.5	142
Garcia-Alias, Guillermo	FrPOS-20.14	110
Garcia-Aracil, Nicolas	WeC01.5	8
	WePOS-29.11	27
García-Berná, José Alberto	WePOS-20.1	23
	WePOS-23.3	24
	FrPOS-37.32	126
Garcia-Constantino, Matias Fernando	ThA19.6	44
Garcia-Garcia, Martha G.	WePOS-30.38	30
Garcia-Gonzalez, Maria-Teresa	SaB02.3	135
García-Hernández, Manuel	WePOS-20.1	23
García-Mateos, Ginés	WePOS-20.1	23
	FrB08.3	90
	FrPOS-37.32	126
Garcia-Molina, Gary Nelson	FrB14.2	92
García-Ruiz, Ashmed-Claudio	SaB02.3	135
García-Sánchez, Tomás	WeA09.2	3
Garde, Ainara	ThPOS-03.3	58
Gardner, Julian	ThA13.5	42
Gardner, Mark	ThPOS-32.38	72
Gare, Suman	ThPOS-19.3	64
Garetier, Marc	ThB16.2	50
	FrB12.2	92
Garg, Ayush	ThPOS-34.4	75
Garnotel, Maël	WeA02.2	1
Garrett, David J.	ThB01.1	45
	FrPOS-33.36	117
	FrPOS-35.31	122
	FrPOS-35.32	122
	FrPOS-36.22	123
Garriga, Pau	WePOS-31.5	31
Gasparri, Roberto	ThA13.6	42
Gassino, Riccardo	WeA10.3	3
Gaßner, Heiko	WeA18.1	6
Gates, Aaron	ThPOS-30.6	69
Gatti, Vittorio	SaB15.3	139
Gauci, Lucianne	FrB02.6	89
Gautam, Umesh	FrPOS-33.47	118
Gavalas, Iakovos	WePOS-16.4	21
Gavas, Rahul	WePOS-21.2	23
	FrPOS-20.2	109
Gaxiola Tirado, Jorge Antonio	WeC01.4	8
Gay-Torné, Júlia	FrPOS-35.24	121
Gazzoni, Marco	ThB13.1	49
	FrA20.6	88
	SaA13.4	133
Gdaniec, Nadine	ThA03.4	39
Ge, Sheng	ThPOS-09.2	60
	FrPOS-06.7	104
Gee, Kaitlyn	FrA17.4	87
Gehring, Hartmut	FrPOS-08.10	105
	FrPOS-08.11	105
Gelfand, Mark	WeA10.6	3
Gemignani, Jessica	FrPOS-33.18	116
Geminiani, Alice	ThA16.1	43
Geng, Xinyi	ThPOS-02.1	58
	FrPOS-23.6	111
Geng, Yanjuan	ThPOS-06.1	59
Gennari, John H.	ThPOS-34.13	75
Genov, Roman	SaC10.3	144
Gentilal, Nichal	SaA10.6	132
Geoghegan, Patrick Henry	FrPOS-08.2	104
Geoghegan, Rory	SaA16.4	134
Georga, Eleni I.	FrPOS-18.2	108
	SaD11.2	150
Georgette, Tso	SaA17.5	134
Georgiadis, Kostas	SaB14.1	139
Georgiou-Karistianis, Nellie	ThPOS-14.5	62
Georgopoulos, Dimitris	WePOS-23.2	24
Gerard, Gregoire	SaC18.10	146
Gerez, Lucas	SaB16.3	139
	SaC16.4	146

Gerginov, Marja	ThA04.1	40	Giraldo, Beatriz	WePOS-31.5	31
Gerginov, Vladislav	ThA04.1	40		ThB11.2	48
	ThPOS-33.25	73		SaA11.6	132
Gerke, Sebastian	WeC11.5	11	Girard, Nadine	FrB19.1	94
	ThB20.5	51	Girau, Elisa	SaA08.3	131
Gerlach, Thomas	ThC21.1	C	Giri, Lopamudra	WeA09.3	3
	ThC21.3	57		ThPOS-19.3	64
Gerstle, J. Ted	SaD16.2	152		FrPOS-08.13	105
Gessert, Nils	SaB03.1	136		FrPOS-22.4	110
Gewefel, Hanan	SaC15.1	145	Irish, GN	WePOS-12.2	19
Gfoehler, Margit	FrC16.1	100		ThB12.1	49
Ghadam Soltani, Elias	WePOS-31.35	32	Giroud, Nathalie	FrB08.2	90
	WePOS-31.36	32	Gizzi, Leonardo	SaC09.1	143
Ghaemmaghani, Benjamin	SaD08.4	149	Gkivogkli, Polyxeni	WePOS-23.9	24
Ghafghazi, Shahab	WePOS-31.39	32		FrB14.5	93
Ghafoor, Usman	FrPOS-34.47	120	Gkoupidenis, Paschalis	SaA06.1	130
Ghamari, Sedigh	ThPOS-32.14	71	Gladow, Till	WeA18.1	6
Ghanbari, Hamid	ThA05.1	40	Gladytz, Thomas	ThA10.3	41
Ghanem, Ahmed	WePOS-10.6	17	Glaser, Manuel	FrC17.5	100
Gharbi, Sadok	ThPOS-26.6	68	Glasscock, Edward	FrB05.4	90
Gharib, Ahmed	WePOS-10.6	17	Glassen, Michael	ThPOS-19.6	64
Gharib, Behdad	WePOS-25.3	25	Glavin, Martin	ThPOS-32.27	71
Ghavami, Mohammad	WePOS-08.2	16		SaD02.1	147
Ghazanfari, Behzad	WeA19.5	7	Gławdecka, Karolina	FrPOS-33.14	116
Ghelich, Pejman	FrPOS-21.1	110	Glos, Martin	ThA05.1	CC
Ghiasi, Shadi	FrPOS-15.1	107		FrA11.1	85
	FrPOS-15.2	107		FrA11.3	85
Ghimenti, Silvia	WePOS-29.6	26		FrA11.4	85
	ThB21.3	52		FrC11.1	98
Ghimire, Madhav	ThA17.2	43		SaA11.2	132
Ghislieri, Marco	ThA06.4	40	Glover, Ben	WePOS-29.26	27
Ghnatios, Chady	WePOS-25.4	25	Go, Dooyoung	ThPOS-32.24	71
Ghodratitoostani, Iman	FrPOS-23.4	111	Gochoo, Munkhjargal	ThPOS-32.17	71
Ghogho, Mounir	FrC08.2	97	Goecke, Roland	WeA21.2	7
GholamHosseini, Hamid	WePOS-34.2	37		ThPOS-08.4	60
Gholizadeh-Ansari, Maryam	SaB17.2	140	Goedgebeur, Jan	WeC09.6	10
Ghораani, Behnaz	WePOS-11.1	17	Goel, Purvi	SaB14.2	139
	FrC18.2	101	Goertz, Michael	FrA21.2	88
	FrPOS-36.13	122	Goette, Josef	FrPOS-30.6	114
Ghose, Avik	ThPOS-25.4	67	Gohel, Suril	WeA08.1	2
	FrPOS-30.5	114	Göksu, Cihan	WeC10.2	10
Ghosh, Nirmalya	WePOS-12.9	19	Goldberg, Arthur	ThPOS-34.13	75
	FrPOS-19.4	109	Goldmundová, Sabina	FrPOS-33.1	115
	SaC19.3	147	Goldhacker, Markus	WeA12.4	4
Ghosh, Prasanta	SaA11.3	132	Goldstein, Joshua	WeC17.2	12
Ghosh, Saswath	FrPOS-34.16	119	Golemati, Spyretta	FrPOS-37.33	126
Giaconia, Costantino	WeA04.3	1	Goletsis, Yorgos	WePOS-23.6	24
Giagka, Vasiliki	FrA21.6	88	Golzan, S.Mojtaba	ThPOS-11.3	61
Giancardo, Luca	ThPOS-27.5	68	Gomaa, Walid	FrPOS-29.2	114
Gianfreda, Claudia Maria	WePOS-23.1	24	Gomes Ataide, Elmer Jeto	FrC20.5	101
Giannini, Valentina	FrC15.6	100	Gomez, Alberto	ThPOS-09.3	60
Giannoni, Alberto	WePOS-09.3	17	Gomez, Britam	WePOS-17.1	22
	FrPOS-09.2	105	Gomez, Carlos	FrPOS-09.5	105
Giannouli, Dimitra	ThB19.4	51		SaA14.1	133
Giantomasi, Lidia	ThPOS-34.9	75		SaC05.5	142
Giardini, Mario Ettore	ThC04.2	53	Gomez, Martin	SaA19.6	135
	FrPOS-07.2	104	Gonçalves, Lino	WePOS-32.29	34
	FrPOS-33.15	116	Gonella, Veronica	FrC09.4	98
	FrPOS-38.35	128	Gong, Bo	ThA11.6	41
Giaretta, Alberto	ThPOS-16.5	63	Gong, Dawei	ThPOS-25.8	67
	ThPOS-17.2	63	Gong, Jian Y.	FrPOS-36.44	124
Gibas, Christian	ThC20.6	57	Gong, Xiaolei	FrPOS-16.2	108
Gibbons, Simon J	ThPOS-10.3	61	Gong, Yi	SaB19.2	140
	FrPOS-09.1	105	Gonzalez Diaz, Hector Andres	WePOS-04.6	15
Gibson, Paul	ThB13.4	49	Gonzalez Martinez, Cristina	FrPOS-33.10	116
Gibson, Simon	SaD08.6	149	Gonzalez, Alejandro	FrB16.6	93
Giggins, Oonagh	FrPOS-34.7	118	Gonzalez, Laura	ThPOS-01.1	57
Gil Cano, Julio Daniel	ThB03.6	46	Gonzalez-Camarena, Ramon	SaB02.3	135
Gil, Amparo	ThC09.4	54		SaC02.5	141
Gil, Debora	WeA21.4	7	Gonzalez-Hermosillo, Jesus Antonio	SaC02.5	141
Gil, Eduardo	WeA20.4	7	Gonzalez-Martinez, Jorge	WeC06.5	10
	ThPOS-31.3	70		WeC18.5	13
	SaD02.5	147		ThB18.4	51
Giladi, Moshe	WeC10.3	10		FrB01.4	88
Gilbert, Barry	ThB19.3	51	González-Méjome, José Manuel	ThPOS-17.9	63
Gilbert, Hunter B.	FrPOS-31.1	115	González-Vélez, Virginia	ThC09.4	54
Gilbert, Kathleen	WeA11.1	4	Goo, Yong Sook	ThPOS-35.16	78
Gilboy, Kevin	ThPOS-16.1	62	Goovaerts, Griet	WeC05.1	9
Gillies, Audrey H.	FrPOS-38.35	128	Gopalakrishnan, Aishwarya	FrC10.1	98
Gilmore, Greydon	ThPOS-35.28	79	Gorantla, Kuber Reddy	SaA16.2	134
Giordano, Noemi	SaC17.6	146	Gordo, Federico	ThC11.2	54

Gordon, Alex	FrPOS-35.2	120	Grosse-Wentrup, Moritz	SaA18.3	134
Gordon, Karen	ThPOS-33.45	75	Grotheer, Rachel	FrPOS-08.7	104
Gordon, Paul	WeA15.1	5	Grubb, Christopher	SaB15.1	139
Gordon, Renee	ThA20.2	45	Grube, Manon	FrPOS-37.12	125
Gori, Riccardo	FrPOS-25.4	111	Gruenewald, Armin	ThC20.6	57
Gorodetski, Alex	ThPOS-04.3	58	Gruenewald, Johannes	ThC01.2	52
Gosselin, Benoit	FrPOS-38.23	127	Grundfest, Warren S.	FrPOS-33.28	117
	SaB04.3	136	Grundlehner, Bernard	WePOS-19.8	23
Gosseries, Olivia	ThPOS-27.1	68	Gryak, Jonathan	WeA19.5	7
	FrPOS-01.11	102		WePOS-12.7	19
Goto, Daisuke	FrPOS-36.28	123		ThA05.1	40
	FrPOS-38.9	127		ThA19.1	44
Goto, Toshiya	FrPOS-36.33	123		ThC15.2	55
Gotoda, Naoto	SaD10.4	150		ThPOS-11.6	61
Gotoda, Takuji	FrB03.2	89	Grymyr, Ole-Johannes Holm Nielsen	FrPOS-14.3	107
Gottschalk, Michael	WePOS-28.2	26	Gsaxner, Christina	SaC19.2	147
	FrB21.2	95	Gschwind, Claudia	WeA06.2	2
Gottschalk, Sven	SaA06.5	130	Gsell, Matthias	WeC09.1	10
Goubergrits, Leonid	WePOS-30.49	30	Gu, Bin	SaC01.5	141
Goubran, Rafik A.	WePOS-19.2	23	Gu, Lin	WePOS-11.4	17
	FrC18.6	101	Gu, Minyu	SaD03.3	148
Goulart, Leonardo	WePOS-33.33	36	Gu, Ping	FrC17.3	100
	ThPOS-33.13	73	Gu, Qiao	WeC17.5	13
Goulding, Cathy	SaC04.5	142	Gu, Rui	WePOS-21.1	23
Govindan, Rathinaswamy	FrA10.3	85	Gu, Xiaosong	SaD01.5	147
	SaD02.3	147	Gu, Xuejun	WeC15.1	C
Gowen, Emma	WePOS-25.2	25		WeC15.3	12
Gowrishankar, Ganesh	FrA06.3	83		WeC15.4	12
Goyal, Vatsala	ThA06.3	40		WeC15.5	12
Gozal, David	FrA02.6	82		WeC15.6	12
	FrPOS-02.1	102		WePOS-11.25	18
Gozes, Ophir	FrB15.3	93	Gu, xuelin	WePOS-07.4	16
Gräbel, Stefan	FrB21.6	95	Gu, Yolanda	ThB16.5	50
Grabow, Niels	WePOS-14.5	20	Guaitolini, Michelangelo	ThC16.3	56
Grabowski, Reagan	SaD02.3	147		ThC16.6	56
Gräfe, Ksenija	ThA03.2	39	Guan, Cuntai	WePOS-07.4	16
Graham, Stuart L.	ThPOS-11.3	61		WePOS-18.8	22
Gramatikov, Boris	ThC12.1	C		ThC18.3	56
	ThC12.1	54	Guan, Wenkai	ThPOS-32.3	70
Grammer, Karl	FrPOS-06.9	104	Guan, Xinyu	FrC16.2	100
Granados Trejo, María del Pilar	FrPOS-37.3	124		FrC16.5	100
Grand, László	WePOS-04.10	15	Guan, Yun	ThC09.2	54
Grandi, Giulia	ThB11.4	49	Guaraldi, Pietro	FrPOS-15.5	107
Grangeat, Pierre	ThPOS-26.6	68	Guazzini, Andrea	ThPOS-21.5	65
Grant, Patricia Ellen	ThA12.5	42	Guber, Andreas E.	SaC07.3	143
Gräßhoff, Jan	FrPOS-05.1	103	Guedes, Felipe	ThPOS-33.13	73
Gratacós, Eduard	SaA16.5	134	Gueli, Calogero	FrB07.3	90
Gateau, Henri	ThPOS-26.6	68	Guérin, Jean-Luc	WePOS-25.1	25
Gratzke, Christian	FrA16.6	86		WePOS-33.17	35
Graybill, Philip	FrA13.6	86	Guerra, Bruna Maria Vittoria	ThPOS-35.27	79
	SaD13.4	151	Guerrisi, Maria	WePOS-11.17	18
Grayden, David B.	WeA09.4	3		FrC12.4	99
	ThPOS-16.3	62		SaC05.1	142
Greco, Alberto	WeA14.6	5	Guevara, Pamela	ThPOS-14.1	62
	FrPOS-15.1	107	Guger, Christoph	ThC01.1	C
	FrPOS-15.2	107		ThC01.2	52
Greco, Giuseppe	WeA04.3	1	Guggenmos, David	ThPOS-36.2	79
Greene, Barry R.	ThB13.2	49	Guha, Rajlakshmi	WePOS-23.8	24
	ThPOS-31.7	70		FrPOS-33.12	116
Greene, Patrick	WePOS-30.21	29	Guidetti, Martina	WeC03.2	8
Greenlee, Mark	WeA12.4	4	Guilhabert, Benoit	WeA04.4	2
Greenspan, Hayit K.	WePOS-11.11	18	Guimarães, Vânia	SaD08.2	149
	WePOS-11.13	18	Guiraud, David	ThC06.1	CC
	FrB15.3	93		FrPOS-30.9	114
Greenstein, Joseph L.	SaB08.5	137	Gumery, Pierre-Yves	FrPOS-14.4	107
Gregory, Shaun David	FrPOS-13.1	107		SaB02.2	135
Grigoriadis, Grigoris	FrPOS-37.41	126		SaC18.10	146
Grigorovsky, Vasily	FrPOS-22.2	110	Gumhold, Stefan	ThPOS-35.1	77
Grillo, Fabiana	WePOS-15.7	21	Gunaratne, Pujitha	ThA05.1	40
Grimaldi, Cecilia	SaB03.4	136	Gunawardane, Palpolage Don Shehan H.	SaB09.4	138
Grimone, Kristin	ThPOS-25.2	67	Gunawardena, Dinusha Serandi	FrA21.1	88
Grisic, Ana-Marija	ThC17.2	56	Gunawardena, Nishan	SaD16.1	152
Groenendaal, Willemijn	ThC11.6	54	Guneyso Ozgur, Arzu	FrPOS-27.13	112
Gromer, Markus Elia	WePOS-31.13	31	Gunn, Alistair Jan	ThB02.2	46
Grönlund, Christer	WePOS-32.32	34		SaD14.3	151
Groppe, David	SaC10.3	144	Gunnarsdottir, Kristin	FrB01.4	88
Grosenick, Dirk	ThA10.3	41	Gunther, Deuschl	ThPOS-25.1	67
Gross, Robert	FrB01.5	88	Guntinas-Lichius, Orlando	SaD02.6	147
	SaC06.4	142	Guo, Hengtao	SaB17.1	140
Grosse, Frederik	FrB19.3	94	Guo, Hongsun	FrPOS-22.3	110
Grossenbacher, Olivier	WeA13.2	4	Guo, Jia-Jiun	FrPOS-08.8	105

Guo, Jiangjian	ThPOS-20.14	64	Haj, Amer	SaA10.2	131
Guo, Jing	WeC03.5	9	Hajabdollahi, Mohsen	WePOS-11.30	19
Guo, JunChao	WePOS-29.33	28		SaD19.6	153
	ThPOS-33.33	74	Hajdu, Andras	ThPOS-08.2	60
Guo, Kairui	SaD14.4	152		ThPOS-32.18	71
Guo, Kq	FrPOS-28.11	113	Haj-Hosseini, Neda	ThB10.2	48
Guo, Li	ThA20.4	45	Hajian, Gelareh	WePOS-03.1	15
Guo, Libao	SaC12.5	144		WePOS-04.7	15
Guo, Qiang	ThPOS-20.12	64	Hakansson, Nils A.	FrB16.1	93
Guo, Rui	ThA20.6	45	Hakim, Siddiqui	ThPOS-23.6	66
Guo, Tianruo	ThA09.4	41	Halamek, Josef	FrPOS-33.1	115
	ThPOS-36.5	79	Hale, Olivia	ThPOS-33.46	75
	ThPOS-36.6	80	Haleem, Ahmed	ThA14.5	43
	FrPOS-26.2	112	Halim Parmonangan, Ivan	FrPOS-37.16	125
Guo, Weiyu	FrPOS-33.2	115	Hallez, Hans	FrPOS-35.17	121
Guo, Wenyu	WePOS-30.9	28		FrPOS-38.4	126
	WePOS-30.10	28		FrPOS-38.25	127
Guo, Xinling	SaC05.4	142	Hallock, Laura	WePOS-12.3	19
Guo, Yaqiu	SaA01.3	129	Halpern, Jeffrey	WePOS-16.2	21
Guo, Yi	SaB15.2	139	Halter, Ryan	SaD10.1	150
Guo, Yuyu	FrA15.5	86	Halvorsen, Per Stainer	FrPOS-14.3	107
Guo, Zengzhi	ThPOS-18.1	63	Halvorson, Ryan	SaA17.3	134
Guo, Zheshan	ThPOS-19.4	64	Hama, Kengo	WePOS-34.5	37
Gupta, Akshat	SaC19.3	147		WePOS-34.6	37
Gupta, Anushka	SaD04.4	148	Hamacher, Volkmar	FrB10.3	91
Gupta, Saurabh Kumar	ThPOS-09.7	60	Hamad, Eyad	WePOS-14.6	20
Guragain, Bijay	FrB14.4	92		WePOS-15.2	21
Gurve, Dharmendra	ThPOS-20.17	65	Hamada, Atsushi	ThA16.6	43
Gustafsson, Magnus	WePOS-26.2	25		SaC16.3	146
Gutierrez Nuno, Rafael Angel	WePOS-02.6	15	Hamada, Eiki	SaD05.4	148
Gutierrez, David	WeC01.4	8	Hamada, Nozomu	WePOS-33.18	35
Gutierrez, Gonzalo Cesar	FrA02.6	82		FrPOS-37.18	125
	FrPOS-02.1	102	Hamagami, Takuma	FrPOS-38.5	126
Gutierrez, Marco	SaA03.5	129	Hamasaki, Shunsuke	WeA08.4	3
Gutschmidt, Stefanie	WePOS-29.2	26	Hamdi, Nabila	FrPOS-27.3	112
Guttman, Markus	SaC07.3	143	Hametner, Bernhard	WePOS-31.1	30
Guttman-Flury, Eva	FrPOS-22.12	110	Hamid, Tariq	ThPOS-31.6	70
Gwillim, Lisa	SaD08.6	149	Hamimi, Ahmed	WePOS-10.6	17
Gwozdz, Mary	ThPOS-04.1	58	Hamm, Christian W.	ThB04.5	47
Gyorfi, Agnes	WePOS-09.2	17	Hammour, Ghena	SaA13.5	133

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Ha, Sangho	FrPOS-34.13	119	Han, Baozeng	SaD17.2	152
Haas, Michael	SaA09.3	131	Han, Bicheng	SaA17.5	134
Habets, Jeroen	WeC20.4	14	Han, Chang-Hee	WePOS-30.29	29
	FrPOS-36.36	124	Han, Chengcheng	ThPOS-20.13	64
Habre, Rima	ThA19.3	44	Han, Dong	FrC10.2	98
Hachmann-Nielsen, Elise	SaD18.3	153		FrC10.3	98
Hada, Yasushi	FrPOS-28.12	113	Han, Hua	WeA03.4	1
Haddad, Tahar	ThPOS-29.4	69		SaB19.3	140
Hadimani, Ravi L.	WePOS-30.22	29	Han, Ji Yan	ThB02.5	46
Hadipour, Sarah	ThPOS-35.34	79		FrPOS-36.5	122
Hadjiat, Yacine	FrPOS-35.19	121	Han, Jiawei	ThPOS-20.10	64
Hadjidimitriou, Stelios	FrA02.1	82	Han, Jiwon	WePOS-32.33	34
Hadjileontiadis, Leontios	FrA02.1	82	Han, Joojin	FrA13.3	85
	FrA10.2	85	Han, Martin	FrPOS-21.1	110
	FrA10.4	85		FrPOS-23.5	111
	FrPOS-06.3	103	Han, Namshik	ThC17.3	56
Hadzievski, Ljupco	ThA21.4	45	Han, Paul	FrB12.3	92
Haeblerlin, Andreas	FrPOS-33.50	118	Han, Sangjin	ThPOS-23.1	66
Haemmerich, Dieter	ThB10.1	C	Han, Seungwoo	ThC13.2	55
Haering, Franziska	FrC17.5	100		ThPOS-35.32	79
Hafezi, Maziar	ThA14.4	42	Han, Wenqing	ThPOS-12.2	61
Hagelauer, Amelie	FrPOS-26.3	112	Han, Xian-Hua	ThPOS-11.5	61
Häger, Christine	SaB05.5	137		FrPOS-11.8	106
Haggard, Warren	ThA17.2	43	Han, Xu	WeC05.6	9
Hagio, Shota	FrA06.2	83	Han, Yang	SaC13.3	145
Hagiwara, Hiroaki	ThPOS-32.32	71	Hanafusa, Akihiko	WePOS-29.14	27
Hagmann, Patric	SaC05.6	142		ThPOS-34.40	77
Hahn, James	ThA19.4	44		FrPOS-33.29	117
Hahn, Jin-Oh	WeC17.2	12		FrPOS-36.33	123
	FrPOS-37.36	126	Hanaoka, Shintaro	ThPOS-33.30	74
	FrPOS-37.38	126	Handel, Till	WeC20.3	13
Hahn, Markus	SaD15.1	152		FrPOS-04.4	103
Hahn, Sei Kwang	ThC17.1	CC	Handly, Neal	WeC17.3	12
	ThC17.1	56		FrPOS-13.3	107
Haider, Clifton	ThB19.3	51		SaD11.3	150
Haimovich, Adrian	ThPOS-29.3	69	Hanke, Randolph	ThA03.1	39
Hairom, Zarinah	ThPOS-33.38	74	Hanneghan, Martin	FrPOS-38.31	128
			Hannula, Markus	FrPOS-11.5	106
			Hansen, Nils-Owe	WeA10.2	3

Hanson, Lars G.	WeC10.2	10	Hayashi, Takuto	FrPOS-34.19	119
Hao, Dehong	SaC14.1	145	Haybaeck, Johannes	SaD19.3	153
Hao, Dongmei	WePOS-04.1	15	Hayes-Gill, Barrie	WePOS-15.7	21
	ThA02.6	39	He, Changyan	ThPOS-23.4	66
Hao, Hongwei	FrPOS-36.23	123	He, Feng	ThPOS-16.4	62
Hao, Huaying	WePOS-11.3	17		SaC01.5	141
	FrPOS-08.4	104	He, Hong	SaB19.4	140
Hao, Jianmin	ThPOS-06.8	59	He, Hongchao	WePOS-12.8	19
Hao, Manzhao	FrPOS-34.44	120	He, Huiguang	WePOS-04.4	15
Hao, Yuxing	WeC05.4	9		WePOS-17.6	22
Haque, Emad	FrPOS-35.9	121		SaA18.6	134
Haque, Mainul	FrPOS-16.3	108	He, Jiayuan	FrB06.2	90
	SaB11.1	138		FrPOS-27.11	112
Hara, Shinsuke	WePOS-29.20	27	He, Jiwei	FrPOS-24.3	111
	ThPOS-36.31	81	He, Jiyue	SaA19.5	135
	FrPOS-38.5	126	He, Junyun	FrC01.4	95
Hara, Takeshi	ThPOS-32.34	71	He, Min	ThA15.3	43
	ThPOS-32.35	72		FrB03.1	89
Harada, Atsuhiko	FrPOS-37.42	126	He, Mu	WePOS-33.22	35
Harada, Daisuke	WePOS-12.13	20	He, Shan	SaD04.2	148
Harada, Shota	FrA15.4	86	He, Wei	ThPOS-33.38	74
Harada, Yuko	FrPOS-35.14	121		FrPOS-36.45	124
Harangi, Balazs	ThPOS-08.2	60	He, Weihua	FrPOS-34.26	119
	ThPOS-32.18	71	He, Ying	ThPOS-15.2	62
Hardin, Sonya	ThC02.1	52		ThPOS-30.2	69
Hardman, Jonathan G.	WePOS-31.11	31	He, Yunze	FrB03.1	89
	ThC11.4	54	Heard, Jamison	WeA19.2	7
	FrPOS-16.3	108	Heaton, Heather	WeA19.4	7
	SaB11.1	138	Heckman, CJ	ThC06.3	53
Hardy, Anna R.	ThPOS-17.6	63		FrB02.2	89
Hargrove, Levi	ThA06.6	40	Hedenstrom, Anders	FrC13.5	99
Hariyani, Yuli Sun	ThPOS-32.47	72	Hedin, Daniel	ThB13.1	CC
Haro, Paulina	FrPOS-37.23	125		ThB13.4	49
Harris, Michael	ThA17.2	43	Hedt-Gauthier, Bethany	ThB21.5	52
Harrison, Robert	ThPOS-33.45	75	Heijmans, Margot	WeC20.4	14
Hart, Zoe	ThB16.5	50	Heikhmakhtiar, Aulia Khamas	WePOS-30.44	30
Hartmann, Simon	ThB02.6	46	Heilemann, Martin	WePOS-07.3	16
Hartmann, Vera	ThA02.3	39	Heiskanen, Arto	ThPOS-34.3	75
Hartshorne, Geraldine	FrPOS-33.25	117	Heitzman, Daragh	SaA01.1	129
Hartwig, Valentina	WePOS-09.3	17	Hejazi, Maryam	ThB01.1	45
	FrPOS-09.2	105		FrPOS-35.31	122
Haruta, Makito	FrPOS-38.11	127	Hejrati, Babak	SaB16.5	140
Harvey, Susan	ThPOS-10.1	61	Heker, Michal	WePOS-11.13	18
Harvy, Jonathan	WeA19.1	6	Held, Jeremia P.O.	FrC01.1	95
Hasan, Md Qumrul	ThA21.1	45	Heldt, Thomas	WeC17.1	CC
Hasan, S. M. Kamrul	SaD19.2	153		WeC17.1	12
Hasegawa, Kaoru	SaA15.2	133		WeC17.5	13
Hasegawa, Yuki	WePOS-11.23	18		FrPOS-19.6	109
Hasey, Gary	FrPOS-37.9	124	Heller, Jakob	SaA09.2	131
Hashemi Fesharaki, Seyed Sohrab	WePOS-02.2	14	Hellmich, Thomas	WeA19.4	7
Hashemi, Javad	WePOS-31.39	32	Hemm, Simone	FrA18.4	87
Hashimoto, Satoshi	ThC19.4	57	Hemmerling, Daria	WePOS-04.11	15
Hashimoto, Takuya	FrPOS-27.10	112	Hemmert, Werner	WeC10.1	10
	FrPOS-34.12	118		FrA14.4	86
Hashimoto, Yuki	FrPOS-38.24	127	Hemmsen, Martin Christian	SaC18.2	146
Hassan, Ahnaf Rashik	SaD14.2	151	Hendriks, Richard	WeA17.1	6
Hassan, Altamash	FrB02.2	89	Heng, Chun Huat	WePOS-15.8	21
Hassan, Mahmoud	SaC05.3	142	Henin, Simon	SaC05.4	142
Hassan, Mai	WePOS-32.24	34	Henle, Christian	ThPOS-35.15	78
Hassan, Modar	ThPOS-25.7	67	Henningsson, Markus	ThPOS-09.3	60
	FrPOS-28.12	113	Henrique, Martinha	FrB03.3	89
	SaB16.2	139	Henriques, Jorge	FrB08.1	90
Hassan, Mohamed	SaD16.5	152		SaD02.2	147
Hassan, Noha	SaD11.6	151	Hensel, Alice	WePOS-27.7	26
Hassel, Abbygail	FrC13.4	99	Hentze, Benjamin	FrPOS-37.37	126
Hata, Nobuhiko	WePOS-31.30	32	Herández, Carme	ThPOS-29.5	69
Hattersley, John Glenn	WeA16.2	5	Herath, Dulip	ThPOS-03.2	58
Hattiangdi, Rohit	ThA12.3	42	Herbort, Christian	ThPOS-33.8	73
Hattori, Asaki	FrPOS-36.33	123	Herff, Christian	WeC20.4	14
Haueisen, Jens	ThA01.1	39		ThC01.3	52
	SaA18.1	134		ThPOS-20.22	65
Haughey, Anne-Marie	WeA04.4	2		ThPOS-20.24	65
Haumann, Niels Trusbak	FrPOS-37.12	125		FrPOS-01.17	102
Havelock, Jon	WePOS-11.19	18		FrPOS-36.36	124
Hawkes, Elliot W.	FrPOS-27.5	112	Herman, Debra	ThPOS-25.2	67
Hawse, John R	FrPOS-28.3	113	Hermawan, Norma	FrPOS-09.10	106
Hayakawa, Masaki	WePOS-31.14	31	Hernáiz Driever, Pablo	FrB19.2	94
Hayano, Junichiro	WePOS-29.17	27		FrB19.3	94
Hayashi, Emi	FrPOS-34.39	120	Hernández Mesa, María	ThPOS-05.1	59
Hayashi, Hideaki	FrA15.4	86	Hernández, Alfredo I	SaA05.3	130
Hayashi, Shigeto	WePOS-30.17	29		SaC06.3	142

Hernández, Alfredo I.	FrC05.1	C	Ho, Yun-Lung	WePOS-03.4	15
	SaA05.1	CC	Hoang, Manh Cuong	FrA16.5	86
Hernandez, Alher Mauricio	FrPOS-01.16	102	Hocking, Kyle	WeA20.4	7
Hernandez, Belinda	ThC19.5	57	Hodson-Tole, Emma	FrPOS-20.15	110
Hernandez, Francisco Ulises	WePOS-15.7	21	Hoeflinger, Fabian	FrA04.1	83
Hernandez, Manuel	FrC01.5	95	Hoer, Tim	FrPOS-34.1	118
	FrPOS-25.1	111	Hofbauer, Stefan	FrA04.4	83
Hernández-Guillamet, Guillem	FrPOS-38.22	127	Hoffmann, Klaus-Peter	WePOS-27.4	25
Hernandez-Juarez, Beatriz	FrC09.3	98		WePOS-28.2	26
Hernandez-Pacheco, Guadalupe	SaC02.5	141		FrA21.1	CC
Hernando, Alberto	ThPOS-31.3	70		FrB21.1	C
	SaD02.5	147		FrB21.3	95
Hernando, David	WeA20.4	7		FrB21.4	95
Hernansanz, Albert	SaA16.5	134		FrC13.1	C
Herold-Garcia, Silena	FrB15.1	93	Hoffmann, Nico	ThPOS-35.1	77
Herranz, Elena	WeA12.6	4	Hofmann, Boris	FrB07.2	90
Herrera, Elisa G	WePOS-16.1	21	Hofmann, Stephan	WePOS-31.29	32
Herrmann, Christoph	ThA01.1	39	Hofmann, Ulrich G.	FrB10.7	91
	SaA18.1	134		FrPOS-08.10	105
Hershkovich, Hadas Sara	WeC10.3	10		FrPOS-08.11	105
	SaA10.2	131		SaA18.4	134
Herth, Felix	WeA10.6	3	Holder Pearson, Lui R.	ThPOS-17.6	63
Herve, Ophelie	ThC16.1	56	Holder, David	ThPOS-35.12	78
Herz, Stefan	ThA03.1	39		ThPOS-36.21	80
Herzog, Christian	FrC20.1	101	Holland, Alex	ThA05.6	40
	FrC20.2	101	Holley, Claire	WePOS-14.2	20
	FrC20.5	101	Holli-Helenius, Kirsi	FrPOS-11.2	106
Hesham El Feshawy, Sarah	FrPOS-27.3	112		FrPOS-11.4	106
Hess, Daniel	WePOS-27.7	26	Holmbæk Petersen, Tine	FrPOS-01.1	101
Hessburg, John	WeC06.4	9	Holmes, David	ThB19.1	C
Hessing, Björn	SaB01.1	135		ThB19.3	51
Hettiarachchi, Chirath Yudara	ThPOS-25.5	67		ThC21.1	CC
Hevia-Montiel, Nidiyare	FrPOS-37.23	125	Holmes, Geoffrey	ThB09.6	48
Hey, Jonathan Heng Kiat	FrPOS-36.45	124	Holmes, Robin	WeC12.4	11
Heyat, Md Belal Bin Heyat	FrPOS-12.4	107	Holsapple, James	FrPOS-19.6	109
Heydari, Nargess	SaC01.2	141	Holsbach Costa, Márcio	WePOS-01.3	14
Heymsfield, Steven	ThPOS-09.10	60	Holt, Abbey	FrA21.4	88
Heyndrickx, Guy R.	FrPOS-13.3	107	Holthuijzen, Ronaldus Frederik Johannes	FrB03.4	89
	SaD11.3	150	Holz, Christian	WeC13.4	11
	WeC20.6	14		ThPOS-36.34	81
Hidaka, Kikue	WeC20.1	13	Homma, Noriyasu	FrC17.1	100
Hidalgo, Andrés Francisco	FrC06.4	97	Honda, Keita	SaC04.3	142
Hierlemann, Andreas	WePOS-08.3	16	Honda, Tetsumi	WePOS-29.5	26
Higashi, Kotaro	WePOS-34.22	38	Hong, Bei	WeA03.4	1
Higashi, Yuichiro	WePOS-32.1	33	Hong, Bo	ThPOS-20.19	65
Higuchi, Masakazu	WePOS-32.5	33	Hong, Daehie	ThPOS-36.36	81
	WePOS-33.9	35		FrPOS-36.34	123
	WePOS-33.39	36	Hong, Engpyo	WePOS-33.44	37
	WePOS-34.7	37		WePOS-33.45	37
	FrPOS-33.5	115	Hong, Hyuckki	WePOS-29.21	27
Higuchi, Yuichi	FrB17.1	93	Hong, Keum-Shik	ThPOS-33.5	72
Hijikata, Wataru	WeA20.1	7		FrC17.4	100
	WePOS-19.10	23		FrPOS-34.47	120
	SaA07.3	131	Hong, Pei-Lun	ThPOS-05.6	59
Hilal, Mirvana	FrPOS-09.6	105	Hong, Sung Jun	FrPOS-34.21	119
	SaB11.4	138	Hong, Wenjia	ThPOS-15.9	62
Hilton, Adrian	ThPOS-21.1	65		FrPOS-33.45	118
Himakhun, Wanwisa	SaD12.6	151		FrPOS-33.46	118
Himanen, Sari-Leena	FrB11.1	91	Hong, Yoonjung	WePOS-33.6	35
Himanshu,	SaB14.4	139	Hongbin, Lu	WePOS-19.3	23
Hinrichs, Reemt	FrB18.6	94	Hood, Donald	ThB12.3	49
Hirahara, Makoto	WePOS-33.32	36	Hoog Antink, Christoph	ThPOS-08.5	60
Hirai, Hiroaki	ThPOS-34.21	76		FrB03.5	89
	ThPOS-36.39	81	Hooshmand, Mohsen	ThA05.1	40
Hirami, Yasuhiko	ThB12.6	49	Hoover, Douglas	SaB17.6	140
Hirano, Ginji	ThPOS-32.6	70		SaD09.5	150
Hirano, Ryo	FrPOS-09.10	106	Hopp, Jennifer	ThC09.3	54
Hiraoka, Nobuaki	ThPOS-36.32	81	Hoppenbrouwer, Xenia L.R.	ThPOS-03.3	58
Hiramatsu, Ryosuke	WePOS-08.5	16	Hoppenstedt, Burkhard	FrB08.2	90
Hirose, Kumi	WePOS-34.5	37	Horak, Fay	ThPOS-01.3	58
Hirose, Shinichi	FrA19.6	87	Hori, Junichi	WePOS-30.24	29
Hirsch, Sebastian	WeC03.6	9	Horii, Takato	SaD16.4	152
Hirtler, Reinhard	ThA21.6	45	Horii, Yasushi	ThPOS-15.9	62
Hitzberger, Christoph	FrC03.2	96		FrPOS-33.45	118
Hlavac, Michael	FrC11.4	98		FrPOS-33.46	118
Ho Ba Tho, Marie-Christine	SaB09.5	138	Horise, Yuki	FrPOS-36.30	123
Ho, Daniel	WePOS-12.3	19	Horiuchi, Hisanori	WePOS-31.14	31
Ho, Edmond S. L.	FrPOS-30.8	114	Hornberger, Christoph	ThA10.1	CC
Ho, Guan-Min	FrPOS-36.5	122	Hornberger, Erik	WePOS-30.14	29
Ho, Harvey	FrPOS-37.39	126			
Ho, Jong Gab	FrPOS-36.29	123			

Horne, Malcolm	WeA18.3	6	Hu, Jing	WeA05.1	2
	FrPOS-03.2	102		ThA05.4	40
	SaD05.1	148		ThB05.4	47
	SaD05.2	148		ThB05.5	47
	SaD17.6	153		ThPOS-05.2	59
Horner, Marc	ThB04.6	47		FrC05.5	97
	FrA09.1	CC	Hu, Jingjing	FrB03.1	89
	FrA09.2	84	Hu, Jin-Jia	ThPOS-36.38	81
	FrA09.6	84	Hu, Jun	WePOS-21.3	23
Hornero, Roberto	FrA02.6	82		FrC10.6	98
	FrPOS-02.1	102	Hu, Katherine	FrB01.6	88
	FrPOS-09.5	105	Hu, Ricky	SaC19.1	146
	SaA14.1	C	Hu, Rui	WeC04.3	9
	SaA14.1	133	Hu, Ruochen	ThPOS-06.3	59
	SaC05.5	142	Hu, Szu-Yeu	WePOS-12.5	19
Hornig, Debra	FrB12.3	92	Hu, Tianren	SaB17.5	140
Hosaka, Ryosuke	WePOS-33.26	36	Hu, Xiyuan	FrPOS-17.1	108
Hoshi, Hideyuki	FrPOS-09.5	105	Hu, Yan	FrC03.4	96
Hoshino, Junya	ThC04.3	53		SaA03.3	129
Hosni, Mohamed	WePOS-23.3	24	Hu, Yong	FrPOS-33.27	117
	FrB08.3	90		FrPOS-33.28	117
	FrPOS-37.32	126	Hu, Yujin	SaC12.5	144
Hosseini, Anahita	ThA19.3	44	Hu, Yuxia	ThPOS-20.18	65
Hosseini, Maryam	FrPOS-22.3	110	Hua, Cam-Hao	WeA03.3	1
	FrPOS-35.30	122		ThC20.2	57
Hosseini, Saeed	WePOS-31.32	32	Hua, Ning	ThB19.5	51
Hosseini, Seyed sina	FrA21.3	88	Huang, Adam	WePOS-12.15	20
	FrC13.2	99	Huang, Athena Y.	SaB15.5	139
Hou, Wensheng	FrB18.3	94	Huang, Chenxi	FrPOS-08.7	104
	FrPOS-06.4	104	Huang, Da-Ming	FrPOS-37.25	125
	FrPOS-23.1	110	Huang, Fanglin	SaD12.1	151
Hou, Zeng-Guang	WeC01.6	8	Huang, Felix	FrPOS-24.4	111
	FrPOS-25.5	111	Huang, He	ThPOS-21.13	66
	SaA12.1	132		FrPOS-07.1	104
	SaD11.4	151	Huang, Jihong	WePOS-31.9	31
Hou, Zhishang	SaB17.3	140	Huang, Liyu	FrPOS-01.5	102
Housden, Richard James	ThPOS-09.3	60	Huang, Lu	ThPOS-19.4	64
Hovorka, Ondrej	FrB09.5	91		ThPOS-36.12	80
Howard, Travis	FrPOS-35.1	120	Huang, Ming	ThPOS-31.4	70
Howe, Robin Low Chin	ThPOS-24.3	67	Huang, Qiuting	SaA06.4	130
Hoxha, Armand	ThA12.2	42	Huang, Rian	ThA15.1	43
	ThPOS-19.6	64	Huang, Ringo	FrPOS-34.22	119
Hoyland, Philip	WePOS-30.45	30	Huang, Shoulin	SaB01.5	135
Hoyos, Lina M.	WePOS-14.4	20	Huang, Shu-Wei	ThA12.4	42
Hoyt, Reed	WeC11.4	11	Huang, Tsai Hsun	WePOS-30.36	30
Hracho, Michal	FrPOS-07.4	104	Huang, Weichen	ThPOS-20.12	64
	FrPOS-07.5	104	Huang, Xin	WePOS-30.32	29
Hsiao, Ching-Chun	WePOS-30.16	29		FrPOS-33.2	115
Hsiao, Jun-Ya	WePOS-30.16	29	Huang, Yanqi	SaB10.4	138
	ThPOS-05.6	59		SaC02.4	141
Hsiao, Mei-Hui	SaC08.3	143	Huang, Yao	WeC01.1	8
Hsiao, Pei-Chi	WePOS-33.23	36	Huang, Yi	SaA12.5	132
Hsieh, Jun-Wei	ThPOS-32.17	71	Huang, Yifan	SaD17.5	153
Hsieh, Kuan Yu	ThPOS-32.9	70	Huang, Yi-Jie	ThPOS-12.2	61
	ThPOS-32.28	71	Huang, Yu	SaB06.5	137
	ThPOS-34.7	75		SaB18.6	140
Hsu, Chao-Jung	ThPOS-36.24	80		SaC06.1	142
Hsu, Chia-Yu	ThPOS-34.49	77	Huang, Yu Da	WePOS-03.4	15
Hsu, Chih-Yung	ThC15.6	56	Huang, Yuanhui	ThC03.2	52
Hsu, Hung-Jui	FrPOS-33.26	117	Huang, Yu-Lin	ThPOS-28.2	69
Hsu, Kuang-Yung	SaC08.3	143	Huang, Yung-Fa	SaD04.5	148
Hsu, Po-Han	FrPOS-34.18	119	Huber, Lisa	WePOS-27.7	26
	SaD04.4	148	Hubka, Peter	FrB10.7	91
Hsu, Po-Ya	FrPOS-34.18	119	Hübner, David	ThPOS-20.2	64
	SaD04.4	148	Huckvale, Kit	SaB08.6	137
Hsu, Yu-Hsiang	SaC07.2	143	Huddleston, Daniel	FrC17.3	100
Hu, Chuanrui	SaB19.4	140	Huemer, Mario	FrPOS-37.5	124
Hu, Chunhua	WePOS-28.1	26	Huertas, Gloria	SaA04.6	130
Hu, Dinghan	ThC14.4	55	Hughes, Jeramy	ThA04.1	40
	ThC14.6	55		ThPOS-33.25	73
Hu, Eric	ThB09.2	48	Hui, Xiaonan	WePOS-17.8	22
Hu, Guoqiang	WeC05.4	9	Hukins, Craig	ThPOS-03.2	58
Hu, Hanhan	ThPOS-36.11	80	Humeau-Heurtier, Anne	WePOS-02.5	15
	SaD06.3	149		WePOS-05.4	16
Hu, Hongjie	FrPOS-11.8	106		FrPOS-09.6	105
Hu, Jiawen	ThPOS-27.3	68		SaB11.4	138
			Hummel, Friedhelm Christoph	FrPOS-27.13	112
			Humphreys, George	ThA20.2	45
			Huneker, Erik	FrPOS-30.7	114
			Hung, Chen-Ying	ThC19.1	56
			Hung, Chung-Lieh, Chung-Lieh	FrPOS-37.22	125

Hung, Hsiu-Ping	ThPOS-34.23	76	Ichikawa, Hiroko	ThPOS-21.6	65
Hung, Ying-Hsiu	FrPOS-36.5	122	Ichikawa, Kenta	WePOS-19.10	23
Hunger, Andre	FrPOS-38.26	127	Ichikawa, Taichi	ThPOS-21.6	65
Hunter, Chad	WePOS-10.5	17	Ichimura, Kazuhiro	WeC20.6	14
Hunter, Peter	WePOS-31.35	32	Idri, Ali	WePOS-20.1	23
	WePOS-31.36	32		WePOS-23.3	24
	FrPOS-37.39	126		FrB08.3	90
Hunyadi, Borbala	WeC05.1	CC		FrPOS-37.32	126
Huo, Zepeng	ThPOS-29.3	69	Idris, Ahamed	WeA02.5	1
Huotari, Matti	SaA02.5	129		ThB05.6	47
Hur, Chin	FrB08.4	90	Ifham, Ahamed	ThPOS-25.5	67
Hur, Su Jeong	ThPOS-32.11	70	Igasaki, Tomohiko	ThB18.6	51
Hurley, Nate	ThPOS-29.3	69	Iima, Sota	ThPOS-36.32	81
Husar, Peter	WeA02.4	1	Ikarashi, Akira	WePOS-29.8	26
Hussey, Erika	SaB06.1	137		FrPOS-34.19	119
Hutchinson, Michael	ThA18.2	44	Ikeda, Kazushi	ThC06.5	53
	FrA01.3	82	Ikeda, Ryutaro	FrB13.2	92
Hutchison, William	SaC10.1	143	Ikejiri, Kouki	WePOS-31.2	30
	SaC10.6	144		FrPOS-34.9	118
Hutmacher, Dietmar W.	FrC20.1	CC		FrPOS-34.10	118
	FrC20.3	101	Ikhsan, Mohammad	FrPOS-37.26	125
	FrC20.5	101	Iliopoulou, Dimitra	WePOS-22.1	24
	SaD10.2	150		ThPOS-28.5	69
Hutson, Timothy	FrA05.1	83	Illanes, Alfredo	WePOS-19.1	22
	FrB05.4	90		ThA21.3	45
Huynh-The, Thien	WeA03.3	1		ThPOS-04.4	58
	ThC20.2	57		ThPOS-08.3	60
Hwang, Changho	WePOS-29.35	28		SaA05.5	130
	WePOS-32.26	34		SaA12.2	132
	ThPOS-34.10	75		SaA15.5	133
	ThPOS-34.11	75		SaA15.6	133
	ThPOS-34.18	76		SaD15.4	152
	ThPOS-36.27	81	Ilmoniemi, Risto	ThPOS-36.7	80
	FrPOS-34.38	120	Im, Chang-Hwan	WePOS-30.25	29
	FrPOS-35.12	121		WePOS-30.26	29
	FrPOS-35.13	121		WePOS-30.27	29
	FrPOS-38.27	128		WePOS-34.21	38
Hwang, Dong Hyun	WePOS-29.21	27		ThPOS-35.22	78
Hwang, Han-Jeong	WePOS-30.29	29		FrPOS-33.4	115
	WePOS-30.31	29		FrPOS-36.9	122
	ThPOS-36.4	79	Imahori, Kosuke	FrB03.2	89
Hwang, Jeong-Eun	WeA13.3	4	Imai, Hirohiko	ThPOS-33.23	73
Hwang, JongHo	FrPOS-34.24	119	Imaizumi, Kazuya	ThC16.4	56
Hwang, Jung-ho	WePOS-32.19	34	Imamura, Hiroshi	ThPOS-34.17	76
Hwang, Seokmin	WePOS-29.16	27	Imashiro, Chikahiro	WePOS-31.21	31
	ThPOS-32.33	71		WePOS-31.22	31
	FrPOS-33.9	116	Imbimbo, Enrico	ThPOS-21.5	65
Hwang, Seoyoon	WeC18.6	13	Imoto, Hirochika	ThPOS-34.35	77
Hwang, Won Hee	WePOS-29.21	27	Improta, Giovanni	ThPOS-25.3	67
Hwang, Woochang	ThC17.3	56	Imtiaz, Masudul Haider	ThPOS-24.7	67
Hysi, Eno	SaC15.2	145		FrA04.2	83
Hyttinen, Jari	FrPOS-11.5	106	Imtiaz, Syed Anas	WeA14.3	5
Hyun Seo, Cho	WePOS-34.14	38		ThPOS-04.2	58
Hyung-Sik, Kim	FrPOS-38.19	127		FrPOS-06.5	104
				SaD17.1	152
			Inamura, Tetsunari	FrPOS-38.17	127
			Inan, Omer	WeC13.5	11
			Inati, Sara	ThC09.3	54
				SaD06.6	149
			Ince, Gökhan	SaA04.2	130
			Ince, Nuri Firat	FrC01.6	95
			Indahlastari, Aprinda	SaB06.4	137
			Indo, Takuya	WePOS-33.25	36
				WePOS-33.42	36
			Indolfi, Ciro	ThB04.5	47
			Indovina, Iole	FrC12.5	99
			Ingram, Myles	FrB08.4	90
			Inibhunu, Catherine	ThPOS-30.6	69
			Innes, Carrie R. H.	FrC11.4	98
			Ino, Shuichi	WePOS-29.5	26
			Inoue, Koh	SaC16.1	145
			Inoue, Koichi	FrPOS-19.3	109
			Inoue, Madoka	ThPOS-23.3	66
			Inoue, Makoto	FrC08.6	97
			Inoue, Takao	ThPOS-34.35	77
				FrC13.6	99
			Inoue, Yusuke	WePOS-31.14	31
			Ioakimidis, Ioannis	SaD08.5	149
			Ioannidou, Pinelopi	WeA15.4	5
				WePOS-23.6	24
			Ionescu, Bogdan	ThC14.3	55

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Iaboni, Andrea	FrA08.1	84
Iacovacci, Veronica	FrPOS-32.3	115
Iakovakis, Dimitrios	FrA02.1	82
Ianez, Eduardo	WeC01.4	8
Iasemidis, Leon	FrA05.1	83
	FrB05.4	90
Iasemidis, Leonidas	FrA05.1	CC
	FrB05.1	CC
	FrB05.2	89
Ibañez, Gema	WePOS-32.29	34
Ibañez, Jaime	ThPOS-20.16	64
Ibarra Zarate, David Isaac	SaD18.4	153
Ibbotson, Michael R	ThB01.1	45
	FrPOS-33.36	117
	FrPOS-35.31	122
	FrPOS-36.22	123
Iberite, Federica	WePOS-13.1	20
	ThC21.4	57
Ibironke, Oluwaseun	FrPOS-20.6	109
Ibrahim, Basseem	WeA20.5	7
	SaC13.1	144
Ibrahim, Mohammed Nasar	ThB12.4	49
Ichiji, Kei	FrC17.1	100

lordachita, Iulian	ThB10.1	48	Iwamoto, Yutaro	WePOS-11.8	18
	ThB10.3	48		ThPOS-11.5	61
	ThB10.4	48		FrPOS-11.8	106
	ThPOS-23.4	66	Iwanaga, Kogoro	ThPOS-33.30	74
lp, Zachary	FrPOS-24.3	111	Iwasaki, Ayako	FrB08.5	91
Iqbal, Muhammad Mubasher	WeA20.3	7	Iwase, Hideaki	ThPOS-34.42	77
Iramina, Keiji	ThPOS-09.2	60	Iwata, Hiroyasu	SaA16.6	134
	FrPOS-37.4	124	Izquierdo, David	ThPOS-31.3	70
Irani, Ashkan	WeA08.3	2	Izukura, Rieko	WePOS-33.8	35
	WeA08.6	3	Izumi, Koki	SaA16.6	134
	WeC01.3	8	Izumi, Shin-ichi	SaC04.3	142
	FrPOS-25.3	111	Izumi, Shintaro	FrA14.6	86
Irimia, Andrei	WeA12.5	4			
Irino, Tomoyuki	ThPOS-33.26	74	J		
Irsch, Kristina	ThC12.1	CC	J M, Poorneshwaran	SaD19.1	153
	ThC12.3	55	Ja Ćur, Miroslav	ThPOS-33.22	73
Irusta, Unai	WeA02.5	1	Jabarulla, Mohamed Yaseen	WePOS-33.34	36
	ThA05.5	40	Jacob, Suma	SaB05.2	136
	ThB05.2	47	Jacobs, Julia	ThPOS-02.2	58
	ThB05.6	47	Jacomet, Marcel	FrPOS-30.6	114
Isaka, Sena	ThPOS-33.26	74		SaB10.6	138
Isaksson, Johan	FrPOS-38.20	127		WePOS-29.4	26
Isasi Liñero, Iraia	ThA05.5	40	Jaesoo, Hong	WePOS-34.8	37
	ThB05.2	47	Jafari, Parya	SaB17.6	140
	ThB05.6	47		SaD09.5	150
Iseki, Yuya	ThPOS-33.4	72	Jafari, Roozbeh	WeA20.5	7
Isezaki, Takashi	WePOS-33.25	36		SaC13.1	144
	ThPOS-25.6	67		ThPOS-33.46	75
Ishibashi, Koichiro	WePOS-08.1	16	Jafari, Sahar	WeA09.4	3
	WePOS-08.3	16	Jafari, Amirhossein	ThPOS-16.3	62
	FrPOS-34.6	118	Jago, James	FrB19.5	94
Ishihara, Hisashi	SaD16.4	152	Jagoda, Laura	FrB08.2	90
Ishihara, Jun	WePOS-20.4	23	Jahangiri, Amir	ThPOS-20.9	64
Ishihara, Takako	FrB17.1	93	Jahanshad, Neda	ThPOS-33.18	73
	FrPOS-38.24	127	Jährling, Nina	FrPOS-33.38	117
	FrC13.6	99	Jain, Abhinandan	ThPOS-26.1	68
Ishihara, Yuya	ThPOS-36.32	81	Jain, Karan	FrPOS-19.4	109
Ishii, Kohei	FrPOS-38.17	127	Jain, Kriti	FrPOS-15.3	107
Ishii, Yuki	FrA04.3	83	Jain, Prateek	FrPOS-20.7	109
Ishikawa, Akira	FrPOS-38.34	128	Jaishankar, Rohan	FrPOS-19.6	109
	FrPOS-19.3	109	Jaiswal, Dibyanshu	ThB20.4	51
Ishikawa, Masahiro	SaD12.3	151	Jakubicek, Roman	ThC15.4	55
Ishikawa, Tsuyoshi	ThPOS-19.1	63		FrC15.1	99
Ishitani, Hayato	WePOS-34.10	37	Jalali, Roozbeh	ThPOS-30.6	69
Islay, Zeynep Melike	WeC13.3	11	Jalalifar, Ali	WeC12.6	11
Isizaki, Shouta	WePOS-31.2	30	Jalamneh, Mais	FrPOS-17.6	108
	FrPOS-34.9	118	Jalan, Rajiv	WePOS-23.4	24
	FrPOS-34.10	118	Jamal, Wasifa	FrPOS-15.3	107
	FrPOS-33.14	116	James, Christopher	FrB18.1	C
	FrPOS-34.20	119	Jami, Apoorva Sargarwal	SaC05.4	142
Isler, Helene	ThA10.4	41	Jamin, Antoine	WePOS-05.4	16
Ismail, Hafsa	WeA21.2	7	Jan, Jiri	ThC15.4	55
	ThPOS-08.4	60		FrC15.1	99
Istrate, Dan	ThPOS-31.5	70	Jana, Soumya	WeA03.6	1
Itai, Natsuko	FrPOS-37.35	126		WeA09.3	3
Ito, Akihito	SaC04.4	142		ThB12.4	49
Ito, Hisatoshi	FrPOS-34.39	120		ThB15.3	50
Ito, Jun	ThPOS-33.37	74		FrPOS-08.13	105
Ito, Kodai	FrPOS-34.15	119	Janati Idrissi, Mohammed Abdou	FrC08.2	97
	FrPOS-38.33	128	Jané, Raimon	ThC11.1	CC
	SaD10.4	150		ThC11.1	54
Ito, Masaaki	WePOS-34.28	38		ThC11.6	54
Ito, Taeko	ThA04.5	40		ThPOS-29.5	69
Ito, Yosuke	FrPOS-35.26	122		FrPOS-14.5	107
Itoh, Yuki	WePOS-11.15	18		FrPOS-17.2	108
Itthipanichpong, Rath	SaC08.2	143		FrPOS-17.4	108
Itu, Lucian	ThPOS-10.4	61		FrPOS-17.5	108
Iuso, Domenico	FrPOS-06.10	104		FrPOS-20.14	110
Ivanov, Kamen	FrPOS-28.13	113		SaA11.6	132
	WeA09.6	3	Jang, Dae-Geun	WeA13.3	4
	WeC20.3	13		FrC04.2	96
	FrPOS-04.4	103	Jang, Geuk Young	FrB11.3	92
Ivanovic, Marija	ThA21.4	45	Jang, Hojeong	ThPOS-36.27	81
	FrPOS-30.11	114	Jang, Jintae	FrPOS-37.27	125
	ThC15.5	55	Jang, Jungwoo	FrPOS-27.9	112
Iwakami, Yumi	ThC16.4	56	Jang, Junwon	SaB16.1	139
Iwakawa, Mikio	WePOS-30.18	29	Jang, Ki-Hwan	FrC13.1	99
Iwamoto, Naoki	WePOS-31.14	31	Jang, Kuk Jin	SaA19.5	135
Iwamoto, Noriyasu	FrPOS-36.30	123	Jang, Sehyeon	WePOS-04.3	15
	FrPOS-36.32	123			

Jang, Won Ick	WePOS-31.24	32	Jia, Jie	FrB06.2	90
Jang, Yongwon	WePOS-31.24	32	Jia, Sen	FrC18.4	101
Jani, Mahrshi	ThPOS-26.3	68		SaD03.6	148
	FrPOS-17.3	108	Jia, Xiaofeng	WePOS-13.9	20
Janicke, Helge	ThPOS-30.2	69		FrC01.3	95
Janiga, Gabor	WePOS-31.10	31		FrC01.4	95
Jankovic, Marko	FrA08.6	84	Jia, Yihan	FrPOS-34.26	119
Jann, Kay	ThPOS-33.19	73	Jian, Wanwei	WePOS-11.4	17
Janoske, Uwe	FrPOS-36.20	123	Jiang, Akang	WePOS-33.2	34
Janott, Christoph	FrA14.4	86	Jiang, Changqing	ThPOS-36.10	80
Jansen, Katrien	SaB02.6	136	Jiang, Daohuai	SaD15.5	152
Jansen, Marcus	SaA19.3	135	Jiang, Dashan	WePOS-11.7	18
Janssen, Mark	FrPOS-36.36	124		SaB19.4	140
Jansson, Tomas	FrPOS-38.20	127	Jiang, Feng	ThA15.1	43
Japundzic-Zigon, Nina	WePOS-05.1	16		FrPOS-05.5	103
Jasey, Neil	WeC08.5	10	Jiang, Hongda	ThPOS-11.4	61
Jatesiktat, Prayook	ThB15.1	50		ThPOS-12.1	61
	FrPOS-03.5	103	Jiang, Hongqing	ThA02.6	39
Jaureguibeitia, Xabier	WeA02.5	1	Jiang, Hongyang	ThB12.5	49
Javid, Abdul Qadir	WeC13.1	11		SaB17.4	140
Javan-Khoshkholgh, Amir	WePOS-15.4	21	Jiang, Hui	ThPOS-02.6	58
	ThPOS-24.9	67	Jiang, Jiehui	WeA03.2	1
	SaD13.4	151	Jiang, Keyuan	SaB08.3	137
Javanmard, Mehdi	ThA13.4	42	Jiang, Lu	SaC01.4	141
	SaA07.4	131	Jiang, Ming	SaA07.3	131
	SaB04.4	136		SaB05.2	136
Javed, Faizan	FrB11.2	91	Jiang, Mingzhe	ThPOS-31.1	70
Javia, Perikumar	ThPOS-27.4	68	Jiang, Naifu	ThB21.6	52
Javorka, Michal	FrC05.3	96	Jiang, Ning	FrB06.1	C
	FrPOS-15.1	107		FrB06.1	90
	SaA02.4	129		FrB06.5	90
Jaworski, Dominic	SaC18.3	146		FrPOS-27.11	112
Jayatilake, Dushyantha	WeC20.6	14		SaC01.2	141
	FrC08.6	97	Jiang, Shize	FrPOS-33.6	116
Jelfs, Beth	FrA01.4	82	Jiang, Xiaoyi	FrB15.1	C
Jelinek, Herbert Franz	ThC16.5	56	Jiang, Yanbing	FrPOS-25.2	111
Jennings, Jessica	ThA17.2	43	Jiang, Yi	WeA03.4	1
Jennum, Poul	WeC19.4	13		SaB19.3	140
	FrA14.3	86	Jiang, Yimin	ThPOS-20.13	64
Jensen, Morten Lind	SaD18.3	153	Jiang, Yizhou	WePOS-15.3	21
Jensen, Winnie	WeC01.2	8	Jiang, Zhiyong	SaB10.3	138
	SaC06.5	142	Jiao, Cuicui	FrPOS-05.5	103
Jeon, Noo Li	ThPOS-34.6	75	Jiao, Xuejun	ThPOS-21.4	65
Jeon, Sohui	ThPOS-34.5	75	Jibbe, Khaled	ThA16.5	43
Jeon, Tae Hyeong	ThPOS-33.14	73	Ji-Hun, Jo	FrPOS-38.19	127
Jeong, Chan Hee	WePOS-29.21	27	Jimaa, Shihab	FrA10.2	85
Jeong, Chang Won	WePOS-31.45	32		FrPOS-06.3	103
	WePOS-33.7	35	Jimbo, Yasuhiko	WePOS-13.2	20
	ThPOS-32.43	72		ThB18.2	50
	ThPOS-33.21	73		FrPOS-34.23	119
Jeong, Chang Wook	WePOS-31.27	32	Jin, Andrew	FrA18.2	87
Jeong, Da Un	WePOS-30.41	30	Jin, Han	WePOS-15.3	21
	WePOS-30.44	30	Jin, Hyungwon	WePOS-31.12	31
Jeong, Hee Soo	ThPOS-35.20	78		ThPOS-35.36	79
Jeong, Hojun	SaC01.6	141	Jin, Lian	SaB10.4	138
Jeong, Hyunbeen	WePOS-19.7	23	Jin, Zelong	SaC12.5	144
Jeong, In Cheol	ThPOS-29.2	69	Jinbo, Liu	WePOS-31.15	31
Jeong, Ji-Hoon	ThPOS-20.1	64	Jing, Xiao	ThPOS-20.12	64
	SaA01.4	129	Jo, Yehhyun	FrPOS-36.39	124
Jeong, Kilhwan	WePOS-31.45	32	Jo, Young Chang	WePOS-29.21	27
Jeong, Moonkwang	FrA16.6	86	João, F. Teixeira	WePOS-12.11	19
Jeong, Seonyun	ThPOS-36.9	80	Jodko-Władzińska, Anna	ThA04.3	40
Jeong, Taegyun	ThPOS-23.1	66	Jog, Mandar	ThPOS-35.28	79
Jermy, Mark	FrPOS-08.2	104	Johal, Wafa	FrPOS-27.13	112
Jesus, Cruz-Garza	WeC06.6	10	Johansson, Johannes	FrPOS-23.8	111
Jetter, Florian	ThPOS-35.18	78	John, Deepu	SaA08.6	131
Jeyhani, Vala	FrA19.4	87	Johnson, Casey	ThPOS-26.1	68
Jha, Ganesh	FrB18.4	94	Johnson, Emily	ThC09.3	54
Jhang, Sin-Hua	ThB02.5	46	Johnston, Benjamin	FrA15.3	86
	ThPOS-35.26	79		FrB11.4	92
Ji, Linhong	FrC16.2	100		FrB17.3	93
	FrC16.5	100	Johnston, William	ThB13.2	49
Ji, Nan	WePOS-12.6	19		ThB13.3	49
Ji, Ning	WePOS-01.2	14	Joko, Shiho	WePOS-20.4	23
Ji, Yunhua	FrC11.2	98	Jonasson, Hanna	SaC11.5	144
Jia, Dongya	WeA05.1	2	Jones, Alexus	FrA17.4	87
	ThA05.4	40	Jones, Creed	FrC13.4	99
	ThB05.4	47	Jones, Edward	ThPOS-32.27	71
	ThB05.5	47		SaD02.1	147
	ThPOS-05.2	59	Jones, Michael	SaB16.5	140
	FrC05.5	97			

Jones, Richard D.	WeA18.1	C
	WeC18.2	13
	ThA18.5	44
	FrA01.1	C
	FrB18.2	94
	FrC11.4	98
Jones, Timothy	FrPOS-30.1	114
	SaD18.1	153
Jones, Travis	ThPOS-34.4	75
Jonghyun, Ryu	WePOS-31.45	32
	ThPOS-32.43	72
	ThPOS-33.21	73
Jonuzi, Shpetime	WePOS-31.31	32
Joppien, Carolin	WeA19.6	7
Jordan, Kirsty Charlotte	FrPOS-07.2	104
	FrPOS-33.15	116
Jorjandi, Sahar	ThPOS-07.1	60
Joseph, Jayaraj	WeA13.4	5
	WeC14.4	12
	ThB05.1	47
	FrPOS-02.4	102
	FrPOS-19.1	109
	FrPOS-19.2	109
	FrPOS-19.5	109
	FrPOS-30.3	114
	SaA02.1	129
	SaD19.1	153
	SaD19.5	153
Joseph, Paul	WePOS-11.24	18
Joshi, Amit M.	FrPOS-20.7	109
Joshi, Prachi	FrPOS-33.12	116
Joshi, Raviraj	SaB14.2	139
Joshi, Rohan	SaB02.5	135
Joubert, Pierre-Yves	SaB04.5	136
Jovanov, Emil	ThC20.1	C
	ThC20.1	57
Jovicic, Ivana	WePOS-30.43	30
Joyner, Michael	ThB19.3	51
Jrad, Nisrine	WePOS-02.5	15
Ju, Chanyang	ThPOS-33.28	74
Ju, Feng	WePOS-21.5	24
Ju, HanQiu	WePOS-11.4	17
Juan, Carlos G.	WePOS-15.1	21
	FrPOS-33.13	116
Judy, Jack	FrA18.6	87
	FrC02.6	96
Jujjavarapu, Sri Sadhan	WeA08.5	3
Jun, Hong Young	WePOS-33.7	35
	ThPOS-32.43	72
	ThPOS-33.21	73
Jun, Kooksung	WeC19.1	13
	WePOS-29.13	27
	WePOS-33.3	35
	WePOS-33.38	36
Jun, Sang Beom	ThPOS-35.20	78
	FrPOS-35.29	122
Jun, Sung Chan	WePOS-04.3	15
Jun, Tae Joon	ThA15.5	43
Juneja, Deppo	ThPOS-19.2	63
Jung, Dawoon	FrA13.3	85
Jung, Duk Young	WePOS-34.23	38
	FrPOS-37.17	125
Jung, Erik	FrPOS-33.18	116
Jung, Gihoon	FrPOS-34.13	119
Jung, GilJun	WePOS-33.34	36
Jung, Hachul	ThPOS-34.31	76
Jung, Hyun Ho	FrPOS-35.29	122
Jung, Suk Won	WePOS-29.21	27
Jung, Sunok	WeA13.3	4
Jung, Tzyy-Ping	ThPOS-20.5	64
	SaB01.2	135
Jung, Woo Chang	WePOS-33.24	36
	ThPOS-33.14	73
Jung, Wooram	SaB10.1	138
Jung, Younginha	FrPOS-27.9	112
Jung, YoungJin	ThPOS-36.9	80
Jung, Yujin	FrPOS-34.24	119
Junior, Jose	ThPOS-33.13	73
Jupille, Hugo	ThPOS-34.36	77
Jurak, Pavel	FrPOS-33.1	115
Justus, Schock	FrA15.2	86

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K, Veena Divya	WePOS-33.36	36
K, Vinay	FrPOS-28.15	113
Kabaliuk, Natalia	FrPOS-08.2	104
Kabashima, Shogo	FrPOS-34.9	118
	FrPOS-37.42	126
Kabayama, Kazuya	WePOS-31.21	31
Kabir, Muammar Muhammad	FrPOS-05.2	103
	SaD14.2	151
Kachenoura, Amar	WeC05.6	9
Kaczmarek, Mariusz	WePOS-24.2	25
	ThPOS-09.8	60
Kadone, Hideki	SaB16.2	139
Kadotani, Hiroshi	FrB08.5	91
Kadoury, Samuel	WePOS-31.30	32
Kaewlee, Thitikorn	FrPOS-37.4	124
Kafantaris, Evangelos	ThC05.1	53
Kafieh, Raheleh	ThPOS-07.1	60
Kahali, Pegah	SaD14.1	151
Kahani, Danial	FrPOS-38.35	128
Kahng, Peter	SaD10.1	150
Kaiharu, Toshiya	ThPOS-09.5	60
Kainz, Wolfgang	ThB04.6	47
	FrA09.6	84
Kaipatur, Neelambar	SaC15.4	145
Kaiser, Alexander	ThPOS-33.8	73
Kaiser, William	SaC17.2	146
Kajdacsy-Balla, Andre	WeC03.4	9
Kakileti, Siva Teja	SaB19.1	140
Kaku, Heet	FrC01.6	95
Kalaboukhov, Alexei	ThA04.4	40
Kallipolitis, Athanasios	SaD12.4	151
Kallos, Efthymios	WePOS-16.7	22
	FrPOS-35.23	121
	SaB04.1	136
	SaD03.4	148
	SaC07.6	143
Kalra, Anubha	SaB17.1	140
Kalra, Mannudeep	FrPOS-38.38	128
Kalso, Eija	ThPOS-34.3	75
Kalvoy, Haavard	ThC01.2	52
Kamada, Kyousuke	ThA20.2	45
Kamara, Vanessa L	FrPOS-11.2	106
Kamarainen, Joni	ThPOS-33.23	73
Kamba, Kazuho	ThPOS-12.4	61
Kameneva, Tatiana	SaA07.2	131
Kameoka, Jun	ThPOS-32.34	71
Kamiya, Naoki	ThPOS-32.35	72
	FrPOS-28.3	113
Kammoun, Malek	WePOS-31.48	33
Kan, Chi Nok Enoch	WePOS-29.1	26
Kan, Chung-Dann	WePOS-17.8	22
Kan, Edwin	WePOS-34.10	37
Kanaya, Shigehiko	ThPOS-31.4	70
	ThB03.1	46
Kanazawa, Kazuki	ThPOS-34.42	77
Kanda, Akio	ThA21.5	45
Kanda, Keiichi	WePOS-23.5	24
Kandori, Akihiko	FrPOS-38.17	127
Kaneko, Fuminari	ThPOS-34.26	76
Kaneko, Hidekazu	ThPOS-34.42	77
Kaneko, Kazuo	FrA19.6	87
Kaneko, Masahiko	ThPOS-36.39	81
Kaneko, Yasunori	WePOS-30.23	29
Kanemura, Atsunori	FrA16.5	86
Kang, Byungjeon	ThPOS-34.15	75
Kang, DongHun	FrPOS-33.16	116
	FrPOS-11.1	106
Kang, Guixia	WePOS-33.13	35
Kang, Hee Gyung	ThPOS-33.9	73
Kang, Ho-Sung	FrPOS-36.2	122
Kang, Jae-Hwan	WeA13.3	4
Kang, Jaemin	ThPOS-32.24	71
Kang, Jinbum	SaB10.1	138
Kang, Joonseong	WePOS-33.44	37
Kang, Jungsun	WePOS-33.45	37
	FrPOS-37.1	124
Kang, JunHyuk	WePOS-15.4	21
Kang, Qi	ThPOS-33.28	74
Kang, Sehong	ThPOS-32.31	71
Kang, Siu		

Kang, Sooln	WePOS-34.9	37	Kato, Kana	ThPOS-32.7	70
Kanik, Sümeyra Demir	WePOS-04.2	15	Kato, Kazuo	ThC21.6	57
Kaniusas, Eugenijus	WePOS-31.1	30		ThPOS-33.3	72
Kannape, Oliver Alan	ThA06.5	40		ThPOS-33.4	72
Kano, Manabu	ThPOS-34.35	77	Kato, Takanori	WePOS-30.14	29
	FrB08.5	91	Katsafadou, Maria	ThC04.2	53
Kano, Shinya	FrA04.3	83	Katsarou, Zoe	FrA02.1	82
Kanoga, Suguru	WePOS-30.23	29	Katsumura, Motoyu	ThA16.6	43
	WePOS-30.30	29		SaC16.3	146
Kant Kumar, Dinesh	ThPOS-13.1	61	Katsuno, Yuki	FrPOS-38.34	128
	FrA01.4	82	Katy, Odette	FrA20.4	88
	FrB20.1	C	Kauppinen, Esko	FrPOS-38.38	128
	FrB20.6	95	Kaur, Inderjeet	FrPOS-08.13	105
	SaA03.4	129	Kaur, Rachneet	FrC01.5	95
Kanzaki, Makoto	FrPOS-09.10	106		FrPOS-25.1	111
Kanzawa, Takahiro	FrPOS-33.20	116	Kaushik, Sumit	ThPOS-33.17	73
Kao, Shin-Yu	ThPOS-35.23	78	Kavehei, Omid	ThC14.1	55
Kao, Wei-Chen	FrC07.1	97	Kawaguchi, Nathan	FrC13.4	99
Kapeller, Christoph	ThC01.2	52	Kawahara, Yuko	FrPOS-34.39	120
Kap-Ho, Seo	ThPOS-36.35	81	Kawahira, Hiroshi	SaD16.4	152
Kappel, Simon Lind	SaA04.3	130	Kawai, Toshikazu	FrPOS-36.30	123
	SaC18.2	146		FrPOS-36.31	123
Kar, Julia	ThPOS-17.12	63		FrPOS-36.32	123
Karabelas, Elias	WeC09.1	10	Kawakubo, Hirofumi	ThPOS-33.26	74
Karageorgos, Grigorios Marios	SaB15.3	139	Kawamoto, Hiroaki	ThA16.2	43
Karam, Choi	FrPOS-37.15	125	Kawamoto, Yasukata	FrPOS-38.5	126
	SaA02.6	129	Kawana, Takumi	WePOS-14.9	21
Karami, Elham	WeC12.6	11	Kawanaka, Haruki	FrPOS-19.3	109
	WePOS-12.12	19	Kawasaki, Hiroshi	WePOS-30.46	30
Karampela, Maria	SaC08.4	143		FrPOS-33.31	117
Karanasiou, Georgia	WePOS-31.38	32		FrPOS-33.32	117
Karasan, Ekin	ThPOS-33.22	73	Kawase, Yumeko	FrPOS-35.27	122
Karashima, Akihiro	WeC19.2	13	Kawasetsu, Takumi	SaD16.4	152
Karbing, Dan Stieper	ThC11.2	54	Kawashima, Motoki	WePOS-34.19	38
	SaB11.1	C	Kawashima, Noritaka	SaC16.5	146
	SaB11.3	138		SaC16.6	146
	SaB11.5	138	Kaye, Jeffrey A.	ThPOS-26.10	68
Karful, Ahmad	WeC05.6	9	Kaymak, Uzay	FrA08.4	84
Kargwal, Sahil	ThA20.2	45	Kayser, Bastian	FrA11.4	85
Karim, Nazmul	SaC18.1	146	Kazemi, Kamran	FrC12.3	98
Karimi, Nader	WePOS-11.30	19	Kazemimoghadam, Mahdieh	FrPOS-27.14	112
	WePOS-12.14	20	Ke, Yufeng	WeA18.6	6
	SaB19.5	141		ThPOS-20.3	64
	SaC12.1	144		ThPOS-20.20	65
	SaC19.6	147		SaA01.5	129
	SaD19.6	153	Kearney, Robert Edward	FrPOS-20.1	109
Karimi, Nouredin	FrPOS-28.16	113	Kearny, Steven	WeC03.4	9
Karimi, Yasin	SaB03.2	136	Kebbach, Märuan	ThPOS-34.27	76
Karimian, Hamid R.	WePOS-11.27	19		ThPOS-34.30	76
Karino, Hideyuki	FrPOS-36.30	123	Kechadi, Tahar	WeC19.3	13
Karisik, Filip	WeA05.2	2		WeC20.2	13
Kärkkäinen, Saku	SaD01.4	147	Keenan, Emerson	ThB04.3	46
Karkoub, Mansour	ThPOS-33.1	72	Kehoe, Matthew	FrA16.3	86
Karlen, Walter	WeC04.4	9	Keim, Uwe	ThPOS-33.8	73
Karmakar, Chandan	WePOS-05.5	16	Keller, Stephan Sylvest	ThPOS-34.3	75
	ThB04.3	46	Kelly, Paul	FrC11.4	98
	FrPOS-02.3	102	Kempresos, Helen	ThPOS-17.11	63
	SaA02.3	129	Kempster, Peter	FrA01.4	82
Karnowski, Karol Marian	FrPOS-33.14	116	Kennedy, Samantha	ThPOS-09.10	60
Karpinecz, Bianca	ThC21.2	57	Kenny, Bret	ThPOS-35.37	79
Karr, Jonathan	ThPOS-34.13	75	Kenny, Glen Patrick	SaD04.2	148
Karsli, Cengiz	FrPOS-35.2	120	Kenny, Rose Anne	ThC19.5	57
Kartasalo, Kimmo	ThPOS-15.4	62	Kepezis, Stavros	WeA15.4	5
Karumudi, Rambabu	WePOS-29.3	26	Kerexeta, Jon	WePOS-23.10	25
Karunakaran, Kiran	WeC08.1	10	Kerin, Michael	ThB03.6	46
	FrC16.4	100	Kerkhof, Peter LM	WeC17.3	12
Karunanithi, Mohanraj	SaD16.3	152		FrPOS-13.3	107
Karwal, Om	WePOS-27.6	25		SaD11.1	CC
Kasahara, Yoshiyuki	ThA21.5	45		SaD11.3	150
	ThPOS-05.3	59	Kertzscher, Ulrich	WePOS-30.49	30
	FrA10.1	85		WePOS-31.31	32
Kasai, Ririko	FrPOS-37.18	125	Kesavadas, Mrinali	WePOS-29.37	28
Kaseda, Yuto	WePOS-33.37	36	Kesavadas, Thenkurussi	WePOS-32.10	33
Kashkooli, Kimia	ThB11.5	49		ThPOS-33.42	74
	SaA14.6	133		SaA16.1	133
Kashyap, Bipasha	SaD17.6	153	Kesavadas, Tushar	FrPOS-35.1	120
Kassanos, Panagiotis	SaB04.1	136	Keshavarz, Behrang	SaD14.2	151
Kassem, Abdallah	WePOS-25.4	25	Keskin, Seda	WePOS-31.42	32
Katai, Takuya	SaA15.4	133	Keßler, Benedikt	ThA03.1	39
Katayama, Norihiro	WeC19.2	13	Khaleghi, Ali	ThC04.5	53
Kateera, Fredrick	ThB21.5	52		ThC04.6	53

Khalil, Islam S. M.	FrPOS-27.3	112	Killia, CA	FrPOS-35.19	121
Khalil, Mohamad	ThPOS-33.32	74	Killian, Owen	ThA18.2	44
Khamis, Heba	WePOS-33.5	35		FrA01.3	82
Khan, Ali Fahim	FrPOS-08.12	105	Kilroy, Hannah	ThB21.4	52
	FrPOS-33.35	117		SaD18.5	153
	FrPOS-33.41	117	Kim, Byeongnam	ThPOS-32.44	72
	SaB03.6	136	Kim, Byungyeon	FrPOS-34.21	119
Khan, Asad	ThA01.1	39	Kim, Chang Won	FrPOS-34.45	120
	SaA18.1	134	Kim, Chang-Sei	WePOS-32.33	34
Khan, Hassan Aqeel	WePOS-11.18	18		FrA16.5	86
	FrC17.2	100	Kim, Chan-Il	WePOS-29.16	27
Khan, Muhammad Saad	ThPOS-26.2	68		ThPOS-32.33	71
Khan, Shehroz	ThA14.5	43		FrPOS-33.9	116
	FrA08.1	84	Kim, Cherry	ThA15.5	43
Khan, Sofia	ThPOS-21.1	65	Kim, Chris H.	FrC02.5	96
Khanafer, Adib	FrPOS-08.2	104	Kim, Chulhong	ThC03.1	C
Khandoker, Ahsan H	ThA21.5	45		ThC03.1	52
	ThC16.5	56		FrPOS-37.29	125
	ThPOS-05.3	59		FrPOS-37.30	125
	FrA10.1	85		FrPOS-37.31	126
	FrA10.2	85	Kim, Chulmin	ThPOS-35.24	78
	FrA10.4	85	Kim, Dae Won	WePOS-31.45	32
	FrPOS-06.3	103	Kim, Daeyoung	ThA15.5	43
Khandoker, Ahsan H.	FrA10.1	C	Kim, Denisse M.	FrPOS-37.32	126
Khanh, Tran Quoc	FrPOS-33.22	116	Kim, Dohyeun	ThA15.5	43
Kharazia, Viktor	FrA01.2	82	Kim, Dong Hwan	FrPOS-03.4	103
Khasnobish, Anwasha	FrPOS-05.3	103	Kim, Dong-Joo	ThPOS-20.1	64
Khateeb, Karam	FrA01.2	82		SaA01.4	129
	SaC06.2	142	Kim, Dong-Seong	ThC20.2	57
Khattak, Shahid	ThPOS-06.4	59	Kim, Do-Won	WePOS-30.35	30
Kheirandish-Gozal, Leila	FrA02.6	82		WePOS-30.37	30
	FrPOS-02.1	102	Kim, Edward	FrB02.2	89
Khojandi, Anahita	WePOS-33.10	35	Kim, Eun Ji	WePOS-32.16	33
Khoo, Michael	FrA11.1	C		WePOS-32.17	33
	FrB11.1	C	Kim, Eun Young	ThPOS-33.12	73
	FrC11.1	C	Kim, EunBin	ThPOS-33.12	73
	FrC11.2	98	Kim, Evgenii	SaB18.4	140
	SaA11.1	CC	Kim, Gyeong Hu	ThB10.1	48
Khorshidi, Reza	ThPOS-34.16	76		ThB10.3	48
Khosravi, Mahsa	ThPOS-35.28	79	Kim, Gyuseok	WePOS-33.44	37
Khovanov, Igor	FrPOS-16.1	107		WePOS-33.45	37
Khovanova, Natasha	WeA16.2	5	Kim, HanBit	FrPOS-36.19	123
	FrPOS-16.1	107	Kim, Hee Chan	WePOS-31.6	31
Khullar, Somesh	WePOS-31.15	31		ThPOS-35.31	79
Khurram, Obaid	FrB02.2	89		FrPOS-33.11	116
Khurram, Syed Ali	FrC17.2	100		FrPOS-34.34	119
Khushaba, Rami N.	ThPOS-06.9	59		FrPOS-38.13	127
Kiani, Mehdi	WeA20.2	7	Kim, Heejin	FrPOS-34.34	119
	ThPOS-24.9	67	Kim, Ho Chul	WePOS-32.23	34
	FrA13.6	86	Kim, Ho Yong	WePOS-32.33	34
	FrPOS-23.2	110	Kim, Hodam	WePOS-34.21	38
	SaD13.4	151		ThPOS-35.22	78
Kiani, Parnian	WeA10.2	3	Kim, Hyeongsub	FrPOS-37.31	126
Kidera, Shouhei	ThB03.1	46	Kim, Hyojin	FrPOS-37.30	125
	ThB03.5	46	Kim, Hyung Ham	FrPOS-37.21	125
	FrPOS-09.8	105	Kim, Hyunggug	FrPOS-36.39	124
Kidmose, Preben	SaA04.1	CC	Kim, Hyungmin	SaB18.4	140
	SaA04.3	130	Kim, Ikhwan	WePOS-15.3	21
	SaC18.1	CC	Kim, Il Kon	WePOS-33.41	36
	SaC18.2	146		WePOS-34.3	37
Kido, Koshiro	ThPOS-31.4	70		WePOS-34.14	38
Kieninger, Jochen	FrA18.5	87		ThPOS-30.7	69
	FrB10.6	91	Kim, In Young	ThPOS-34.15	75
Kienle, Alwin	ThA10.1	41		FrPOS-33.16	116
Kietzer, Stephanie	WePOS-05.2	16		FrPOS-34.21	119
Kifle, Yonatan	ThPOS-33.7	73	Kim, Insoo	FrPOS-23.5	111
	FrC13.3	99	Kim, Jae Gwan	SaB18.4	140
Kigka, Vassiliki	FrPOS-18.2	108	Kim, Janis	ThPOS-36.24	80
	SaA12.6	132	Kim, Jason	FrPOS-36.18	123
	SaA15.1	133	Kim, Jeehoon	FrPOS-36.14	122
	SaD11.1	150		FrPOS-36.18	123
	SaD11.2	150	Kim, Jeffrey	ThPOS-32.45	72
Kihara, Hiromu	WePOS-31.2	30		FrC15.5	100
	FrPOS-34.9	118	Kim, Ji Eon	ThPOS-32.43	72
	FrPOS-34.10	118		ThPOS-33.21	73
Kikuchi, Keigo	FrPOS-34.23	119	Kim, Ji Hwan	ThPOS-35.21	78
Kikuchi, Takahiro	FrPOS-27.10	112	Kim, Ji Sung	FrC13.1	99
Kilicarslan, Atila	WeA06.4	2	Kim, Jieun	FrPOS-33.24	116
	WePOS-01.6	14	Kim, Jin Young	FrPOS-37.29	125
	ThPOS-20.8	64		FrPOS-37.30	125
Kilintzis, Vassilis	SaA08.5	131			

Kim, Jinhyuk	FrA08.2	84	Kim, Youn Ho	WeA13.3	4
	FrPOS-36.40	124		FrC04.2	96
Kim, Jinman	FrA15.5	86	Kim, Young	FrPOS-36.29	123
	SaC08.5	143	Kim, Young Soo	FrPOS-35.28	122
Kim, Jinwook	FrA13.3	85	Kim, Youngjae	ThPOS-32.20	71
Kim, Jong Hyun	FrPOS-37.31	126	Kim, Young-Jin	ThPOS-34.31	76
Kim, Jong Ryeol	FrPOS-28.6	113	Kim, Young-Kwan	FrPOS-27.6	112
	FrPOS-28.7	113	Kim, Youngsoo	WeA13.3	4
Kim, Jongbeom	FrPOS-37.29	125		FrC04.2	96
Kim, Jongbum	SaC01.6	141	Kimura, Shunsuke	ThPOS-36.20	80
Kim, Jongheon	ThPOS-34.45	77	Kimura, Toshitaka	ThPOS-25.6	67
Kim, Jonghyun	WeC18.6	13	Kimura, Yoshitaka	ThA21.5	45
	FrPOS-20.5	109		ThPOS-05.3	59
	SaC01.6	141		FrA10.1	85
Kim, Joon-Seok	WePOS-29.24	27		FrPOS-06.3	103
Kim, Jung	ThPOS-32.29	71	King, Andy	ThPOS-09.3	60
Kim, Jung Hwan	ThPOS-35.24	78	King, Louis Charles	SaD01.2	147
Kim, Jungsuk	ThPOS-33.9	73	King, Nicolas Kon Kam	FrB18.5	94
Kim, Jung-Yeon	FrPOS-22.11	110	King, Richard	ThB16.5	50
Kim, Junsuk	FrPOS-36.2	122	Kinney-Lang, Eli	WeC05.3	9
Kim, Junyoung	FrPOS-20.5	109		FrB02.4	89
Kim, Kang San	WePOS-34.4	37	Kinoshita, Kengo	WeC19.2	13
Kim, Ki-Bum	ThPOS-36.30	81	Kinoshita, Koichi	WePOS-11.23	18
Kim, Kijung	FrPOS-03.4	103	Kircher, Michael	ThA12.3	42
Kim, Kou Gyeom	WePOS-31.45	32	Kirchhain, Arno	WePOS-16.1	21
Kim, Kyung Hwan	FrPOS-34.46	120		ThA13.1	42
Kim, Laehyun	ThPOS-32.20	71	Kirchner, Jens	ThC04.3	53
Kim, Mi Jin	FrPOS-34.46	120		ThC04.4	53
Kim, Min Gyu	WePOS-33.41	36		FrPOS-26.3	112
	WePOS-34.3	37	Kirimoto, Tetsuo	ThPOS-22.2	66
	ThPOS-30.7	69	Kirn, Borut	FrPOS-13.2	107
Kim, Min Seong	FrPOS-33.16	116	Kissler, Johanna	ThPOS-35.38	79
Kim, Minju	WePOS-30.2	28	Kitagawa, Yuko	ThPOS-33.26	74
Kim, Mun Sang	WeC19.1	13	Kitahata, Shohei	ThB12.6	49
	WePOS-29.13	27	Kitamura, Takahiro	ThPOS-11.5	61
	WePOS-33.3	35	Kitamura, Toshiaki	ThPOS-15.9	62
	WePOS-33.38	36		FrPOS-33.45	118
Kim, Namju	ThPOS-35.16	78		FrPOS-33.46	118
	ThPOS-35.21	78	Kitano, Keisuke	SaC04.4	142
Kim, Nathan	ThB19.6	51	Kiuchi, Yukihiro	ThC19.4	57
Kim, Sang Geon	ThB17.1	C	Kiyani, Amber	FrC17.2	100
	ThB17.1	50	Kjelgaard, Margaret	FrPOS-15.3	107
Kim, Sang Joon	SaB10.1	138	Klabes, Julian	FrPOS-33.22	116
Kim, Sang-Su	WePOS-30.35	30	Klaproth, Joel	WePOS-19.5	23
Kim, Sehyeon	ThPOS-33.28	74	Klatt, Dieter	WeC03.1	C
Kim, Seong-Woo	WePOS-29.24	27		WeC03.1	8
	ThPOS-33.9	73		WeC03.2	8
Kim, Seongyeon	FrPOS-36.39	124		WeC03.4	9
Kim, SeungJin	WePOS-33.7	35	Kleiser, Stefan	ThA10.4	41
	ThPOS-32.43	72	Klemm, Lisa	WePOS-19.1	22
	ThPOS-33.21	73	Klenner, Jacob B.	ThPOS-17.6	63
Kim, Seung-Jong	ThPOS-36.22	80	Klimes-Dougan, Bonnie	FrA01.1	82
Kim, Seung-Jun	WePOS-29.13	27	Klingelhoefer, Lisa	FrA02.1	82
	ThPOS-10.1	61		SaB14.6	139
Kim, Sohee	WePOS-30.3	28	Klingspor, Christoph	SaC04.2	142
	ThPOS-33.6	72	Kloosterman, Fabian	FrC14.1	99
	ThPOS-35.16	78	Klosterman, Samantha	FrA02.1	CC
	ThPOS-35.21	78		FrA02.3	82
Kim, SuBok	ThPOS-36.17	80	Kluba, Marta Maria	FrA21.6	88
Kim, Sun I.	ThPOS-34.15	75	Klucken, Jochen	WeA18.1	6
Kim, Sung June	FrA18.3	87	Kluess, Daniel	ThPOS-34.27	76
	FrPOS-27.9	112		FrPOS-33.48	118
Kim, Sung Woo	ThPOS-31.2	70	Klugsberger, Bettina	SaD16.1	152
Kim, Sunghan	ThC02.1	52	Klum, Michael	WePOS-19.5	23
	ThC02.3	52		FrA19.1	87
	FrPOS-33.7	116		FrC05.6	97
Kim, Sung-Phil	WePOS-30.2	28		FrPOS-06.2	103
	FrPOS-36.2	122		SaA13.6	133
Kim, Sungwon	ThPOS-07.2	60	Knaflitz, Marco	ThA06.4	40
Kim, Sunhyo	FrPOS-27.9	112		ThB13.1	49
Kim, Tae Hyun	ThB17.1	50		SaC17.6	146
Kim, Tae-Hoon	WePOS-31.45	32	Knappe, Svenja	ThA04.1	40
	WePOS-33.7	35		ThPOS-33.25	73
	ThPOS-32.43	72	Knecht, Sebastien	WeC09.6	10
	ThPOS-33.21	73	Kneist, Werner	WePOS-27.4	25
Kim, Wooseop	WePOS-34.23	38		WePOS-28.2	26
	FrPOS-37.17	125		FrB21.3	95
Kim, Yangwoo	WePOS-04.3	15	Knickerbocker, John	WePOS-18.4	22
Kim, Yeongdae	FrPOS-37.27	125	Knippels, Ingrid	FrPOS-28.1	113
Kim, Youmin	FrPOS-37.1	124	Knobbe, Arno	ThC20.4	57

Knoefel, Frank-Dietrich	WePOS-19.2	23	Komoriya, Yota	WePOS-32.4	33
	FrC18.6	101	Kompatsiaris, Ioannis (Yannis)	WePOS-07.2	16
Knopp, Jennifer L.	WeA16.5	6		SaB14.1	139
	ThA11.1	41	Kompella, Gayatri	WePOS-11.29	19
	ThA17.4	44	Konasch, Jan	WePOS-14.5	20
	ThPOS-17.6	63	Koncar, Igor	FrPOS-37.40	126
	ThPOS-17.8	63	Kondo, Kazuya	FrA06.1	83
Knopp, Tobias	ThA03.1	CC	Kondo, Toshiyuki	FrPOS-36.38	124
	ThA03.4	39		FrPOS-38.17	127
Ko, Bor-Sheng	ThA19.5	44	Kong, Chanho	FrPOS-35.29	122
	ThC19.3	57		FrPOS-36.42	124
Ko, Byung-Hoon	WeA13.3	4	Kong, Linghan	WeA18.6	6
Ko, Hoon	FrA13.5	85		ThPOS-20.3	64
Ko, Joong-Kwang	WeC19.1	13		ThPOS-20.20	65
	WePOS-33.38	36		SaA01.5	129
Ko, Match Wai Lun	FrPOS-28.6	113	Kong, Yekyung	WeC08.3	10
	FrPOS-28.7	113		WeC08.5	10
Ko, Minjee	FrPOS-33.40	117	Kong, Youngsun	ThPOS-24.5	67
Ko, Ping-Liang	FrC07.3	97	König, Reinhard	FrPOS-34.20	119
Ko, Taehoon	WePOS-34.4	37	Konijnenburg, Mario	FrC02.5	96
Kobayashi, Futoshi	FrPOS-38.34	128	Koning, Raphael	FrB10.3	91
Kobayashi, Hisato	ThC04.3	53	Konofagou, Elisa	SaB15.1	139
Kobayashi, Kazuto	FrPOS-09.10	106		SaB15.3	139
Kobayashi, Naoki	SaD12.3	151		SaC15.1	C
Kobayashi, Nobuhisa	WePOS-34.7	37	Konopinska, Kamila K.	WePOS-31.17	31
Kobayashi, Tetsuo	ThA04.5	40	Konradi, Alexandra O.	WeC17.3	12
Kobayashi, Toya	SaC16.6	146	Koo, Beomseo	ThPOS-35.19	78
Kober, Maria	ThPOS-36.14	80	Koo, Kyoin	WePOS-29.35	28
Kobler, Reinmar Josef	FrPOS-22.5	110		WePOS-32.26	34
Kobold, Wouter Muller	ThC03.3	52		ThPOS-34.10	75
Kobravi, Hamid Reza	FrPOS-27.4	112		ThPOS-34.11	75
Kobsik, Gregor	SaB19.6	141		ThPOS-34.18	76
Kocaturk, Ozgur	ThPOS-33.39	74		ThPOS-36.27	81
	ThPOS-34.37	77		FrPOS-34.38	120
Kocejko, Tomasz	WePOS-06.4	16		FrPOS-35.12	121
	ThPOS-27.6	68		FrPOS-35.13	121
	FrA04.6	83		FrPOS-38.27	128
Kocevar, Gabriel	ThB15.2	50	Koochaki, Fatemeh	WePOS-20.3	23
Koch, Edmund	ThPOS-35.1	77	Kooijman, Gerben	FrC08.1	97
Koch, Martin	SaB07.1	137	Kopaczka, Marcin	FrA15.2	86
Koch, Michael	ThA21.6	45	Kopietz, Carlotta	ThPOS-22.1	66
Koch, Philipp	ThB02.3	46	Korbicz, Józef	SaD19.1	C
	FrPOS-20.8	109		SaD19.4	153
Kodama, Kana	ThPOS-33.11	73	Kordjamshidi, Parisa	WePOS-11.27	19
Kodate, Junichi	ThPOS-22.5	66	Korenko, Branislav	ThA04.1	40
Kodithuwakku, Janith	ThPOS-25.5	67		ThPOS-33.25	73
Koelpin, Alexander	WePOS-19.9	23	Korposh, Serhiy	WePOS-15.7	21
	SaC11.4	144	Korshoej, Anders R.	FrA09.1	84
	SaC17.3	146		SaD10.6	150
Kofidis, Eleftherios	WeC05.5	9	Kosch, Olaf	ThA03.3	39
Kogawa, Daisuke	ThPOS-36.39	81	Koshida, Manami	FrPOS-38.24	127
Kogo, Takuma	ThC19.4	57	Koshiji, Fukuro	ThPOS-33.10	73
Kogut, Andreas	WePOS-27.4	25		FrPOS-38.1	126
	FrB21.4	95		FrPOS-38.8	127
Koh, Chin Su	FrPOS-35.29	122	Koshiji, Kohji	ThPOS-33.10	73
Koh, Jia Han Benjamin	ThPOS-23.1	66		FrB13.2	92
Koh, Tian Hai	WePOS-31.7	31		FrPOS-38.1	126
Kohler, Fabian	ThPOS-35.15	78		FrPOS-38.8	127
Kohler, Mark	ThC05.6	53	Koskinen, Jari	FrPOS-38.38	128
Kohli, Marc	FrA15.6	86	Kosmas, Panagiotis	WePOS-16.7	22
Kohmura, Eiji	WePOS-30.17	29		FrPOS-35.23	121
Koike, Takuji	FrPOS-27.10	112		SaD03.4	148
Kojodjojo, Pipin	WePOS-15.8	21	Kosmas, Panos	SaB04.1	136
Kok, Manon	FrPOS-38.4	126	Kosmidou, Ioanna	FrPOS-37.41	126
Kok, Xuen Hoong	ThPOS-04.2	58	Kosmyna, Nataliya	ThA18.4	44
Koklonis, Kyriakos	ThPOS-28.5	69	Koss, Jonathan	SaA01.2	129
Kokuryo, Daisuke	ThPOS-09.5	60	Kostas, Evangelos	ThB19.4	51
Kolar, Radim	FrPOS-07.3	104	Kostelnik, Jan	WePOS-28.2	26
	FrPOS-07.4	104	Kostka, Pawel Stanislaw	FrPOS-14.1	107
	FrPOS-07.5	104	Kosugi, Shinichi	ThB16.4	50
Kolb, Katharina	FrPOS-26.3	112	Kosvira, Alexandra	FrA10.4	85
Kolbig, Silke	WePOS-07.3	16		SaA08.5	131
Kolbitsch, Christian	FrA04.4	83	Kota, Srinivas	SaD02.3	147
Koledova, Ekaterina	ThB08.2	48	Kotachi, Takahiro	FrPOS-33.31	117
Kolios, Michael	SaC15.2	145		FrPOS-33.32	117
Kolkhorst, Henrich	SaD01.4	147	Kotake, Yasuyo	WePOS-34.22	38
Kollmannsberger, Philip	ThPOS-34.29	76	Kotani, Kiyoshi	WePOS-13.2	20
Kolodziej, Malgorzata	SaC19.2	147		ThB18.2	50
Komar, Gaber	ThC21.1	57		FrPOS-34.23	119
Kommers, Deedee	SaB02.5	135	Kothawala, AliArshad	SaC03.6	142
Komolafe, Temitope Emmanuel	FrPOS-11.7	106	Kotov, Dmytro	WePOS-32.19	34

Kouamé, Denis	ThPOS-14.4	62	Ku, Yunseo	FrPOS-33.11	116
	SaB15.6	139		FrPOS-38.13	127
Kouchaki, Samaneh	ThPOS-21.1	65	Kuah, Christopher Wee Keong	ThB15.1	50
Kourtidou-Papadeli, Chrysoula	WePOS-23.9	24	Kuai, Shengzheng	FrC16.5	100
	FrB14.5	93	Kubben, Pieter Leonard	WeC20.4	14
Koutsiana, Elisavet	FrA10.4	85		ThPOS-02.3	58
Koutsoupidou, Maria	WePOS-16.7	22		FrPOS-36.36	124
	SaB04.1	136	Kubota, Yuji	WePOS-29.14	27
	SaD03.4	148	Kuchelar, Ramani	SaC15.5	145
Koutsouri, Georgia	WePOS-22.2	24	Kudela, Pawel	FrPOS-35.22	121
Koutsouris, Dimitrios	WeA15.4	5	Küderle, Arne	WeA18.1	6
	WePOS-04.8	15	Kudo, Yuta	WePOS-14.9	21
	WePOS-22.1	24	Kudzia, Pawel	WePOS-29.32	28
	WePOS-22.2	24	Kuert, Gerhard	SaB10.6	138
	ThB19.4	51	Kuga, Yusuke	WePOS-33.46	37
	ThPOS-28.5	69	Kuijf, Mark	WeC20.4	14
	FrB15.2	93		FrPOS-36.36	124
	FrPOS-03.3	103	Kuijsters, Nienke Pertronella Maria	ThB19.1	51
Kouyoumdjian, Maria	WePOS-33.35	36	Kuis, Robinson	ThA21.1	45
Kovacs, Levente	WePOS-09.2	17	Kukuk, Markus	SaA05.2	130
Kovács, Péter	FrPOS-37.5	124	Kulhanek, Tomas	WePOS-33.12	35
Kowal, Marek	SaD19.4	153	Kuliasha, Cary	FrA18.6	87
Kowalewski, Stefan	SaB19.6	141	Kulkarni, Prathamesh	SaC05.4	142
Koyama, Daisuke	ThPOS-34.12	75	Kulkarni, Tanmay	WePOS-16.3	21
Kozasa, Kohei	ThPOS-36.39	81	Kuller, David Thomas	FrPOS-36.17	123
Kozloski, James	FrA02.2	82	Kullmann, Walter H.	ThA03.1	39
Kozlov, Mikhail	ThB04.6	47	Kumamoto, Etsuko	WePOS-30.17	29
	FrA09.6	84		ThPOS-09.5	60
Kraemer, Jan F.	ThC02.1	CC	Kumamoto, Masazumi	ThC16.4	56
Kraft, Michael	ThA17.1	43	Kumamoto, Yorio	WePOS-33.1	34
Kral, Andrej	FrB10.7	91	Kumar Hissaria, Lalit	WePOS-21.2	23
Kramek-Romanowska, Katarzyna	FrPOS-33.43	117	Kumar, Ashnil	SaC08.5	143
	FrPOS-35.7	120	Kumar, Haribalan	FrPOS-16.5	108
Kramer, Annabel	ThA08.2	41	Kumar, Kundan	ThPOS-09.7	60
	ThA08.3	41	Kumar, Mari Ganesh	FrPOS-01.8	102
Kramer, Edgar R.	FrPOS-33.38	117		FrPOS-01.10	102
Kramer-Johansen, Jo	ThB05.2	47	Kumar, Nishant	ThPOS-35.1	77
Krames, Lorena	FrB09.3	91	Kunczik, Janosch	SaB05.5	137
Kranold, Lena	ThPOS-22.4	66	Kunigk, Nicolas	ThB01.4	45
Krause, Christopher	SaA17.5	134	Kunii, Ren	WePOS-32.31	34
Krautschneider, Wolfgang H.	SaC07.5	143	Kuniyoshi, Yasuo	SaD06.1	149
Kravtsova, Anastasiia	WeA04.5	2	Kuo, Hsu-Tah	ThC11.3	54
Krebs, Hermano Igo	ThPOS-36.39	81	Kuper, Francis	WePOS-27.7	26
Kreuzer, Samuel	FrPOS-38.10	127	Kuramoto, Naomi	WeC20.6	14
Krewcun, Camille	ThPOS-34.36	77	Kuriki, Shinya	WePOS-32.31	34
	SaD09.6	150	Kurimoto, Yasuo	ThB12.6	49
Krhac, Katjana	FrB13.5	92	Kurita, Yuki	ThPOS-21.6	65
	SaB13.1	138	Kuriyama, Takuma	WePOS-31.21	31
Krishna, Ragil	SaD05.2	148	Kuroda, Kagayaki	WePOS-32.11	33
Krishnamoorthy, Venkatasubramanian	FrB18.2	94	Kuroda, Tomohiro	WePOS-33.42	36
Krishnan, Anita	FrA10.3	85	Kurokawa, Hiroaki	ThB16.4	50
Krishnan, Balasubramaniam	FrPOS-30.5	114	Kurokawa, Jun	WePOS-34.10	37
Krishnan, Sridhar	ThPOS-02.4	58	Kuromiya, Hiroyuki	FrA08.2	84
	ThPOS-20.17	65	Kurose, Hitoshi	ThA17.1	CC
Krishnasamy Balasundaram, Jayanthi	SaC15.5	145		ThB17.1	CC
Kritikos, Jacob	FrPOS-03.3	103		ThB17.2	50
Krogh, Magnus Reinsfelt	FrPOS-14.3	107	Kurthen, Ira	FrB08.2	90
Krohova, Jana	FrC05.3	96	Kuruppu, Sachira	FrPOS-04.1	103
	SaA02.4	129	Kurz, Jennifer	FrPOS-38.26	127
Kroll, Lori	ThA21.2	45	Kusaba, Shihori	WePOS-31.2	30
Kroll, Mark William	ThA21.2	45		FrPOS-34.9	118
	ThA21.6	45		FrPOS-34.10	118
Krstic, Djordje	WePOS-30.43	30		FrPOS-37.42	126
Krueger, Eddy	ThPOS-36.8	80	Kusakabe, Moriaki	ThPOS-33.26	74
Krueger, Thilo B	WePOS-27.4	25	Kushan, Leila	ThPOS-33.18	73
	WePOS-28.2	26	Küster, Dennis	ThPOS-20.24	65
	FrB21.5	95	Kuster, Niels	SaB09.2	138
	SaA18.4	134	Kuwabara, Kei	FrPOS-38.24	127
Krueger-Ziolek, Sabine	ThA11.6	41	Kuwahara, Makiko	SaC13.2	145
	FrA04.1	83	Kuwahara, Yoshihiko	ThPOS-17.3	63
Krüger, Frank	ThPOS-27.2	68	Kuwahata, Akihiro	ThPOS-33.26	74
Krüger, Simone	SaC07.4	143	Kuznetsov, Nikita	FrPOS-31.1	115
Kruse, Amy	WeC18.1	13	Kuzum, Duygu	SaA06.1	CC
Krusienski, Dean	ThC01.3	52	Kwak, Dong-Kyu	ThPOS-36.30	81
	ThPOS-20.22	65	Kwak, Jin Seul	WePOS-33.13	35
	ThPOS-20.24	65	Kwakkel, Gert	ThB13.6	49
	FrPOS-01.17	102	Kwasnica, Marek	WeC08.3	10
Krzyzak, Artur, Tadeusz	ThPOS-14.3	62		ThPOS-19.6	64
Krzyzewski, Sean	ThPOS-33.25	73		FrC16.6	100
Ku, Jeonghun	WePOS-30.33	29		FrPOS-35.6	120
	ThPOS-36.28	81			

Kwasniewska, Alicja	ThPOS-09.8	60
	ThPOS-27.6	68
Kwon, Bumsun	WePOS-32.23	34
	FrPOS-34.37	120
Kwon, Chiheon	FrPOS-34.34	119
Kwon, Hyunbin	WePOS-31.12	31
	ThPOS-35.36	79
	FrPOS-36.14	122
Kwon, Jangho	ThPOS-32.20	71
Kwon, Jinuk	WePOS-30.26	29
Kwon, Junmo	ThPOS-32.30	71
Kwon, Ohwon	FrPOS-34.45	120
Kwon, Soon Bin	FrPOS-34.34	119
Kwon, Soon-Sung	WeA11.3	4
Kwon, Uikun	WeA13.3	4
Kwon, Yongjoo	WeA13.3	4
Kybic, Jan	FrPOS-33.23	116
Kyoso, Masaki	ThPOS-35.30	79
	FrPOS-36.24	123
	FrPOS-36.25	123
	FrPOS-37.2	124
Kyotani, Katsusuke	WePOS-30.17	29
Kyriacou, Efthyououlos	ThPOS-32.19	71
	FrPOS-37.34	126
Kyriacou, Panayiotis	WeA04.6	2
	WePOS-17.5	22
	ThA02.1	39
	ThPOS-23.2	66
	ThPOS-23.5	66
	ThPOS-24.1	66
	ThPOS-24.2	67
	SaA13.3	133
Kyriakidis, Savvas	FrPOS-18.1	108
	FrPOS-18.2	108
	SaD11.1	150
	SaD11.2	150
Kyritsis, Konstantinos	FrC02.1	CC
	FrC02.2	96
	SaB14.6	139

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L. C. Batista, Joao	ThPOS-32.25	71
	ThPOS-32.26	71
L. Saratxaga, Cristina	WePOS-29.26	27
Laaperi, Anna-Leena	FrPOS-11.2	106
	FrPOS-11.4	106
Labitzky, Vera	SaC07.5	143
LaBorde, Margarite	ThPOS-09.10	60
Labounek, Rene	ThPOS-14.6	62
	FrPOS-07.5	104
Labounek, Ivana	FrPOS-07.4	104
	FrPOS-07.5	104
Labuschagne, FJ	FrPOS-35.19	121
Labyt, Etienne	ThA04.1	CC
	ThA04.2	40
Lach, John	WePOS-21.4	24
	SaD08.4	149
Lachner-Piza, Daniel	ThPOS-02.2	58
Lacour, Stéphanie	ThPOS-34.46	77
	SaA06.4	130
Lacquaniti, Francesco	FrC12.5	99
Laczko, Jozsef	WePOS-29.31	28
Ladouceur, Francois	ThPOS-36.33	81
LaFrance Jr, W Curt	ThPOS-31.6	70
Lagae, Lieven	FrB05.1	89
Lagrée, Pierre-Yves	WePOS-31.8	31
Laguna, Alejandro	FrPOS-30.2	114
Laguna, Pablo	WeA20.4	7
	FrC10.4	98
	SaD02.1	C
Laher, Rebecca	FrB09.4	91
Lähteenmäki, Jaakko	ThPOS-33.40	74
Lai, Chrissi Chi Ching	FrPOS-28.7	113
Lai, Dakun	FrPOS-12.2	106
	FrPOS-12.4	107
	FrPOS-22.1	110
Lai, Ka Lee	FrPOS-09.3	105
Lai, Tze Huei, Daniel	ThPOS-36.40	81
Lai, Xiaoping	ThC14.4	55

Lai, Ying-Hui	ThB02.5	46
	ThPOS-35.26	79
	ThPOS-36.25	80
	FrPOS-36.5	122
Laidig, Daniel	WePOS-18.3	22
	FrPOS-31.1	115
Lains, Jorge	ThPOS-28.4	69
Laird, Philip	WeC19.6	13
	ThPOS-29.1	69
Laiwalla, Farah	SaD06.2	149
Lakany, Heba	FrPOS-38.35	128
Laleg, Taous-Meriem	WeC16.1	C
	WeC16.1	12
	WeC16.3	12
	WeC16.4	12
	ThC14.2	55
	FrPOS-18.4	108
Lamard, Mathieu	SaC19.5	147
Lambermont, Bernard	WeA16.5	6
Lambrou, George I.	WeA15.4	5
	WePOS-04.8	15
	WePOS-22.1	24
	WePOS-22.2	24
Lamos, Martin	FrPOS-33.1	115
Lan, Hengrong	SaC03.1	141
	SaC03.2	141
	SaD15.5	152
Lan, Ning	FrPOS-34.44	120
Lanata', Antonio	WeA14.6	5
Lande, Tor Sverre	SaC13.3	145
Landini, Luigi	FrPOS-09.2	105
Landry, Cederick	SaD13.3	151
Lang, Annemarie	SaB07.3	137
Lang, Elmar W.	WeA12.4	4
	FrB02.5	89
Lang, Hauke	FrB21.3	95
Lang, Klaus Dieter	FrPOS-33.18	116
Lang, Martin	ThPOS-35.38	79
Lange, Hans-E.	FrPOS-33.48	118
Lange, Justina	ThPOS-04.1	58
Langguth, Berthold	FrB08.2	90
Langs, Georg	ThPOS-33.20	73
Lanka, Pranav	ThA10.2	41
Lansdown, Drew	SaA17.3	134
Lanzafame, Simona	FrC12.4	99
Lao, Bryan	ThC06.5	53
Laohakangvalvit, Tipporn	FrPOS-34.15	119
	FrPOS-38.33	128
Lapborisuth, Pawan	SaA01.2	129
Lapergola, Alfonso	WeA10.3	3
Lara, Jaime	SaB16.4	139
	SaC09.3	143
Laratta, Rosita	WeA05.5	2
Laburu, Nekane	WePOS-23.10	25
Larin, Kirill	FrC03.1	96
Larissa Pereira da Cunha, Mariana	WePOS-33.33	36
Larochelle, Jonathan	FrPOS-38.23	127
Larrea, Andima	ThA05.5	40
Larsen, Mark Erik	SaB08.6	137
Larson, Lawrence	SaD06.2	149
Laskar, Mostafizur Rahaman	WePOS-33.47	37
Laskaris, Nikos	SaB14.1	139
Lataire, John	ThPOS-33.15	73
Latonen, Leena	ThPOS-15.4	62
Latus, Sarah	SaB03.1	136
Laufer, Bernhard	FrA04.1	83
Laurand, Nicolas	WeA04.4	2
Laureanti, Rita	WeC18.3	13
Laurent, Didier	ThPOS-21.11	65
Laureys, Steven	FrPOS-01.11	102
Laurila, Tomi	FrPOS-38.38	128
Laursen, Kjeld	FrA21.3	88
	FrC13.2	99
Lautslager, Timo	SaC13.3	145
Lavanga, Mario	SaB02.6	136
Laviola, Marianna	WePOS-31.11	31
	ThC11.4	54
Lavy-Shahaf, Gitit	FrA09.3	84
Lázaro, Jesús	WeA20.4	7
	FrC10.3	98
	FrC10.4	98

Lazeron, Richard	FrPOS-34.27	119	Lee, Ho Jin	WePOS-19.6	23
Lazkani, Naim	FrC13.4	99		ThPOS-32.45	72
Lazzaroni, Maria	WePOS-29.32	28		FrPOS-31.6	115
Le Diraison, Yohan	SaB04.5	136	Lee, Hong Ji	WeA13.3	4
Le Franc, Yann	WePOS-33.12	35	Lee, Hooseok	FrA13.5	85
Le Henaff, Anne Claire	FrA17.4	87	Lee, Hsiao-Yu	FrC01.2	95
Le Rolle, Virginie	SaC06.3	142	Lee, HyeokMin	WePOS-33.48	37
Le Thi Cam, Van	FrPOS-37.4	124	Lee, HyoSeok	WePOS-29.35	28
Le, Lawrence H	SaC15.4	145		WePOS-32.26	34
Le, Phu N.	WeA14.1	5		ThPOS-34.10	75
Le, Thi Huong	WePOS-29.35	28		ThPOS-34.11	75
	WePOS-32.26	34		ThPOS-34.18	76
	ThPOS-34.10	75		ThPOS-36.27	81
	ThPOS-34.11	75		FrPOS-34.38	120
	ThPOS-34.18	76		FrPOS-35.12	121
	ThPOS-36.27	81		FrPOS-35.13	121
	FrPOS-34.38	120		FrPOS-38.27	128
	FrPOS-35.12	121	Lee, Hyowon	WePOS-31.23	31
	FrPOS-35.13	121	Lee, Hyungwoo	SaB10.1	138
	FrPOS-38.27	128	Lee, Hyunjoo Jenny	FrPOS-36.39	124
Le, Tyler	SaA16.4	134	Lee, I-Chieh	ThPOS-21.13	66
Leal, Adriana	SaD02.2	147	Lee, I-Jung	WePOS-33.23	36
Leal, André Giacomelli	FrB17.5	94	Lee, Jee Won	FrPOS-35.29	122
Leblond, Frederic	WePOS-31.30	32	Lee, JeeEun	WePOS-32.6	33
Lechner, Manuel	FrB20.4	95		FrPOS-36.19	123
Lechuga, Laura	WePOS-29.7	26	Lee, Jeungyoon	ThPOS-32.15	71
Lecoeuche, Stéphane	WePOS-18.5	22	Lee, Ji Won	ThPOS-32.11	70
Lederer, Katharina	ThB21.4	52	Lee, Jihun	SaD06.2	149
	SaD18.5	153	Lee, Jihyeon	FrPOS-36.42	124
Lederman, Dror	ThPOS-32.12	70	Lee, Jihyoung	WePOS-31.2	30
Lee, Ah Ra	WePOS-33.41	36		FrPOS-34.9	118
	WePOS-34.3	37		FrPOS-34.10	118
	ThPOS-30.7	69		FrPOS-37.42	126
Lee, Ah-Hyoung	SaD06.2	149		FrPOS-38.2	126
Lee, Beom-Chan	WeA08.2	2	Lee, Jimmy	WeA14.5	5
	ThPOS-36.35	81	Lee, Jin San	SaB10.1	138
Lee, Boreom	WePOS-11.10	18	Lee, Jinseok	FrA13.5	85
	ThPOS-06.7	59	Lee, Jinseon	FrPOS-33.40	117
	ThPOS-34.45	77	Lee, JiYeoun	FrPOS-36.10	122
	ThPOS-34.48	77	Lee, Jong Min	ThPOS-36.22	80
Lee, Brian C	FrC18.3	101	Lee, Jong-Ha	WePOS-29.16	27
Lee, Chaedong	ThPOS-36.36	81		ThPOS-32.33	71
Lee, Chan	FrPOS-27.6	112		FrPOS-33.9	116
Lee, Chang Won	FrPOS-34.24	119	Lee, Jongmin	WePOS-30.2	28
Lee, Changhyuk	WePOS-32.19	34	Lee, Jong-Shill	ThPOS-34.15	75
Lee, Chen Kai	ThPOS-35.26	79		FrPOS-33.16	116
Lee, Chengkuo	WePOS-29.34	28	Lee, Jongwook	WeA13.3	4
	SaA07.1	130	Lee, Joonnyong	WePOS-34.4	37
Lee, Chi-Chih	FrPOS-36.8	122		FrPOS-33.11	116
Lee, Chi-Chun	ThA19.5	44	Lee, Jung Keun	WePOS-33.24	36
	ThC19.1	56		ThPOS-33.14	73
	ThC19.3	57	Lee, Junghoon	FrPOS-27.6	112
	ThPOS-28.2	69	Lee, Jungwoo	FrPOS-36.40	124
Lee, Chol U	SaA17.4	134	Lee, Jun-Hwan	FrPOS-33.24	116
Lee, Chung Sub	WePOS-33.7	35	Lee, Junseok	WeA15.6	5
	ThPOS-32.43	72	Lee, Juok	WePOS-30.37	30
	ThPOS-33.21	73	Lee, Jusin	ThPOS-33.31	74
Lee, Chung-Wei	WePOS-12.15	20	Lee, Kang Moo	ThPOS-34.31	76
Lee, Dae-Young	FrPOS-33.8	116	Lee, Kwanhoon	FrA13.3	85
Lee, Deok-Won	WeC19.1	13	Lee, Kyoung Joung	WePOS-33.11	35
	WePOS-29.13	27		WePOS-33.29	36
	WePOS-33.3	35	Lee, Kyung Eun	WeA11.3	4
	WePOS-33.38	36		WePOS-31.33	32
Lee, Deuk Yong	ThPOS-34.20	76	Lee, Kyu-Sung	ThPOS-32.11	70
Lee, Donghyun	FrPOS-37.31	126	Lee, Man-Hua	ThPOS-35.23	78
Lee, Dongkyu	FrPOS-34.45	120	Lee, Meng-Jung	ThPOS-35.18	78
Lee, Dongseok	ThPOS-35.32	79	Lee, Mi Hyun	ThPOS-35.36	79
	FrPOS-36.14	122	Lee, Mi-Kyung	ThPOS-36.30	81
	FrPOS-36.18	123	Lee, Ming-Yih	FrC07.5	97
Lee, Eung Hyuk	SaA17.4	134	Lee, Minji	ThPOS-27.1	68
Lee, Eun-Hee	ThPOS-33.6	72	Lee, Onseok	ThPOS-32.42	72
Lee, Eunjoo	WePOS-34.14	38		ThPOS-33.12	73
Lee, Eunsol	WePOS-34.4	37		ThPOS-36.17	80
Lee, Gi Taek	ThPOS-32.43	72	Lee, Sangbaek	ThPOS-06.7	59
Lee, Gihyoun	ThPOS-36.9	80		ThPOS-34.45	77
Lee, Hae-Young	WePOS-34.12	37	Lee, Sanghyub	WeC19.1	13
	FrPOS-34.46	120		WePOS-33.3	35
Lee, Hajeong	WePOS-33.13	35		WePOS-33.38	36
Lee, Heehyol	ThPOS-21.9	65	Lee, Sang-Mok	FrPOS-36.39	124
Lee, Heung-No	WePOS-33.34	36	Lee, Sang-Won	WePOS-26.1	25
			Lee, Saram	WePOS-34.4	37

Lee, Sean	WeA12.5	4	Lekkas, Konstantinos	FrPOS-37.33	126
Lee, Seong-A	FrPOS-22.11	110	Leliaert, Jonathan	FrC09.1	CC
Lee, Seong-Whan	ThPOS-20.1	64		FrC09.1	97
	ThPOS-27.1	68	Lemay, Mathieu	ThPOS-30.1	69
	SaA01.4	129		SaA02.2	129
Lee, Seulki	WePOS-19.8	23	Lemij, Hans G.	WePOS-11.9	18
	SaB04.2	136	Lemos, Pedro	SaA15.1	133
Lee, Seung Hyun	ThPOS-36.9	80	Lencer, Rebekka	ThA01.1	39
	FrPOS-33.24	116	Lendaro, Eva	ThA20.1	CC
Lee, Seung-A	ThPOS-34.31	76		ThA20.4	45
Lee, Seung-Beck	ThPOS-33.31	74	Leng, Shuang	WeA11.6	4
Lee, Seunghyeon	ThPOS-35.10	78		WePOS-10.2	17
Lee, SeungJae	ThPOS-34.15	75		FrB12.5	92
	FrPOS-34.21	119		FrPOS-11.6	106
Lee, Soo Chin	ThPOS-33.38	74	Leng, Xinyi	ThC05.5	53
Lee, Soo Hyun	WePOS-32.19	34	Leng, Yue	FrPOS-06.7	104
Lee, Sungmin	ThPOS-21.2	65	Leng, Yusong	FrPOS-37.26	125
Lee, Sungmun	WePOS-31.37	32	Lenk, Claudia	WePOS-29.2	26
Lee, Sungyoung	WeA03.3	1	Lennon, Olive	ThPOS-31.7	70
Lee, Suwon	WePOS-29.35	28	Leone, Michael	FrPOS-36.17	123
	WePOS-32.26	34	Leong, Chen Onn	SaD09.2	150
	ThPOS-34.10	75	Leong, Chin Neng	SaD09.2	150
	ThPOS-34.11	75	Leonhardt, Steffen	ThB20.1	C
	ThPOS-34.18	76		ThPOS-08.5	60
	ThPOS-36.27	81		FrA03.2	83
	FrPOS-34.38	120		FrB03.5	89
	FrPOS-35.12	121		FrC16.2	100
	FrPOS-35.13	121		FrPOS-37.37	126
	FrPOS-38.27	128		SaD18.1	CC
Lee, Taejun	WePOS-30.2	28	Leonov, Vladimir	SaB04.1	CC
Lee, Tse-Ang	ThPOS-34.4	75		SaB04.2	136
Lee, Tsung-Chieh	ThPOS-35.23	78	Lepore, Natasha	FrB19.2	94
Lee, Wonkyu	FrPOS-36.4	122	Leporini, Roberto	WePOS-32.2	33
Lee, Woon-Hee	WeA21.5	7	Lesage, Frederic	FrA03.3	83
	FrPOS-31.6	115	Lester, Lauren	SaB18.5	140
Lee, Ye Jin	WePOS-32.21	34	Leung, Frankie Ka-Li	ThPOS-36.37	81
	WePOS-32.22	34	Leung, Thomas	ThC05.5	53
	WePOS-32.23	34		SaD09.1	150
	FrPOS-35.3	120	Leung, Vincent	SaD06.2	149
Lee, Yi Jae	WePOS-32.19	34	Levermann, Anja	FrB07.2	90
Lee, YongKwan	FrPOS-34.38	120	Levesque, Jessica	FrPOS-34.29	119
Lee, Yoot	WeC14.2	12	Levi, Riccardo	SaD04.1	148
	FrA02.5	82	Levi, Shay	FrA09.3	84
	FrPOS-01.2	101	Levin, Jay	ThPOS-31.6	70
Lee, Youjin	FrPOS-35.29	122	Levine, David	ThA17.2	43
Lee, Youngro	FrC15.5	100	Levin-Schwartz, Yuri	WeC05.2	9
Lee, Yuan-Chii Gladys	WeA15.5	5	Li, Adam	ThC09.3	54
Lee, Yuhyun	WePOS-30.3	28		FrB01.6	88
Lee, Yujin	WePOS-31.12	31	Li, Annan	FrC03.3	96
	ThPOS-35.36	79	Li, Ao	ThPOS-32.1	70
	WePOS-29.13	27		ThPOS-32.41	72
Lee, Yun-dong	WePOS-29.32	28	Li, Bing	WePOS-28.1	26
Leestma, Jennifer	WeA09.5	3	Li, Bingchuan	FrPOS-11.1	106
Lefevre, Julien	WeC12.1	11	Li, Chi-Cheng	ThA19.5	44
	FrB19.1	94	Li, Chong	FrC16.5	100
Legaria, Uriel	ThPOS-35.2	77	Li, Chuanjiang	FrPOS-09.11	106
	ThPOS-35.3	77	Li, Dandan	FrA16.6	86
	ThPOS-35.4	78	Li, Deling	WePOS-12.6	19
	ThPOS-35.5	78	Li, Ding	FrB06.2	90
	ThPOS-35.6	78	Li, Fei	WePOS-11.3	17
Legnani, Walter	ThPOS-15.6	62		FrPOS-08.4	104
Lehmann, Dustin	WePOS-18.3	22	Li, Gang	ThB10.1	48
Lehmann, Torsten	ThPOS-36.33	81		ThB10.3	48
Lei, Baiying	WeA09.1	3		ThB10.4	48
	WeA12.2	4	Li, Guanglin	WePOS-01.2	14
	WeA16.6	6		ThB21.6	52
	ThA15.1	43		ThPOS-06.1	59
	SaC12.5	144		FrPOS-25.2	111
	SaD12.1	151	Li, Guangye	FrPOS-33.6	116
Lei, Haijun	WeA09.1	3	Li, Guanyu	FrC18.1	101
Lei, Kin Fong	FrC07.1	C	Li, Guijin	FrPOS-20.16	110
	FrC07.2	97	Li, Haichun	ThPOS-32.41	72
Lei, Yu	FrC12.1	98	Li, Hongwei	ThB15.4	50
Leib, Fabian	SaA13.6	133	Li, Hua	FrB01.2	88
Leib, Raz	ThA06.1	40	Li, Hui	WePOS-17.6	22
	ThA06.2	40	Li, Huihui	FrPOS-06.10	104
	ThB06.4	47	Li, Jeng-Lin	ThA19.5	44
	FrPOS-20.3	109		ThC19.1	56
Leiss, Regina	FrPOS-38.18	127		ThC19.3	57
Leistriz, Lutz	FrB05.2	89	Li, Jianning	WeA17.3	6
	SaC14.2	145		FrPOS-12.3	106

Li, Jingyue	FrPOS-25.5	111	Li, Zhenqi	WeA05.1	2
Li, Jinpeng	WePOS-04.4	15		ThA05.4	40
	WePOS-17.6	22		ThB05.4	47
Li, Jinping	FrPOS-20.9	109		ThB05.5	47
Li, John K-J.	WeC17.3	12		ThPOS-05.2	59
Li, Jun	FrA06.3	83		FrC05.5	97
	FrPOS-01.5	102	Li, Zhi	ThA05.1	40
Li, Junhua	WeA19.1	6	Li, Zhibin	FrC16.2	100
Li, Ke	ThPOS-18.2	63	Li, Zhide	FrPOS-08.3	104
	FrPOS-20.9	109	Li, Zhiling	FrA20.1	87
Li, Kunyan	ThA02.6	39	Liang, Cuiping	WeA17.6	6
Li, Le	WePOS-30.32	29	Liang, Dong	FrC18.1	101
	FrPOS-33.2	115		FrC18.4	101
Li, Lei	SaB05.3	136		FrPOS-09.9	106
Li, Li	ThPOS-34.14	75		SaA12.5	132
Li, Liang	FrC12.1	98		SaD03.6	148
Li, Liming	ThA09.4	41	Liang, Jackson	SaA19.5	135
	FrPOS-26.2	112	Liang, Jia	ThC02.5	52
Li, Linfeng	ThA04.1	40	Liang, Jiajun	ThA15.1	43
Li, Linlin	WeA03.4	1	Liang, Jie	ThB09.1	CC
	SaB19.3	140		ThB09.5	48
Li, Linze	ThPOS-36.10	80	Liang, Jimin	WeA18.5	6
Li, Luming	WePOS-28.1	26	Liang, Li Yan	SaB14.5	139
	ThPOS-36.10	80	Liang, Renghao	FrPOS-27.8	112
	FrPOS-36.23	123	Liang, Shuang	WePOS-30.28	29
Li, Mei	WePOS-23.7	24	Liang, Wenyu	FrPOS-28.8	113
Li, Min	FrPOS-27.8	112	Liang, Wenyuan	FrPOS-34.44	120
Li, Mingkang	ThPOS-20.10	64	Liang, Xu	WeC01.6	8
Li, Mingtao	ThA02.5	39	Liang, Zhiyue	WePOS-17.6	22
Li, Minhan	ThPOS-21.13	66	Liao, Hongen	WePOS-33.22	35
Li, Paula	ThPOS-31.6	70	Liao, Iman Yi	ThPOS-15.8	62
Li, Peilun	WePOS-29.3	26	Liao, Lun-De	FrPOS-37.28	125
Li, Peng	FrPOS-25.2	111	Liao, Qingmin	ThPOS-03.4	58
Li, Qian	WePOS-12.5	19		FrPOS-08.3	104
Li, Qiang	ThPOS-36.1	79	Liao, Wei-Hao	FrC07.3	97
Li, Qince	WeA17.6	6	Liao, Yuanyuan	WePOS-02.7	15
	FrB09.6	91		WePOS-32.20	34
Li, Rui-Qi	SaD11.4	151	Liao, Yu-Te	ThC11.3	54
Li, Ruojun	ThPOS-25.2	67		SaA13.1	132
Li, Shiyue	WeA10.6	3	Liapis, Christos	FrPOS-37.33	126
Li, Shuang	FrPOS-08.7	104	Liarokapis, Minas	SaB16.1	CC
Li, Teng	WePOS-11.7	18		SaB16.3	139
	SaB19.4	140		SaC16.4	146
Li, Thomas Hui	WePOS-12.3	19	Liberini, Paolo	FrPOS-29.5	114
Li, Tong	FrPOS-26.2	112	Lieberman, Leonardo	SaB15.1	139
Li, Tongtong	WePOS-31.18	31	Liberti, Micaela	WeA09.2	3
	WePOS-31.41	32		ThA17.3	44
Li, Wanlin	ThPOS-23.1	66		ThPOS-16.6	63
Li, Wei	WePOS-21.1	23		FrB09.4	91
	ThPOS-17.10	63	Libourel, Paul-Antoine	FrC13.5	99
	SaC18.4	146	Libring, Sarah	WePOS-31.23	31
Li, Wen-Tyng	FrPOS-38.37	128	Liebetrau, Christoph	ThB04.5	47
Li, Xiangxin	ThPOS-06.1	59	Liew, Yih Miin	SaD09.2	150
Li, Xianpeng	ThPOS-20.18	65	Ligero Hernández, Marta	WeA21.4	7
Li, Xiaobo	WeA08.1	2	Lightbody, Gordon	FrB17.2	93
Li, Xiaoxiao	ThPOS-11.4	61		FrPOS-01.13	102
	ThPOS-12.1	61		FrPOS-36.15	123
Li, Xin	ThC05.3	53	Liimatainen, Kaisa Maria	ThPOS-15.4	62
Li, Xinhui	ThB12.3	49	Lilaj, Ledia	WeC03.6	9
Li, XueMeng	WePOS-23.7	24	Lilius, Tuomas	FrPOS-38.38	128
Li, Yacong	ThPOS-15.2	62	Liljeberg, Pasi	ThPOS-31.1	70
	FrB09.6	91	Liljemalm, Rickard	ThPOS-35.17	78
Li, Yang	ThPOS-02.6	58	Lim, Andrew	ThPOS-33.35	74
	FrA15.1	86	Lim, Bokman	SaB16.1	139
Li, Yao	WeC12.2	11	Lim, Einly	SaD09.2	150
	FrC12.6	99	Lim, Guan Ming	ThB15.1	50
Li, Ye	ThPOS-25.11	68		FrPOS-03.5	103
	FrA19.2	87	lim, Hae Gyun	FrPOS-37.21	125
Li, Yiming	ThA15.6	43	Lim, Hendrick Gao-Min	WeA15.5	5
Li, Yinbo	FrC16.2	100	Lim, Hsueh Yee	FrPOS-28.8	113
Li, Yizhou	FrA15.1	86	Lim, Hubert	FrB10.8	91
Li, Yu	ThPOS-25.2	67		FrPOS-22.3	110
Li, Yuan	WePOS-27.8	26	Lim, Hyunjun	FrPOS-34.24	119
Li, Yuanqi	FrB03.6	89	Lim, Hyunmi	ThPOS-36.28	81
Li, Yuanqing	ThPOS-20.12	64	Lim, Jan	ThA14.5	43
Li, Yumeng	WePOS-34.16	38	Lim, Ki Moo	WePOS-30.41	30
				WePOS-30.44	30
			Lim, Miranda	ThPOS-26.10	68
			Lim, Sarah Man Lin	ThPOS-33.36	74
			lim, Seungeui	ThPOS-36.28	81

Lim, Soo Teik	WeA11.4	4	Liu, Jianfei	WePOS-11.7	18
	WePOS-10.2	17		SaB19.4	140
	WePOS-31.7	31	Liu, Jiang	WePOS-11.3	17
Lima, Carlos Manuel Gregorio Santos	SaB10.2	138		ThB12.2	49
Lima, Raul Gonzalez	ThA11.4	41		FrC03.1	CC
Limosani, Raffaele	ThPOS-28.1	69		FrC03.3	96
Limsuknirun, Wannasiri	SaD16.6	152		FrC03.4	96
Lin, Bor-Shing	WePOS-33.23	36		FrPOS-08.4	104
Lin, Bor-Shyh	WePOS-33.23	36		SaA03.3	129
Lin, Chi-Lun	ThB10.6	48		SaC03.1	141
Lin, Ching-Heng	ThC19.1	56	Liu, Jie	ThA15.3	43
Lin, Chuang	WePOS-30.32	29		FrB03.1	89
	FrPOS-33.2	115	Liu, Jikui	FrA19.2	87
Lin, Chutong	WePOS-31.19	31	Liu, Jinfen	WePOS-31.9	31
Lin, Hau	ThC11.3	54	Liu, Jing	WePOS-33.40	36
Lin, Huang-Chen	WePOS-33.20	35		ThA20.6	45
Lin, Jenshan	SaA13.1	132		ThPOS-34.1	75
Lin, Jianhao	WePOS-31.19	31		FrPOS-35.4	120
Lin, Jiaqi	SaA17.5	134	Liu, Jinlong	WePOS-31.9	31
Lin, Jiayin	FrPOS-34.25	119		FrPOS-16.2	108
Lin, Junquan	FrPOS-03.5	103	Liu, Junbiao	ThC14.4	55
Lin, Lanfen	FrPOS-11.8	106	Liu, Jundong	FrPOS-37.19	125
Lin, Shien-Fong	ThA12.4	42	Liu, LiangLiang	WePOS-15.7	21
	ThPOS-35.14	78	Liu, Liping	FrPOS-16.2	108
	FrPOS-33.26	117	Liu, Monica	ThB06.2	47
	FrPOS-37.22	125	Liu, Pao-Hsin	ThPOS-34.23	76
Lin, Ting-Tse	FrPOS-33.26	117	Liu, Pengxiao	ThPOS-20.3	64
Lin, Wan-Hua	WePOS-01.2	14		ThPOS-20.20	65
Lin, Wei-Ren	FrPOS-36.7	122		SaA01.5	129
Lin, Wen-Yang	SaC08.3	143	Liu, Qiegen	FrC18.1	101
Lin, Wen-Yen	FrC07.5	97	Liu, Ran	SaB08.5	137
Lin, Xiaogang	ThC02.5	52	Liu, Shaolin	FrC01.4	95
Lin, Xinyuan	SaC01.1	141	Liu, Shaomin	WeA09.1	3
Lin, Yen-Heng	ThPOS-34.8	75	Liu, Shing-Hong	FrPOS-37.6	124
Lin, You-Rong	ThPOS-35.14	78		SaD04.5	148
Lin, Yuan-Hsiang	FrPOS-34.4	118	Liu, Shuang	WeA18.6	6
	FrPOS-34.5	118		ThPOS-20.3	64
Lind, John C.	FrPOS-37.9	124		ThPOS-20.7	64
Lindholm, Harri	SaA05.6	130		ThPOS-21.4	65
Lindner, Lydia	ThPOS-20.6	64		SaC01.5	141
	SaC19.2	147	Liu, Tong	ThPOS-15.2	62
Ling, Sai Ho, Steve	WeC18.4	13	Liu, Weifeng	FrC16.5	100
	WePOS-07.1	16	Liu, Wentao	WeA18.6	6
	ThPOS-17.1	63		ThPOS-20.3	64
	FrPOS-09.3	105		ThPOS-20.20	65
	SaB17.5	140		SaA01.5	129
Lingurar, Marius George	FrB19.1	C	Liu, Xiao	ThC05.6	53
	FrB19.5	94	Liu, Xin	FrB03.4	89
Linte, Cristian A.	WeA10.1	CC		FrC18.4	101
	ThB10.1	CC		FrPOS-09.9	106
	ThPOS-32.37	72		SaA12.5	132
	SaD19.2	153	Liu, Xuqing	WePOS-10.4	17
Linz, Dominik	FrC05.2	96	Liu, Yali	FrC16.2	100
Lippi, Vittorio	FrPOS-28.4	113		FrC16.5	100
Lipping, Tarmo	FrPOS-01.14	102	Liu, Yan	WePOS-11.2	17
Lipscombe, Oliver	SaB04.1	136		SaD12.2	151
Liston, Mairead	ThB13.3	49	Liu, Yi-Hung	WePOS-30.36	30
Litvak, Leonid	FrB10.3	91	Liu, Yiling	FrC18.1	101
Liu, Andi	SaC09.1	143	Liu, Yilong	WePOS-12.1	19
Liu, Anli	SaC05.4	142	Liu, Ying-Hsang	WePOS-25.3	25
Liu, Bo	ThPOS-20.18	65	Liu, Yixing	WePOS-29.32	28
Liu, Chih-Chia	ThPOS-36.38	81	Liu, Yong	FrC05.4	96
Liu, Dengtang	FrC12.6	99	Liu, Yu	WeA20.6	7
Liu, Dingyi	ThA15.6	43		ThPOS-32.1	70
Liu, Dongdong	WeA12.2	4	Liu, Yuanyuan	FrC18.4	101
Liu, FangJun	WePOS-28.1	26	Liu, Zengding	FrA19.2	87
Liu, Fei	ThPOS-20.13	64	Liu, Zheng	SaB01.6	135
Liu, Haipeng	ThA02.2	39	Liu, Zhengxin	WePOS-32.25	34
	ThA02.3	39		ThPOS-34.2	75
	ThC05.5	53	Liu, Zhengyong	FrA21.1	88
	SaD09.1	150	Liu, Zhenrong	SaB19.2	140
Liu, Hanjun	FrB01.2	88	Liu, Zhenzhen	FrPOS-25.2	111
Liu, He	ThPOS-22.2	66	Liu, Zhiwen	WePOS-15.5	21
Liu, Hon-Man	WePOS-12.15	20	Liu, Ziwei	ThPOS-21.13	66
Liu, Hsin-Li	FrPOS-34.18	119	Liu, Zixiao	FrPOS-28.11	113
	SaD04.4	148	Livingstone, Iain	FrPOS-07.2	104
Liu, Huafeng	FrPOS-10.1	106		FrPOS-33.15	116
Liu, Huaiyu	FrPOS-38.12	127	Lloyd, Bryn	SaB09.2	138
Liu, Jia	ThA05.3	40	Lloyd, John E.	SaD10.1	150
Liu, Jialing	FrPOS-24.3	111	Lo, Benny	WeC21.2	14
			Lo, Michi WT	ThPOS-34.44	77

Lo, Tsz-Yan Milly	ThC05.1	53	Lowery, Madeleine	ThB18.3	51
Lobaton, Edgar	ThPOS-01.1	57		ThC06.1	53
	ThPOS-21.13	66		ThPOS-17.13	63
	ThPOS-26.7	68		FrPOS-03.1	102
Lobo-Valbuena, Beatriz	ThC11.2	54		FrPOS-22.10	110
Loeb, Jeffrey A.	ThPOS-02.5	58		SaA09.4	131
Loecher, Michael	WeA11.5	4		SaC04.5	142
Loewe, Axel	WeC09.1	C		SaC14.6	145
	WePOS-29.4	26	Lozano Albalade, María Teresa	ThPOS-31.3	70
	ThB04.1	46	Lozano-García, Manuel	ThC11.1	54
	ThC05.1	CC		FrPOS-14.5	107
	ThC05.3	53	Lu, Bao-Liang	ThPOS-20.14	64
	ThPOS-05.1	59		SaD01.1	147
	ThPOS-34.33	76	Lu, Chih-Chuan	ThC19.3	57
	FrB09.3	91	Lu, Kaiyuan	FrA16.4	86
	FrPOS-36.3	122	Lu, Lijing	FrPOS-36.11	122
Löffler, Marcus Michael	WePOS-07.3	16	Lu, Mei-Yi	FrC07.1	97
Logier, Regis	WeA04.1	1	Lu, Minhua	SaC15.6	145
	SaB02.1	135	Lu, Qun	ThPOS-33.44	75
Lohmann, Chris	FrPOS-28.14	113	Lu, Shao-Yung	ThC11.3	54
Lohmeier, Annette	SaA10.2	131		SaA13.1	132
Loizidou, Kosmia	ThPOS-32.36	72	Lu, Tongtong	ThPOS-32.3	70
Loizou, Christos	WeA14.2	5	Lu, Weiguo	WeC15.5	12
	WePOS-34.1	37		WePOS-11.25	18
Lolatto, Riccardo	FrPOS-01.6	102	Lü, Xiaoying	FrA20.1	87
Lombardi, Federico	FrC05.1	96	LU, Xinyue	FrPOS-30.9	114
Lommel, Michael	WePOS-30.49	30	Lu, Ya	SaA08.4	131
Lomonaco, Tommaso	WePOS-29.6	26	Lu, Yao	WeC15.1	12
	ThB21.3	52		WeC15.2	12
Londergan, Ana	SaB04.2	136		ThA19.4	44
Long, Jinyi	SaA01.3	129	Lubarsky, Gennady	WePOS-29.34	28
Long, L. Rodney	WePOS-11.1	17	Lubrano, Riccardo	FrA17.2	87
	FrC18.2	101	Luca, Stijn	WePOS-33.14	35
Long, Xi	FrPOS-34.27	119		FrC08.1	97
Longatelli, Valeria	FrC16.1	100	Lucano, Elena	FrA09.2	84
Longato, Enrico	FrC08.5	97	Lucas, Molly	FrA02.2	82
Lontis, Eugen Romulus	WeC01.2	8	Lucas, Yves	FrC15.4	100
	SaC06.5	142	Lucchini, Maristella	WePOS-21.6	24
Loo, Colleen	WeC10.6	11		FrA14.2	86
Looi, Thomas	ThPOS-33.35	74	Lucini, Daniela	FrPOS-15.5	107
	ThPOS-33.45	75	Lucke, Lori	WeA10.4	3
	FrPOS-35.2	120	Łudzik, Joanna	FrPOS-08.6	104
	SaD16.2	152	Lueth, Tim	SaB09.1	137
Lopes, Ana	ThA16.3	43	Luft, Andreas	FrC01.1	95
Lopez Albalat, Alvaro	WePOS-16.6	21	Luigs, Hans-Georg	SaA19.3	135
Lopez del Angel, Francisco	FrPOS-32.4	115	Luik, Armin	WePOS-29.4	26
Lopez, Beatriz	FrPOS-38.22	127		WePOS-32.27	34
Lopez, Daralys	FrPOS-28.2	113	Luiz, Luiza Maire	SaC13.6	145
Lopez, Eneko	WeC14.3	12	Lunardini, Francesca	FrPOS-20.13	110
López, Natalia M	WePOS-34.26	38	Lundqvist, Daniel	ThA04.4	40
	ThPOS-36.26	80	Lundy, Christopher T.	FrPOS-34.30	119
Lopez-Martinez, Daniel	FrB08.4	90	Luo, Cunjin	ThPOS-15.2	62
Lopez-Perez, David	WePOS-29.11	27		ThPOS-30.2	69
Lopez-Rubio, Ezequiel	WePOS-12.7	19		FrB09.6	91
López-Ruiz, Nuria	WePOS-29.23	27	Luo, Feixiang	SaC12.6	144
Lora, Julio	WeC20.1	13	Luo, Huichun	ThPOS-02.1	58
Loram, Ian David	FrA06.5	83	Luo, Jie	WeA03.4	1
Lorenz, Katharina	FrPOS-38.18	127		FrPOS-34.25	119
Lorenzo, Giuseppe	WeC09.6	10	Luo, JunWen	SaB09.6	138
Lortie, Michel	FrPOS-14.2	107	Luo, Jun-Wen	FrA17.6	87
Lotfi, Nastaran	WePOS-02.2	14	Luo, Lincong	FrPOS-25.5	111
Lotfian, Mahboube	WeA08.3	2	Luo, Yu-Xi	WePOS-02.7	15
	WeC01.3	8		WePOS-32.20	34
	FrPOS-25.6	111	Luongo, Giorgio	FrPOS-36.3	122
Lotz, Jeffrey	FrB16.2	93	Lurz, Fabian	SaC11.4	144
Lou, Edmond H.	SaC15.4	145		SaC17.3	146
Lourenco, Andre dos Santos Goncalves	WePOS-07.1	16	Luther, Stefan	WePOS-30.42	30
Lovell, Nigel H.	WeC10.6	11	Lutz, Matthias	SaB03.1	136
	WePOS-33.5	35	Lutz, Yannick	ThB04.1	46
	ThA09.4	41		FrB09.3	91
	ThPOS-15.5	62	Luu, Chi	FrPOS-35.32	122
	ThPOS-36.5	79	Luu, Trieu Phat	WeA06.4	2
	ThPOS-36.6	80	Lv, Haiyan	WePOS-12.6	19
	ThPOS-36.33	81		FrC12.1	98
Low, Adrian F	WePOS-31.7	31	Lv, Yadong	ThPOS-18.2	63
Low, Hui Ying Jessalyn	ThPOS-33.38	74	Lv, Yi	SaA19.4	135
Low, Ris	WePOS-31.7	31	Lynch, James	WeC17.1	12
Lowe, Andrew	FrC04.3	96	Lyon, Graeme	ThB21.4	52
	SaC07.6	143		SaD18.5	153
			Lyu, Bo	SaC14.1	145
				SaC14.4	145

Lyu, Juan	WePOS-07.1	16
	FrPOS-09.3	105
	SaB17.5	140
Lyu, Junyan	WePOS-12.1	19

M

M S, Saranya	FrPOS-01.10	102
M Shankaranarayana, Sharath	SaA02.1	129
	SaD19.5	153
M, Ramasubba Reddy	ThPOS-20.15	64
M. Araujo, Natalia	ThPOS-32.25	71
M. D. Junior, Geovanny	ThPOS-32.46	72
M. Roshan, Yaser	SaC18.3	146
Ma, Anna	FrPOS-08.7	104
Ma, Benjamin	SaA17.3	134
Ma, Botong	WeA13.5	5
Ma, Bozhi	FrPOS-36.23	123
Ma, Chao	FrB12.3	92
Ma, He	ThB12.5	49
	FrPOS-07.1	104
	SaB17.4	140
Ma, Huangshui	FrA15.1	86
Ma, Jianhua	WePOS-19.3	23
Ma, Jixin	FrPOS-01.15	102
Ma, Jun	FrPOS-37.26	125
Ma, Junwei	FrPOS-34.33	119
Ma, Kefei	FrPOS-22.1	110
Ma, Lei	WePOS-21.5	24
	FrA20.1	87
Ma, Libin	FrPOS-11.6	106
Ma, Renfei	FrPOS-37.39	126
Ma, Samantha J.	ThPOS-33.19	73
Ma, Shihan	SaC14.4	145
Ma, Ting	WePOS-12.6	19
	ThPOS-18.1	63
	FrC12.1	98
	SaB01.5	135
Ma, Xuelin	WePOS-04.4	15
	WePOS-17.6	22
Maartens, Joachim	FrC20.3	101
	FrC20.5	101
Maaß, Marco	FrPOS-20.8	109
Mabo, Philippe	SaA05.3	130
Macarthur, Kori	ThA14.5	43
Macarulla, Teresa	FrC09.3	98
Macdonald, Rainer	FrA03.1	82
Machado, Juliano	FrA13.2	85
	SaC14.3	145
Macía, Iván	WePOS-23.10	25
Macias, Virgilia	WeC03.4	9
Mackenzie, Richard	WePOS-16.7	22
Mackinnon, Nick	FrB15.4	93
MacLean, Julie	FrPOS-38.32	128
Mac-Thiong, Jean-Marc	SaA07.6	131
Maddipatla, Reddikumar	ThC12.2	55
Madeira, Henrique	WePOS-24.3	25
Madhu, Himanshu	SaB19.1	140
Madill, Godfrey	ThA19.6	44
Madill, John	ThPOS-30.6	69
Madruga, Mario	WePOS-32.3	33
	FrPOS-36.1	122
Madsen, Camilla	SaB09.2	138
Madsen, Joseph	ThA12.5	42
Madsen, Kristoffer H.	WeC10.2	10
	ThA01.2	39
Maeda, Hiroyuki	ThPOS-34.42	77
Maeda, Mutsuhiro	ThPOS-34.42	77
Maeda, Takaki	FrPOS-36.38	124
Maeda, Tamon	FrPOS-38.30	128
Maeda, Tomonori	WePOS-11.16	18
Maeda, Yuka	ThC13.4	55
Maes, Pattie	WePOS-27.5	25
	ThA18.4	44
	ThPOS-26.1	68
	SaA17.5	134
Magarajah, Gayathiri	ThPOS-33.38	74
Magas, Viviane	FrPOS-31.3	115
Magatani, Kazushige	ThPOS-35.13	78
	ThPOS-36.20	80

Magenes, Giovanni	FrC05.1	CC
	SaA04.4	130
Maghsadgh, Sevil	WeC12.5	11
Maglaveras, Nikolaos	WePOS-23.2	24
	SaA08.5	131
Maglogiannis, Ilias	ThA15.2	43
	ThPOS-30.5	69
	SaD12.1	C
	SaD12.4	151
Magnat Thalmann, Nadia	WeA14.5	5
Magno, Michele	WeC04.1	CC
	WeC04.1	9
Magrassi, Lorenzo	WePOS-32.2	33
Magsood, Hamzah	WePOS-30.22	29
Mahadevappa, Manjunatha	WeA14.4	5
	WePOS-23.8	24
Mahajan, Aman	SaC17.2	146
Mahale, Amith Kumar	WePOS-27.1	25
Mahapatra, Arindam Gajendra	WePOS-03.5	15
Maharathi, Biswajit	ThPOS-02.5	58
Maharatna, Koushik	WePOS-02.6	15
Mahdy, Dalia	FrPOS-27.3	112
Maheen Aboobacker, Najib Akram	WePOS-31.49	33
Mahmood, Salman	ThC04.2	53
	FrA16.2	86
Mahmoodi, Seyed Reza	ThA13.4	42
Mahmoodian, Naghmeh	ThA21.3	45
	SaA15.6	133
Mahmoodin, Zulkifli	FrPOS-01.2	101
Mahmoud, Ahmed M.	SaC15.1	145
	SaD11.6	151
Mahmoud, Aya H.	SaD11.6	151
Mahmoudi, Babak	FrC17.1	C
	FrC17.3	100
	SaB10.5	138
Mahvash Mohammadi, Sara	ThPOS-21.1	65
Mai, Jingeng	WePOS-18.2	22
Mai, Khoi	ThPOS-14.6	62
Mai, Songping	FrA21.5	88
Maia, Joaquim Miguel	ThPOS-12.5	61
Maier, Stephanie	WeA10.2	3
Mainardi, Luca	WeA05.3	2
	WeA21.6	8
	ThA13.1	CC
	ThA13.6	42
	FrC02.1	C
	FrC05.1	96
	SaD04.1	148
Mainero, Caterina	WeA12.6	4
Maintz, Michaela	ThB10.2	48
Mair, Lamar	ThPOS-33.46	75
Maiwald, Tim	FrPOS-26.3	112
Majd, Sheereen	WePOS-14.2	20
	FrA16.1	86
	FrB07.4	90
	SaC07.1	CC
Majid, Muhammad	WePOS-17.4	22
	WePOS-18.6	22
MajidiRad, AmirHossein	FrB16.1	93
Majima, Mitsuru	WePOS-34.13	38
Majmudar, Maulik	ThPOS-24.3	67
	SaA05.4	130
Major, Paul	SaC15.4	145
Majumdar, Shreyan	WeC03.4	9
Majumder, Debabrata	WePOS-23.8	24
Makaram, Navaneethakrishna	ThPOS-06.5	59
	FrPOS-34.35	120
Makarov, Sergey	WeC10.5	10
	ThA01.4	39
	FrA09.5	84
	SaA10.1	CC
	SaA10.4	132
	SaB13.2	138
	SaB13.3	139
	SaD10.1	C
Makgawinata, Henry	WePOS-07.1	16
Maki, Yuichiro	SaC11.2	144
Makihara, Yasushi	FrPOS-29.2	114
Makikawa, Masaaki	FrPOS-36.27	123
	FrPOS-37.11	125

Makki, Karim	ThB16.2	50	Mardin, Christian	FrPOS-26.3	112
	FrB12.2	92	Maremmani, Carlo	FrC10.5	98
Malayannan, Subramaniam	FrPOS-28.3	113	Marescaux, Jacques	WeA10.3	3
Maldonado, Ivan	ThA21.3	45		ThB03.2	46
	SaD19.3	153	Margalho, Paulo	ThPOS-28.4	69
Maleki, Sanaz	WeA17.2	6	Margolis, David	FrPOS-24.1	111
Malerba, Mario	ThPOS-34.9	75	Margraf, Nils	ThPOS-25.1	67
Malesevic, Nebojsa	SaC14.5	145	Mariani, Andrea	ThC21.5	57
Malessa, Anke	SaC17.3	146	Marimon, Xavier	FrPOS-35.24	121
Malinda, Vania	ThPOS-07.2	60	Marin, Lucas	FrPOS-36.35	124
Malinowska, Urszula	FrPOS-01.3	101	Marin, Thibault	FrB12.3	92
Malouf, Gordon Joseph	FrB11.2	91	Mariotti, Giulia	WePOS-13.4	20
Maltais, Desirée	FrPOS-34.29	119	Marisamy, Gomathi	WeA19.4	7
Maluckov, Aleksandra	ThA21.4	45	Mark, Schoberer	SaB19.6	141
Malvicino, Selene	WePOS-30.39	30	Markandeya, Mrunal	ThPOS-03.2	58
Malysz, John	ThPOS-10.3	61		FrC02.3	96
Mamou, Jonathan	SaB15.6	139	Markert, Bernd	WePOS-32.28	34
Mamouei, MohammadHossein	WePOS-17.5	22	Markert, Jonathan	ThA03.1	39
	ThPOS-24.2	67	Marling, Cindy	WePOS-04.9	15
	SaA13.3	133	Marmarelis, Vasilis	ThB04.1	C
Mamprin, Marco	FrB03.4	89		ThB04.2	46
Manamperi, Buddhi Shan	ThPOS-25.5	67	Marmarelis, Zissis	FrPOS-34.22	119
Manassakorn, Anita	WePOS-11.15	18	Marnane, William	FrPOS-01.13	102
Manchanda, Rohit	ThC09.1	54		FrPOS-36.15	123
Manchester, Ian	ThC16.2	56	Marozas, Vaidotas	WePOS-31.4	30
Mancini, Martina	ThPOS-01.3	58	Marques, Bernardo	ThPOS-28.4	69
Mancino, Raffaele	FrC12.4	99	Marquez-Chin, Cesar	WePOS-30.38	30
Mandai, Michiko	ThB12.6	49	Marsili, Italo Augustin	SaC02.2	141
Mandava, Sai	WePOS-12.3	19	Martens, David	SaA13.6	133
Mandge, Darshan	ThC09.1	54	Martens, Geraldine	FrPOS-01.11	102
Mandic, Danilo	ThC02.6	52	Martens, Mirco	SaB16.6	140
	FrA14.1	86	Martín Fernández, Leticia	WeC17.6	13
	SaA13.5	133	Martin, Anne	ThC16.1	56
Manffra, Elisangela F.	FrA20.2	88	Martin, Benoit	SaC06.3	142
Mangal, Naveen Kumar	WePOS-32.13	33	Martin, Donel	WeC10.6	11
Mangharam, Rahul	SaA19.5	135	Martin, Lori Schindel	FrA08.1	84
Mangin, Jean-François	ThPOS-14.1	62	Martin, Rémi	SaA19.1	134
Manibardo, Eric	ThA05.5	40		SaD11.5	151
Manikandan, Suchetha	ThC08.3	54	Martin, Robert C. G.	FrPOS-32.2	115
Manjunath, Geetha	SaB19.1	140	Martin, Russel A.	SaB04.2	136
Mankodiya, Kunal	ThA20.2	45	Martindale, Christine	WeA18.1	6
Manne, Shanmukh Reddy	WeA03.6	1	Martinez Madrid, Natividad	WePOS-31.13	31
	ThB15.3	50		SaA11.2	132
	FrPOS-08.13	105	Martinez Mozos, Oscar	SaD08.3	149
Manni, Francesca	FrB03.4	89	Martinez, Manuel	SaC11.3	144
Mannini, Andrea	ThC16.6	56	Martinez-Canada, Pablo	ThPOS-17.9	63
Manocha, Dinesh	ThPOS-33.41	74	Martinez-de-Juan, Jose Luis	ThPOS-21.8	65
Manohar, Srirang	ThC03.3	52	Martinez-Gonzalez, Jorge	ThC09.3	54
Manome, Nobuhito	WePOS-32.1	33		FrB01.6	88
	WePOS-32.5	33	Martinez-Licona, Fabiola	FrPOS-32.4	115
	WePOS-33.1	34	Martinez-Mateu, Laura	WeC09.5	10
	WePOS-33.9	35	Martinez-Millana, Antonio	WeA19.3	7
	WePOS-33.39	36		WePOS-16.6	21
	FrPOS-33.5	115	Martinez-Serrano, Alberto	ThPOS-34.3	75
Mansor, Wahidah	WeC14.2	12	Martins de Abreu, Raphael	ThB11.3	48
	FrA02.5	82	Martins, Samuel	WeC12.3	11
	FrPOS-01.2	101	Martins, Thiago de Castro	ThA11.4	41
Mansour, Maher	WePOS-14.6	20	Martinsen, Ørjan G	ThPOS-34.3	75
Mansour, Mohanad	FrPOS-27.3	112	Martucci, Alessio	FrC12.4	99
Mansow-Model, Sebastian	FrA11.4	85	Maruo, Hiroto	WePOS-29.20	27
Manteuffel, Dirk	ThPOS-34.38	77	Marupally, Abhilash Goud	WeA03.6	1
Manti, Alessandro	FrC16.1	100		ThB12.4	49
Mäntysalo, Matti	FrA19.4	87		ThB15.3	50
Mantzaris, Michalis	FrPOS-37.40	126	Maruthachalam, Srihari	FrPOS-01.8	102
Manuel, Alfonso	ThPOS-15.6	62	Marx, Laura	WeC09.1	10
Manuel, Jacob	SaC01.2	141	Marx, Philipp	ThC20.6	57
Mao, Huajian	WePOS-23.7	24	Marzi, Claudia	WeA14.6	5
	ThPOS-30.3	69	Marzorati, Davide	ThA13.6	42
Mao, Jingna	FrB13.6	92	Marzullo, Aldo	ThB15.2	50
	FrPOS-36.11	122	Masamune, Ken	FrPOS-36.30	123
Mao, Muiyi	SaC12.5	144	Masashi, Kawasumi	ThPOS-21.15	66
Mao, Ronghu	WePOS-11.7	18	Masci, Alessandro	WeC09.2	10
Mao, Rui	SaC15.6	145	Mascia, Guido	WeA05.5	2
Mar, Winnie	WeC03.4	9	Masculo, Felipe	FrC08.1	97
Maragakis, Nicholas	SaB08.4	137	Masè, Michela	SaC02.1	CC
Maramis, Christos	SaD08.1	149		SaC02.2	141
Marcantoni, Ilaria	WeA05.5	2	Maslove, David M	WeC19.6	13
	ThC05.2	53		ThPOS-29.1	69
Marchesini, Lorenzo	ThPOS-21.12	66	Masoud-Ansari, Sina	SaA12.4	132
Marcroft, Claire	FrPOS-30.8	114	Massaro, An	SaD02.3	147
Marcutti, Simone	FrB20.3	95			

Massot, Bertrand	FrC13.5	99	Mc Larney, Ben	SaA06.5	130
	FrPOS-29.4	114	McAdams, Eric	FrPOS-29.4	114
Mastakouri, Atalanti Anastasia	SaA18.3	134	McBurnett, Will	WeC18.1	13
Mastitskaya, Svetlana	ThPOS-35.12	78	McCarron, Alexandra	ThPOS-32.38	72
Masuda, Kohji	SaA15.4	133	McCarthy, Chris	ThPOS-12.4	61
Matej, Paul	ThPOS-33.8	73	McCay, Kevin	FrPOS-30.8	114
Mather, Mara	FrPOS-34.22	119	McCrea, Michael	ThB13.4	49
Mathew James, Nisanth	WePOS-29.9	26	McCulloch, Andrew	WeA11.1	4
	WePOS-31.47	33	McDaid, Andrew	ThPOS-36.19	80
	ThPOS-32.39	72		FrPOS-38.28	128
Mathieu, William	SaD03.5	148		FrPOS-38.29	128
Matrella, Guido	WeC04.3	9	McDaniel, Matthew	WeA16.1	5
Matscheko, Michael	SaD16.1	152		FrPOS-36.35	124
Matsopoulos, George K	ThB19.4	51	McDougall, Mary	SaD03.3	148
Matsuda, Kento	WePOS-30.17	29	McDuff, Daniel Jonathan	SaB05.1	C
Matsuda, Sachiko	ThPOS-33.26	74		SaC11.1	144
Matsuda, Tetsuya	ThPOS-33.23	73		SaD04.1	CC
	ThPOS-33.29	74		SaD04.3	148
Matsui, Kazuhiro	ThPOS-34.21	76	McEwan, Alistair	WeA06.2	2
Matsui, Takemi	ThPOS-22.2	66		WeA10.1	3
	SaD18.2	153		WeA17.2	6
Matsukawa, Mami	WePOS-31.8	31		WeA22.3	8
	FrPOS-37.35	126		WeC11.1	11
Matsumae, Mitsunori	WePOS-32.11	33		WeC11.6	11
Matsumoto, Hideyuki	ThPOS-19.1	63	McGibbon, Chris	ThPOS-36.23	80
Matsumoto, Hirotaka	FrPOS-36.27	123	McGovern, Eavan	ThA18.2	44
Matsumoto, Keiji	SaD13.1	151		FrA01.3	82
Matsumoto, Masanori	WePOS-31.14	31	McGrath, Denise	ThB13.2	49
Matsumoto, Yoshio	SaA17.2	134		ThPOS-31.7	70
Matsumura, Kohei	ThPOS-33.30	74	McGregor, Carolyn	WeC11.1	CC
Matsumura, Taishi	ThPOS-32.31	71		WeC11.2	11
Matsunaga, Daichi	FrPOS-36.43	124		WeC11.3	11
Matsunaga, Kenichi	WePOS-34.18	38		ThPOS-30.6	69
	ThPOS-22.5	66	McIlduff, Courtney	FrB09.4	91
Matsuo, Masahiro	FrB08.5	91	Mckeage, James William	ThA17.5	44
Matsuo, Yoshiki	FrPOS-38.8	127	McKenna, Ashley L.	WeC08.3	10
Matsuoka, Hiroto	FrPOS-38.24	127	McKinney, Zach	WeC21.5	14
Matsushiro, Naoki	ThPOS-11.5	61	McLaughlin, James	WePOS-15.2	21
Matsuura, Hirotaka	WePOS-34.18	38		WePOS-29.34	28
Matsuzawa, Ryosuke	ThPOS-34.29	76		SaA07.1	130
Mattei, Eugenio	FrPOS-34.3	118	McLoughlin, Rod	ThB13.3	49
Matthew, Robert P.	FrB16.2	93	McMahon, Laura	ThPOS-31.7	70
	FrC16.3	100	McManus, David	WeA17.4	6
	SaA17.3	134		FrC10.2	98
Matthias, Kirsch	ThPOS-35.1	77		FrC10.3	98
Matthias, Voelkel	FrPOS-26.3	112	McManus, Kilian	ThPOS-31.7	70
Mattia, Donatella	WePOS-02.1	14	McManus, Lara	ThC06.1	53
	WePOS-02.4	14		SaC14.6	145
	ThPOS-20.16	64	McNames, James	ThPOS-01.3	58
	FrPOS-34.31	119	McNaughton, Candace	WeA19.2	7
	SaC05.2	142	McNulty, Johnny	ThPOS-04.6	59
Mattos, Leonardo	WePOS-30.39	30	McPhedran, Michelle	FrPOS-35.32	122
	SaD01.2	147	McPherson, Laura Miller	FrB02.2	89
Maturana-Candelas, Aarón	SaA14.1	133	Md Ali, Sawal Hamid	FrPOS-06.9	104
	SaC05.5	142	Meade, Robert	SaD04.2	148
Matysiak, Artur	FrPOS-34.20	119	Means, Shawn	ThPOS-10.3	61
Mau, Robert	WePOS-14.5	20	Mechrez, Roey	WePOS-11.11	18
Mauck, Josephine	ThPOS-34.27	76	Medeiros, Julio	WePOS-24.3	25
Mauger, Charliène Alice	WeA11.1	4	Meena, Yogesh Kumar	WePOS-20.2	23
May, James	ThPOS-23.2	66	Meffin, Hamish	FrPOS-35.31	122
	ThPOS-23.5	66		FrPOS-35.32	122
May, Theodor	WePOS-01.5	14	Mehndiratta, Ambica	WeA12.6	4
Mayanagi, Shuhei	ThPOS-33.26	74	Mehta, Iti	ThPOS-33.42	74
Mayer, Chantal	SaC19.1	146	Mehvari Habibabadi, Jafar	WePOS-02.2	14
Mayer, Christopher	WePOS-31.1	30	Mei, Hongxiang	FrA15.1	86
Mayer, Frieder	WePOS-19.9	23	Mei, Longzhi	ThA09.2	41
Mayer, Philipp	WeC04.1	9	Meiburger, Kristen M.	WeA21.3	7
Mayer, Raphael Maria	FrPOS-27.12	112		WeC14.1	12
Mayo, Perla	WeC12.4	11		FrC15.6	100
	SaA03.2	129	Meier, Jens	FrPOS-37.5	124
Mayordomo-Martínez, Diego	WePOS-20.1	23	Meier, Moritz	ThPOS-20.24	65
Mazumder, Oishee	FrB16.4	93	Meier, Vinzenz	SaA08.4	131
	FrPOS-18.5	108	Melai, Bernardo	WePOS-16.1	21
	FrPOS-20.2	109		ThA13.1	42
Mazur, Weronika	ThPOS-14.3	62	Melki, Lea	SaB15.1	139
Mazurenka, Mikhail	FrA03.1	82	Mena-Giraldo, Pedro	WePOS-14.4	20
Mazur-Milecka, Magdalena	ThPOS-27.6	68	Menciassi, Arianna	ThC21.5	57
Mazzà, Claudia	SaC04.6	142		FrPOS-32.3	115
Mazzone, Amelia	FrPOS-09.1	105	Mendelsohn, Abie H	SaA16.4	134
Mbithi, Florence M.	ThB13.5	49	Mendez, Danilo	FrPOS-32.4	115
Mc Ardle, Riona	ThC20.3	57	Méndez, Inmaculada	SaD08.3	149

Meneghel, Maykon Christian	FrA20.2	88	Michler, Fabian	SaC11.4	144
Meng, Ellis	ThPOS-35.19	78		SaC17.3	146
Meng, Jiayuan	ThPOS-16.4	62	Michoud, Frederic	SaA06.4	130
	SaB01.6	135	Middleton, Alexandra	WePOS-26.2	25
Meng, Miao	WeA20.2	7	Miele, Ermanno	ThPOS-34.9	75
	SaD13.4	151	Miele, Vincent	ThB13.4	49
Meng, Qier	FrA15.4	86	Miernik, Arkadiusz	FrA16.6	86
Meng, Qingfang	ThPOS-02.6	58	Mignot, Emmanuel	WeC19.4	13
Meng, Qingshi	WePOS-15.5	21	Mihailidis, Alex	WeC13.1	11
Mengarelli, Alessandro	WePOS-17.7	22		FrA08.1	84
	ThPOS-21.12	66	Mihara, Atsunori	ThPOS-34.17	76
	FrA01.5	82	Mika, Nonoyama	FrPOS-35.2	120
	FrB16.5	93	Mikami, Kanako	WePOS-30.19	29
	FrPOS-27.15	113	Mikhailov, Andrey	WePOS-14.8	21
Mengden, Thomas	WePOS-31.1	30	Miki, Kenji	FrB03.2	89
Menges, Robert	ThA12.3	42	Miki, Norihisa	WePOS-14.9	21
Menolotto, Matteo	FrPOS-33.15	116	Mikic, Marko	SaD16.2	152
Menon, Sanjana	FrC01.5	95	Mikic, Nikola	FrA09.1	84
Menze, Bjoern	WePOS-11.26	19		SaD10.6	150
	ThB15.4	50	Mikisek, Ines	WePOS-31.1	30
	FrA01.6	82	Mikkelsen, Kaare	SaA04.3	130
Mercado, Federico Gustavo	WePOS-34.26	38		SaC18.2	146
	ThPOS-36.26	80	Mikladal, Björn	FrPOS-38.38	128
Mercante, Oriano	FrA01.5	82	Mikola, Annika	FrPOS-01.14	102
Mergenthal, Adam	ThB09.2	48	Mikolaitis, Lora	WePOS-30.43	30
Merhof, Dorit	FrA15.2	86	Milagro, Javier	ThA14.1	42
	SaA19.3	135	Miled, Amine	WePOS-13.6	20
Merino, Rubi	ThC02.1	52	Miletic, Marjan	FrPOS-30.11	114
Merla, Arcangelo	WeA04.3	1	Milis, Marios	WeA14.2	5
Merla, Caterina	WeA09.2	3	Miller, Larry	ThPOS-24.9	67
	ThA17.3	44	Miller, Michael	FrC18.3	101
Merlet, Isabelle	WeC05.6	9	Miller, R. J. Dwayne	WeA10.2	3
Merola, Alessio	ThB04.5	47	Miller, Steve	WeC18.1	13
Mertens, Marc	ThPOS-22.3	66	Milnthorpe, William Robert Fenton	ThA08.1	40
Mertins, Alfred	ThB02.3	46	Milosevic, Luka	SaC10.1	C
	FrPOS-20.8	109		SaC10.1	143
Merzoukid, Khalil	WePOS-20.1	23	Milosevic, Matija	SaC10.2	144
Mescam, Muriel	ThPOS-14.4	62	Milosevic, Mladen	WePOS-11.6	18
Mescheder, Ulrich	SaA16.3	134	Min, Cheol-Hong	FrPOS-30.4	114
Meshksar, Saba	ThPOS-34.38	77	Min, Huaqing	ThB12.2	49
Meskers, Carel	ThB13.6	49	Min, Hyun-Ki	WePOS-32.33	34
Mesotten, Dieter	WePOS-33.14	35	Min, Kyou Sik	ThPOS-35.20	78
Mestrom, Rob	ThPOS-24.8	67	Min, Se Dong	FrPOS-36.29	123
Metsomaa, Johanna	ThPOS-36.7	80	Minami, Shigenobi	ThC13.3	55
Metwally, Ahmed	WePOS-22.4	24	Minematsu, Takeo	WePOS-11.16	18
Metzger, Michael	FrB07.2	90	Minemura, Kohei	ThPOS-35.30	79
Meunier, H�el�ene	SaC12.3	144		FrPOS-36.24	123
Meurer, Thomas	WePOS-01.5	14		FrPOS-36.25	123
Meyer, Martin	FrB08.2	90		FrPOS-37.2	124
Meyerhoff, Mark E.	WePOS-31.17	31	Minetto, Marco Alessandro	WePOS-34.11	37
Mezzina, Giovanni	SaD05.6	148	Ming, Dong	WeA18.6	6
Mian, Wang	WePOS-13.8	20		ThPOS-16.4	62
Miao, Fen	FrA19.2	87		ThPOS-20.3	64
Miao, Jiajun	FrPOS-05.5	103		ThPOS-20.5	64
Miao, Peng	FrB03.6	89		ThPOS-20.7	64
Miaskowski, Arkadiusz	FrB09.5	91		ThPOS-20.20	65
Miasnikova, Aleksandra	ThC19.2	56		ThPOS-21.4	65
Micera, Silvestro	ThC16.3	56		FrC14.6	99
	ThC16.6	56		FrPOS-01.9	102
	SaD05.6	148		FrPOS-08.9	105
Michael, Markl	FrA12.3	85		SaA01.5	129
Michalis, Lampros	FrPOS-18.1	108		SaB01.2	135
	FrPOS-18.2	108		SaB01.6	135
	FrPOS-37.41	126		SaC01.5	141
	SaA12.6	132		SaD01.5	147
	SaA15.1	133	Mingchuan, Zhou	FrPOS-28.14	113
	SaD11.1	150	Minh, Duc Nguyen	WeA10.1	3
Michel, Bruno	WeC04.1	C	Minna, Isomursu	SaC08.4	143
	WeC04.2	9		SaD08.1	149
	WeC04.3	9	Mino, Hiroyuki	ThPOS-36.15	80
	WeC11.5	11		FrPOS-35.27	122
	ThB20.5	51	Minogue, Conor M	FrA20.3	88
	SaD13.1	151	Minosse, Silvia	FrC12.4	99
Michel, Christoph	SaC05.6	142	Miocinovic, Sijetlana	SaB10.5	138
Michielli, Nicola	WeA21.3	7	Mir, Lluıs	WeA09.2	3
	WeC14.1	12	Mirab, Fereshtehsadat	FrA16.1	86
	FrC15.6	100		FrB07.4	90
Michihiko, Fukunaga	ThPOS-33.27	74	Miralles, Felip	ThPOS-29.5	69
Michikawa, Takashi	ThPOS-12.3	61	Miran, Sina	FrB18.1	94
Michiwaki, Yukihiro	FrPOS-27.10	112	Miranda, Igor	ThPOS-04.5	58

Miranda, Pedro Cavaleiro	ThA01.5	39	Moeller, Knut	ThA11.1	C
	SaA10.6	132		ThA11.3	41
	SaA18.2	134		ThA11.6	41
	SaA18.5	134		FrA04.1	83
	SaB06.2	137	Moeyersons, Jonathan	SaB02.6	136
Mirbagheri, Alireza	WeC01.3	8	Moffitt, Amanda	SaD04.4	148
	FrPOS-25.3	111	Moggridge, Jason	ThPOS-35.29	79
	FrPOS-25.6	111		FrPOS-02.2	102
	FrPOS-28.16	113	Mohamed Refai, Mohamed Irfan	ThB13.6	49
Mirbagheri, Mehdi	WeA08.3	2	Mohamed, Abdallah	FrPOS-27.3	112
	WeA08.6	3	Mohammadi Far, Somayeh	FrPOS-06.1	103
	WeC01.3	8	Mohammadi, Alireza	FrPOS-27.12	112
	WePOS-02.2	14	Mohammadi, Arash	SaD17.3	153
	FrC12.3	98	Mohammadi-Mobarakeh, Neda	WePOS-02.2	14
	FrPOS-25.3	111	Mohammed, Abdul Rasheed	WeA03.6	1
	FrPOS-25.6	111	Mohammed, Zafar Ali Khan	WePOS-16.5	21
	FrPOS-28.16	113	Mohan, Suyash	SaA10.1	131
Mirkovic, Bojana	FrPOS-34.42	120	Mohapatra, Ankita	ThA17.2	43
Mirmahboub, Behzad	SaB19.5	141	Mohd Ali, Ahmad Faizal	ThPOS-15.8	62
Miró, Joaquim	SaA19.1	134	Mohd Radzol, Afaf Rozan	WeC14.2	12
	SaD11.5	151		FrA02.5	82
Mirshekarian, Sadegh	WePOS-04.9	15	Mohebbi, Ali	SaD18.3	153
Mirza, Farhaan	WePOS-34.2	37	Mohrekesh, Majid	SaC19.6	147
	ThB19.5	51	Mojena Medina, Dahiana	WePOS-29.23	27
Mirzaaghayan, Mohamadreza	WePOS-25.3	25	Mok, Ethan	SaD06.2	149
Mischi, Massimo	ThB06.5	47	Mokhtary, Marzieh	SaA03.6	129
	ThB19.1	51	Molavi, Mohammad	WeA08.6	3
	ThPOS-32.16	71		FrPOS-25.3	111
Mishra, Abinash	WePOS-12.7	19		FrPOS-25.6	111
Mishra, Kanuj	ThC03.2	52	Molder, Anna Leida	FrPOS-33.25	117
Mishra, Sanjay	ThA17.2	43	Molinari, Fabio	FrPOS-28.4	113
Mishra, Siddhartha	FrPOS-08.13	105	Molinari, Filippo	WeA21.3	7
Miskov-Zivanov, Natasa	ThPOS-16.1	62		WeC14.1	12
	FrPOS-37.20	125		FrC15.6	100
Misra, Sarthak	FrPOS-27.3	112	Molino-Minero-Re, Erik	FrPOS-37.23	125
Misteli, Tom	WePOS-13.5	20	Mollenhauer, Brit	FrA14.3	86
Mistretta, Leonardo	WeA04.3	1	Möller, Harald	FrA09.6	84
Mistry, Michael	FrPOS-27.7	112	Moloney, Brian	ThB03.6	46
Mitani, Ryoma	FrPOS-20.10	109	Molteni, Erika	WeA16.1	C
Mitchell, Chris	WePOS-12.3	19		WeA16.3	6
Mithraratne, Kumar	WePOS-31.35	32	Molteni, F	FrC16.1	100
	WePOS-31.36	32	Momeni, Kamyar	WeC08.4	10
Mitsis, Georgios D.	WeA12.1	4	Momeni, Niloofar	FrA19.3	87
	WeC14.1	CC	Momoi, Emi	WePOS-33.31	36
	ThC14.1	C	Momose, Keiko	WePOS-30.7	28
Mitsis, Konstantinos	WePOS-24.1	25	Monaco, Vito	ThC16.3	56
Mitsui, Kazuyuki	WePOS-34.19	38		ThC16.6	56
	ThPOS-34.42	77		SaD05.6	148
Mitsukura, Yasue	WePOS-30.30	29	Monbaliu, Elegast	FrPOS-35.17	121
	WePOS-33.18	35		FrPOS-38.25	127
	FrPOS-37.18	125	Mönch, Christoph	SaB05.1	136
Mitsuyoshi, Shunji	WePOS-32.1	33	Mondelaers, Mieke	ThPOS-22.3	66
	WePOS-32.5	33	Mondini, Valeria	FrPOS-22.5	110
	WePOS-33.9	35	Mondragon, Norma Carolina	FrB07.1	90
	WePOS-33.39	36	Monemian, Maryam	FrPOS-08.5	104
	WePOS-34.7	37	Monfaredi, Reza	ThB10.3	48
	FrPOS-33.5	115	Monno, Yusuke	FrB03.2	89
Mittag, Christina	FrPOS-38.18	127		SaC11.2	144
Mittnacht, Annette	SaA15.3	133	Monsalve, Emyrna	WePOS-17.1	22
Miura, Daiki	WePOS-30.47	30	Monsivais, Fernando Huerta	WePOS-07.1	16
Miura, Keiji	ThPOS-19.1	63	Montalibet, Amalric	FrPOS-29.4	114
Miura, Saori	WePOS-34.13	38	Montanari, Enrico	WeC04.3	9
Miyagawa, Makoto	SaA03.5	129	Montanaro, Domenico	WePOS-09.3	17
Miyamoto, Ryusuke	FrPOS-38.5	126		FrPOS-09.2	105
Miyata, Makoto	FrB17.1	93	Montanaro, Hazael	SaB09.2	138
Miyazaki, Kunihiko	WePOS-27.8	26	Montanero, José María	WePOS-31.43	32
Mizelle, John Christopher	ThC02.1	52	Montazeri Ghahjaverestan, Nasim	ThA14.4	42
Mizuguchi, Tomohiko	WePOS-23.5	24		FrPOS-05.2	103
Mizutani, Koichi	ThC13.4	55	Montesinos, Victoriano	ThB20.3	51
Mizutani, Shouhei	WePOS-30.14	29	Montgomery, Johanna	FrPOS-36.21	123
Moccia, Sara	WeA14.2	5		SaB04.6	136
	WePOS-12.10	19	Montserrat, Josep Maria	FrPOS-17.2	108
Mochida, Takumi	WeA20.1	7		FrPOS-17.4	108
Mochimaru, Masaaki	ThPOS-34.26	76	Mookerjee, Rajeshwar Prosad	WePOS-23.4	24
Mochiyama, Hiromi	FrPOS-27.16	113	Moon, Ho-Sang	WePOS-33.48	37
	SaB16.2	139	Moon, Hyunmin	ThPOS-33.6	72
Mochizuki, Kanta	FrPOS-38.1	126	Moon, Jong Hak	ThPOS-32.11	70
Mocny-Pachońska, Katarzyna	WePOS-33.19	35			
Modat, Marc	WeA16.3	6			
Möddel, Martin	ThA03.4	39			
Modolo, Julien	FrPOS-23.7	111			

Moon, Sang-Hyub	WePOS-31.3	30	Mourad-Chehade, Farah	SaB05.6	137
	WePOS-32.21	34	Mousavi, Mahta	FrPOS-01.7	102
	WePOS-32.22	34	Mousavi, Parvin	WeC19.6	13
	WePOS-32.23	34		ThPOS-29.1	69
	FrPOS-35.3	120	Mousavi, Sajad	WeA19.5	7
Moon, Young Lae	WeC21.1	14	Moutselos, Konstantinos	ThA15.2	43
Moontaha, Sidratul	WePOS-01.5	14	Moya Esteban, Alejandro	ThB16.3	50
Moore, Michael J.	WePOS-11.27	19		FrB16.3	93
Mopan, Jintapatee	SaD12.6	151	Mozetic, Pamela	WePOS-31.20	31
Mora, Niccolo'	WeC04.3	9	Mrachacz-Kersting, Natalie	ThPOS-20.16	64
Moradi Birgani, Parmida	WeA08.6	3		FrB06.5	90
Moradi Rad, Reza	WePOS-11.19	18	Mrugala, Dariusz	SaC13.1	144
Moradi, Farshad	FrA21.3	88	Muaremi, Amir	ThPOS-21.11	65
	FrC13.2	99		FrPOS-31.4	115
Morales Tellez, John Fredy	ThA14.1	42	Muceli, Silvia	ThC06.4	53
Morales, Cristian	WeA08.1	2		ThPOS-20.16	64
Moraru, Ion	ThPOS-34.13	75		SaB18.1	140
Morasso, Pietro	FrA06.1	83	Muders, Thomas	FrPOS-37.37	126
	FrA06.6	83	Mudie, Kurt Laurence	ThPOS-36.40	81
	FrPOS-20.11	109	Mudiyanselage, Thilini Kuruwita	WePOS-14.7	20
	FrPOS-20.12	109	Muehlsteff, Jens	FrB12.4	92
Morath, Jakob Paul	SaB03.5	136		SaD13.5	151
Morchi, Laura	ThC21.4	57	Mueller, Bryon	ThPOS-14.6	62
	ThC21.5	57		FrA01.1	82
Mordoh, Valeria	FrPOS-34.41	120	Mueller, Jennifer	ThA11.4	41
Moreau, Albane	WePOS-32.9	33	Muftu, Ali	ThPOS-27.4	68
Moreau, Richard	SaD05.5	148	Mugge, Winfred	ThB16.1	50
Moreland, Samuel A	ThA08.2	41	Muhamad, Fadzli	WePOS-29.14	27
	ThA08.3	41	Mukaeda, Takayuki	FrPOS-20.10	109
Morelli, Maria Sole	WePOS-09.3	17	Mukai, Barbara	ThPOS-15.3	62
	FrPOS-09.2	105	Mukai, Susumu	WePOS-33.9	35
	FrPOS-15.2	107	Mukai, Toshiharu	FrPOS-36.6	122
Moreschi, Maria Eduarda	WePOS-13.3	20		FrPOS-37.10	125
Morettini, Micaela	WeA05.5	2	Mukaino, Masahiko	WePOS-34.18	38
	ThC05.2	53		ThPOS-22.5	66
Morgan, Kaye	ThPOS-32.38	72	Mukherjee, Devanshu	WePOS-33.36	36
Morgan, Kristin	ThB16.6	50	Mukhopadhyay, Jayanta	WePOS-23.8	24
Morgan, Stephen Peter	WePOS-15.7	21	Mukkamala, Ramakrishna	WeA13.1	C
Mori, Fumina	FrPOS-34.23	119		WeA13.1	4
Mori, Hiroyuki	SaD13.1	151		FrPOS-37.36	126
Mori, Ivy Tiemi	WePOS-27.9	26		FrPOS-37.38	126
	FrB17.5	94		SaC11.1	CC
Mori, Ryosuke	ThPOS-36.15	80	Mullen, Lisa	ThPOS-10.1	61
Mori, Taketoshi	WePOS-11.16	18	Müller, Klaus-Robert	SaB03.5	136
	WePOS-29.25	27	Müller-Putz, Gernot	ThPOS-20.6	64
	WePOS-34.9	37		FrPOS-22.5	110
Morimont, Philippe	WeA16.5	6		SaB01.1	135
Morin, Evelyn	WePOS-03.1	15	Mun, Kyung-Ryoul	FrA13.3	85
	WePOS-04.7	15	Munera, Nicolas	ThPOS-08.1	60
Morita, Ryosuke	WePOS-31.14	31	Mungulmare, Kunda	WeA13.5	5
Moriya, Fumika	ThB18.2	50	Muñoz, María Jose	ThA20.4	45
Moriya, Takehiro	ThPOS-21.3	65	Muñoz-Diosdado, Alejandro	WePOS-32.7	33
Morley, John William	ThPOS-36.6	80		FrPOS-33.3	115
Mormann, Florian	FrPOS-33.10	116	Muntané Calvo, Enric	ThPOS-30.1	69
Moro, Andrea	WePOS-32.2	33	Muntean, Maria-Lucia	FrA14.3	86
Morohashi, Itaru	ThPOS-34.42	77	Mura, Fabrizio	SaA08.3	131
Moron Mendoza, Andres	FrPOS-32.4	115	Murai, Akihiko	WePOS-30.23	29
Morrison, Gareth	ThA19.6	44	Murakami, Takahiro	FrB17.1	93
Morshed, Bashir	ThA17.2	43	Murakami, Toshiyuki	ThB06.3	47
Mortaheb, Sepehr	FrPOS-01.11	102	Murali, Srinivasan	FrPOS-34.40	120
Mortazavi, Bobak	ThPOS-29.3	69	Muralidharan, Anusha	ThPOS-33.42	74
Morton, Sophie E.	ThA11.1	41	Muralidharan, Kartik	WePOS-21.2	23
Morup, Morten	SaD18.3	153	Muralidharan, Madhuvanathi	ThPOS-36.6	80
Moscato, Serena	FrPOS-34.28	119	Muramatsu, Dairoku	WePOS-29.18	27
Moschetti, Alessandra	FrC10.5	98	Muraru, Luiza	FrPOS-28.1	113
Moser, Julia	SaA08.2	131		FrPOS-28.9	113
	SaC12.2	144	Murashige, Tomotaka	SaA07.3	131
Mosmiller, Elizabeth	SaB08.4	137	Murata, Yuuki	FrPOS-36.38	124
Motani, Yuki	FrPOS-33.33	117	Muro, Naiara	WePOS-23.10	25
Motin, Mohammad Abdul	SaA02.3	129	Murphree, Dennis	FrC17.6	101
Motoi, Kosuke	WePOS-33.46	37	Murphy, Brian Michael	FrPOS-01.13	102
	FrPOS-38.2	126		FrPOS-36.15	123
Motoike, Ikuko	WeC19.2	13	Murphy, Liam	ThPOS-17.8	63
Motoyoshi, Daisuke	WeC14.5	12	Murtadha, Hssayeni	FrPOS-36.13	122
Motozawa, Naohiro	ThB12.6	49	Murthy, Hema	FrPOS-01.8	102
Mougiakakou, Stavroula	ThC08.2	54		FrPOS-01.10	102
	FrA08.6	84		SaB14.2	139
	SaA08.4	131	Murugesan, Balamurali	SaA02.1	129
Moukarzel, Lea	ThPOS-23.6	66		SaD19.5	153
Moulin, Kevin	WeA11.5	4	Mushtaq, Fajer	FrA07.2	84
Moura, Fernando Silva de	ThA11.4	41	Muthunayagam, Muthulakshmi	WePOS-10.3	17

Mutsvangwa, Tinashe Ernest Muzvidzwa	FrPOS-09.7	105
Mütter, Malte	WePOS-31.31	32
Muzaffar, Shahzad	FrB13.4	92
Mwamba, Hervé Mukenya	WePOS-27.2	25
Myers, Michael	WePOS-21.6	24
Myland, Paul	FrPOS-33.22	116
Myllylä, Teemu	SaA02.5	129
Mylonopoulou, Vasiliki	SaD08.1	149
Mynttinen, Elsi	FrPOS-38.38	128

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N, Ahana Priyanka	ThPOS-11.1	61
Na, Duk-Lyul	SaB10.1	138
Na, Youngmin	WePOS-30.20	29
Naal-Ruiz, Norberto Emmanuel	SaD18.4	153
Naber, Ady	FrPOS-08.14	105
Nadal, Jurandir	ThPOS-33.34	74
	FrPOS-34.32	119
Nagae, Shigenori	WePOS-11.23	18
Nagai, Miwa	ThPOS-34.21	76
Nagakura, Jin	FrPOS-33.21	116
Nagamatsu, Genki	WePOS-30.46	30
Nagano, Tatsuya	FrA14.6	86
Nagao, Hiroshi	ThPOS-36.39	81
Nagaoka, Takashi	ThPOS-32.5	70
	ThPOS-32.6	70
	ThPOS-32.7	70
	ThPOS-32.21	71
Nagaoka, Tomoaki	FrPOS-33.42	117
Nagarajan, Srikantan S.	FrPOS-09.4	105
Nagarkoti, Amit	WePOS-27.1	25
Nagashima, Mikihiisa	FrA13.4	85
Nagatsuka, Kazuyuki	FrPOS-37.35	126
Nagatsuma, Akemi	WePOS-34.19	38
Nagy, Norbert	ThB04.1	46
Naheem, Khawar	WePOS-29.13	27
Nahm, Werner	ThA10.1	C
	ThPOS-32.13	71
	FrPOS-08.14	105
	FrPOS-33.37	117
Naik, Akash	WePOS-31.28	32
Naik, Ganesh R.	ThPOS-06.1	59
Nair, Ankitha Rajagopalan	FrA18.2	87
Nair, K.P.S.	SaC04.6	142
Nair, Shalini R.	ThPOS-15.8	62
Naito, Hisashi	WePOS-29.8	26
Najafizadeh, Laleh	WePOS-20.3	23
	FrPOS-24.1	111
Najarian, Kayvan	WeA19.5	7
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Naka, Hiroyuki	WePOS-34.13	38
Naka, Katerina	WePOS-23.6	24
	FrPOS-37.41	126
Nakada, Yuno	WePOS-29.18	27
Nakada, Yuuji	ThPOS-17.3	63
Nakadate, Ryu	FrB20.2	94
Nakagawa, Seiji	FrPOS-22.9	110
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Nakagawa, Yusuke	ThPOS-09.5	60
Nakai, Shizuki	ThPOS-36.32	81
Nakai, Tomoaki	WePOS-30.17	29
Nakajima, Hiroshi	WePOS-34.22	38
Nakajima, Kae	WePOS-34.22	38
Nakamoto, Hiroyuki	FrPOS-38.34	128
Nakamura, Akihiro	FrA06.1	83
Nakamura, Hajime	WePOS-15.10	21

Nakamura, Hideo	WePOS-17.3	22
	FrPOS-35.20	121
Nakamura, Hidetoshi	WePOS-34.13	38
Nakamura, Mitsuteru	WePOS-33.9	35
	WePOS-33.39	36
	WePOS-34.7	37
	FrPOS-33.5	115
Nakamura, Ryoichi	SaD16.4	152
Nakamura, Sousuke	WePOS-29.22	27
Nakamura, Takashi	ThC02.6	52
	FrA14.1	86
Nakamura, Tatsuo	FrPOS-36.31	123
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Nakamura, Tetsuo	WePOS-29.22	27
Nakamura, Toru	FrA08.2	84
Nakamura, Yukio	ThC15.6	56
Nakanishi, Kana	ThA21.5	45
Nakanishi, Masaki	WePOS-30.23	29
Nakanishi, Rafael Mikio	ThA11.4	41
Nakano, Masayuki	ThPOS-32.2	70
	ThPOS-32.10	70
Nakao, Megumi	ThPOS-33.29	74
Nakao, Mitsuyuki	WeC19.2	13
Nakao, Tomoyuki	ThA16.6	43
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Nakashima, Hiroshi	ThPOS-34.17	76
Nakashima, Naoki	WePOS-33.8	35
Nakasuji, Hisa	FrPOS-36.32	123
Nakata, Kodai	ThPOS-35.13	78
Nakatani, Minori	FrPOS-36.28	123
	FrPOS-38.9	127
Nakayama, Chikao	FrB08.5	91
Nakayama, Koharu	WePOS-30.18	29
Nakazawa, Toru	ThPOS-12.3	61
Nakazawa, Yosuke	FrA06.2	83
Nakphu, Nonthaporn	FrPOS-37.4	124
Nalband, Saif	FrB17.2	93
Nam, Ki Chang	WePOS-31.3	30
	WePOS-32.21	34
	WePOS-32.22	34
	WePOS-32.23	34
	ThPOS-35.9	78
	FrPOS-35.3	120
Nam, Sung Hyun	FrPOS-31.5	115
Nam, Tack Soo	ThB17.3	50
Nam, Yoonkey	FrC06.1	C
	FrC06.3	97
Nam, Yunyoung	FrPOS-22.11	110
Nambu, Isao	WePOS-30.5	28
	ThPOS-20.23	65
Nambu, Masayuki	WePOS-33.42	36
Nan, Hao	SaC03.3	141
Nanayakkara, Nuwan Dayananda	SaD18.6	153
Nanbakhsh, Kambiz	FrA21.6	88
Narain, Jaya	FrA17.4	87
Narasaki, Katsuhiko	WePOS-30.14	29
Narasimham, Shruti	ThA18.2	44
	FrA01.3	82
Narayanan, Shrikanth	ThB20.6	51
	ThPOS-01.2	58
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	SaD13.2	151
Nardelli, Mimma	WeA20.4	7
	ThB11.4	49
Nardoni, Martina	ThA17.3	44
Narnhofer, Dominik	SaC19.2	147
Naruse, Yasushi	WePOS-34.17	38
	WePOS-34.20	38
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Nash, Martyn	WeA11.1	4
Nasim, Amnah	WeA05.5	2
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Nasr, Remie	SaC15.2	145
Nasreen, Shazia	WePOS-23.8	24
	FrPOS-33.12	116
Nassereddine, Mohamad	FrA17.5	87
Nasseri, M. Ali	FrPOS-28.14	113
Nasuto, Slawomir	ThPOS-19.2	63
Natarajan, Keerthana	WeA13.1	4
Natarajan, Sriraam	ThPOS-02.3	58
Nategh, Neda	SaD07.3	149

Natsiavas, Pantelis	SaA08.5	131	Nguyen, Thanh Duc	WePOS-11.10	18
Naulaers, Gunnar	WePOS-03.3	15	Nguyen, Trung	WePOS-29.35	28
	SaB02.6	136		WePOS-32.26	34
Nauleau, Pierre	SaB15.1	139		ThPOS-34.10	75
	SaB15.3	139		ThPOS-34.11	75
Navarro, Cesar Oswaldo	WePOS-29.34	28		ThPOS-34.18	76
Navkar, Nikhil V.	ThPOS-33.1	72		ThPOS-36.27	81
	ThPOS-33.41	74		FrPOS-34.38	120
Nawaz, Wajahat	FrC17.2	100		FrPOS-35.12	121
Nayagam, David A.X.	FrPOS-35.32	122		FrPOS-35.13	121
Nayeem, Huzaifa	WePOS-16.5	21		FrPOS-38.27	128
Naze, Sebastien	FrA02.2	82	Nguyen, Tuan V.	FrPOS-30.1	114
Nazem-Zadeh, Mohammad-Reza	WePOS-02.2	14		SaD18.1	153
Ndoye, Ibrahima	WeC16.4	12	Nguyen, Van Du	WePOS-32.33	34
Neasham, Jeff	FrB13.1	92	Ni, ZhenLiang	SaA12.1	132
Nederveen, Aart	FrA12.3	85	Nica, Ioana	FrPOS-35.17	121
Needell, Deanna	FrPOS-08.7	104		FrPOS-38.25	127
Neff, Patrick	FrB08.2	90	Nicholson, Lindsay	SaA03.2	129
Negahdar, Mohammadreza	WePOS-11.21	18	Nickerson, David Phillip	ThPOS-34.13	75
Negishi, Toshiaki	ThPOS-22.2	66	Nicolaï, Alice	SaD05.3	148
Negro, Francesco	ThB06.5	47	Nicolaidis, Andrew	ThPOS-32.19	71
	FrB02.2	89		FrPOS-37.34	126
Negro, Matteo	SaD04.1	148	Nicolau V Costa, António	SaB10.2	138
Neidhardt, Maximilian	SaB03.1	136	Nie, Jiaming	ThPOS-25.2	67
Nelson, Bradley	FrA07.2	84	Niedbalski, Paweł	FrPOS-01.3	101
Nelson, Marvin	FrB19.2	94	Niederhauser, Thomas	FrPOS-33.50	118
Nelson, Morgan	WePOS-21.6	24		FrPOS-38.10	127
Nensa, Felix	WePOS-11.12	18		SaB10.6	138
Neofytou, Marios	WePOS-33.35	36	Niediek, Johannes	FrPOS-33.10	116
Neokleous, Kleantis	WePOS-33.35	36	Nielsen, Jesper D.	ThA01.2	39
Nesic, Dragan	WeA09.4	3		SaB09.2	138
	ThPOS-16.3	62	Nielsen, Poul	ThA17.5	44
Nestler, David	WeA19.4	7	Niemann, Christoph	SaA09.2	131
Nestrasil, Igor	ThPOS-14.6	62	Nieminen, Hannu	ThB20.2	51
	FrPOS-07.5	104	Nieminen, Jaakko	ThPOS-27.1	68
Neufeld, Esra	SaB09.2	138		ThPOS-36.7	80
Neuhaus, Elisa	WePOS-14.3	20	Niesler, Thomas	ThPOS-04.5	58
Neuschwander, Pia	FrB08.2	90	Niewrzol, Peter	WeC08.3	10
Neuta, Paola Andrea	FrPOS-35.11	121		FrC16.6	100
Neves, Eduardo Borba	ThPOS-13.2	61		FrPOS-35.6	120
Newcombe, Lee	ThC20.5	57	Niijima, Arinobu	ThPOS-25.6	67
	FrPOS-38.31	128	Niikawa, Takuya	WePOS-29.15	27
Newman, Kristine	FrA08.1	84	Niizeki, Kyuichi	ThA21.5	45
Ng, Cailin	FrPOS-28.8	113	Niki, Yoshifumi	ThC16.4	56
	FrPOS-37.26	125	Nikita, Konstantina	WePOS-24.1	25
Ng, Dianwen	WePOS-11.5	17		ThPOS-26.9	68
Ng, Manwa, L.	FrB01.2	88		FrPOS-37.33	126
Ng, Nicholas Zhi Hao	ThPOS-33.38	74	Niklas, Christian	WePOS-31.11	31
Ng, Partick Chun Kit	FrPOS-28.7	113		ThC11.4	54
Ng, Si Yen	ThB10.6	48	Nikolaou, Christos	ThPOS-32.36	72
Ngamvirojcharoen, Jarun	SaD12.6	151	Nikolic, Konstantin	SaB09.6	138
Ngezahayo, Anacllet	ThPOS-34.38	77	Nikolopoulos, Spiros	WePOS-07.2	16
Ngo, Cuong Q.	FrPOS-30.1	114		SaB14.1	139
	SaD18.1	153	Nilsen, Kris	ThPOS-34.34	76
Nguyen, Anh	FrC14.4	99	Nilsson, Johan	FrPOS-38.20	127
Nguyen, Golda	FrPOS-38.32	128	Nimnual, Rossukon	FrC02.1	95
Nguyen, Hang Phuong	WePOS-29.35	28	Ning, Gangmin	WePOS-29.3	26
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	ThPOS-34.10	75	Ning, Guochen	WePOS-33.22	35
	ThPOS-34.11	75	Nir, Talia M.	ThPOS-33.18	73
	ThPOS-34.18	76	Nishi, Eri	WePOS-29.15	27
	ThPOS-36.27	81	Nishi, Kazumasa	ThA04.5	40
	FrPOS-34.38	120	Nishida, Jun	ThPOS-25.7	67
	FrPOS-35.12	121	Nishijimi, Yasuo	FrPOS-24.3	111
	FrPOS-35.13	121	Nishikawa, Atsushi	ThPOS-34.21	76
	FrPOS-38.27	128		ThPOS-36.39	81
Nguyen, Hung T.	WeC18.4	13		FrPOS-36.30	123
	FrPOS-30.1	114		FrPOS-36.31	123
	SaC14.1	CC		FrPOS-36.32	123
	SaD14.1	C	Nishikawa, Satoshi	SaD06.1	149
	SaD14.4	152	Nishimori, Daigo	WePOS-29.14	27
	SaD18.1	153	Nishimura, Fumiaki	FrPOS-36.32	123
Nguyen, Khoa D.	WeA18.3	6	Nishimura, Hidekazu	ThPOS-22.2	66
	SaC08.6	143	Nishimura, Takahiro	WePOS-29.12	27
Nguyen, Kien	ThA15.4	43		WePOS-34.15	38
	ThB15.5	50	Nishimura, Yoshihiro	FrA14.6	86
Nguyen, Kim-Cuong T	SaC15.4	145	Nishino, Atsushi	ThC19.4	57
Nguyen, Mau Dung	FrA13.3	85	Nishino, Takashi	WePOS-30.17	29
Nguyen, Nhan	FrPOS-03.2	102	Nishiyuki, Kenta	WePOS-11.23	18
Nguyen, Tan-Nhu	FrPOS-28.3	113			
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Nishizawa, Yuji	FrPOS-36.30	123	Nowshiravan Rahatabad, Fereidoun	WeA08.3	2
	FrPOS-36.31	123	Noyori, Shuhei	WePOS-29.25	27
	FrPOS-36.32	123	Nozaki, Akira	ThPOS-17.3	63
Nissim, Nicole	SaB06.4	137	Nozaki, Daichi	FrA06.2	83
Nita, Cosmin	SaC08.2	143	Nozaki, Yoshitaka	ThPOS-21.10	65
Nitsche, Michael A.	ThA01.1	39	Nozik, Yonatan	WePOS-12.3	19
	SaA18.1	134	Ntziachristos, Vasilis	ThC03.2	52
Niu, Chuanxin M.	FrPOS-34.44	120		FrPOS-33.39	117
Niu, Wendou	ThPOS-24.3	67	Nucci, Carlo	FrC12.4	99
Niwayama, Masatsugu	FrPOS-33.19	116	Nudo, Randolph	ThPOS-36.2	79
	FrPOS-33.20	116	Nugent, Chris	ThA19.6	44
	FrPOS-33.21	116	Nugent, J. David	WePOS-21.6	24
Niyonambaza, Shimwe Dominique	WePOS-13.6	20	Nuijten, Raoul Ceasar Yannic	FrA08.4	84
Nkurunziza, Theoneste	ThB21.5	52	Nummenmaa, Aapo	WeC10.5	10
Noaro, Giulia	WePOS-33.15	35		ThA01.4	39
Nobili, Lino	FrB01.3	88		SaA10.4	132
Nochino, Teruaki	FrPOS-37.11	125	Nunes, Diogo	FrB08.1	90
Noeth, Elmar	WePOS-04.11	15	Nunes, Urbano	ThA16.3	43
Noetscher, Gregory	WeC10.5	10	Nunez, Erick	FrPOS-35.10	121
	ThA01.4	39	Núñez, Pablo	FrPOS-09.5	105
	FrA09.1	C		SaA14.1	133
	FrA09.5	84	Nunokawa, Kiyohiko	WePOS-29.5	26
	FrB13.5	92	Nunziata, Stefano	WeC04.3	9
	SaA10.4	132	Nurmikko, Arto	SaD06.2	149
	SaB13.1	C	Nutt, John	ThPOS-01.3	58
	SaB13.2	138	Nyberg, Tobias	FrPOS-23.1	110
	SaB13.3	139	Nygaard, Gerhard	ThPOS-15.7	62
Noga, Michelle	FrB12.6	92			
	SaC15.4	145			
Nogas, Jacob	FrA08.1	84			
Nogawa, Masamichi	WePOS-29.8	26			
Noguchi, Hiroshi	WePOS-11.16	18			
	WePOS-29.25	27			
	WePOS-34.9	37			
Nogueira, Diogo Marcelo	SaC17.1	146			
Nogueira, Waldo	FrB10.1	C			
	FrB18.6	94			
Nogueira-Neto, Guilherme	ThPOS-36.8	80			
	FrA20.2	88			
Noh, Seungwoo	WeA13.3	4			
Noh, SiHyeong	WePOS-33.7	35			
	ThPOS-32.43	72			
	ThPOS-33.21	73			
Noh, Yeon Sik	FrC10.4	98			
Noh, Yohan	ThPOS-09.3	60			
	ThPOS-23.1	66			
Nohama, Percy	WePOS-27.9	26			
	ThPOS-36.8	80			
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Oh, Yu-Kyoung	ThA17.1	C		WePOS-34.7	37
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Otso, Arponen	FrPOS-11.2	106		FrPOS-34.48	120
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Otte, Karen	FrA11.4	85	Pan, Qing	WePOS-33.2	34
Otto, Kevin	ThB01.4	45	Pan, Yue	WePOS-31.16	31
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Otto, Thomas	FrPOS-36.41	124	Pan, Zherong	ThPOS-33.41	74
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			Park, ByungEun	WePOS-32.23	34
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			Park, Cheolsoo	ThC13.2	55
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Padmanabhan, Supriya	WePOS-13.5	20
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Pagano, Gaetano	ThA20.3	45
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Pagnotta, Mattia Federico	WePOS-01.4	14
Pahikkala, Tapio	ThPOS-31.1	70
Pahl, Barbara	FrA21.6	88
Paidi, Anna	WePOS-22.1	24
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Pal, Arpan	WePOS-21.2	23
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Pal, Ravi	FrPOS-06.6	104
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Palaniswami, Marimuthu	WePOS-05.5	16
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Park, Eunyeong	FrPOS-37.31	126		ThB21.2	52
Park, Hoon Ki	FrPOS-33.16	116		ThC09.5	54
Park, Hyeong-jun	ThPOS-34.48	77		FrPOS-04.1	103
Park, Hyun Mok	WePOS-32.21	34		FrPOS-33.49	118
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Park, Hyunjin	WePOS-32.30	34		SaD17.2	152
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Park, Hyunsu	WePOS-31.23	31	Pasquier, Alexiane	SaB04.5	136
Park, Hyun-Tae	FrPOS-34.11	118	Passamonti, Luca	FrC12.2	98
Park, Jin-Joo	ThPOS-35.31	79		FrC12.5	99
Park, Jinsick	FrPOS-34.21	119	Passat, Nicolas	SaC12.3	144
Park, Jongkyu	FrPOS-34.13	119	Passino, Claudio	WePOS-09.3	17
Park, Jongoh	WePOS-32.33	34		FrPOS-09.2	105
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Park, Jonguk	WePOS-33.11	35	Pastel, David	SaD10.1	150
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Park, Joshua	FrPOS-34.37	120	Pataranutaporn, Pat	ThPOS-26.1	68
Park, Jun Young	WePOS-30.4	28	Patel, Aakash	SaA04.5	130
Park, Jung-Hyun	WePOS-33.4	35	Patel, Niravkumar	ThB10.1	48
Park, Junyung	ThPOS-33.6	72		ThB10.3	48
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Park, Ki-Su	ThPOS-33.6	72	Patel, Nitish	SaB04.6	136
Park, Kwang S.	WePOS-31.12	31	Patel, Rajan	SaA12.2	132
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Park, Kyungjin	FrPOS-37.31	126	Pathirana, Pubudu N	FrPOS-03.2	102
Park, Kyungsoo	ThC17.1	C		SaC08.6	143
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Park, Mina	FrA13.3	85		SaD05.2	148
Park, Minseon	WePOS-33.6	35		SaD17.6	153
	FrPOS-36.37	124	Pathirana, Pubudu N.	WeA18.3	6
Park, Sang Min	FrPOS-34.46	120	Pathmanathan, Pras	FrA09.2	84
Park, Sang Soo	FrPOS-33.24	116	Pati, Sandipan	FrA05.1	83
Park, Sang-Eon	FrB01.5	88		FrB05.2	89
	SaC06.4	142	Patil, Nilesh	WeA03.1	1
Park, Sang-Heum	FrPOS-34.13	119	Patra, Amit	FrPOS-19.4	109
Park, Sangyun	WeA13.3	4	Patterson, Jacqueline R.	ThC06.3	53
Park, Seonghun	WePOS-30.25	29	Pattichis, Constantinos	WePOS-34.1	37
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Park, Seung Woo	WeA13.3	4		FrPOS-37.34	126
Park, Sukang	WePOS-32.23	34	Pattichis, Marios	WePOS-34.1	37
Park, Sung Yun	FrPOS-34.37	120		FrPOS-37.34	126
Park, Sungkee	FrPOS-03.4	103	Patton, James	ThPOS-02.5	58
Park, Sung-Min	WePOS-31.27	32		FrPOS-24.4	111
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Park, Yong-In	WePOS-29.24	27	Paul, Friedemann	FrA11.4	85
Park, Yujin	WePOS-33.6	35	Paul, Michael	ThPOS-08.5	60
Park, Yun Sang	FrPOS-31.5	115	Paul, Rashmi Ranjan	WePOS-31.28	32
Parker, John	ThA09.6	41	Paulk, Angeliqne C	ThPOS-17.4	63
Parra, Johanna	SaA16.5	134	Pauls, Jo P	FrPOS-13.1	107
Parra-Castaneda, Natalia	FrPOS-37.23	125	Paulus, Walter	ThA01.1	39
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	SaD09.5	150	Pavan, Jacopo	WePOS-29.10	26
Parsi, Ashkan	SaD02.1	147	Pavesi, Marco	WePOS-23.4	24
Parsons, David	ThPOS-32.38	72	Pavone, Francesco Saverio	WePOS-29.26	27
Parvaneh, Saman	WePOS-11.6	18	Paydarfar, David	ThA09.5	41
Parvaresh-Rizi, Mansor	FrC12.3	98		ThPOS-04.1	58
Pascarella, Suzanne	FrPOS-33.23	116	Paydarfar, Joseph	SaD10.1	150
Pascoletti, Giulia	FrPOS-28.10	113	Paysen, Hendrik	ThA03.3	39
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Pascual-Leone, Alvaro	FrB09.4	91	Pearl, Philip	ThA12.5	42
Pascucci, David	WePOS-01.4	14	Pearson, John	ThA18.5	44
	SaC05.6	142	Pearton, Stephen	SaA13.1	132
Pashazadeh, Ali	ThPOS-34.39	77	Pebesma, Joyce	WeA19.3	7
	SaD10.2	150	Peden, David	SaD08.4	149
			Pednekar, Divesh Deepak	SaD07.1	149
			Pedrocchi, Alessandra	ThA16.1	43
				ThPOS-19.5	64
				FrC16.1	100
				FrPOS-20.13	110
			Peek, Niels	WePOS-18.7	22

Pei, Weihua	ThPOS-20.11	64	Perreault, Eric	ThB06.1	C
	FrPOS-34.44	120	Perrone, Guido	WeA10.3	3
	SaC01.4	141	Perry, Sean	FrPOS-16.1	107
Peláez Coca, María Dolores	ThPOS-31.3	70	Pertuz, Said	FrPOS-11.2	106
	SaD02.5	147		FrPOS-11.4	106
Pelc, Mariusz	FrPOS-01.15	102	Pery, Emilie	SaD09.6	150
Pelisek, Jaroslav	FrPOS-37.40	126	Péry, Emilie	ThPOS-34.36	77
Pelka, Obioma	WePOS-11.12	18	Peter, Coveney	FrPOS-33.44	118
Pellacani, Giovanni	FrPOS-08.6	104		FrPOS-38.36	128
Pellegrini, Thomas	SaB15.6	139	Peters, Craig A.	FrB19.5	94
Pellionisz, Peter	FrPOS-33.27	117	Petersen, Eike	FrPOS-05.1	103
Pelosi, Gualtiero	FrPOS-18.1	108	Peterson, Jeffrey	WeC17.2	12
	FrPOS-18.2	108	Petibon, Yoann	FrB12.3	92
	SaD11.2	150	Petit, Yvan	FrPOS-28.17	114
Peng, Danli	FrPOS-33.36	117		SaA07.6	131
Peng, Fei	FrPOS-06.4	104	Petralito, Stefania	ThA17.3	44
Peng, Hao	SaB01.5	135	Petrarca, Maurizio	FrB01.1	88
Peng, Liang	WeC01.6	8		FrPOS-25.4	111
	FrPOS-25.5	111	Petrénas, Andrius	WePOS-31.4	30
Peng, Shun	SaC13.5	145	Petroff, Neil	WeA18.1	CC
Peng, Silong	FrPOS-17.1	108		WeC01.1	C
Peng, Suhao	FrPOS-06.7	104		ThPOS-21.16	66
Peng, Wang	WePOS-19.3	23		ThPOS-34.47	77
Peng, Xin	ThA15.6	43	Petropoulou, Ourania	ThPOS-28.5	69
Peng, XiYang	ThC20.5	57	Petti, Manuela	WePOS-02.1	14
Peng, Yi	WePOS-31.16	31	Peyrache, Louis-Marie	SaA07.6	131
Peng, Yige	FrA15.5	86	Pezoa, Jorge E.	SaB08.1	137
Peng, Zhiting	WePOS-14.1	20	Pezoulas, Vasileios C.	ThB19.2	51
PengZheng, Zhou	FrC12.1	98	Pfau, Jennifer	FrA18.5	87
Penzel, Thomas	ThB21.4	52	Pfeiffenberger, Moritz	SaB07.3	137
	FrA11.1	CC	Pfeiffer, Christoph	ThA04.4	40
	FrA11.1	85	Pham, Chi-Hieu	SaC12.3	144
	FrA11.3	85	Pham, Dung	WeC10.5	10
	FrA11.4	85		ThA01.4	39
	FrA14.1	C		FrA09.5	84
	FrB11.1	CC	Pham, Jérôme	ThPOS-34.36	77
	FrC11.1	CC	Pham, Minh Tu	SaD05.5	148
	FrC11.1	98	Phan, Dung	FrPOS-03.2	102
	FrC11.3	98	Phan, Huu Lam	WePOS-29.35	28
	SaA02.3	129		WePOS-32.26	34
	SaA11.1	C		ThPOS-34.10	75
	SaA11.2	132		ThPOS-34.11	75
	SaA11.4	132		ThPOS-34.18	76
	SaA13.6	133		ThPOS-36.27	81
	SaD18.5	153		FrPOS-34.38	120
Penzlin, Bernhard	FrC16.2	100		FrPOS-35.12	121
Pepin, Jean-Louis	SaC18.10	146		FrPOS-35.13	121
Perantoni, Eleni	FrPOS-17.7	108		FrPOS-38.27	128
Pereira Botelho, Diego	ThPOS-17.13	63	Phan, Huy	ThB02.3	46
	SaC14.6	145		FrPOS-20.8	109
Pereira da Cunha, Ana Julia	WePOS-33.30	36	Phasuk, Siriporn	WePOS-11.15	18
	WePOS-33.33	36	Phienphanich, Phongphan	FrC02.1	95
	FrPOS-29.3	114	Philip, Nada	ThC08.1	C
Pereira, Adriano A.	SaC13.6	145		ThC08.3	54
Pereira, Joana	ThPOS-20.6	64		ThC08.4	54
	SaB01.1	135	Phillips, Justin	ThPOS-23.5	66
Pereira, Pedro	FrB03.3	89	Philippen, Lovis	FrPOS-27.2	112
Perevoznyuk, Gleb	ThC19.2	56	Phu, Helen	FrPOS-23.5	111
Perez Berenguer, Maria Elisa	ThPOS-36.26	80	Phung, Le Son	SaC08.5	143
Pérez López, Nancy Gabriela	WePOS-32.7	33	Piaseczna, Natalia	WePOS-33.19	35
Pérez Martínez, Cristina	SaD02.5	147	Picard, Rosalind	ThB20.1	51
Perez Pozuelo, Ignacio	FrPOS-35.18	121		FrB08.1	C
Perez, Carlos J.	WePOS-32.3	33		FrB08.4	90
	FrPOS-36.1	122	Picchi, Eliseo	FrC12.4	99
Pérez, Diego	SaC06.3	142	Piccinini, David Jesús	WePOS-34.26	38
Perez, Pablo	SaA04.6	130	Picon, Artzai	WePOS-29.26	27
Perez, Raquel	WeA21.4	7		ThB05.6	47
Perez-Buitrago, Sandra	WePOS-14.4	20	Picot, Fabien	WePOS-31.30	32
Perez-Gonzalez, Jorge	WePOS-09.4	17	Pielmus, Alexandru Gabriel	WePOS-19.5	23
	FrPOS-37.23	125		FrA19.1	87
Perez-Macias, Jose Maria	FrB11.1	91		FrC05.6	97
Pérez-Rodríguez, Rodrigo	ThA19.2	44		FrPOS-06.2	103
Periasamy, Chinnamuthan	ThPOS-33.47	75		SaA13.6	133
Periyamolapalayam Allimuthu, Karthick	FrB18.5	94	Pierguidi, Lapu	ThPOS-21.5	65
Perkins, Pete	ThA21.2	45	Pierrepoint, James	ThB16.5	50
Pernice, Riccardo	FrB05.3	89	Pietilä, Julia	ThB20.2	51
	FrC05.3	96	Pietrabissa, Antonio	WePOS-02.4	14
	SaA02.4	129		SaC05.2	142
	SaB14.3	139	Pietrewicz, Michal	FrA04.6	83
Perotti, Luigi E.	WeA11.5	4	Pietrowicz, Mary	SaB08.4	137
Perpetuini, David	WeA04.3	1			

Pifferi, Antonio	ThA10.2	41	Poopraserit, Pakinee	WePOS-11.15	18
	FrA03.1	82		SaD12.6	151
Pikhletsy, Mikhail	SaC18.5	146	Poosapadi Arjunan, Sridhar	FrA01.4	82
Piletska, Elena	WePOS-15.7	21	Pooyan, Mohammad	WePOS-02.2	14
Piletsky, Sergey	WePOS-15.7	21	Popok, Paula	WeC08.3	10
Pilia, Nicolas Alessandro	ThPOS-05.1	59		FrC16.6	100
Pilkar, Rakesh	FrPOS-20.6	109		FrPOS-35.6	120
Pinal, Rodolfo	WePOS-14.4	20	Popovic, Milos R.	WePOS-30.38	30
Pina-Ramirez, Omar	WePOS-09.4	17		SaC10.1	CC
Pinegger, Andreas	SaB01.1	135		SaC10.1	143
Pinho, João Pedro	ThC06.6	54		SaC10.4	144
Pini, Nicolò	WePOS-21.6	24	Popovich, Milica	ThPOS-22.4	66
	FrA14.2	86		SaD03.5	148
	SaA04.4	130	Porras, Antonio R.	FrB19.5	94
Pino, Esteban J.	WeC21.1	CC	Porta, Alberto	ThB11.1	48
	WePOS-17.1	22		ThB11.3	48
	FrB17.1	CC		FrPOS-15.5	107
Pinto Costa, Joaquim F.	WeA03.5	1	Portela de Lemos, Ana F.	SaB10.2	138
Pinto, Joana	FrA04.5	83	Porter, David	ThPOS-10.1	61
Pinto, Mauro	SaD02.2	147	Porter, Emily	FrPOS-34.36	120
Piovanelli, Enrico	ThPOS-06.6	59	Portillo-Anaya, Jose María	SaA04.6	130
Piovesan, Davide	WePOS-29.31	28	Posada, Jorge	WePOS-32.29	34
	ThPOS-06.6	59	Potluri, Sasanka	WeC20.5	14
	FrA16.1	C		FrA13.1	CC
	FrA16.3	86		FrA13.1	85
	FrB16.6	93	Potschka, Julian	FrPOS-26.3	112
Piper, Ian	ThC05.1	53	Potsika, Vassiliki	FrPOS-37.40	126
Pirbhulal, Sandeep	ThPOS-06.1	59		SaD09.4	150
Pires, Gabriel	ThA16.3	43	Potyagaylo, Danila	ThA12.6	42
Pires, Nuno M. M.	WePOS-15.6	21	Poudel, Prabal	SaA15.5	133
Pirotte, Marc	WeA16.5	6		SaA15.6	133
Pisanello, Ferruccio	SaA06.2	130		SaD19.3	153
Pisanello, Marco	SaA06.2	130	Pouletaut, Philippe	FrPOS-28.3	113
Pisano, Filippo	SaA06.2	130	Poulsen, Mathias Krogh	ThC11.2	54
Pistono, Maxime	SaC08.1	143		SaB11.5	138
Pistorius, Stephen	ThB03.4	46	Poupon, Cyril	ThPOS-14.1	62
Pitoglou, Stavros	ThB19.4	51	Power, Laura	FrPOS-03.2	102
	ThPOS-28.5	69		SaD05.1	148
Pitris, Costas	ThPOS-32.36	72		SaD05.2	148
Pitz, Katrin	WeA21.1	7		SaD17.6	153
Plácido da Silva, Hugo	FrA04.5	83	Power, Sarah	ThPOS-35.37	79
	FrPOS-35.21	121	Poza, Jesus	FrPOS-09.5	105
Plank, Gernot	WeC09.1	10		SaA14.1	133
Plant, David	ThPOS-23.6	66		SaC05.5	142
	FrPOS-14.2	107	Pradon, Didier	ThPOS-33.32	74
Pleouras, Dimitrios	FrPOS-18.2	108	Pramono, Renard Xaviero Adhi	WeA14.3	5
Plocksties, Franz	SaA09.2	131		FrPOS-06.5	104
Plomp, Gijs	WePOS-01.4	14		SaD17.1	152
	SaC05.6	142	Prasad, Girijesh	WePOS-20.2	23
Plourde, Eric	FrPOS-22.3	110	Prasad, Varesh	WeC17.1	12
	FrPOS-35.30	122		WeC17.5	13
Pluntke, Ulrike	WeC11.5	11	Pratellesi, Tiziano	ThC21.4	57
	ThB20.5	51	Prats-Boluda, Gema	ThPOS-21.8	65
Poduval, Murali	FrB16.4	93	Pravdin, Pavel	FrC02.4	96
Poeschl, Christiane	SaC14.2	145	Praver, Steven	ThB01.1	45
Pohl, Hans G.	FrB19.5	94		FrPOS-33.36	117
Poigai Arunachalam, Shivaram	WeA19.4	7		FrPOS-35.31	122
Pok, Gouchol	WePOS-29.36	28		FrPOS-35.32	122
Polak, Adam G.	FrB14.3	92		FrPOS-36.22	123
Poli, Riccardo	ThPOS-20.21	65	Preibsch, Heike	SaD15.1	152
Poliakoff, Ellen	WePOS-25.2	25	Preissl, Hubert	SaA08.2	131
Polinski, Artur	WePOS-06.4	16		SaC12.2	144
	FrA04.6	83	Prendin, Francesco	WePOS-33.43	37
Polito, Salvatore	WePOS-19.8	23	Prerau, Michael	SaA14.5	133
Polk, Sam, L	ThB11.5	49	Presacco, Alessandro	FrB18.1	94
	SaA14.6	133	Press, Daniel	FrB09.4	91
Polkinghorne, Stuart	SaD08.6	149	Pricci, Roberto L.	WePOS-16.7	22
Pollard, Kevin	WePOS-11.27	19		FrPOS-35.23	121
Polley, Christian	WePOS-29.27	27		SaD03.4	148
Polo, Edoardo Maria	SaD10.5	150	Prier, Marcus	ThC21.3	57
Polydorou, Andreas	FrB15.2	93	Prieto, Flavio	SaD05.5	148
Poma, Noemi	WePOS-16.1	21	Prinable, Joseph Barry Yoo Sik	WeA10.1	3
	ThA13.1	42	Principe, Jose	FrB06.4	90
Ponce, Sergio Damian	WePOS-34.26	38		SaA14.2	133
Pongleritnapakorn, Puntawat	FrPOS-35.16	121	Probst, Thomas	FrB08.2	90
Pongsachareonnon, Pear	SaD16.6	152	Procopio, Anna	ThB04.5	47
Pons, Jose Luis	SaB18.1	140	Proenca, Martin	SaA02.2	129
Pontiki, Antonia, A	ThPOS-33.36	74	Proescholdt, Martin	SaA10.2	131
Pontre, Beau	SaA12.4	132	Proix, Timothée	ThC02.2	52
Ponukumati, Aravind	SaD10.1	150		ThC14.5	55
			Prokopiou, Prokopis	WeA12.1	4

Pröll, Samuel Martin	FrA04.4	83
Pronina, Anna	WePOS-30.40	30
Propst, Evan	ThPOS-33.45	75
Provini, Federica	FrPOS-15.5	107
Prucnal, Monika A.	FrB14.3	92
Pryakhina, Natalia	FrPOS-38.26	127
Pryss, Rüdiger	FrB08.2	90
Przystup, Piotr	WePOS-19.4	23
	SaC13.4	145
Puchinger, Markus	FrC16.1	100
Puers, Robert	ThA17.1	43
	SaA04.5	130
Pueyo, Esther	WeC09.3	10
Pugachev, Alexander	FrPOS-36.20	123
Puiu, Andrei	SaC08.2	143
Punithakumar, Kumaradevan	FrB12.6	92
	SaC15.4	145
Puonti, Oula	ThA01.2	39
	ThA01.3	39
	SaB09.2	138
Puri, Chetanya	FrC08.1	97
Purmehdi, Hakimeh	FrB12.6	92
Putame, Giovanni	FrPOS-28.10	113
Putensen, Christian	FrPOS-37.37	126
Puthusserypady, Sadasivan	FrPOS-01.1	101
	SaD18.3	153
Puttaswamy, Srinivasu Valagerahally	WePOS-29.34	28
	SaA07.1	130
Putze, Felix	ThPOS-20.22	65
Puxeddu, Maria Grazia	WePOS-02.1	14
	FrPOS-34.31	119
Puzhavakkathu Madom Viswanathan, R.	FrA01.4	82

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Qassem, Meha	ThPOS-24.2	67
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Qi, Hairong	ThC02.5	52
Qi, Hongzhi	ThPOS-21.4	65
	ThPOS-21.7	65
	SaC01.5	141
Qi, Jun	ThC20.5	57
	FrPOS-38.31	128
Qi, Weichen	ThPOS-36.37	81
Qian, Anna	ThPOS-10.3	61
	FrPOS-09.1	105
Qian, Cheng	ThPOS-30.3	69
Qian, Cunle	FrC14.3	99
Qian, Dahong	ThA15.6	43
Qian, Hongyu	SaB05.3	136
Qian, Kun	FrA08.2	84
Qian, Li	SaB10.4	138
Qian, Wei	ThB12.5	49
	FrPOS-07.1	104
	SaB17.4	140
Qian, Yi	WePOS-31.9	31
Qiang, Rui	FrA09.4	84
Qiao, Hong	WePOS-18.2	22
Qiao, Mengyun	SaB15.2	139
Qin, Jing	FrPOS-08.7	104
Qin, Xuemei	SaD14.5	152
Qin, Yajie	WePOS-15.3	21
Qiu, Chunkai	SaD04.6	148
Qiu, Jieli	SaD01.1	147
Qiu, Shuang	WePOS-04.4	15
	WePOS-17.6	22
	SaA01.6	129
	SaA18.6	134
Qiu, Tian	FrA16.6	86
Qiu, Zhilang	SaD03.6	148
Quadri, Syed	FrPOS-36.17	123
Quellec, Gwenole	SaC19.5	147
Quero, Giuseppe	WeA10.3	3
Quevedo de Cea, Rosario	WePOS-29.23	27
Quevedo, Karina	FrPOS-32.4	115
Quinlivan, Brendan	ThA18.2	44
Quinn, Susan	ThA19.6	44
Quiñonez Uribe, Raul Alejandro	WePOS-30.42	30
Quintanar, Kevin	ThPOS-34.36	77

Quintyne, Collin	ThPOS-22.4	66
Qureshi, Muhammad Naveed Iqbal	WePOS-11.10	18
Quy Thinh, Dao	ThPOS-34.22	76

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R Kothari, Abhishek	WePOS-12.2	19
	ThB12.1	49
R, Anand R	ThPOS-09.4	60
R, Arathy	FrPOS-19.2	109
R, Vignesh	ThB05.1	47
	SaA02.1	129
R. B. Souza, Sintia	ThPOS-32.25	71
Rabat, Arnaud	WeC11.4	11
Rabbani, Hossein	ThPOS-07.1	60
	ThPOS-07.4	60
	FrPOS-04.5	103
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	SaA03.6	129
Rabe, Fabian	FrC17.5	100
Rabelo, Amanda	SaC13.6	145
Raben, Hendrikje	ThPOS-27.2	68
Rabiller, Gratianne	FrPOS-24.3	111
Rabini, Rosa Anna	FrA01.5	82
Rabotti, Chiara	ThB06.5	47
	ThB19.1	51
	ThPOS-32.16	71
Racha, Vamshi Teja	WeA03.6	1
Rachim, Vega Pradana	SaD13.6	151
Rackebbrandt, Klaas	FrPOS-08.10	105
	FrPOS-08.11	105
Rad, Ali Bahrami	FrB14.4	92
Radcliffe, Pj	FrB20.6	95
Radermacher, Klaus	FrPOS-27.2	112
Radwan, Ibrahim	WeA21.2	7
	ThPOS-08.4	60
Raepsaet, Julie	ThPOS-22.3	66
Raffo, Luigi	WeA02.1	1
Rafieenazari, Zahra	FrPOS-25.3	111
	FrPOS-25.6	111
Rafiei, Shima	WePOS-12.14	20
	SaB19.5	141
	SaC12.1	144
Rafique, Waqas	SaB04.1	136
Raghav, Sanjay	FrA01.4	82
Raghu, Raghu	ThPOS-02.3	58
Rahal, Mohamad	FrA17.5	87
Raheel, Aasim	WePOS-17.4	22
Raheim, Amund Faller	SaD01.4	147
Rahimi, Asal	ThB19.6	51
Rahimi, Kazem	ThPOS-34.16	76
	FrPOS-37.7	124
Rahman, Mohammed	SaB04.1	136
Rahman, Saeed ur	ThPOS-06.4	59
Rai, Shesh	WePOS-31.39	32
Raina, Shashank	WeA10.6	3
Rainer, Alberto	WePOS-31.20	31
Raj, Shasidran	WePOS-29.34	28
Rajajee, Krishna	ThPOS-11.6	61
Rajala, Satu	SaA05.6	130
Rajamanickam, Yuvaraj	FrB18.5	94
Rajan, Jeny	WePOS-12.2	19
	ThB12.1	49
Rajan, Ronnie	WePOS-12.9	19
Rajapakse, Sudeshna	ThPOS-14.5	62
Rajaraman, Sivaramakrishnan	WePOS-11.1	17
	FrA15.6	86
Rajesh, Kausthubram	SaD08.6	149
Rajeswaran, Pavithra	WePOS-29.37	28
Rajput, Kuldeep Singh	ThPOS-24.3	67
	FrPOS-35.19	121
	SaA05.4	130
Rakkunedeth Hareendranathan, Abhilash	FrB12.6	92
Ram, Keerthi	WePOS-11.29	19
	SaA02.1	129
	SaD19.1	153
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Ramakrishna, Prashanth	WeC17.4	13
Ramakrishna, Seeram	FrPOS-36.45	124
Ramakrishnan, Ramesh Kumar	WePOS-21.2	23

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	ThPOS-06.10	59		SaD04.6	148
	FrPOS-34.35	120	Rees, Christiaan	SaD10.1	150
	SaC14.1	C	Rees, Stephen Edward	ThC11.2	54
	SaD12.1	CC	Regge, Daniele	FrC15.6	100
	SaD12.5	151	Regmi, Sambad	WePOS-32.12	33
	SaD17.4	153	Rehder-Santos, Patrícia	ThB11.3	48
Ramanujam, Arvind	WeC08.4	10	Rehman, Rana Zia Ur	ThB02.4	46
Ramasamy, Ellankavi	SaC09.4	143	Reich, Stefan	SaA09.3	131
Ramat, Stefano	ThPOS-35.27	79	Reich, Uta	WePOS-27.4	25
Ramezani, Reza	FrA17.6	87		FrB21.6	95
Ramirez, Alejandra	FrPOS-35.11	121	Reichert, Christoph	WePOS-30.34	30
Ramirez-Paredes, Juan-Pablo	ThPOS-26.8	68	Reichert, Manfred	FrB08.2	90
Rammos, Aidonis	WePOS-23.6	24	Reichmann, Heinz	FrA02.1	82
Ramos, Cleber	SaC17.1	146	Reilly, James	FrPOS-37.9	124
Ramos, Raddy	SaD13.4	151	Reilly, Richard	ThA12.1	42
Rampadarath, Anand	ThPOS-34.13	75		ThA18.2	44
Rampeltshammer, Wolfgang	WePOS-29.32	28		ThC19.1	C
Rana, Aman	ThPOS-27.4	68		ThC19.5	57
	FrC15.3	100		ThPOS-04.6	59
Rana, Soumya Prakash	WePOS-08.2	16		FrA01.3	82
Rana, Srinivas	WePOS-16.7	22	Reimer, Tyson	ThB03.4	46
	FrPOS-35.23	121	Reindl, Leonhard	FrA04.1	83
Ranaldi, Simone	WePOS-18.1	22	Reis Gomes, Pedro Miguel Pinto	SaB10.2	138
Ranco, Gabriele	WePOS-23.4	24	Reisner, Andrew	WeC17.1	12
Rands Bertelsen, Astrid	SaA04.3	130		WeC17.2	12
Rangriz Rostami, Fazel	ThC04.6	53	Reiter, Rolf	WeC03.1	8
Rani, Priya	ThPOS-13.1	61		WeC03.4	9
Ranieri, Rebecca	ThPOS-31.6	70	Rekowska, Natalia	WePOS-14.5	20
Rank, Mike Lind	SaA04.3	130	Rektor, Ivan	FrPOS-33.1	115
	SaC18.2	146	Reljin, Natasa	FrC10.4	98
Rao M V, Achuth	SaA11.3	132	Remme, Espen W.	FrPOS-14.3	107
Rao T J, Narendra	WePOS-12.2	19	Ren, Alissa	SaD04.4	148
Rao, Madhav	FrPOS-28.15	113	Ren, Fan	SaA13.1	132
Rao, Shyam Vasudeva	ThPOS-02.3	58	Ren, Fenggang	SaA19.4	135
Rao, Vikram	FrA05.2	83	Ren, Junchan	FrPOS-01.5	102
Raos, Brad J	WePOS-29.30	28	Ren, Shixin	WeC01.6	8
Rapela, Joaquin	ThC02.2	52	Ren, Tianyu	WePOS-16.2	21
Rapp, Philipp	SaD15.1	152	Renaud, Pierre	SaA16.3	134
Rashid, Haroon	WePOS-11.18	18	Renaux, Serge	FrPOS-30.9	114
	FrC17.2	100	Renli, Brighty	WePOS-31.41	32
Rashidi, Amin	FrA21.3	88	Renna, Francesco	ThPOS-04.4	58
	FrC13.2	99		SaC17.1	146
Rasko, Adam Emery	WeA17.2	6	Ressom, Habtom	WeA15.3	5
Rasool, Banafsaj	FrB13.1	92		WePOS-22.3	24
Rastar, Amir	ThPOS-34.34	76	Reulecke, Sina	SaC02.5	141
Rasteh, Mehrnaz	FrPOS-25.6	111	Reunamo, Aino	FrPOS-11.5	106
Raszewski, Zbigniew	ThPOS-14.3	62	Reust, Adam	FrPOS-27.1	112
Rátkai, Anikó	WePOS-04.10	15	Reuter, Milan	WePOS-04.5	15
Rattazzi, Ryan	FrPOS-35.9	121	Revol, Emilie	ThPOS-36.33	81
Rattenborg, Niels C.	FrC13.5	99	Reynolds III, William Thomas	FrB19.2	94
Rattis Santos, Talles Batista	ThA11.4	41	Rezaei, Safiyeh	WePOS-12.14	20
Ratray, John	FrPOS-35.22	121	Rezaeian, Mahdieh	ThPOS-11.3	61
Raurale, Sumit Arun	FrB17.2	93	Rhode, Kawal	ThPOS-23.1	66
Rausch, Andreas	SaB03.3	136		ThPOS-33.36	74
Ravagli, Enrico	ThPOS-35.12	78	Ribas, Vicent	ThPOS-29.5	69
Ravazzani, Paolo	SaA07.5	131	Ribeiro Dias, Mariana	WePOS-12.11	19
	SaD07.4	149	Ribeiro, Anna Giselle	WePOS-33.30	36
Ravelli, Flavia	SaC02.2	141		WePOS-33.33	36
Ravi, Aravind	FrB06.1	90		ThPOS-32.23	71
	SaC01.2	141		ThPOS-32.25	71
Ravi, Manikandan	WeC08.4	10		ThPOS-32.26	71
Ravizza, Alice	FrA17.3	87		ThPOS-32.40	72
Ravuri, Srinivas	FrA13.1	85		ThPOS-33.13	73
Ray, Tapabrata	WePOS-31.15	31		FrPOS-29.3	114
Raz, Erez	SaB03.4	136	Ricard, Damien	WePOS-32.9	33
Raza ur Rehman, Syed	FrB07.5	90	Ricci, Serena	FrB20.1	CC
	FrB07.6	90		FrB20.3	95
Razansky, Daniel	ThC03.4	53	Ricciardi, Leonardo	WeA05.5	2
	SaA06.5	130	Rice, John J	WePOS-18.4	22
Razavi, Jahan	FrPOS-08.1	104	Richardson, Robin	FrPOS-33.44	118
Reali, Pierluigi	FrPOS-01.6	102		FrPOS-38.36	128
Reamaroon, Narathip	ThA19.1	44	Richhariya, Ashutosh	ThB15.3	50
Rebelo de Sa, Claudio	ThC20.4	57	Richter, Claudia	WePOS-30.42	30
Rebelo, José	SaC19.4	147	Rickard, Matthew	FrC13.4	99
Rebling, Johannes	SaA06.5	130	Rickert, Joern	ThPOS-35.15	78
Rechowicz, Krzysztof	ThC01.3	52			
Reda, Bilal	SaB08.6	137			
Redd, Christian Brandt	SaD08.6	149			
	SaD16.1	CC			
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Ricotti, Leonardo	WePOS-13.1	20	Rodriguez, Hernan Atilio	WePOS-34.26	38
	WePOS-13.4	20	Rodriguez, Javier	ThB11.2	48
	ThC21.4	57	Rodríguez-Cañón, María	FrPOS-20.14	110
	FrA07.1	C	Rodríguez-González, Víctor	FrPOS-09.5	105
	FrA07.5	84		SaC05.5	142
	FrPOS-32.3	115	Rodriguez-Villegas, Esther	WeA14.3	5
Riedle, Hannah	ThPOS-15.3	62		ThPOS-04.2	58
Riedner, Brady	FrB01.3	88		FrPOS-06.5	104
Rieger, Ines	ThPOS-32.4	70		SaC02.1	141
Rieger, Robert	ThPOS-25.1	67		SaC11.6	144
Riel, Stefanie	WeC10.1	10		SaC17.5	146
Riemer, Raziell	FrC16.3	100		SaD17.1	152
Riess, Alexander	WePOS-14.5	20	Rogala, Jacek	FrPOS-01.3	101
	SaC07.4	143	Rogers, Jeff	WePOS-18.4	22
Rieth, Loren	SaB18.3	140	Roh, Younghoon	ThPOS-34.31	76
Rigas, Georgios	WePOS-31.38	32	Rohafza, Maryam	FrPOS-22.6	110
Righi, Stefania	ThPOS-21.5	65	Rohdin, Johan	ThPOS-09.6	60
Rimini, Daniele	ThPOS-34.44	77	Rohlén, Robin	WePOS-32.32	34
Rinaldi, Martina	FrB01.1	88	Rohling, Robert	SaC19.1	146
Rinaldin, Carla Daniele	ThPOS-36.8	80	Röhrle, Oliver	SaC09.1	CC
Rincón, Francisco	FrPOS-34.40	120		SaC09.1	143
Ringman, John	ThPOS-33.19	73		SaC09.4	143
Rinta-Kiikka, Irina	FrPOS-11.2	106	Rohrmeier, Christian	FrA14.4	86
	FrPOS-11.4	106	Rojanapongpun, Prin	WePOS-11.15	18
Ripka, Wagner L.	FrPOS-29.1	114	Rojo, Javier	WeA18.1	6
Ripperger, Simon	WePOS-19.9	23	Rokham, Hooman	FrB15.5	93
Rispoli, Joseph Vincent	SaD03.1	C	Rolfe, Peter	FrPOS-37.42	126
	SaD03.1	148		FrPOS-38.2	126
	SaD03.2	148	Rolff, Jens	WePOS-31.31	32
Ristaniemi, Tapani	ThA05.3	40	Roloff, Christoph	WePOS-31.10	31
Risvanis, Fotios	FrPOS-13.2	107	Román, Claudio	ThPOS-14.1	62
Ritter, Arthur	FrPOS-27.4	112	Romaneli, Eduardo F. R.	ThPOS-13.2	61
Ritter, Helge	WePOS-30.6	28		FrPOS-29.1	114
	ThPOS-35.38	79		FrPOS-31.3	115
Ritter, Julia	SaD02.6	147	Romano, Alberto	FrB01.1	88
Rivaz, Hassan	SaB15.4	139	Romanov, Gleb	ThA04.1	40
	SaC15.3	145		ThPOS-33.25	73
Rivet, Bertrand	ThPOS-24.4	67	Romeo, Mario Francesco	WeA04.3	1
	SaB02.2	135	Romero Soto, Fabian Oswaldo	SaD18.4	153
Rivetti, Fiamma	WeC18.3	13	Romero Ugalde, Héctor Manuel	FrPOS-30.7	114
Riviello, Robert	ThB21.5	52	Romero, Daniel	FrPOS-17.5	108
Rivolta, Massimo Walter	WeA02.6	1		SaA05.3	130
	FrC05.1	96	Romero, Eduardo	ThPOS-08.1	60
Rizkallah, Jennifer	SaC05.3	142		SaA19.6	135
Rizzi, Michele	WePOS-12.10	19	Ron, Avihai	ThC03.4	53
Rizzo, Raimondo	WeA04.3	1	Ronca, Vincenzo	FrPOS-01.12	102
Rizzo, Rudy	FrPOS-26.1	112	Rong, Ruichen	ThPOS-11.4	61
Roa, Jessica Lorena	SaD18.4	153	Roopasinghe, Pubudu	SaD18.6	153
Roane, Brandy	FrC10.1	98	Ropp, Chad	ThPOS-33.46	75
Roberts, Llion Roberts	FrPOS-13.1	107	Roque, Jesse	FrPOS-37.13	125
Robertson, Dave	ThPOS-34.28	76	Rosa, Agostinho Claudio da	SaB01.3	135
Robinson, Reece	ThB19.5	51	Rosa, Alessandro	WePOS-13.1	20
Robinson, Tom	ThB19.5	51	Rosas Andreu, Gerardo	FrPOS-32.4	115
Robles, Denise	WePOS-29.7	26	Rosati, Giulio	SaA13.2	133
Robledo, Dario	WeC06.6	10	Rosati, Samanta	WePOS-23.1	24
Roca, Josep	ThPOS-29.5	69		SaC12.4	144
Roca-González, Joaquín	SaD08.3	149	Rose, Georg	WePOS-30.34	30
Rocchetta, Filippo	FrC05.1	96		ThPOS-10.4	61
Rocchiccioli, Silvia	FrPOS-18.1	108		ThPOS-26.2	68
	FrPOS-18.2	108	Rosenberger, Matthew	ThPOS-04.1	58
	SaD11.2	150	Rosenstiel, Wolfgang	SaA08.2	131
Rocco, Giulia	SaD10.5	150	Rosenthal, Eric	WeC17.2	12
Rocha, Ana Patrícia	FrPOS-31.2	115	Rosenthal, Jean-Claude	FrPOS-33.30	117
Rocha, Beatriz	WePOS-12.11	19	Roshanibrizi, Pooneh	FrB19.5	94
Rocha, Miguel Ângelo	FrPOS-35.21	121	Ross, James	FrC06.2	97
Rocha, Teresa	FrB08.1	90	Rossano, Federico	ThPOS-16.6	63
Rochester, Lynn	ThB02.4	46	Rossato, Gianluca	ThB11.1	48
	ThC20.3	57	Rossi, Andrea	SaC12.4	144
	SaA17.6	134	Rossi, Michele	ThB02.4	46
Rocon, Eduardo	WeA06.6	2	Rossini, Mauro	FrC16.1	100
	WeC20.1	CC	Rosskothén-Kuhl, Nicole	FrB10.7	91
	WeC20.1	13	Rostalski, Philipp	FrPOS-05.1	103
Rodrigo Yanadel, H. Alejandro	ThPOS-36.26	80	Rostowsky, Kenneth A.	WeA12.5	4
Rodrigues, Carlos M. B.	ThPOS-33.34	74	Rothstein, Jeffrey D.	SaB08.4	137
	FrPOS-34.32	119	Rotter, Stefan	FrB10.7	91
Rodrigues, Marco Aurélio Benedetti	ThPOS-33.34	74	Rouse, Adam	ThB09.3	48
	FrPOS-34.32	119			
Rodrigues, Rui	ThA13.5	42			
Rodríguez Hernandez, Karen Elena	ThB16.1	50			
Rodríguez, Blanca	WePOS-32.29	34			
Rodriguez, Gerardo	FrPOS-22.3	110			

Rousseau, François	WeA09.5	3	Sabatini, Angelo Maria	FrPOS-33.13	116
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	FrB19.1	94	Sabatino, Jolanda	ThB04.5	47
	SaC12.3	144	Sabes, Philip N.	SaC06.2	142
Roversi, Chiara	WePOS-33.21	35	Sabeti, Elyas	ThA19.1	44
Rovini, Erika	ThPOS-28.1	69	Sabil, AbdelKebir	FrA11.1	85
	FrC10.5	98	Sabir, Mohannad K.	FrPOS-06.9	104
Roy Chowdhury, Shubhajit	WePOS-27.6	25	Sabu, Anu	FrPOS-35.32	122
Roy, Anup Kumar	WePOS-23.8	24	Saccavini, Claudio	FrC08.5	97
	FrPOS-33.12	116	Sacchi, Lucia	WeA19.3	7
Roy, Dibyendu	FrPOS-18.5	108	Saccomandi, Paola	WeA10.3	3
Roy, Jean Sébastien	FrPOS-34.29	119		ThB03.2	46
Roy, Promit	SaB08.4	137	Sachdeva, Pratik	ThB09.4	48
Roy, Rinku	WeA14.4	5	Sack, Ingolf	WeC03.5	9
Roy, Sitikantha	FrPOS-33.47	118		WeC03.6	9
	FrPOS-34.16	119	Sacré, Pierre	WeC06.5	10
Roy, Somali	WePOS-33.36	36		ThC09.2	54
Roy, Souvik	FrPOS-37.20	125		SaD06.6	149
Roychowdhury, Sohini	ThB12.1	49	Sacristan, Emilio	FrPOS-32.4	115
Royston, Thomas	WeC03.2	8	Sadat-Nejad, Younes	ThA18.1	44
Rozema, Jos	FrPOS-33.14	116	Sadeghi Gougheri, Hesam	FrPOS-23.2	110
Ruan, Wen	WePOS-10.2	17	Sadeghi, Maryam	SaA15.5	133
Ruano, Josue	SaA19.6	135		SaD19.3	153
Ruano, M. Graça	FrB08.1	90	Sadeghi-Naini, Ali	WeC12.6	11
	SaD02.2	147		WePOS-12.12	19
Rubbert, Lennart	SaA16.3	134		SaB17.6	140
Rubega, Maria	SaC05.6	142		SaD09.5	150
Rubia-Rodriguez, Irene	FrC09.3	98	Sadr, Nadi	ThA14.6	43
Rubin, J. Tyler	WeC17.2	12		FrB02.1	89
Rückert, Martin A.	ThA03.1	39		FrB11.4	92
Ruddy, Bryan	ThA17.5	44		SaA11.1	132
Rué Queralt, Joan	SaC05.6	142	Saeedi, Parvaneh	WePOS-11.19	18
Rueckriegel, Stefan	FrB19.3	94	Saeidi, Nooshin	FrPOS-36.41	124
Ruess, Karin	ThPOS-33.8	73	Saemann, Michael	ThPOS-34.27	76
Ruff, Roman	WePOS-28.2	26	Saes, Mique	ThB13.6	49
	FrB21.4	95	Saey, Tom	FrPOS-28.1	113
Ruffieux, Silvia	ThA04.4	40		FrPOS-28.9	113
Ruffini, Giulio	ThA01.3	39	Safaei, Soroush	WePOS-31.35	32
	SaB06.3	137		WePOS-31.36	32
Ruiz-Gómez, Saúl J.	SaA14.1	133		FrPOS-37.39	126
	SaC05.5	142	Safavi-Naeini, Mitra	FrPOS-10.3	106
Ruminski, Jacek	ThPOS-09.8	60	Safdar, Nabile	FrB19.5	94
	ThPOS-27.6	68	Saffaran, Sina	WePOS-31.11	31
Rupp, Rüdiger	WePOS-27.4	25	Saga, Takuma	WePOS-34.22	38
	WePOS-28.2	26	Saggini, R	WePOS-34.11	37
	FrB21.1	CC	Saghafi, Saiedeh	FrPOS-33.38	117
	FrB21.4	95	Saha, Dipta	ThC14.5	55
	SaB01.1	135		FrC14.5	99
Ruscheinski, Andreas	ThPOS-27.2	68	Saha, Shimul C.	WePOS-16.7	22
Ruschin, Mark	WeC12.6	11		SaD03.4	148
	WePOS-12.12	19	Saha, Simanto	FrC05.2	96
Rushdi, Muhammad	SaC15.1	145	Saha, Sreenil	FrA03.3	83
Rusovici, Razvan	FrPOS-28.2	113	Sahak, Hosna	ThA14.5	43
Russo, Dario	WeC04.3	9	Sahara, Genta	WePOS-31.14	31
Russo, Vincenzo	WeC18.3	13	Sahayam, Dravvy	ThPOS-34.49	77
Rutkove, Seward	FrB09.4	91	Sahgal, Arjun	WeC12.6	11
Rutkowski, Tomasz	ThC01.1	CC		WePOS-12.12	19
	ThC01.1	52	Sahin, Mesut	FrPOS-23.3	111
Ruusuvuori, Pekka	ThPOS-15.4	62		SaC06.6	143
Ruutu, Sampsa	ThPOS-33.40	74	Saijo, Naoki	FrB17.1	93
Ryan, Clodagh	ThA14.5	43	Saijo, Yoshifumi	FrPOS-09.10	106
Ryczewski, Juliane	FrA11.4	85		SaA15.2	133
Ryden, Louise	FrC13.3	99	Saikumar, Banoth	ThB12.1	49
Rymer, William Zev	ThPOS-36.29	81	Sainio, Harnoor	SaC09.1	143
	FrPOS-24.2	111	Sainio, Teija	ThC21.1	57
Ryu, Jin Hwa	WePOS-31.24	32	Saisho, Osamu	ThPOS-34.17	76
Ryu, Seon Young	FrPOS-37.30	125	Saito, Itsuro	ThPOS-33.26	74
Ryu, Seungjun	WePOS-11.10	18		ThPOS-36.32	81
			Saito, Kasumi	FrPOS-33.33	117
			Saito, Kozue	FrPOS-37.35	126
			Saito, Taku	WePOS-33.39	36
				FrPOS-33.5	115
			Saito, Takuya	WePOS-30.12	28
			Saitoh, Akiyoshi	FrB13.2	92
			Saitoh, Eiichi	WePOS-34.18	38
				ThPOS-22.5	66
			Saiz, Javier	WeC09.5	10

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S Chandran, Dinu	FrPOS-19.5	109
S Prakash, Sucharitha	WePOS-09.1	17
S, Ancy Carshia	WePOS-09.1	17
S. Silva, Raul	WePOS-33.27	36
Saadati Fard, Reza	SaA14.3	133
Sabán Ruiz, José	WeC17.6	13
Sabater-Navarro, Jose Maria	WePOS-15.1	21

Sajda, Paul	WeA12.3	4	Sanchez, Carlos	ThPOS-31.3	70
	ThB12.3	49		SaD02.5	147
	SaA01.2	129	Sánchez-Aarnoutse, Juan-Carlos	WePOS-20.1	23
Sakai, Hiroaki	WePOS-33.46	37	Sanchez-Casanova, Jorge	SaB18.4	140
Sakai, Hiroyuki	WePOS-34.28	38	Sánchez-Peralta, Luisa Fernanda	WePOS-29.26	27
Sakai, Koji	WePOS-13.2	20	Sanchez-Todo, Roser	SaB06.3	137
Sakai, Risako	FrPOS-34.17	119	Sanchis, Araceli	ThA19.2	44
Sakai, Shun	FrC13.6	99	Sanders, Prashanthan	FrC05.2	96
Sakajiri, Yuichiro	WePOS-15.10	21	Sander-Thömmes, Tilmann H.	ThA04.1	C
Sakakibara, Katsumi	FrPOS-38.7	127		ThA04.3	40
Sakakibara, Ryosuke	ThPOS-33.3	72	Sandroff, Brian	WeC08.3	10
Sakata, Mami	FrPOS-20.10	109		FrC16.6	100
Sakellarios, Antonis	FrPOS-18.1	108	Sandsjö, Leif	ThA20.4	45
	FrPOS-18.2	108	Sanguineti, Vittorio	SaC16.1	C
	FrPOS-37.41	126		SaC16.2	145
	SaA12.6	132	Sania, Ayesha	WePOS-21.6	24
	SaA15.1	133	Sankai, Yoshiyuki	WePOS-14.8	21
	SaD11.1	150		ThA16.2	43
	SaD11.2	150	Sankar, Kamyá	FrPOS-35.1	120
Sakota, Daisuke	SaA07.3	131	Sankaran, Naveen Kumar	WePOS-32.10	33
Sakriani, Sakti	FrPOS-37.16	125	Sanna, Alberto	FrPOS-35.25	121
Sakuma, Katsuyuki	WePOS-18.4	22	Sano, Akane	ThB20.1	51
Sala, Pilar	WePOS-32.29	34	Sano, Yuko	WePOS-23.5	24
Salah, Bassant	WePOS-32.24	34	Santalucia, Delio	WePOS-16.1	21
Salaheldien, Mohamed	SaC15.1	145		ThA13.1	42
Salamanca, Paula	WeA14.2	5	Santamaría, Eduardo	FrPOS-09.5	105
Salanterä, Sanna	ThPOS-31.1	70	Santana Costa, Mateus	ThPOS-32.26	71
Salari Shahrabaki, Sobhan	FrA14.5	86	Santaniello, Sabato	WeC06.1	CC
Salb, David Julian	WePOS-31.13	31		WeC06.1	9
Salcedo Martínez, Amparo	FrPOS-33.3	115	Santarnecki, Emiliano	SaB06.3	137
Saleh, Soha	WeC08.2	10	Santhanakrishnan, Priyadharshini	ThPOS-33.38	74
	ThA12.2	42	Santiago, Diego	FrPOS-36.1	122
	ThC16.1	CC	Santiago, Felicidade	FrB03.3	89
	ThPOS-19.6	64	Santorelli, Adam	WeA15.2	5
	FrPOS-22.6	110		FrPOS-34.36	120
Salerno, Marco	WePOS-13.1	20	Santos, Elio	WeA08.1	2
Saliba, Faouzi	WePOS-23.4	24	Santos, Fabia Camile	ThC06.6	54
Salis, Francesca	SaC04.6	142	Santos, Isabel	FrB02.5	89
Salsabilian, Shiva	FrPOS-24.1	111	Santos, Laura	ThA16.1	43
Salvador, Ricardo	ThA01.3	39	Santos, Manuel	WePOS-32.29	34
	SaA10.6	132	Santos, Miguel	FrB03.3	89
	SaA18.2	134	Santos, Simão	WePOS-15.6	21
	SaB06.3	137	Santoso, Laura Frances	ThPOS-04.1	58
Salvi, Massimo	WeA21.3	7	Santos-Victor, Jose	ThA16.1	43
	WeC14.1	12	Sanz Alaman, Maria Begoña	WePOS-16.6	21
	FrC15.6	100	Sappey-Marinier, Dominique	ThB15.2	50
Salvo, Pietro	WePOS-16.1	21		FrB02.3	89
	WePOS-23.6	24	Saraf, Kanav	SaC17.2	146
	WePOS-29.6	26	Sarafidis, Michail	WePOS-22.1	24
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	ThB21.3	52	Sarafis, Ioannis	FrA08.3	84
Sam Jeeva Raj, Edward Jero	ThPOS-06.10	59		SaD08.5	149
	SaD17.4	153	Sarasaen, Chompunuch	ThPOS-10.4	61
Samani, Abbas	SaB09.3	138	Sardar, Sakshi	SaB04.4	136
	SaB17.6	140	Sarfraz, Muhammad Saquib	ThA15.4	43
	SaD09.5	150		ThB15.5	50
Samanta, Debasis	SaB14.4	139	Sarikaya, Mehmet Ali	SaA04.2	130
Samavi, Shadrokh	WePOS-11.30	19	Sarikhani, Parisa	SaB10.5	138
	WePOS-12.14	20	Särkelä, Mika	FrPOS-01.14	102
	SaB19.5	141	Sarlabous, Leonardo	ThC11.1	54
	SaC12.1	144	Sarma, Devapratim	ThB06.2	47
	SaC19.6	147	Sarma, Monalisa	SaA04.1	130
	SaD19.6	153		SaB14.4	139
Sambolu, Ramya	FrPOS-35.28	122	Sarma, Sridevi V.	WeC06.2	9
Samek, Wojciech	SaB03.5	136		WeC06.5	10
Samima, Shabnam	SaA04.1	130		WeC18.5	13
Samir, Anthony Edward	WePOS-12.5	19		WePOS-30.21	29
Sammali, Federica	ThB19.1	51		ThB09.3	48
	ThPOS-32.16	71		ThB18.4	51
Samorezov, Sergey	ThB13.4	49		ThC09.2	54
Samuel, Oluwarotimi Williams	ThPOS-06.1	59		ThC09.3	54
	FrPOS-25.2	111		FrB01.4	88
Sanada, Hiromi	WePOS-11.16	18		FrB01.6	88
	WePOS-29.25	27		SaB08.5	137
	WePOS-34.9	37		SaD06.6	149
Sanagavarapu, Ananda Mohan	ThPOS-17.1	63	Sarossy, Marc	SaA03.4	129
Sanchez Arciniegas, Jorge Patricio	ThPOS-34.33	76	Sarrafzadeh, Majid	ThA19.3	44
Sanchez Garcia, Moises Noe	WePOS-23.4	24	Sarry, Laurent	ThPOS-34.36	77
Sánchez, Antonio	SaD10.1	150		SaD09.6	150
Sanchez, Carles	WeA21.4	7			

Sartori, Massimo	ThB16.3	50	Schena, Emiliano	WeA10.3	3
	FrB16.3	93		ThB03.2	46
	SaC09.2	143	Schenker, Carla	WeC05.2	9
Sarvas, Jukka	ThPOS-36.7	80	Schiatti, Lucia	WePOS-30.39	30
Sarveswaran, Kaushik	SaD19.5	153		SaD01.2	147
Sasabe, Kohji	WePOS-30.18	29	Schiavone, Giuseppe	ThPOS-34.46	77
Sasagawa, Kiyotaka	FrPOS-38.11	127	Schiavoni, Valerio	ThPOS-30.1	69
Sasagawa, Mana	ThPOS-25.6	67	Schick, Fritz	WePOS-04.5	15
Sasaki, Ayumu	FrPOS-36.31	123	Schieber, Marc	ThB09.3	48
Sasaki, Jun	ThPOS-34.32	76	Schiecke, Karin	FrA05.1	C
Sasazawa, Fumio	WePOS-11.29	19		FrB05.1	C
Sass, Jan-Oliver	ThPOS-34.27	76		FrB05.2	89
Sassi, Antti	FrPOS-11.2	106		FrB05.3	89
	FrPOS-11.4	106	Schieker, Matthias	ThPOS-21.11	65
Sassi, Roberto	WeA02.1	CC		FrPOS-31.4	115
	WeA02.6	1	Schiele, Julian	FrC17.5	100
	FrB14.1	C	Schiemer, Jonas	WePOS-27.4	25
	FrC05.1	96		WePOS-28.2	26
Sassiya, Bedouin	WePOS-25.4	25		FrB21.3	95
Satekenova, Elnara	FrPOS-28.6	113	Schierbaum, Nicolas	FrA21.2	88
Sathappan, Selva Muthu Kumaran	WePOS-15.8	21	Schimmel, Daniel	FrPOS-35.1	120
Sathish, Rachana	WePOS-12.9	19	Schindhelm, Klaus	WePOS-33.5	35
Sato, André Kubagawa	ThA11.4	41	Schlaefer, Alexander	WeA10.2	3
Sato, Daisuke	WeC14.5	12		WePOS-12.4	19
Sato, G Takashi	ThPOS-21.3	65		SaB03.1	136
Sato, Hiroki	ThB03.5	46		SaD10.3	150
Sato, Junya	ThPOS-33.10	73	Schlee, Winfried	FrB08.2	90
Sato, Mitsuru	ThPOS-21.15	66	Schleer, Philipp	FrPOS-27.2	112
Sato, Shohei	ThPOS-22.2	66	Schleger, Franziska	SaA08.2	131
Satoshi, Nakamura	FrPOS-37.16	125		SaC12.2	144
Sauermann, Stefan	FrB20.4	95	Schlett, Katalin	WePOS-04.10	15
Saunders, Mark	ThA20.1	44	Schlett, Paul	SaA18.4	134
	ThA20.5	45	Schlotman, Taylor	ThB19.3	51
Saunders, Alexia	FrPOS-35.32	122	Schlüter, Hartmut	WeA10.2	3
Saunders, Catherine	ThA19.6	44	Schlüter, Matthias	WeA10.2	3
Sauro, Herbert	ThPOS-34.13	75		SaD10.3	150
Savarraj, Jude	ThPOS-27.5	68	Schmetterer, Leopold	FrC03.3	96
Savendahl, Lars	ThB08.5	48		FrC03.5	96
Savoia, Paola	WeA21.3	7	Schmid, Maurizio	WePOS-18.1	22
	WeC14.1	12		FrB01.1	88
Sawalmeh, Basil	WePOS-14.6	20	Schmid, Micaela	ThPOS-35.27	79
Sawan, Mohamad	FrA03.3	83	Schmid, Ute	ThPOS-32.4	70
Sawatome, Akira	ThPOS-21.6	65	Schmidt, Malte	WePOS-19.5	23
Sawodny, Oliver	SaD15.1	152	Schmidt, Martin	WeA05.2	2
Saxena, Abha	WeA09.3	3		FrPOS-36.16	123
	ThPOS-19.3	64	Schmidt, Samuel Emil	SaB11.5	138
	FrPOS-22.4	110	Schmitt, Claus	WePOS-29.4	26
Sayed, Khaled	ThPOS-16.1	62		WePOS-32.27	34
Sayols, Narcís	SaA16.5	134	Schmitt, Maximilian	FrA14.4	86
Sayrafian, Kamran	FrB13.5	92		FrC17.5	100
	SaB13.1	CC	Schmitz, Christoph	FrPOS-33.18	116
	SaB13.1	138	Schmitz, Cornelia	ThPOS-09.3	60
Sazonov, Edward	ThPOS-24.7	67	Schmitz, Cristiane	WePOS-27.9	26
	FrA04.1	C	Schmitz, Pia M.	SaB09.1	137
	FrA04.2	83	Schmitz-Rode, Thomas	FrPOS-13.2	107
	SaD16.5	152	Schmitz-Stolbrink, Annette	WePOS-27.7	26
Sazuka, Naoya	WePOS-32.4	33	Schnabel, Julia	ThPOS-09.3	60
Sbrollini, Agnese	WeA05.5	2		FrB19.4	94
	ThC05.2	53	Schneider, Gerlind	SaD02.6	147
Sburlea, Andreea Ioana	FrPOS-22.5	110	Schneider, Sophie	ThPOS-34.19	76
Scaccia, Massimiliano	FrPOS-29.5	114	Schneider, Till	ThA01.1	39
Scali, Marta	ThPOS-34.41	77		SaA18.1	134
Schabron, Bridget	ThA16.5	43	Schneider, Urs	SaC09.4	143
	FrPOS-27.1	112	Schneiderman, Justin F.	ThA04.4	40
Schack, Thomas	WePOS-30.6	28	Schneiders, Matthias	SaB01.1	135
Schad, Lothar R.	FrB12.1	92	Schnupp, Jan W.	FrB10.7	91
Schäfer, Henning	SaB08.2	137	Schöbel, Johannes	FrB08.2	90
Schalk, Gerwin	FrPOS-33.6	116	Schobesberger, Martin	SaD16.1	152
Schall, Albrecht	ThPOS-20.2	64	Schoebel, Christoph	FrA11.4	85
Schanze, Thomas	FrPOS-04.2	103		FrC11.1	98
	SaB03.3	136		FrC11.3	98
Scharfe, Curt	SaA07.4	131		SaA11.4	132
Scharlach, Sascha	WePOS-01.5	14	Schoenewald, Caroline	ThB06.2	47
Scheeren, Eduardo Mendonça	ThPOS-36.8	80	Schölkopf, Bernhard	SaA18.3	134
Schega, Lutz	WeC20.5	14	Schonewille, Adam	ThPOS-33.35	74
	FrA13.1	85	Schönle, Philipp	SaA06.4	130
Scheiman, Mitchell	WeA08.1	2	Schoot, Benedictus Christiaan	ThB19.1	51
Schellenberger, Sven	SaC11.4	144		ThPOS-32.16	71
	SaC17.3	146	Schostek, Sebastian	ThC04.2	53
Schembri, Patrick	FrPOS-01.15	102		FrA16.1	CC
				FrA16.2	86

Schoustra, Sjoukje	ThC03.3	52	Seet, Manuel	ThC18.5	56
Schouten, Alfred C.	ThB16.1	50	Segarra, Carlos	ThPOS-30.1	69
	ThB16.3	50	Sehnert, Walter	WePOS-31.1	30
	FrB16.3	93	Seidel, Markus	WePOS-07.3	16
Schreiber, Max	WeC20.3	13	Seidl, Karsten	WeC19.1	CC
	FrPOS-04.4	103		FrA21.2	88
Schreibvogel, Alina	WePOS-28.2	26	Seifert, Andreas	WeC14.3	12
Schröder, Corinna	FrPOS-30.2	114	Seifert, Frank	ThC21.3	57
Schröder, Max	WePOS-14.3	20	Seiler, Stephen	WePOS-11.25	18
	ThPOS-27.2	68	Seitz, Hermann	WePOS-14.5	20
Schröder, Pascal	ThPOS-17.9	63		WePOS-29.27	27
Schroeder, Tim	FrA21.2	88		SaC07.4	143
Schrumpf, Fabian	SaB05.1	136	Seitz, W. Rudolf	WePOS-16.2	21
Schubert, Marvin	FrPOS-04.2	103	Seki, Shun	WePOS-32.31	34
Schubert, Rainer	FrA04.4	83	Sekiguchi, Yusuke	SaC04.3	142
Schuchmann, Jake	FrPOS-38.14	127	Sekihara, Kensuke	FrPOS-09.4	105
Schuelke, Christin	ThPOS-34.3	75	Sekine, Masaki	ThC13.4	55
Schuetzler, Martin	ThPOS-35.15	78	Sekine, Masashi	FrPOS-38.15	127
Schuler, Steffen	ThA12.6	42	Sekino, Masaki	ThPOS-33.26	74
	ThPOS-34.33	76		SaD06.1	149
	FrPOS-36.3	122	Seko, Sarah	FrB16.2	93
Schuller, Bjoern	FrA08.2	84		FrC16.3	100
	FrA14.4	86	Sel, Kaan	WeA20.5	7
	FrC17.5	100	Selladurai, Sathiyamoorthy	SaD15.2	152
Schultz, Tanja	ThPOS-20.22	65	Sellmer, Danielle	WePOS-13.3	20
	ThPOS-20.24	65	Selvaraj, Senthil Kumar	FrB12.5	92
Schulz, Steffen	ThB11.2	48	Semprini, Marianna	ThPOS-36.2	79
	SaD02.6	147	Sen, Bhaskar	FrA01.1	82
Schulze, Christian	ThPOS-34.27	76		FrB15.6	93
Schulze, Frank	SaB07.1	CC	Sen, Prasanta Kr	WePOS-33.47	37
	SaB07.4	137	Sengupta, Partho	WeA13.5	5
Schulze-Bonhage, Andreas	WePOS-31.40	32	Sengupta, Shantanu	WeA13.5	5
	ThPOS-02.2	58	Senhadji, Lotfi	WeC05.6	9
Schulz-Menger, Jeanette	FrB12.1	92		SaC06.3	142
Schumacher, Udo	SaC07.5	143	Senneff, Sageanne	ThC06.1	53
Schumann, Andy	WePOS-05.2	16	Senyürek, Volkan	ThPOS-24.7	67
Schurr, Marc O.	FrA16.2	86		FrA04.2	83
Schwartz, Martin	WePOS-04.5	15	Seo, Dae Won	SaB10.1	138
Schwarz, Andreas	ThPOS-20.6	64	Seo, Hee Won	ThPOS-35.16	78
	SaB01.1	135		ThPOS-35.21	78
Schwarz, Anne	FrC01.1	95	Seo, Jong Mo	WeA21.5	7
Schweda, Christoph	ThB04.1	46		WePOS-19.6	23
Schweizer, Bernd	ThPOS-26.2	68		WePOS-19.7	23
Sciaraffa, Nicolina	ThC18.2	56		WePOS-26.1	25
	FrPOS-01.12	102		WePOS-29.24	27
Scilingo, Enzo Pasquale	WeA14.6	5		WePOS-34.12	37
	WeA20.4	7		ThC12.4	55
	ThB11.4	49		ThPOS-07.3	60
	ThB11.6	49		ThPOS-32.29	71
	FrPOS-15.1	107		ThPOS-32.45	72
	FrPOS-15.2	107		FrC13.1	99
	SaD14.6	152		FrC15.5	100
Scimeca, Manuel	WePOS-11.17	18		FrPOS-21.2	110
Scipioni, Michele	FrPOS-10.2	106		FrPOS-26.1	112
Scopelliti, Matteo Giuseppe	SaB03.2	136		FrPOS-27.9	112
Scorza, Davide	WePOS-12.10	19		FrPOS-31.6	115
Scott, Timothy	WeA06.2	2	Seo, Jungmin	FrPOS-27.9	112
	FrPOS-16.3	108	Seo, Kangmoon	FrPOS-27.9	112
	SaB11.1	138	Seo, Min-won	WePOS-19.6	23
Scully, Deirdre	WeA19.2	7		ThC12.4	55
Sebastian, Arun	WePOS-32.8	33	Seo, Seungmin	WePOS-33.6	35
	ThA14.2	42	Seoane, Fernando	WePOS-32.29	34
	FrB11.4	92	Seok, Chunkyun	SaC06.6	143
Sebastin, Amalan	FrPOS-02.4	102	Seok, HyeonSeok	WePOS-33.4	35
Sedda, Giulia	ThA13.6	42	Seok, Jin Myoung	FrPOS-34.13	119
Sedghi, Alireza	WeC19.6	13	Seok, Woojoon	ThPOS-35.33	79
	ThPOS-29.1	69	Seong, Ki-Hyeon	ThPOS-32.31	71
See, Angela An Qi	FrB18.5	94	Seoni, Silvia	WeA21.3	7
Seeber, Lars	WePOS-29.2	26		WeC14.1	12
Seehus, Corey	SaA06.4	130		FrC15.6	100
Seel, Thomas	WePOS-18.3	22	Seppänen, Tapio	FrA19.4	87
	FrPOS-28.4	113	Septiana, Lina	SaD12.3	151
	FrPOS-31.1	115	Sepulveda, Francisco	ThPOS-20.9	64
	SaB16.6	140	Serag El Din, Nermeen	WePOS-32.24	34
	SaC04.2	142	Serano, Peter	FrA09.2	84
Seelamantula, Chandra Sekhar	ThPOS-09.7	60	Serdijn, Wouter A.	FrA21.6	88
Seeliger, Erdmann	ThA10.3	41	Serfaty, Stéphane	SaB04.5	136
Seemann, Gunnar	WePOS-29.4	26	Seroussi, Brigitte	WePOS-23.10	25
Seepold, Ralf	WePOS-31.13	31	Serrano Balazote, Pablo	ThA19.2	44
	FrB08.1	CC	Serrano, Juan A.	SaA04.6	130
	SaA11.2	132	Sesmero Lorente, M. Paz	WeA19.6	7

Setiawan, Agung Wahyu	FrB20.5	95	Shenoy, Chetan	FrB12.1	92
Settu, Kaipana	WePOS-29.19	27	Shepherd, John	ThPOS-09.10	60
Seuß, Dominik	ThPOS-32.4	70	Shepherd, Robert	FrPOS-35.32	122
Severi, Stefano	ThB04.1	46	Sheth, Sameer	FrC01.6	95
Severino, Maria Savina	SaC12.4	144	Sheth, Sunil	ThPOS-27.5	68
Seyama, Michiko	FrPOS-36.43	124	Shi, Caiyun	FrC18.4	101
Shaarbaf Ebrahimi, Behdad	FrPOS-16.5	108		FrPOS-09.9	106
Shadmehr, Azadeh	FrPOS-28.16	113		SaA12.5	132
Shafai, Bahram	ThPOS-35.34	79		SaD03.6	148
Shah, Alok	ThB13.4	49	Shi, Hongjian	WePOS-12.1	19
Shah, Malay Ilesh	FrPOS-30.3	114	Shi, Jian	SaA17.6	134
Shah, Pratik	ThPOS-26.1	68	Shi, Jun	WePOS-11.22	18
	ThPOS-27.4	68	Shi, Kilin	SaC11.4	144
	FrC15.3	100		SaC17.3	146
Shah, Vrutangkumar V	ThPOS-01.3	58	Shi, Kuangyu	WePOS-11.26	19
Shahbakhti, Mohammad	FrPOS-06.1	103		ThB15.4	50
Shahed, Joohi	FrC01.6	95		FrA01.6	82
	FrPOS-36.13	122	Shi, Lin	ThC05.5	53
Shahrokh, Amin	WeA08.3	2	Shi, Qiongfeng	SaA07.1	130
	WeA08.6	3	Shi, Weiguo	WeC01.6	8
	WeC01.3	8	Shi, Wenbin	FrB14.1	92
	FrPOS-25.3	111	Shi, Yankun	SaB19.2	140
	FrPOS-25.6	111	Shiau, Jia-Yau	WePOS-11.23	18
Shahtalebi, Soroosh	SaD17.3	153	Shiba, Kenji	WePOS-30.47	30
Shahulhameed, Shahna	FrPOS-08.13	105		WePOS-30.48	30
Shaikh, Muhammad Ateeb	ThPOS-31.6	70	Shibata, Masahiro	FrPOS-37.42	126
Shaji, Ashly	WePOS-29.9	26		FrPOS-38.2	126
	WePOS-31.47	33	Shibata, Tomohiro	ThC06.2	53
Shakibfar, Saeed	WeA17.5	6	Shibui, Toyohito	WePOS-33.31	36
	FrPOS-12.1	106		WePOS-33.37	36
Shamiyeh, Andreas	SaD16.1	152		WePOS-34.6	37
Shan, Caifeng	FrB03.4	89	Shigeta, Masahiro	ThPOS-21.6	65
	SaB02.5	135	Shigihara, Yoshihito	FrPOS-09.5	105
Shan, Chengcheng	ThPOS-27.3	68	Shils, Jay	ThA09.1	CC
Shan, Hongchang	ThPOS-20.4	64		ThA09.1	41
Shan, Siang-Sin	SaA13.1	132		ThA09.2	41
Shang, Qiaoling	WePOS-11.3	17	Shim, Bong Sup	WePOS-29.29	27
	FrPOS-08.4	104		WePOS-32.34	34
Shao, Wen-Chen	FrC01.2	95		ThPOS-34.5	75
Shao, Xingfeng	ThPOS-33.19	73		ThPOS-35.8	78
Sharifi, Neda	WePOS-06.1	16		ThPOS-35.10	78
	ThB09.6	48	Shim, Eun Bo	WeA11.3	4
Sharkey, Don	WePOS-31.11	31		WePOS-31.33	32
Sharma, Ashish	FrC17.3	100	Shim, Kyung-Hwan	SaA01.4	129
Sharma, Gaurav	WePOS-27.6	25	Shim, Shinyong	FrA18.3	87
	ThB06.2	47		FrPOS-27.9	112
	ThPOS-31.6	70	Shim, Youngbo	SaB16.1	139
Sharma, Neha	WePOS-31.28	32	Shima, Keisuke	FrPOS-20.10	109
Sharma, Piyush	SaC02.1	141	Shimabuko Cascás Sousa, Felipe	FrA20.5	88
	SaC11.6	144	Shimada, Shigenobu	WePOS-34.27	38
Sharma, Pragya	WePOS-17.8	22	Shimane, Yuta	ThPOS-34.26	76
Sharma, Shanker Lal	WePOS-11.14	18	Shimatani, Koji	FrPOS-20.10	109
Sharma, Swati	FrB07.3	90	Shimatani, Yuichi	FrPOS-36.24	123
Sharma, Varsha	ThPOS-25.4	67		FrPOS-36.25	123
Sharon, Rini A	SaB14.2	139	Shimayoshi, Takao	ThB09.1	48
Sharott, Andrew	FrA21.4	88	Shimazaki, Shota	FrPOS-19.3	109
Shaw, Geoffrey M	WeA16.5	6	Shimazaki, Takunori	WePOS-29.20	27
	ThPOS-17.6	63		ThPOS-36.31	81
She, Xiwei	FrB06.3	90		FrPOS-38.5	126
Sheet, Debdoot	WePOS-12.9	19	Shimba, Kenta	WePOS-13.2	20
Shek, Chi Ho	ThB01.6	46		ThB18.2	50
Shellhammer, Steven	SaD06.2	149	Shimizu, Hiroto	WePOS-31.8	31
Shen, Hui	WePOS-04.9	15	Shimoji, Mika	ThPOS-33.46	75
Shen, Jiahuan	FrA20.1	87	Shimojo, Atsushi	WePOS-30.12	28
Shen, Jianhuo	SaB19.4	140	Shimokakimoto, Tomoya	FrC08.6	97
Shen, Jianxin	FrC18.5	101	Shimoohkawa, Takeharu	ThPOS-34.42	77
Shen, Juanya	FrPOS-16.2	108	Shin, Dae	ThB04.2	46
Shen, Lei	ThPOS-02.1	58	Shin, Eui Seok	FrPOS-31.5	115
	FrPOS-23.6	111	Shin, Hangsik	WePOS-33.4	35
Shen, Lijun	SaB19.3	140		ThPOS-34.20	76
Shen, Lu	WePOS-11.22	18	Shin, Heean	ThPOS-35.31	79
Shen, Wang	ThA15.3	43		FrPOS-33.11	116
Shen, Xiang	SaD17.5	153	Shin, Jaewoo	FrPOS-35.29	122
Shen, Xiaoyan	WePOS-21.5	24		FrPOS-36.42	124
	FrA20.1	87	Shin, Jin Woo	SaA17.4	134
Shen, Zih-Xun	SaC08.3	143	Shin, Sungtae	WeC17.2	12
Sheng, Xinjun	ThB01.3	45	Shin, Sung-Wook	WePOS-30.4	28
	FrPOS-22.12	110		WePOS-33.48	37
	SaC14.1	145	Shin, Young Seok	WePOS-34.23	38
	SaC14.4	145		FrPOS-37.17	125
Shenoy Handiru, Vikram	ThA12.2	42			

Shindo, Yasuhiro	ThC21.6	57	Singla, Muskan	FrPOS-04.3	103
	ThPOS-33.4	72	Singla, Rohit	SaC19.1	146
Shinohara, Mai	ThPOS-33.16	73	Sinha, Aniruddha	FrB16.4	93
Shinohara, Shuji	WePOS-32.1	33		FrPOS-18.5	108
	WePOS-32.5	33		FrPOS-20.2	109
	WePOS-33.1	34	Sinha, Pawan	FrPOS-15.3	107
	WePOS-33.9	35	Sinha, Rishie	WePOS-15.7	21
	WePOS-33.39	36	Siniatchkin, Michael	WePOS-01.5	14
	WePOS-34.7	37	Sinquefield, Bridgett	WePOS-14.2	20
	FrPOS-33.5	115	Siogkas, Panagiotis	FrPOS-18.1	108
Shiozawa, Naruhiro	ThPOS-33.16	73		FrPOS-18.2	108
	FrPOS-36.26	123		FrPOS-37.40	126
	FrPOS-36.27	123		SaA12.6	132
	FrPOS-36.28	123		SaA15.1	133
	FrPOS-38.9	127		SaD11.1	150
Shipeng, Han	FrPOS-28.13	113		SaD11.2	150
Shirafuji, Shouhei	ThPOS-06.6	59	Sippel, Katrin	SaA08.2	131
Shiraishi, Hideaki	WePOS-30.12	28		SaC12.2	144
Shiraishi, Yasuyuki	WePOS-31.14	31	Sir, Mustafa	WeA19.4	7
Shirbani, Fatemeh	WeC13.2	11	Sistla, Prasad	FrPOS-04.3	103
	FrC04.4	96	Siti Anom, Ahmad	FrPOS-06.9	104
Shishegar, Rosita	ThPOS-14.5	62	Siutryk, Nadège	WeA13.2	4
Shivdasani, Mohit N.	ThPOS-36.5	79	Sivakulam, Niveca	ThA14.5	43
	ThPOS-36.6	80	Sivaprakasam, Mohanasankar	WeA13.4	5
	FrPOS-35.32	122		WeC14.4	12
Shlyakhto, Evgeny V.	WeC17.3	12		WeC17.4	13
Shoham, Shy	SaA06.5	130		WePOS-11.29	19
Shoji, Taku	ThPOS-35.35	79		ThB05.1	47
Shome, Sayani	WePOS-31.28	32		FrPOS-02.4	102
Shon, Young-Min	SaB10.1	138		FrPOS-19.1	109
Shono, Naoyuki	WePOS-31.30	32		FrPOS-19.2	109
Shoorangiz, Reza	WeC18.2	13		FrPOS-19.5	109
	FrB18.2	94		FrPOS-30.3	114
Shou, Guofa	WePOS-30.1	28		SaA02.1	129
	ThA18.3	44		SaD19.1	153
Shree, Vidhya	WePOS-33.36	36		SaD19.5	153
Shu, Pin	ThB18.5	51	Sivaswamy, Jayanthi	SaA03.1	129
Shuffrey, Lauren C.	WePOS-21.6	24	Sixel-Döring, Friederike	FrA14.3	86
Shukla, Pooja Rajesh	ThC09.1	54	Siyuan, Fang	SaC15.6	145
Shvilkin, Alexei	ThA21.4	45	Sjoding, Michael	ThA19.1	44
Si, Bo	WePOS-16.2	21	Skalski, Andrzej	WePOS-04.11	15
Sia, Alex Tiong Heng	FrPOS-37.26	125		FrPOS-08.6	104
Sichi, Vittoria	FrPOS-34.28	119	Skoric, James	ThPOS-23.6	66
Siebner, Hartwig R.	SaB09.2	138		FrPOS-14.2	107
Siecinski, Szymon	WePOS-33.19	35	Skoric, Tamara	WePOS-05.1	16
	FrPOS-14.1	107	Skouroumouni, Galateia	ThPOS-32.36	72
Sielużycki, Cezary	FrPOS-34.20	119	Slaughter, Gymama	WePOS-16.3	21
Signorini, Maria G.	FrA14.2	86		ThA13.2	42
	SaA04.4	130		ThA21.1	45
	SaB02.1	C	Sloan, Erinn	FrPOS-27.5	112
	SaC12.1	C	Slovak, Jan	ThPOS-33.17	73
Sikdar, Debdeep	WeA14.4	5	Slyusarenko, Kostyantyn	FrPOS-36.4	122
Silva Teixeira, Viviane	SaC07.5	143	Small, Abigail	ThC09.6	54
Silva, Gyl	ThPOS-33.13	73	Smieschek, Manfred	SaB19.6	141
Silva, Olavo Luppi	ThA11.4	41	Smink, Jouke	FrB12.4	92
Silva, Pujitha	WePOS-14.7	20		SaD13.5	151
	ThPOS-25.5	67	Smit, Gerwin	ThPOS-34.41	77
Silveira, Fernando	FrA18.1	87	Smith, Michael	WeA15.1	CC
Silver, Eric S.	SaB15.1	139		WeA15.1	5
Silversmith, Daniel	SaC06.2	142	Smith-Byrne, Karl	ThPOS-34.16	76
Silvestri, Leonardo	ThPOS-36.33	81	Smits, Anne	WePOS-03.3	15
Similowski, Thomas	FrPOS-30.9	114	Smolikova-Wachowiak, Renata	ThPOS-35.29	79
Simon, Chantal	WeA02.2	1		FrPOS-02.2	102
Simon, Jonathan Z.	FrB18.1	94	Smorodnikova, Evgeniya	FrC02.4	96
Simone, Mayer	FrA02.1	82	Sng, Ban Leong	FrPOS-37.26	125
Simoni, Virginia	FrPOS-32.3	115	So, Aaron	SaB09.3	138
Simons, Monique	FrA08.4	84	So, Lester KP	ThPOS-34.44	77
Simpson, Andrew	ThC20.5	57	Soares Gadelha de Lima, Luis Felipe	FrPOS-29.3	114
	FrPOS-38.31	128	Sobhani-Nia, Zahra	SaC12.1	144
Simunic, Dina	FrB13.5	92	Sobhiyeh, Sima	ThPOS-09.10	60
	SaB13.1	138	Soell, Christopher	FrPOS-26.3	112
Sin, Minki	FrPOS-34.45	120	Soga, Kohei	SaD10.4	150
Sinclair, Peter James	ThC16.2	56	Søgaard, Peter	SaB11.5	138
Singarayan, Jeevakala	WePOS-11.29	19	Soheilian Esfahani, Sahar	FrPOS-33.44	118
Singh, Aadesh	SaA16.4	134		FrPOS-38.36	128
Singh, Balbir	WePOS-03.5	15	Sohn, Jangjay	FrPOS-33.11	116
Singh, Devinder	WePOS-10.2	17	Sola, Josep	WeA13.2	4
Singh, Nicky	FrPOS-33.12	116	Solari, Fabio	SaA08.3	131
Singh, Ranjana	FrPOS-22.4	110	Solarski, Jędrzej	FrPOS-33.14	116
Singh, Sanjana	FrC18.2	101	Solà-Soler, Jordi	SaA11.6	132
Singhal, Shivam	ThPOS-25.4	67			

Soliman, Hany	WeC12.6	11	Soundoulounaki, Stella	WePOS-23.2	24
	WePOS-12.12	19	Sousa Santos, Beatriz	WePOS-33.28	36
Solis-Nepote, Mario	ThB03.4	46		ThPOS-28.4	69
Solleder, Peter	SaD16.1	152	Sousa, Inês	SaD08.2	149
Solmaz, Hakan	SaD06.5	149	Southern, Paul	FrC09.2	97
Solorio, Luis	WePOS-31.23	31	Sowers, Richard	FrC01.5	95
Solosenko, Andrius	WePOS-31.4	30		FrPOS-25.1	111
Soltan Zadi, Armin	FrPOS-17.3	108	Soygazi, Hasan	ThPOS-30.2	69
	SaA11.5	132	SP, Preejith	WeC14.4	12
Soltan, Ahmed	WeA20.6	7		ThB05.1	47
	FrB13.1	92		FrPOS-02.4	102
Soltaninejad, Sara	FrB08.6	91		SaA02.1	129
Somerlik-Fuchs, Karin H	WePOS-27.4	25	Spada, Maria Rita	WeC04.3	9
	WePOS-28.2	26	Spadone, Sara	WeC02.4	8
	FrB21.3	95	Spaggiari, Lorenzo	ThA13.6	42
	FrB21.5	95	Spahn, Nico	WePOS-07.3	16
Sompawong, Nitiwat	SaD12.6	151	Spangler, Taylor	WeA10.6	3
Son, Hyewon	WePOS-29.35	28	Sparacino, Giovanni	WePOS-06.3	16
	WePOS-32.26	34		WePOS-29.10	26
	ThPOS-34.10	75		WePOS-33.15	35
	ThPOS-34.11	75		WePOS-33.21	35
	ThPOS-34.18	76		WePOS-33.43	37
	ThPOS-36.27	81		FrB17.4	93
	FrPOS-34.38	120		FrC08.5	97
	FrPOS-35.12	121		SaD07.5	149
	FrPOS-35.13	121	Sparrow, William	ThPOS-34.25	76
	FrPOS-38.27	128	Spasojevic, Sofija	FrA08.1	84
Son, JiEun	WePOS-30.33	29	Speck, Oliver	ThC21.3	57
Son, Jongsang	ThPOS-36.29	81		ThPOS-10.4	61
Son, Myeongjoo	FrPOS-37.30	125	Spencer, Benjamin	WePOS-10.5	17
Sonehara, Tsuyoshi	WePOS-30.12	28	Spicher, Nicolai	SaA05.2	130
Song, Andrew	SaA14.5	133	Spiliopoulou, Myra	FrB08.2	90
Song, Cheol	FrPOS-33.40	117	Spiller, Moritz	WePOS-19.1	22
Song, Dong	FrB06.3	90	Spindler, Bruno	SaC07.3	143
Song, Edward	WePOS-16.2	21	Spinelli, Lorenzo	ThA10.2	41
Song, Jonathan	ThPOS-34.4	75	Spiru, Luiza	WePOS-24.2	25
	SaA16.4	134	Sporer, Markus	SaA09.3	131
Song, Liang	ThPOS-33.33	74	Spors, Sascha	ThPOS-27.2	68
	FrC16.5	100	Spüler, Martin	SaA08.2	131
Song, Minsu	SaC01.6	141	Sreeja, S R	SaB14.4	139
Song, Rong	WeC01.1	8	Sreenivas, Arathi	ThA21.3	45
Song, Shaozhen	FrA01.2	82	Sridhar, Arvind	WeC11.5	11
Song, Tai-Kyong	ThPOS-32.15	71		ThB20.5	51
	FrPOS-37.27	125	Sridhar, Karthik	ThPOS-17.13	63
Song, Won Hoon	WePOS-31.27	32		SaA09.4	131
Song, Xiaoyu	FrPOS-26.2	112	Sridharan, Sridha	ThA15.4	43
Song, Xizi	FrPOS-08.9	105	Sriperumbudur, Kiran K	SaB18.2	140
Song, Yoon-Kyu	FrPOS-27.9	112	Sriramu, Sharang	ThB15.3	50
	SaD06.2	149	Srishyla, Diksha	SaB05.2	136
Song, Yun Seong	WePOS-32.12	33	Srivastava, Ruchir	FrC03.3	96
	FrPOS-35.5	120	St. John, Maie	FrPOS-33.27	117
	FrPOS-38.14	127	Staab, Jeffrey P.	FrC12.5	99
Song, Yuru	ThPOS-17.11	63	Stademayer, Markus	FrPOS-26.3	112
Songur, Noyan	SaB01.4	135	Stadnik, Paul	FrA09.4	84
Sonthalia, Harsh	ThB21.5	52	Stålberg, Erik	WePOS-32.32	34
Sooriyaarachchi, Jinani Janahansi	SaD18.6	153	Stamile, Claudio	ThB15.2	50
Sorelli, Michele	WePOS-29.26	27		FrB02.3	89
	ThPOS-21.5	65	Stamoulis, Catherine	WeA05.4	2
	ThPOS-22.1	66	Stamp, Melanie	ThB01.1	45
Sorensen, Helge B D	WeC19.4	13		FrPOS-33.36	117
	FrA14.3	86		FrPOS-35.31	122
Sørensen, Kasper	SaB11.5	138		FrPOS-36.22	123
Soriano, Diogo Coutinho	ThC05.3	53	Stanga, Zeno	SaA08.4	131
Sornapudi, Sudhir	FrA15.6	86	Stanisz, Greg	WeC12.6	11
Sornmo, Leif	WePOS-31.4	30		WePOS-12.12	19
Soroshmehr, S.M.Reza	WePOS-11.30	19	Stanton, Tom	ThPOS-21.11	65
	WePOS-12.7	19		FrPOS-31.4	115
	WePOS-12.14	20	Stanuch, Maciej	ThPOS-11.2	61
	ThC15.2	55	Starliper, Nathan	ThPOS-01.1	57
	ThPOS-11.6	61	Stathopoulou, Thomai	SaA08.4	131
	SaB19.1	CC	Stecka, Anna	FrPOS-33.43	117
	SaB19.5	141		FrPOS-35.7	120
	SaC12.1	144	Steele, Alexander G.	WeA06.4	2
	SaC19.6	147	Steele, David	WePOS-29.34	28
	SaD19.6	153		SaA07.1	130
Sosulski, Jan	ThC02.4	52	Steenbergen, Wiendelt	ThC03.3	52
Soto-Bear, Jessica	ThC09.4	54	Steer, Joshua W.	ThB13.5	49
Soubra, Racha	ThPOS-28.6	69	Stefanini, Cesare	FrPOS-34.43	120
	FrA17.5	87	Stefanov, Todor	ThPOS-20.4	64
	SaB05.6	137	Steigleder, Tobias	SaC17.3	146
Soulat, Hugo	SaA14.5	133	Stein, Michael	ThPOS-25.2	67

Steinhardt, Cynthia	SaD06.6	149	Sudo, Ryo	ThPOS-34.29	76
Steinseifer, Ulrich	FrPOS-13.2	107		FrPOS-35.14	121
Steiroopoulos, Paschalis	FrPOS-17.7	108	Sugamiya, Yurina	FrB20.2	94
Stemper, Brian	ThB13.4	49	Suganuma, Miki	WePOS-33.46	37
Stenmark P., Rasmus	ThPOS-36.13	80	Sugawara, Tomoko	WePOS-34.28	38
Stepanov, Pavel	ThPOS-33.46	75	Sugimoto, Chika	ThPOS-32.32	71
Stephane, Gagnon	FrPOS-14.2	107	Sugimoto, Keita	ThPOS-32.2	70
Stephani, Ulrich	WePOS-01.5	14	Sugita, Norihiro	FrC17.1	100
Stephens, Andrew	FrPOS-13.1	107	Sühn, Thomas	WePOS-19.1	22
Steppacher, Inga	ThPOS-35.38	79		ThA21.3	45
Stevens, Robert	FrPOS-35.22	121	Sui, Jianye	SaA07.4	131
Stevenson, Nathan	SaB02.4	135	Suinesiaputra, Avan	WeA11.1	4
Stibe, Agnis	SaD08.1	149	Sujit, Jos	FrPOS-37.15	125
Stidham, Ryan W.	ThC15.2	55		SaA02.6	129
Stiefelhagen, Rainer	ThB15.5	50	Sukal, Theresa	ThA06.3	40
	SaC11.3	144	Sukumar, Santhosh Kumar	SaD19.1	153
Stieglitz, Thomas	ThPOS-02.2	58	Sul, Onejae	ThPOS-33.31	74
	ThPOS-35.15	78	Sulas, Eleonora	WeA02.1	1
	ThPOS-35.17	78	Sultan, Saad	WeA20.3	7
	FrA18.5	87	Sulzer, James	ThPOS-04.1	58
	FrB07.1	90	Sumali, Brian	WePOS-33.18	35
	FrB07.3	90	Sumi, Chikayoshi	FrPOS-37.24	125
	SaA06.3	130	Sumi, Yukiyoshi	FrB08.5	91
	SaA15.1	C	Summa, Susanna	FrPOS-25.4	111
	SaA15.3	133	Sumsky, Stefan	WeC06.1	9
Stiel, Andre C.	ThC03.2	52	Sun, Chenglu	SaC18.4	146
Stirling, Leia	FrPOS-38.32	128	Sun, Chunlei	WePOS-10.4	17
Stoerr Eva-Maria, Eva-Maria	SaA10.2	131	Sun, Danica	ThPOS-33.46	75
Stollenwerk, Andre	SaB19.6	141	Sun, Guanghao	WePOS-08.1	16
Stone, Emily	ThPOS-26.7	68		WePOS-08.3	16
Storch, Alexander	ThPOS-36.14	80		ThPOS-22.2	66
Storms, Valerie	WePOS-33.14	35		FrPOS-34.6	118
Stotts, Larry	FrA09.4	84		SaD18.2	153
Stransky, Beatriz	WePOS-33.27	36	Sun, Haoqi	FrPOS-36.17	123
Strauch, Martin	SaA19.3	135	Sun, Jianqi	WePOS-12.8	19
Strauss, Gero	SaB09.1	137		ThPOS-27.3	68
Stravato, Stefano	FrPOS-34.48	120		FrPOS-32.1	115
Strazza, Annachiara	WePOS-17.7	22		SaB17.3	140
	ThPOS-21.12	66	Sun, Jing	FrC18.5	101
	FrA01.5	82	Sun, Jingpeng	FrPOS-17.1	108
	FrB16.5	93	Sun, Junfeng	ThB18.5	51
	FrPOS-27.15	113	Sun, Kai	SaB01.5	135
Strazzer, Sandra	WeA16.3	6	Sun, Qi	WePOS-31.9	31
Strisciuglio, Teresa	WeC09.6	10	Sun, Qingnan	FrA08.6	84
Strohm, Hannah	FrB13.3	92	Sun, Rongyi	FrPOS-25.1	111
Struijk, Johannes	SaB11.5	138	Sun, Shuchen	FrPOS-17.1	108
Stufflebeam, Steve	ThA12.5	42	Sun, Shurui	FrPOS-25.2	111
Su, JiaBin	FrC12.1	98	Sun, Xuyang	ThA20.6	45
Su, Pan	FrPOS-08.4	104		ThPOS-34.1	75
Su, Peng	WePOS-33.40	36	Sun, Xuyun	FrC14.3	99
Su, Shi	FrC18.4	101	Sun, Yinming	FrA02.2	82
	FrPOS-09.9	106	Sun, Yue	SaB02.5	135
	SaA12.5	132	Sundar, Raghav	ThPOS-33.38	74
	SaD03.6	148		FrPOS-36.45	124
Su, Shiyong	ThB01.3	45	Sundaram, Niteesh	ThPOS-16.1	62
Su, Steven Weidong	WeC01.1	8	Sundaram, Padmavathi	SaA10.4	132
	ThPOS-06.8	59	Sundararajan, Vikram	ThA18.2	44
	FrPOS-09.3	105	Sundararajhan, Harinath	ThPOS-29.3	69
	SaD14.4	152	Sung, Dongsuk	FrPOS-36.18	123
Su, Tingting	WeC01.6	8	Sung, Jidong	WeA13.3	4
Su, Xuan-Hao	FrPOS-37.6	124	Sung, JooHwan	FrPOS-20.5	109
Su, Yi	FrB12.5	92	Sung, Shih-Hsien	FrPOS-37.36	126
Su, Yilun	FrPOS-33.37	117	Sung, Yen-Ling	FrPOS-33.26	117
Su, Zhe	ThB21.1	51	Sunny, Ali Imam	SaB04.1	136
Suaning, Gregg	WeA06.2	2	Suntrup-Krueger, Sonja	ThA01.1	39
	ThB01.1	C		SaA18.1	134
	ThB01.2	45	Suomi, Visa	ThC21.1	57
Suarez-Ibarrola, Rodrigo	FrA16.6	86	Suominen, Hanna	WeA21.2	7
Suárez-Revelo, Jazmín Ximena	FrPOS-01.16	102		ThPOS-08.4	60
Subotic, Ida	FrPOS-30.11	114	Suplino, Lucas Oliveira	FrPOS-28.5	113
Subramaniam, Sudha	SaC15.5	145	Sur, Mriganka	FrPOS-01.10	102
Subramaniam, Vishwanath	ThPOS-34.4	75		SaB14.2	139
Subramanian, Arjun	FrPOS-36.45	124	Suresh, Nina	FrPOS-20.16	110
Subramanian, Mahendran	FrB09.5	91		FrPOS-24.2	111
	SaB01.4	135	Suresh, Vinod	WePOS-31.32	32
Subramanian, Sandya	SaA14.5	133	Susanne, Akesson	FrC13.5	99
	SaD07.2	149	Susko, Tyler	FrPOS-27.5	112
Suciu, Constantin	SaC08.2	143	Suvannachart, Pukkapol	WePOS-11.15	18
Sudo, Kazuhiro	ThC15.6	56	Suviseshamuthu, Easter	ThA12.2	42
Sudo, Motoki	ThC16.4	56	Suwannarurk, Komsun	SaD12.6	151
			Suzuki, Go	WePOS-34.7	37

Suzuki, Hiroyuki	SaD12.3	151	Takahashi, Toshiaki	WePOS-34.9	37
Suzuki, Ikuto	WePOS-29.8	26	Takamatsu, Jun	FrA13.4	85
Suzuki, Kenji	WeC20.6	14	Takamatsu, Tomokage	ThPOS-33.4	72
	ThPOS-25.7	67	Takamatsu, Toshihiro	SaD10.4	150
	FrC08.6	97	Takamichi, Shinnosuke	FrPOS-37.16	125
	FrPOS-28.12	113	Takanishi, Atsuo	FrB20.2	94
	SaB16.2	139	Takano, Takeshi	WePOS-33.39	36
Suzuki, Kouta	WePOS-32.1	33		WePOS-34.7	37
	WePOS-32.5	33		FrPOS-33.5	115
	WePOS-33.1	34	Takase, Ryoken	ThA18.6	44
	WePOS-33.9	35	Takayama, Eri	WePOS-34.13	38
	WePOS-33.39	36	Takei, Yusuke	ThPOS-34.42	77
	FrPOS-33.5	115	Takemoto, Nobuo	FrPOS-35.8	121
Suzuki, Michiyasu	ThPOS-34.35	77	Takemura, Hiroshi	WePOS-11.20	18
	FrC13.6	99		ThB16.4	50
Suzuki, Nao	FrPOS-33.33	117		ThPOS-21.6	65
Suzuki, Naoki	FrPOS-36.33	123		ThPOS-34.26	76
Suzuki, Shiho	WePOS-32.11	33		SaD10.4	150
Suzuki, Sho	FrB03.2	89	Takemura, Kenjiro	WePOS-31.21	31
Suzuki, Shuhei	WePOS-29.22	27		WePOS-31.22	31
Suzuki, Yasuyuki	FrA06.1	CC	Takerkart, Sylvain	FrB19.1	94
	FrA06.1	83	Takeuchi, Hiroya	ThPOS-33.26	74
Svirskis, Darren	WePOS-29.30	28	Takeyama, Hirofumi	WePOS-33.42	36
	FrPOS-36.21	123	Taki, Chinami	FrPOS-38.9	127
	SaB04.6	136	Takiguchi, Tetsuya	FrPOS-22.9	110
Swain, Sarpras	FrPOS-08.13	105	Talha, Sid Ahmed Walid	WePOS-18.5	22
Swanson, Brett Anthony	ThB01.2	45	Tam, Hwa-Yaw	FrA21.1	88
Swindlehurst, A. Lee	WePOS-30.16	29	Tam, Simon	SaB04.3	136
Swoboda, Jessica	WePOS-27.7	26	Tam, Wing Kin	ThPOS-26.5	68
Syed, Azeemuddin	WePOS-16.5	21	Tamadon, Izadyar	FrPOS-32.3	115
	FrPOS-04.3	103	Tamai, Nao	WePOS-11.16	18
Syrjälä, Elise	ThPOS-31.1	70	Tamaki, Airi	ThPOS-15.9	62
Syu, Jhen-Yang	FrPOS-33.26	117		FrPOS-33.45	118
Szankin, Maciej	ThPOS-09.8	60		FrPOS-33.46	118
	ThPOS-27.6	68	Tamei, Tomoya	ThC06.5	53
Szczepek, Agnieszka J.	FrB21.6	95	Tamilia, Eleonora	ThA12.5	42
Szewczyk, Jerome	ThPOS-36.41	81	Tamilselvi, Munusamy	WePOS-29.19	27
Szilagyi, Laszlo	WePOS-09.2	17	Tamir, Levin	WePOS-33.25	36
Szmulewicz, David	WeA18.3	6	Tamura, Toshiyo	WePOS-34.10	37
	FrPOS-03.2	102		ThC13.1	CC
	SaD05.1	148		ThC13.3	55
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Szymczyk, Jacek	WePOS-33.19	35	Tamura, Yudai	ThPOS-32.21	71
			Tamura, Yusuke	WeA08.4	3
			Tan, Bhing-Leet	WeA14.5	5
			Tan, Chee Pin	ThA11.2	41
			Tan, Chin-Tuan	ThPOS-21.2	65
			Tan, Daxin	WePOS-33.40	36
			Tan, Isabella	WeC13.2	11
				FrC04.4	96
			Tan, Jack Wei Chieh	WePOS-31.7	31
			Tan, Jingqian	FrPOS-25.2	111
			Tan, Ju Le	WePOS-10.2	17
			Tan, Kok Kiong	FrPOS-28.8	113
				FrPOS-37.26	125
				ThPOS-35.7	78
			Tan, Mei Chee	ThB12.2	49
			Tan, Mingkui	WeA11.4	4
			Tan, Ru-San	WeA11.6	4
				WePOS-10.2	17
				WePOS-31.7	31
				FrB12.5	92
				FrPOS-11.6	106
			Tan, Swee Yaw	WePOS-31.7	31
			Tan, Tan-Hsu	ThPOS-32.17	71
				SaD04.5	148
			Tan, Tao	SaB02.5	135
			Tan, Teng Hong	WePOS-10.2	17
			Tanabe, Norio	ThPOS-33.26	74
			Tanaka, Eiichiro	ThPOS-21.9	65
			Tanaka, Hirokazu	FrPOS-38.3	126
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				FrPOS-38.7	127
			Tanaka, Hiroki	FrPOS-37.16	125
			Tanaka, Keita	WePOS-30.13	29
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			Tanaka, Kiyohito	FrA15.4	86

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Taberner, Andrew	ThA17.5	44
Tachizaki, Yuma	WePOS-31.14	31
Tachos, Nikolaos	WePOS-31.38	32
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	SaD09.4	150
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Tada, Mitsunori	WePOS-30.23	29
	FrPOS-34.15	119
	FrPOS-38.33	128
Tada, Yuma	WePOS-20.4	23
Tadesse, Girmaw Abebe	FrC05.4	96
Tae, Chul-Gyu	SaC18.3	146
Taffoni, Fabrizio	FrA17.2	87
Tagawa, Munenori	WePOS-17.3	22
	FrPOS-35.20	121
Tagawa, Takehiro	FrPOS-38.24	127
Taghavi, Hamidreza	SaD13.1	151
Taguchi, Ryo	ThPOS-23.3	66
Tahafchi, Parisa	FrC02.6	96
Tahara, Ayumi	FrPOS-37.4	124
Taheri, Nasrin	WeC05.6	9
Takabayashi, Kento	FrPOS-38.7	127
Takae, Seido	FrPOS-33.33	117
Takagi, Seiji	ThB12.6	49
Takahashi, Masanobu	ThPOS-32.2	70
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Tanaka, Motoyoshi	ThPOS-21.6	65	Taylor, Zachary	FrPOS-33.28	117
Tanaka, Naoto	WePOS-33.46	37	Tchinde Fotsin, Ted Julien	ThPOS-09.9	60
Tanaka, Ryo	ThPOS-33.26	74	Techentin, Robert	ThB19.3	51
Tanaka, Shinji	FrPOS-33.31	117	Tee, Keng Peng	FrA06.3	83
	FrPOS-33.32	117	Tehrani, Milad	SaC19.6	147
Tanaka, Shinobu	WePOS-29.8	26	Teixeira, Ana Rita	FrB02.5	89
Tanaka, Toshihisa	ThPOS-35.35	79	Teixeira, César	WePOS-24.3	25
	FrPOS-37.14	125		FrB08.1	90
Tanaka, Yasuhiro	ThB16.4	50		SaD02.2	147
Tanaka, Yoshihiro	SaC16.5	146	Teixeira, Leonor	WePOS-33.28	36
Tanaka, Yujiro	FrPOS-36.43	124	Telfer, Brian	WeC11.4	11
Tang, Hao	SaD01.1	147		WeC11.7	11
Tang, Jiabei	SaB01.6	135		WePOS-12.5	19
Tang, Jih-Luh	ThA19.5	44	Telling, Neil	FrC09.1	97
	ThC19.3	57	Temel, Yasin	FrPOS-36.36	124
Tang, Julia	FrPOS-37.13	125	Temiz, Yuksel	SaD13.1	151
Tang, Min	ThA05.2	40	Tempel-Brami, Catherine	WeC10.3	10
Tang, Shih-Tsang	ThPOS-36.25	80	Teng, Zhicheng	FrPOS-27.8	112
Tang, Xiaoying	WePOS-12.1	19	Tenhunen, Mirja	FrB11.1	91
	SaA19.2	135	Teo, Lynette Li San	WePOS-10.2	17
	SaB19.2	140		WePOS-31.7	31
Tang, Zhiqiang	SaD06.4	149	Teotia, Revant	WePOS-27.1	25
Tang, Zihan	FrC16.2	100	Teran, Francisco	FrC09.1	97
Tangermann, Michael	ThC02.4	52		FrC09.3	98
	ThPOS-16.2	62	Terasaka, Sumitaka	ThPOS-34.42	77
	ThPOS-20.2	64	Terebus, Anna	ThB09.5	48
	SaD01.4	147	Terracina, Giorgio	ThB15.2	50
Tanichi, Masaaki	FrPOS-33.5	115	Tervo, Aino	ThPOS-36.7	80
Taniguchi, Hironari	FrPOS-35.8	121	Terzini, Mara	FrPOS-28.10	113
Taniguchi, Kazuhiro	ThPOS-34.21	76	Tesh, Ryan	FrPOS-36.17	123
Tankongchamruskul, Nattakit	FrC02.1	95	Teske, Michael	WePOS-14.5	20
Tanner, Hildegard	FrPOS-33.50	118	Tessadori, Jacopo	WePOS-30.39	30
Tannous, Halim	ThPOS-31.5	70		SaD01.2	147
Tansley, Geoff	FrPOS-13.1	107	Tessaro, Mark	FrPOS-35.2	120
Tantibundhit, Charturong	WePOS-11.15	18	Testelmans, Dries	ThA14.1	42
	FrC02.1	95		ThPOS-03.5	58
	SaD12.6	151	Tetteh, Giles	WePOS-11.26	19
Tantisevi, Visanee	WePOS-11.15	18	Tey, Hongliang	FrC03.3	96
Tanveejul, Mohamed	WeC14.4	12	Teymoori, Morteza	ThPOS-33.39	74
Tanveer, M. Asjid	WePOS-11.18	18	Thaha, Mohamed	ThPOS-24.1	66
	FrC17.2	100	Thakoor, Kaveri	ThB12.3	49
Tanzarella, Simone	ThC06.4	53	Thakor, Nitish	WeA19.1	6
Tao, Ben	SaC03.5	141		ThC18.4	56
	SaD15.6	152		ThC18.5	56
Tao, Chunling	WePOS-21.5	24		ThPOS-33.38	74
	FrA20.1	87		ThPOS-35.7	78
Tao, Linkai	SaC18.4	146		FrPOS-01.12	102
Tao, Tangfei	FrPOS-27.8	112		FrPOS-22.7	110
Tapak, Leili	WePOS-02.2	14		FrPOS-36.45	124
Tapani, Karoliina	SaB02.4	135	Thakur, Chetan Singh	ThPOS-09.7	60
Tarantino, Vanessa	WeA21.3	7	Thakur, Raviraj	FrA18.2	87
	WeC14.1	12	Thalmann, Daniel	WeA14.5	5
Tarassenko, Lionel	ThPOS-34.16	76	Thanaj, Marjola	ThC05.4	53
	FrPOS-37.7	124	Thanawattano, Chusak	SaD16.6	152
Tarín, Cristina	FrPOS-30.2	114	Thangakunam, Balamugesh	WeC14.4	12
	SaD15.1	152	Thanou, Maya	SaB04.1	136
Tarotin, Ilya	ThPOS-36.21	80	Tharmalingam, Varun	FrPOS-38.26	127
Tarp, Jens	SaD18.3	153	Thelen, Richard	SaC07.3	143
Tataraidze, Alexander	SaC18.5	146	Theodoridis, Sergios	WeC05.5	9
Tatarlar, Efecan	ThPOS-33.39	74	Thewissen, Liesbeth	WePOS-03.3	15
	ThPOS-34.37	77	Thibaut, Aurore	FrPOS-01.11	102
Tatsuta, Masahiro	ThPOS-35.30	79	Thiebault, Jean-Jacques	FrPOS-14.4	107
	FrPOS-36.24	123	Thielscher, Axel	WeC10.2	10
	FrPOS-36.25	123		ThA01.1	C
	FrPOS-37.2	124		ThA01.2	39
Tatum, Nathan	FrPOS-34.1	118		ThA01.3	39
	FrPOS-36.35	124		FrA09.1	84
Tauber, John	SaA14.5	133		SaB09.2	138
Tautan, Alexandra-Maria	ThC14.1	CC		SaD10.6	150
	ThC14.3	55	Thipayawat, Tawanwart	WeA10.1	3
Tavakolian, Kouhyar	FrB14.4	92	Thittai, Arun Kumar	ThPOS-09.4	60
	FrB15.4	93		SaC03.1	CC
Tavernier, Rene	WeC09.6	10		SaC03.4	141
Tavora, Luis	FrB03.3	89		SaC03.6	142
Tawaki, Yuta	ThB06.3	47		SaD15.2	152
Tawhai, Merryn	ThA11.5	41	Tholl, Maximilien Victor	FrPOS-33.50	118
	ThPOS-34.34	76	Thomale, Ulrich-Wilhelm	FrB19.3	94
	FrPOS-16.5	108	Thomas, Alan	ThC20.3	57
Taylor, Julian S	SaB18.1	140			
Taylor, Richard Andrew	ThPOS-29.3	69			

Thomas, Chris	FrPOS-23.4	111	Tomokazu, Urakawa	ThPOS-21.6	65
	SaB06.5	137	Tomotaki, Seiichi	ThPOS-33.30	74
	SaB18.6	140	Toms, Steven	FRA09.3	84
	SaC06.1	142	Tona, Francesco	SaD11.3	150
Thomas, Kimberly	ThB19.6	51	Tong, Kai Yu, Raymond	SaD06.4	149
Thomas, Robert Joseph	FrPOS-36.17	123	Tong, Longzheng	ThA04.2	40
Thomas, Webster	WePOS-13.8	20	Tong, Ng Wee	ThPOS-24.3	67
Thompson, Bruce	ThPOS-34.34	76	Tong, Shanbao	ThB18.5	51
Thompson, Christopher	FrB02.2	89		FrB03.6	89
Thompson, Nicole	ThPOS-35.12	78	Tong, Wei	ThB01.1	45
Thompson, Paul	ThPOS-33.18	73		FrPOS-33.36	117
Thomsen, Lars Pilegaard	SaB11.4	138		FrPOS-35.31	122
Thorey, Valentin	WeC19.4	13		FrPOS-36.22	123
	ThA14.3	42	Tonon, Davide	ThB11.1	48
Thurnhofer-Hemsi, Karl	WePOS-12.7	19	Tononi, Giulio	ThPOS-27.1	68
Tian, Maoyi	FrC05.4	96	Toombs, Nicholas	SaA16.1	133
Tian, Yang	FrPOS-34.26	119	Toppi, Jlenia	WePOS-02.4	14
Tiba, Mohamad H.	ThPOS-11.6	61		FrPOS-34.31	119
Tie, Yi	ThPOS-06.8	59		SaC05.2	142
Tietze, Anna	FrB19.3	94	Topping, Daniel	FrPOS-28.2	113
Tiffany, Stephen	ThPOS-24.7	67	Tor-Diez, Carlos	SaC12.3	144
	FrA04.2	83	Töreyn, Hakan	FrPOS-22.8	110
Tigges, Timo	WePOS-19.5	23	Torfs, Tom	SaA04.5	130
	FrA19.1	87	Torii, Katsuhiko	ThA16.6	43
	FrC05.6	97		SaC16.3	146
	FrPOS-06.2	103	Torkamani-Azar, Mastaneh	WePOS-04.2	15
	SaA13.6	133	Torlakcik, Harun	FrA07.2	84
Tigrini, Andrea	WePOS-17.7	22	Tornow, Ralf-Peter	FrPOS-07.3	104
	ThPOS-21.12	66		FrPOS-07.4	104
	FrA01.5	82		FrPOS-07.5	104
	FrB16.5	93	Torok, Michelle	SaB08.6	137
	FrPOS-27.15	113	Torre, Giancarlo	FrB20.3	95
Tijssen, Marina AJ	SaA17.1	134	Torres, Abel	ThC11.1	54
Tillmann, Daniel	FrA15.2	86	Torres, German	FrPOS-11.2	106
Timmann-Braun, Dagmar	FrB19.3	94	Torres, Guillermo	WeA21.4	7
Timmermann, Dirk	SaA09.2	131	Torres, Jordi	WePOS-23.10	25
Ting, Jordyn	ThB06.2	47	Torricelli, Alessandro	ThA10.2	41
Ting, Li	WePOS-21.1	23	Tortora, Domenico	SaC12.4	144
Tipre, Dnyanesh	FrC18.3	101	Toschi, Nicola	WeA12.1	C
Tiron, Roxana	SaD18.5	153		WeA12.6	4
Tiseo, Carlo	WePOS-17.2	22		WePOS-11.17	18
	FrPOS-27.7	112		ThB15.1	C
Tiwari, Abhishek	ThB20.6	51		FrC12.2	98
	SaD13.2	151		FrC12.4	99
Tiwari, Anil Kumar	WePOS-32.13	33		FrC12.5	99
Tiwari, Manish	ThA16.4	43		SaC05.1	142
Tjio, Gabriel	FrB12.5	92	Toselli, Benedetta	SaC12.4	144
Tkacz, Ewaryst	FrPOS-14.1	107	Tosi, Jacopo	FrA17.2	87
Toda, Hiroyuki	WePOS-33.39	36	Toth, Janos	ThPOS-08.2	60
	FrPOS-33.5	115		ThPOS-32.18	71
Todd, James	WeA19.5	7	Toth, Robert	FrA21.4	88
Todoroki, Yoshihiro	WePOS-11.8	18	Toumpaniaris, Petros	WeA15.4	5
Todorov, Dmitrii	ThC02.2	52		WePOS-23.6	24
	FrC14.2	99		FrB15.2	93
Toffolo, Gianna	ThPOS-16.5	63	Touryan, Jonathan	SaA01.2	129
Toft, Hans Olaf	SaA04.3	130	Toussaint, Nicolas	ThPOS-09.3	60
Töger, Johannes	FrA12.2	85	Toyama, Hiroaki	ThA16.2	43
Tognarelli, Selene	ThC21.5	57	Toyoda, Kentaroh	WePOS-08.5	16
Tognola, Gabriella	SaA07.5	131		SaB05.4	136
	SaD07.4	149	Toyoshi, Takuya	ThPOS-33.16	73
Togo, Hiroyoshi	WePOS-34.18	38		FrPOS-36.26	123
	FrB17.1	93		FrPOS-36.28	123
Tokhmpash, Ala	ThPOS-35.34	79		FrPOS-38.9	127
Tokuda, Takashi	FrPOS-38.11	127	Traeger, Kelsey	SaB06.4	137
Tokunaga, Hiroki	WePOS-12.13	20	Traidl-Hoffmann, Claudia	FrC17.5	100
Tokuno, Shinichi	WePOS-33.1	34	Tramontan, Lara	FrC08.5	97
	WePOS-33.9	35	Tramonti Fantozzi, Maria Paola	SaD02.4	147
	WePOS-33.39	36	Tran, Ha	SaD05.1	148
	WePOS-34.7	37	Tran, Son	WeC19.5	13
	FrPOS-33.5	115	Tran, Yvonne	WeC18.4	13
Tokura, Akio	FrPOS-38.24	127	Travas-Sejdic, Jadranka	SaB04.6	136
Tola-Arribas, Miguel A.	SaA14.1	133	Traver, Vicente	WeA19.3	7
	SaC05.5	142		WePOS-16.6	21
Tolba, Rene	FrA15.2	86		WePOS-32.29	34
	SaB05.5	137		ThB08.1	CC
Tomaio, Jacquelyn	SaB18.3	140		ThB08.4	48
Tomasi, Corrado	WeC09.2	10		FrB08.1	90
Tome, Ana Maria	WeA12.4	4	Treaba, Constantina	WeA12.6	4
	FrB02.5	89	Tremmel, Christoph	ThC01.3	52
Tomisaki, Masumi	ThC16.4	56		ThPOS-20.22	65
Tomizawa, Ryota	ThC15.5	55		FrPOS-01.17	102

Trenkwalder, Claudia	FrA14.3	86
Treuillet, Sylvie	FrC15.4	100
Triantis, Iasonas	SaB04.1	136
Tridandapani, Srini	FrB17.1	C
Tripoliti, Evanthia	WePOS-23.6	24
Trivella, Maria G.	WePOS-29.6	26
Trivredi, Dhaval	FrA02.1	82
Trojaniello, Diana	FrPOS-35.25	121
Troshkov, Daniil	ThC19.2	56
Tröster, Mark	SaC09.4	143
Truccolo, Wilson	ThC02.2	52
	ThC14.5	55
	ThPOS-31.6	70
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Truitt, Seth	FrC13.4	99
Truong, Nhan, Duy	ThC14.1	55
Tsai, David	ThPOS-36.5	79
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Tsai, Han-Chun	ThPOS-32.9	70
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Tsai, Jang-Zern	WePOS-29.19	27
Tsai, Ming-Dar	ThC15.6	56
Tsai, Pin-Chien	FrPOS-23.2	110
Tsai, Tung-Lin	ThPOS-34.23	76
Tsai, Yuh-Show	ThPOS-34.49	77
Tsamis, Emmanouil	ThB12.3	49
Tsanakas, Panayiotis	ThPOS-30.5	69
Tsanas, Athanasios	ThPOS-28.3	69
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Tsaur, Irene	SaD04.4	148
Tschapka, Marco	WePOS-19.9	23
Tsegaye, Temesgen	ThPOS-33.17	73
Tsekhan, Shawn	ThPOS-31.6	70
Tsekos, Nikolaos	ThPOS-33.1	72
Tseng, Wei-Kung	FrPOS-37.6	124
Tsenkova, Roumiana	WePOS-33.18	35
Tsogzolmaa, Udval	SaD18.2	153
Tsompou, Panagiota	FrPOS-18.2	108
	SaA12.6	132
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Tsoneva, Tsvetomira	FrB14.2	92
Tsou, Winnie	WeC18.1	13
Tsubota, Kohei	FrPOS-33.19	116
Tsuchiya, Yasuhiro	WePOS-30.30	29
Tsuichihara, Satoki	WePOS-11.20	18
	ThB16.4	50
	SaD10.4	150
Tsuji, Toshio	ThB06.6	47
Tsujikawa, Masanori	ThC19.4	57
	ThPOS-23.7	66
Tsujimura, Yuki	ThPOS-34.26	76
Tsujiuchi, Nobutaka	SaC04.4	142
Tsukada, Kosuke	FrPOS-33.33	117
Tsukada, Shingo	ThPOS-34.17	76
Tsukahara, Akihiko	WePOS-30.14	29
	FrPOS-06.8	104
Tsumura, Ryosuke	SaA16.6	134
Tsunematsu, Shoji	WePOS-30.14	29
Tsuruda, Takahiro	WePOS-29.8	26
Tsurusaki, Ryo	FrPOS-37.35	126
Tsuzuki, Marcos de Sales Guerra	ThA11.4	41
Tu, Mingta	ThPOS-34.8	75
Tu, Tao	WeA12.3	4
Tumbarello, Roberto	WeA02.1	1
Tunç, Burcu	SaD06.5	149
Tung, Yi-Chung	FrC07.3	97
Turco, Simona	ThB19.1	51
Turianikova, Zuzana	SaA02.4	129
Turki, Ahmad Fawzi	ThPOS-26.3	68
Turkiyyah, George	ThPOS-33.41	74
Turolla, Andrea	ThPOS-34.44	77
Tuszynski, Jack Adam	SaA10.3	131
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Tuvignon, Patrick	FrPOS-14.4	107
Tward, Daniel	FrC18.3	101
Tzapochkin, Konstantin	FrC02.4	96
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Tzioufas, Athanasios	ThB19.2	51

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Uchikawa, Yoshinori	WePOS-30.14	29
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Uchiyama, Takanori	SaD05.4	148
Ucrak, Fuat	WePOS-31.42	32
Udayanandana, Ruwan	WePOS-14.7	20
Udhayakumar, Radhagayathri	WePOS-05.5	16
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Uecker, Florian Cornelius	WePOS-27.4	25
	FrB21.6	95
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Uegaki, Yuriko	WePOS-30.18	29
Ueno, Akinori	WePOS-15.10	21
Ueno, Tomoyuki	SaB16.2	139
Uhrmacher, Adelinde	WePOS-14.3	20
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Ul Haq, Mohammad Adnan	ThA14.5	43
Ulbricht, Leandra	ThPOS-13.2	61
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Ülgen, Yekta	SaD06.5	149
Ullah, Ehsan	WePOS-34.2	37
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Um, Ji-Yong	FrPOS-34.11	118
Umbel, Calista	ThPOS-34.47	77
Umehara, Ken	FrPOS-38.34	128
Umematsu, Terumi	ThB20.1	51
Umemura, Guilherme Silva	ThC06.6	54
Umetani, Tomohiro	FrPOS-35.26	122
Umezaki, Taizo	ThPOS-23.3	66
Umimoto, Koichi	FrPOS-35.20	121
Unger, Laura Anna	WePOS-32.27	34
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Unsworth, Charles Peter	ThB02.2	46
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Upadhyay, Vikas	WeA09.3	3
Upendra, Roshan Reddy	ThPOS-32.37	72
Urabe, Mariko	FrPOS-27.10	112
Uraguchi, Tomotaka	WePOS-33.1	34
	FrPOS-33.5	115
Urban, Gerald A.	FrA18.5	87
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Urban, Mike	FrB09.1	91
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Urbano, Diamond	ThPOS-36.3	79
Urbano, Nicoletta	WePOS-11.17	18
Urdaneta, Morgan	ThB01.4	45
Urman, Noa	WeC10.4	10
	FrA09.3	84
Urru, Monica	WeA02.1	1
Urtnasan, Erdenebayar	WePOS-33.11	35
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Ushijima, Takeshi	ThB18.6	51
Usui, Souichiro	FrB17.1	93
Usui, Tomohiro	FrB17.1	93
Usuki, Shin	ThPOS-33.37	74
Uthappa, Poojitha	WePOS-11.14	18
Uto, Sadahito	WePOS-29.28	27
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Utsuki, Tomohiko	ThPOS-34.32	76
Uyttendaele, Vincent	WeA16.5	6
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V. Nguyen, Cuong	FrPOS-34.6	118
V. Oliveira, Beatriz	ThPOS-32.25	71
Vabalas, Andrius	WePOS-25.2	25
Vachiramon, Tee	SaD12.6	151
Vadgama, Pankaj	WePOS-17.5	22
	ThPOS-24.2	67
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Vaini, Emanuele	ThB11.1	48		WeC09.6	10
	ThB11.3	48	Vandervoort, Pieter	WePOS-33.14	35
	FrPOS-15.5	107	Vanello, Nicola	WeA14.6	5
Valdez Zermeno, Daniel	SaA03.2	129		WePOS-09.3	17
Valdez, Rupa Sheth	FrC08.3	97		FrPOS-09.2	105
Valencia, Lisa	ThA19.3	44		SaD14.6	152
Valenza, Gaetano	WeA20.4	7	Vanhatalo, Sampsa	SaB02.4	135
	ThB05.1	C	Vannozzi, Lorenzo	WePOS-13.4	20
	ThB11.4	49	Vanrumste, Bart	WePOS-33.14	35
	ThB11.6	49		ThPOS-22.3	66
	FrC01.1	95		FrC08.1	C
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	FrPOS-15.1	107	Vantrung, Pham	FrC15.4	100
	FrPOS-15.2	107	Vaporidi, Katerina	WePOS-23.2	24
	SaD14.6	152	Vaquerizo-Villar, Fernando	FrA02.6	82
Valeri, Federica	WePOS-23.1	24		FrPOS-02.1	102
Valeriani, Davide	ThPOS-20.21	65	Varghese, Arathy	ThPOS-33.47	75
Valero, Ana	WeC14.3	12		FrPOS-20.7	109
Valesi, Riccardo	WeC18.3	13	Varghese, Rency	WePOS-22.3	24
Valiante, Taufik A.	SaC10.3	144	Varjos, Ilkka	FrPOS-38.38	128
Vallan, Alberto	WeA10.3	3	Varnfield, Marlien	SaD08.6	149
Valls, Rebecca	WeC06.6	10		SaD16.3	152
Valterova, Eva	FrPOS-07.3	104	Varon, Carolina	ThA14.1	42
van Asseldonk, Edwin h.f.	WePOS-29.32	28		ThPOS-03.5	58
van Beijnum, Bert-Jan F.	ThB13.6	49		FrB05.1	89
Van Bogaert, Patrick	WePOS-02.5	15		SaB02.6	136
Van Cleemput, Nico	WeC09.6	10		SaC02.6	141
Van den Berg, Pauline E.W.	FrA08.4	84	Varrecchia, Tiwana	WePOS-18.1	22
Van Den Heever, Dawie	WePOS-27.2	25	V�rri, Alpo	FrB11.1	91
van der Geest, Rob	FrA12.1	CC	Varr�, Andr�s	ThB04.1	46
van der Sommen, Fons	FrB03.4	89	Vasadi, Lukas James	WePOS-31.29	32
van Dijk, Johannes	FrPOS-34.27	119	Vasco, Gessica	FrB01.1	88
Van Eyndhoven, Simon	WeC05.5	9	Vasefi, Fartash	FrB15.4	93
van Gils, Mark	ThPOS-33.40	74	Vasiloglou, Maria F.	SaA08.4	131
Van Gorp, Pieter	FrA08.4	84	Vasireddy, Rakesh	FrPOS-30.6	114
Van Helleputte, Nick	FrC02.5	96	Vatankhah, Maryam	FrPOS-27.4	112
Van Hoof, Chris	WePOS-19.8	23	Vater, Jana	FrB21.6	95
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	SaA04.5	130	Vaughn, Julie	WePOS-11.6	18
	SaB04.2	136	Vayatis, Nicolas	WePOS-32.9	33
Van Huffel, Sabine	WeC05.1	C	Vaz, Joao	ThPOS-17.7	63
	WeC05.1	9	Vazhiyal, Vikas	FrPOS-28.15	113
	WeC05.5	9	Vazquez Galvez, Arturo	ThPOS-23.8	66
	WePOS-03.3	15	Vazquez, Carlos	ThPOS-09.9	60
	ThA14.1	42		FrPOS-11.3	106
	ThPOS-03.5	58	Vazquez, Fabian	ThPOS-35.2	77
	FrB02.1	C		ThPOS-35.3	77
	FrB02.3	89		ThPOS-35.4	78
	FrB05.1	89		ThPOS-35.5	78
	SaB02.6	136		ThPOS-35.6	78
	SaC02.6	141	Veauthier, Christian	FrA11.3	85
Van Leemput, Koen	ThA01.2	39		FrA11.4	85
van Mierlo, Pieter	FrA05.3	83	Veeravalli, Bharadwaj	SaA08.6	131
	SaC05.6	142	Veerbeek, Janne M.	FrC01.1	95
Van Nieuwenhuysse, Enid	WeC09.6	10	Vegesna, Anil	ThPOS-24.9	67
Van Noorden, Benjamin A.	ThPOS-17.6	63	Vehkaoja, Antti	FrA19.4	87
van Ooij, Pim	FrA12.3	85	Veintemillas, Jose	ThA05.5	40
Van Paesschen, Wim	FrB05.1	89	Veitch, Brian	ThPOS-35.37	79
	FrPOS-36.12	122	Veith, Larissa	SaB09.1	137
	FrPOS-38.21	127	Velardo, Carmelo	ThPOS-34.16	76
van Pul, Carola	SaB02.5	135		FrPOS-37.7	124
van Rienen, Ursula	WePOS-14.3	20	Velazco Garcia, Jose Daniel	ThPOS-33.1	72
	WePOS-31.34	32	Velciu, Magdalena	WePOS-24.2	25
	ThB18.1	50	Veltink, Peter	ThB13.6	49
	ThPOS-27.2	68	Veluru, Jagadeesh Babu	FrPOS-36.45	124
	ThPOS-34.30	76	Vempada, Ramu Reddy	WePOS-21.2	23
	SaA09.1	C	Venkat, Swaathi	WeC14.4	12
	SaB18.2	140	Venkatachalam, K.L.	WePOS-30.43	30
	SaC07.1	143	Venkatasubramanian, Umamaheswari	ThA18.5	44
	SaC07.4	143	Ventre, Jeanne	WePOS-31.8	31
van Rooij, Jeroen	WePOS-11.9	18	Ventruto, Reto	ThPOS-33.8	73
Van Sambeek, Shannon	FrC08.1	97	Vercelli, Gianni	FrB20.3	95
van 't Veld, Ronald C.	ThB16.3	50	Verdaguer, Helena	FrC09.3	98
	FrB16.3	93	Verdini, Federica	WePOS-17.7	22
van Vliet, Lucas	WePOS-11.9	18		ThPOS-21.12	66
Van Zant, Cody	FrC13.4	99		FrA01.5	82
Vandecappelle, Michiel	WePOS-03.3	15		FrB16.5	93
Vandekerckhove, Yves	WeC09.6	10		FrPOS-27.15	113
Vandendriessche, Benjamin	FrPOS-36.12	122	Vereshchaga, Yana	ThPOS-34.24	76
	FrPOS-38.21	127	Vergara, Victor Manuel	WePOS-02.3	14

Wang, Faqi	FrC14.6	99	Wang, Shouyan	ThPOS-02.1	58
	FrPOS-01.9	102		ThPOS-25.8	67
Wang, Ge	SaB17.1	140		FrPOS-23.6	111
Wang, Guangyi	WePOS-11.4	17	Wang, Shyh-Hau	WePOS-33.20	35
Wang, Guobao	WePOS-10.5	17		FrPOS-37.25	125
Wang, Guoxing	FrPOS-38.12	127	Wang, Tianfu	WeA12.2	4
Wang, Haifeng	ThA15.1	CC		WeA16.6	6
	FrC18.4	101		ThA15.1	43
	FrPOS-09.9	106		SaC12.5	144
	SaA12.5	132		SaD12.1	151
	SaD03.6	148	Wang, Tianqi	FrB01.2	88
Wang, Han	ThPOS-36.33	81	Wang, Tianyao	WeC12.2	11
Wang, Hanbin	WePOS-31.19	31	Wang, Tong	WePOS-12.6	19
Wang, Hanchen	ThPOS-36.10	80		FrC12.1	98
Wang, Haochong	ThPOS-20.13	64		SaB01.5	135
Wang, Henry	WeA02.5	1	Wang, Tzu-Yi	ThPOS-33.24	73
Wang, Hongmei	WeA05.1	2	Wang, Weibin	FrPOS-11.8	106
	ThA05.4	40	Wang, Weiming	WePOS-28.1	26
	ThB05.4	47	Wang, Weiqun	WeC01.6	8
	ThB05.5	47		FrPOS-25.5	111
	ThPOS-05.2	59	Wang, Wenjin	ThA15.1	C
	FrC05.5	97		ThA15.3	43
Wang, Jia-Jung	FrPOS-37.6	124		FrA03.1	C
	SaD04.5	148		FrB03.1	8
Wang, Jianfei	SaB10.4	138		SaB02.5	135
Wang, Jianliu	ThPOS-33.44	75	Wang, Wuqi	FrPOS-36.11	122
Wang, Jianqing	ThC04.3	53	Wang, Xiaochen	FrPOS-25.2	111
Wang, Jianzhong	ThC14.6	55	Wang, Xiaoyu	WeA09.5	3
Wang, Jiaqi	SaB17.5	140		WeC12.1	11
Wang, Jiaxing	WeC01.6	8	Wang, Xin	FrPOS-25.2	111
Wang, Jing	ThB19.6	51		SaD06.4	149
	ThPOS-17.11	63	Wang, Xingjun	ThPOS-03.4	58
Wang, Jingwen	ThB12.2	49	Wang, Yalin	FrB19.2	94
Wang, Jingying	ThPOS-02.1	58	Wang, Yaomin	ThC14.6	55
	ThPOS-25.8	67	Wang, Ye	WePOS-30.8	28
	FrPOS-23.6	111		WePOS-30.9	28
Wang, Ju	ThPOS-24.6	67		WePOS-30.10	28
Wang, Jun	SaA01.1	129		WePOS-30.11	28
Wang, Kai Yen	WePOS-03.4	15	Wang, Yi	ThB01.6	46
Wang, Ke	SaC03.3	141	Wang, Yifei	FrB07.4	90
Wang, Kuanquan	WeA17.6	6	Wang, Yijun	ThPOS-20.5	64
	ThPOS-15.2	62		ThPOS-20.11	64
	FrB09.6	91		ThPOS-20.19	65
Wang, Kun	FrPOS-01.9	102		SaB01.2	135
Wang, Kuocheng	WePOS-32.10	33		SaB14.5	139
Wang, Lan	FrB01.2	88		SaC01.4	141
Wang, Lana	FrPOS-33.7	116	Wang, Ying	FrPOS-34.27	119
Wang, Lei	WeA18.2	6	Wang, Yingxue	ThPOS-06.8	59
	FrPOS-06.10	104	Wang, Yinwang	ThPOS-20.18	65
	FrPOS-28.13	113	Wang, Yiwen	FrA02.1	C
Wang, Li	ThC05.5	53		FrA02.4	82
Wang, Lin	WePOS-01.2	14		FrB06.1	CC
Wang, Ling	WePOS-11.2	17		FrB06.4	90
	FrC14.6	99		FrC14.1	C
Wang, Li-qun	WePOS-32.31	34		FrC14.3	99
Wang, Lisheng	ThPOS-12.2	61		SaD17.5	153
Wang, Matthew	FrPOS-35.22	121	Wang, Yixin	WePOS-04.4	15
Wang, Mengya	ThPOS-20.7	64		WePOS-17.6	22
	SaD01.5	147	Wang, Yongjun	SaD12.1	151
Wang, Michael	FrC17.6	101	Wang, Yuanyuan	SaB15.2	139
Wang, Min	WeA03.2	1	Wang, Yubo	FrPOS-01.5	102
Wang, Minghui	ThPOS-32.1	70	Wang, Yue	WeA18.5	6
	ThPOS-32.41	72	Wang, Yu-Fen	ThA19.5	44
Wang, Minhong	ThPOS-34.28	76		ThC19.3	57
Wang, Ning	FrPOS-26.2	112	Wang, Zeyu	SaC18.4	146
Wang, Ningci	WeA18.6	6	Wang, Zhaoxia	ThPOS-32.8	70
	ThPOS-20.20	65	Wang, Zhaoxiang	ThPOS-36.12	80
	SaA01.5	129		SaD06.3	149
Wang, Qiang	WePOS-11.2	17	Wang, Zheng	WePOS-11.2	17
	FrPOS-01.5	102	Wang, Zhenze	WePOS-29.33	28
Wang, Qining	WePOS-18.2	22		ThPOS-33.33	74
Wang, Qiyue	ThA19.4	44	Wang, Zhigang	WePOS-31.16	31
Wang, Rencheng	FrC16.5	100	Wang, Zhigong	FrA20.1	87
Wang, Ruikang	FrA01.2	82	Wang, Zhihua	ThB21.1	51
Wang, Ruimin	ThPOS-09.2	60		FrA21.5	88
Wang, Ruixue	ThPOS-20.10	64	Wang, Zhihui	ThPOS-15.1	62
Wang, Ruizhi	WePOS-31.29	32	Wang, Zhongpeng	ThPOS-20.7	64
Wang, Ruxin	FrA19.2	87		FrPOS-01.9	102
Wang, Samuel	SaD04.4	148		FrPOS-08.9	105
Wang, Shanshan	FrC18.1	101		SaC01.5	141
Wang, Shengpei	SaA18.6	134		SaD01.5	147

Wang, Zhuoran	FrC01.3	95	Weltin, Andreas	FrA18.5	87
	FrC01.4	95		FrB10.6	91
Wang, Zihuan	WePOS-34.12	37	Wen, Bo	FrA19.2	87
	ThPOS-07.3	60	Wen, Wen	WeA08.4	3
	ThPOS-32.29	71	Wen, Xin	SaB10.4	138
Wang, Zirui	FrPOS-08.3	104		SaC02.4	141
Waradisai, Adisai	SaD16.6	152	Wendebourg, Mareike	WePOS-12.4	19
Ward, Kevin	ThPOS-11.6	61	Wendling, Fabrice	FrPOS-23.7	111
Ward, Sarah	ThPOS-36.19	80		SaB06.3	137
	FrPOS-38.28	128		SaC05.3	142
	FrPOS-38.29	128	Wendt, Herwig	ThB11.6	49
Wardell, Karin	ThPOS-36.13	80		SaD14.6	152
	FrA18.4	87	Wenger, Cornelia	WeC10.3	10
	FrPOS-23.8	111	Wens, Vincent	WeC02.4	8
Warnecke, Joana Maureen	ThPOS-24.6	67	Werginz, Paul	ThB01.5	46
Warnecke, Maren	WePOS-27.7	26	Werner Henke, Heinz	ThB10.5	48
Warzecha, Michaela	WePOS-27.7	26	Werner, Franziska	ThA03.4	39
Washio, Toshikatsu	WePOS-32.11	33	Wertz, Jerome	FrA11.2	85
Wasko, Michael	SaC17.2	146	Wessel, Maximilian Jonas	FrPOS-27.13	112
Wassermann, Laura	SaB05.5	137	Wessel, Niels	SaD07.1	CC
Wassertheurer, Siegfried	WePOS-31.1	30	Wester, Niklas	FrPOS-38.38	128
Wasylczyk, Piotr	ThA16.4	43	Westerhausen, Markus	FrB07.2	90
Watanabe, Eichi	ThPOS-36.39	81	Westover, Brandon	FrPOS-36.17	123
Watanabe, Hayato	WePOS-30.12	28	Weththasinghe, Rasangika	SaD18.6	153
Watanabe, Kosuke	SaA15.4	133	Wetzel, Dominik	WePOS-07.3	16
Watanabe, Masaya	FrPOS-38.17	127	Weygers, Ive	FrPOS-38.4	126
Watanabe, Reiko	FrPOS-28.12	113	Wheeler, Bruce	FrC06.1	97
Watanabe, Takashi	ThPOS-21.10	65	Whitaker, Ricardo	FrPOS-35.9	121
Watanabe, Takeharu	FrC08.6	97	Whitcomb, Cody	FrC10.2	98
Watanabe, Tomoki	ThPOS-25.6	67		FrC10.3	98
Watanabe, Yoshiaki	WePOS-30.18	29	White, Austin T.	ThC02.1	52
Watenpaugh, Donald	FrPOS-17.3	108		ThC02.3	52
	SaA11.5	132		FrPOS-33.7	116
Watkins, Gregory Douglas	ThB01.2	45	White, Jack Andrew	ThPOS-12.4	61
Watson, Paul	SaA17.6	134	White, Steven A	FrPOS-34.1	118
Waytowich, Nicholas	SaA01.2	129		FrPOS-36.35	124
Webb, Andrea	FrPOS-38.16	127	Whiting, Stewart	ThA08.2	41
Weber, Douglas	ThB06.2	47		ThA08.3	41
Weber, Leon	SaC17.3	146	Whittaker, Dominic G	ThPOS-15.2	62
Weber, Matthias	ThA03.1	39	Whittaker, Robyn	ThB19.5	51
	ThA03.2	39	Wi, Hun	FrB11.3	92
Weber, Maximilian	ThPOS-30.4	69	Wibowo, Sandi	SaA05.4	130
	SaC19.2	147	Wickramasuriya, Dilranjan	WeA02.3	1
Weber, Rachel	SaB15.1	139		WeC06.3	9
	SaB15.3	139		WePOS-01.1	14
Webster, Mark	SaA12.4	132		SaC01.3	141
Weckhuysen, Dorien	FrPOS-36.12	122	Widatalla, Namareq	ThPOS-05.3	59
	FrPOS-38.21	127		FrA10.1	85
Weddell, Stephen J.	WeC18.2	13	Widge, Alik	ThPOS-17.4	63
	FrB18.2	94	Widule, Matthew	WeA10.4	3
Wee, Justin W.	ThPOS-33.45	75	Widya, Aji Resindra	FrB03.2	89
Wee, Seng Kwee	FrPOS-03.5	103	Wiedemann, Jan Philipp	SaC17.3	146
Wegen, Erwin E.H.	ThB13.6	49	Wiedemann, Lukas	ThPOS-36.19	80
Wegner, Celine	SaA18.4	134	Wiegank, Ludwig	FrA19.1	87
Wei, Jinchi	FrC18.3	101	Wiegner, Arnim	FrA11.3	85
Wei, Na	ThPOS-18.2	63	Wiekhorst, Frank	ThA03.3	39
	FrPOS-20.9	109	Wiemer, Maik	FrPOS-36.41	124
Wei, Qi	ThPOS-17.7	63	Wiest, Joachim	SaB07.1	C
Wei, Yuan	ThPOS-36.33	81		SaB07.1	137
Weidenmueller, Jens	FrA21.2	88		SaB07.2	137
Weigel, Robert	WePOS-19.9	23		SaB07.5	137
	FrPOS-26.3	112	Wik, Lars	ThB05.2	47
	SaC11.4	144	Wiklund, Urban	SaC11.5	144
	SaC17.3	146	Wikner, Jacob	ThPOS-33.7	73
Weiland, James	ThPOS-35.19	78		FrC13.3	99
Weiler, Reto	FrPOS-33.38	117	Wilairasitporn, Theerawit	FrPOS-35.16	121
Wein, Simon	WeA12.4	4	Wilcox, Ian	WePOS-33.5	35
Weinberg, Irving	ThPOS-33.46	75	Wild, Daniel	ThPOS-30.4	69
Weingärtner, Sebastian	FrB12.1	92	Wilder-Smith, Einar P V	ThPOS-33.38	74
Weiskopf, Nikolaus	FrA09.6	84	Will, Matthias	WePOS-30.34	30
Weiss, Christoph	ThPOS-08.5	60	Willems, Rik	ThA14.1	42
Weiss, Jonas	WeC11.5	11		SaC02.6	141
	ThB20.5	51	Williams, Mark	ThB16.5	50
	FrPOS-36.16	123	Williams, Patrick	ThC02.1	52
Weiss, Robert G.	FrC18.3	101		ThC02.3	52
Weizel, Alina	WePOS-29.27	27		FrPOS-33.7	116
	SaA07.1	CC	Williams, Todd E.	WeC08.3	10
	SaC07.4	143	Williamson, Craig	ThPOS-11.6	61
Wellbeloved-Stone, Claire	FrC08.3	97	Williamson, Petra Nicole	FrPOS-08.2	104
Wells, James	ThA03.3	39	Wilson, James	SaD02.3	147
Wells, Kevin	ThPOS-21.1	65	Wilson, Keenan John	FrPOS-10.3	106

Xu, Hong	WePOS-12.5	19
Xu, Kedi	SaC01.1	141
Xu, Lin	ThB06.5	47
Xu, Lisheng	WePOS-15.5	21
	WePOS-21.3	23
	FrC10.6	98
Xu, Minpeng	WeA18.6	6
	ThPOS-16.4	62
	ThPOS-20.5	64
	ThPOS-20.20	65
	FrPOS-01.9	102
	SaA01.5	129
	SaB01.2	135
	SaB01.6	135
	SaC01.5	141
Xu, Peng	ThPOS-06.8	59
Xu, Shengqian	WePOS-29.3	26
Xu, Shihao	WeA14.5	5
Xu, Zhuoming	FrPOS-16.2	108
Xue, Jinwei	ThB21.6	52
Xue, Ke	WeC12.2	11
Xue, Mengru	WePOS-21.3	23
Xue, Wei	ThA15.6	43
Xue, Zhiyun	FrC18.2	101
Xutao, Guo	WePOS-12.6	19

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Yaacoub, Elias	WeA05.6	2
Yabuuchi, Tomohiro	WePOS-11.23	18
Yadollahi, Azadeh	WePOS-08.4	16
	ThA14.4	42
	FrPOS-05.2	103
	SaD14.2	151
Yaemsuk, Akarachai	WePOS-11.15	18
Yagi, Jin	FrPOS-36.6	122
Yagi, Keisuke	ThPOS-25.7	67
	FrPOS-27.16	113
	SaB16.2	139
Yagi, Yasushi	FrPOS-29.2	114
Yagoub, Mustapha	ThPOS-29.4	69
Yaguchi, Haruki	SaC04.3	142
Yagyu, Kazuyori	WePOS-30.12	28
Yajima, Tomoaki	WePOS-33.31	36
Yamada, Akihiro	WePOS-31.14	31
Yamada, Daisuke	FrB13.2	92
Yamada, Kenji	ThPOS-33.11	73
Yamada, Masayuki	FrPOS-06.8	104
Yamada, Yoshiyuki	WeC14.6	12
Yamagami, Hiroshi	FrPOS-37.35	126
Yamaguchi, Hirohito	SaA07.2	131
Yamaguchi, Takashi	WePOS-30.14	29
	ThPOS-34.42	77
Yamakawa, Hiroshi	WeA08.4	3
Yamakawa, Toshitaka	FrB20.1	94
	FrC13.6	99
Yamaki, Shunsuke	FrC17.1	100
Yamakoshi, Ken-ichi	WePOS-29.8	26
	WePOS-33.46	37
	FrPOS-34.10	118
	FrPOS-38.2	126
Yamakoshi, Takehiro	WePOS-31.2	30
	FrPOS-34.9	118
	FrPOS-34.10	118
	FrPOS-37.42	126
	FrPOS-38.2	126
Yamakoshi, Yasuhiro	WePOS-33.46	37
	FrPOS-34.10	118
	FrPOS-38.2	126
Yamami, Satoshi	ThPOS-32.2	70
	ThPOS-32.10	70
Yamamoto, Akio	FrA04.3	83
	FrPOS-38.34	128
Yamamoto, Arata	FrPOS-36.24	123
	FrPOS-36.25	123
	FrPOS-37.2	124
	WePOS-33.9	35
Yamamoto, Keisuke	FrPOS-38.9	127
Yamamoto, Kohei	WePOS-08.5	16
	SaB05.4	136

Yamamoto, Naoya	FrPOS-38.17	127
Yamamoto, Shin-ichiroh	ThPOS-34.22	76
Yamamoto, Takahiko	FrB13.2	92
Yamamoto, Yoshiharu	FrA08.2	84
Yamanaka, Masaaki	FrPOS-38.3	126
	FrPOS-38.6	127
Yamaner, Feysel Yalcin	SaC06.6	143
Yamani, Yusuke	ThC01.3	52
Yamashita, Atsushi	WeA08.4	3
Yamashita, Kazuhiko	WeA18.4	6
	ThPOS-21.15	66
Yamashita, Kento	ThB18.6	51
Yamashita, Shingo	ThC13.1	55
Yamashita, Tadahiro	ThPOS-34.29	76
	FrPOS-35.14	121
Yamashita, Takanori	WePOS-33.8	35
Yamashita, Tatsuya	ThPOS-33.29	74
Yamashita, Tomoko	WeA18.4	6
	ThPOS-21.15	66
Yambe, Tomoyuki	WePOS-27.3	25
	WePOS-31.14	31
Yan, Cong	WeA05.1	2
	ThA05.4	40
	ThB05.4	47
	ThB05.5	47
	ThPOS-05.2	59
	FrC05.5	97
Yan, Jiawen	ThB10.1	48
	ThB10.3	48
	ThB10.4	48
Yan, Jiayi	SaC12.6	144
Yan, Lirong	ThPOS-33.19	73
Yan, Minghao	ThPOS-24.3	67
	FrPOS-35.19	121
Yan, Nan	FrB01.2	88
Yan, Pingkun	SaB17.1	140
Yan, Ryan	SaC19.1	146
Yan, Yuguang	ThB12.2	49
Yan, Yutong	SaC19.5	147
Yan, Zhuangzhi	WeA03.2	1
Yana, Kazuo	WePOS-33.31	36
	WePOS-33.32	36
	WePOS-33.37	36
	WePOS-34.5	37
	WePOS-34.6	37
Yang, Anne En-Tzu	ThPOS-36.41	81
Yang, Banghua	WePOS-07.4	16
Yang, Bin	WePOS-04.5	15
Yang, Changchun	SaC03.1	141
	SaC03.2	141
	SaD15.5	152
Yang, Chen	SaB14.5	139
Yang, Chiou-Fong	SaC07.2	143
Yang, Chung-Yi	WePOS-12.15	20
Yang, Chushu	WePOS-12.6	19
Yang, Cuiwei	ThB05.3	47
Yang, Dalin	ThPOS-33.5	72
Yang, De	FrPOS-09.3	105
Yang, Emily	ThPOS-23.4	66
Yang, Fei	ThC09.2	54
Yang, Feng	FrB12.5	92
Yang, Heewon	ThPOS-33.31	74
Yang, Jiajia	FrC14.6	99
Yang, Jiancheng	SaA13.1	132
Yang, Jianlong	FrC03.4	96
	SaA03.3	129
Yang, Jiemeng	WePOS-29.33	28
	ThPOS-33.33	74
Yang, Kai-Chiang	FrPOS-35.15	121
Yang, Kang	ThB12.5	49
Yang, Lin	ThA02.6	39
Yang, Mei	ThPOS-32.8	70
Yang, Mengya	WeA16.6	6
Yang, Peixiang	ThPOS-30.3	69
Yang, Peng	WeA12.2	4
	WeA16.6	6
Yang, Po	ThC20.5	57
	FrPOS-38.31	128
Yang, Rongfang	WePOS-16.2	21
Yang, Ruolin	WePOS-10.1	17

Yang, Seungman	WePOS-31.6	31	Yi, Jungho	WePOS-19.6	23
	FrPOS-33.11	116		WePOS-26.1	25
Yang, Shang-Qing	WePOS-30.36	30		ThC12.4	55
Yang, Shih-Chieh	ThPOS-34.23	76	Yi, Weibo	SaA01.6	129
Yang, Shuai	WePOS-15.6	21		SaA18.6	134
Yang, Shu-Yu	WePOS-33.23	36		FrB16.1	93
Yang, Sunchoel	WePOS-31.27	32	Yihun, Yimesker	FrPOS-27.1	112
Yang, Weijie	WePOS-04.4	15		ThPOS-26.10	68
Yang, Wenming	ThPOS-03.4	58	Yilmaz, Atila	SaC17.4	146
	FrPOS-08.3	104	Yim, Donghyun	WePOS-31.27	32
Yang, Xiuli	FrC01.3	95	Yim, Kingsley Ho Chiu	FrPOS-28.7	113
	FrC01.4	95	Yim, Man-Sung	ThPOS-35.24	78
Yang, Xiuzhu	SaB05.3	136	Yin, Kuiying	WeA18.5	6
Yang, Xuening	FrC14.6	99	Yin, Pengyu	FrPOS-34.44	120
Yang, Xulei	FrB12.5	92	Yin, Ying	WePOS-23.5	24
Yang, Yanwu	WePOS-12.6	19	Yin, Zhongliang	WeA18.5	6
Yang, Ya-Ting	FrPOS-35.15	121	Ying, Leslie	SaD03.6	148
Yang, Yuchao	FrPOS-06.10	104	Yip, James Wei Luen	WePOS-10.2	17
Yang, Yun	ThC20.5	57	Ylen, Peter	ThPOS-33.40	74
Yang, Zaiyue	FrC14.3	99	Yochum, Maxime	SaC06.3	142
Yang, Zhaochu	WePOS-15.6	21	Yokosawa, Koichi	WePOS-30.12	28
Yang, Zhengzheng	SaA19.4	135		ThA18.6	44
Yang, Zhi	WePOS-04.10	15	Yokota, Hideo	ThB12.6	49
	ThPOS-26.5	68		ThC15.6	56
Yang, Zixu	WeA14.5	5		ThPOS-12.3	61
Yano, Hajime	FrPOS-22.9	110		ThPOS-34.26	76
Yano, Kenichi	ThA16.1	CC		SaD10.4	150
	ThA16.6	43	Yokota, Yusuke	WePOS-34.17	38
	SaC16.3	146		WePOS-34.20	38
Yano, Shiro	FrPOS-36.38	124		WePOS-34.22	38
	FrPOS-38.17	127	Yokoyama, Kazuhiro	WePOS-30.14	29
Yano, Sumio	FrPOS-27.17	113	Yokoyama, Kiyoko	FrPOS-34.17	119
Yao, Da-Jeng	FrC07.4	97		FrPOS-34.39	120
Yao, Dezhong	ThPOS-06.8	59		FrPOS-35.26	122
Yao, Feng	FrPOS-34.44	120	Yokoyama, Yuichi	FrPOS-33.29	117
Yao, Heming	ThC15.2	55	Yomo, Hiroyuki	FrPOS-38.5	126
Yao, Siyuan	ThA20.6	45	Yoneda, Ken	WeA10.6	3
Yao, Zhaojie	FrA01.2	82	Yoneyama, Takashi	ThC05.3	53
	FrPOS-24.3	111	Yoo, Dongyual	WeA08.2	2
Yaolei, Zhang	WePOS-21.1	23		ThPOS-36.35	81
Yap, Jonathan	WePOS-10.2	17	Yoo, Ho-Ryong	FrPOS-33.24	116
Yap, Shelley	ThPOS-15.8	62	Yoo, Ho-Ryong Yoo	FrPOS-34.47	120
Yapps, Bryce	WeC17.2	12	Yoo, Hyun Ji	ThPOS-35.20	78
Yaramothu, Chang	WeA08.1	2	Yoo, HyunJong	ThPOS-32.42	72
Yaremko, Brian	SaB17.6	140	Yoo, Hyun-Joon	ThPOS-06.7	59
	SaD09.5	150		ThPOS-34.45	77
Yarici, Metin	SaA13.5	133		ThPOS-34.48	77
Yasemin, Mine	SaA04.2	130	Yoo, Jerald	WePOS-04.6	15
Yasin, Omar	WePOS-30.43	30	Yoo, Seonggeun	FrA13.3	85
Yasin, Temel	ThPOS-02.3	58	Yoo, So-Hyeon	ThPOS-33.5	72
Yasuda, Ikumu	SaA15.4	133		FrC17.4	100
Yaune, Gregory	ThPOS-27.4	68	Yoo, Sun K.	WePOS-32.6	33
	FrC15.3	100		ThPOS-32.44	72
Yavari, Ehsan	SaC13.2	145		FrPOS-36.19	123
Yavarimanesh, Mohammad	WeA13.1	4	Yoo, Sunyoung	WePOS-34.12	37
	FrPOS-37.36	126		ThPOS-07.3	60
	FrPOS-37.38	126		ThPOS-32.29	71
Yayo, Ken-ichi	WePOS-29.17	27	Yoo, Yangmo	ThPOS-32.24	71
Yazdani, Sasan	ThPOS-26.4	68	Yoon, Changhan	FrPOS-37.21	125
	FrPOS-34.40	120	Yoon, Eugene	ThPOS-35.19	78
Yazdan-Shahmorad, Azadeh	FrA01.2	82	Yoon, Hyung-Jin	WePOS-33.6	35
	FrPOS-24.3	111		WePOS-33.13	35
	SaC06.2	142		WePOS-34.4	37
Yazdchi, Mohammadreza	WeA17.5	6		ThPOS-35.31	79
	FrPOS-12.1	106		FrPOS-34.34	119
Yazdi, Sina Ghafoorpoor	FrPOS-08.2	104		FrPOS-36.37	124
Ye, Bing	FrA08.1	84	Yoon, Jungwon	WePOS-32.26	34
Ye, Dong Hye	WePOS-31.48	33	Yoon, Kwon-Ha	WePOS-31.45	32
	WePOS-31.49	33		WePOS-33.7	35
	ThPOS-32.3	70	Yoon, Myung-Han	ThPOS-35.21	78
Ye, Eunbi	WePOS-31.27	32	Yoon, Seung Keun	WeA13.3	4
Ye, Hui	FrC18.5	101	Yoon-Ji, Kim	WePOS-33.11	35
Ye, Jingying	WePOS-33.22	35		WePOS-33.29	36
Yedidia, Noa	WePOS-11.11	18	Yoshida, Chihiro	ThA21.5	45
Yeh, Chien-Hung	FrB14.1	92	Yoshida, Ken	SaC06.5	142
Yeh, Hsiu-Wei	ThB02.5	46	Yoshida, Noboru	ThPOS-35.35	79
Yemini, Mor	ThPOS-32.12	70		FrPOS-37.14	125
Yeo, Khung Keong	WePOS-31.7	31	Yoshida, Yuri	WePOS-14.9	21
Yeo, Sunmi	FrPOS-37.27	125	Yoshihi, Motoki	FrPOS-37.11	125
Yeoh, Jonathan	FrPOS-35.32	122	Yoshikawa, Masahiro	SaC16.5	146
Yi Han Chua, Victoria	WeA14.5	5		SaC16.6	146

Zhang, Dongdong	ThB12.5	49	Zhang, Teng	ThB04.4	46
	SaB17.4	140		ThPOS-36.37	81
Zhang, Edmond	ThB19.5	51	Zhang, Wenbin	ThPOS-25.8	67
Zhang, Erlei	WePOS-11.25	18	Zhang, Xiabing	ThPOS-06.8	59
Zhang, Fan	WeA12.5	4	Zhang, Xiang	FrA02.4	82
	FrPOS-08.12	105		FrB06.4	90
	FrPOS-33.35	117		SaD17.5	153
	FrPOS-33.41	117	Zhang, XiangZi	SaA01.3	129
	SaB03.6	136	Zhang, Xiaoke	ThA19.4	44
Zhang, Haihong	WePOS-18.8	22	Zhang, Xiaomiao	FrC01.5	95
Zhang, Han	ThPOS-25.8	67	Zhang, Xin	FrB06.1	90
Zhang, Hang	FrPOS-33.2	115	Zhang, Xinran	WePOS-33.22	35
Zhang, Hanyong	ThPOS-02.6	58	Zhang, Xinshu	FrPOS-12.4	107
Zhang, Heng	FrPOS-22.1	110	Zhang, Xinyue	FrPOS-22.1	110
Zhang, Henggui	WeA17.6	6		SaB05.3	136
	ThPOS-15.2	62	Zhang, Xiulan	WePOS-11.3	17
	FrB09.1	CC		FrPOS-08.4	104
	FrB09.6	91	Zhang, Xu	ThB06.1	47
Zhang, Honggang	WePOS-10.1	17		ThPOS-06.2	59
	WePOS-10.4	17		ThPOS-06.3	59
Zhang, Honglai	WePOS-11.4	17		SaC17.2	146
Zhang, Jialun	ThPOS-25.11	68	Zhang, Yan	ThPOS-12.2	61
Zhang, Jianguo	FrPOS-23.6	111	Zhang, Yang	WePOS-27.8	26
Zhang, Jie	FrPOS-34.44	120		FrPOS-20.9	109
Zhang, Jing	FrPOS-05.2	103	Zhang, Yawen	ThPOS-23.7	66
Zhang, Jue	WePOS-30.8	28	Zhang, Yi	WePOS-13.7	20
	WePOS-30.9	28		ThPOS-06.8	59
	WePOS-30.10	28	Zhang, Yifei	FrPOS-12.4	107
	WePOS-30.11	28	Zhang, Yongtao	SaD12.1	151
	WePOS-31.19	31	Zhang, You	WeC15.3	12
	WePOS-32.25	34	Zhang, Yuan-Ting	WePOS-33.40	36
	ThPOS-32.8	70	Zhang, Yue	WePOS-12.1	19
	ThPOS-33.44	75		SaA19.2	135
	ThPOS-34.2	75		SaB19.2	140
Zhang, Jun-Mei	WeA11.4	4	Zhang, Yun	FrPOS-01.5	102
	WePOS-10.2	17	Zhang, Zhendong	WePOS-18.2	22
	WePOS-31.7	31	Zhang, Zhengyang	FrA17.4	87
	FrPOS-11.6	106	Zhang, Zhiqiang	WePOS-29.33	28
Zhang, Kai	WePOS-31.44	32		FrC16.5	100
	ThPOS-20.13	64	Zhang, Zhiwei	FrPOS-36.11	122
Zhang, Kangwei	FrPOS-32.1	115	Zhang, Zhuo	WePOS-18.8	22
Zhang, Lei	ThPOS-20.7	64	Zhang, Zhuozhi	FrPOS-34.44	120
	FrPOS-01.4	101	Zhang, Zixing	FrA08.2	84
	SaA19.4	135	Zhao, Bo	WeC15.3	12
	SaD01.5	147		WeC15.6	12
Zhang, Li	FrB18.3	94	Zhao, Chen	WePOS-04.4	15
	FrPOS-06.4	104	Zhao, Dongsheng	WePOS-23.7	24
	FrPOS-23.1	110		ThPOS-30.3	69
Zhang, Lijian	SaA01.6	129	Zhao, Jialu	WeA20.5	7
Zhang, Lijuan	WePOS-11.4	17	Zhao, Jun	WePOS-12.8	19
Zhang, Lin	SaB05.3	136		SaB17.3	140
Zhang, Lipeng	ThPOS-20.18	65	Zhao, Li-Ming	ThPOS-20.14	64
Zhang, Lixin	FrPOS-01.9	102	Zhao, Luke Hong Lu	WeA17.2	6
Zhang, Lu	WePOS-18.8	22	Zhao, Ni	WePOS-33.40	36
Zhang, Lynn	ThPOS-31.6	70	Zhao, Qi	SaB05.2	136
Zhang, Meihui	ThPOS-34.4	75	Zhao, Qibin	ThC01.1	52
Zhang, Min	SaA19.4	135	Zhao, Rui	SaA03.3	129
Zhang, Ming	WePOS-21.1	23	Zhao, Wangyuan	WePOS-12.8	19
Zhang, Minghui	FrC18.1	101	Zhao, Wei	WeA05.1	2
Zhang, Mingming	FrPOS-09.11	106		WeC05.4	9
	FrPOS-28.11	113		ThA05.4	40
Zhang, Ningbo	FrPOS-11.1	106		ThB05.4	47
Zhang, Pan	WePOS-27.8	26		ThB05.5	47
Zhang, Peng	ThPOS-36.1	79		ThB12.2	49
Zhang, Qi	FrPOS-05.2	103		ThPOS-05.2	59
Zhang, Qiaowei	FrPOS-11.8	106		FrC05.5	97
Zhang, Qingxue	ThPOS-05.4	59	Zhao, Xiaodan	WeA11.6	4
Zhang, Rong	ThB04.2	46		WePOS-10.2	17
	ThPOS-26.3	68		FrB12.5	92
	FrPOS-17.3	108		FrPOS-11.6	106
	SaA11.5	132	Zhao, Xin	WeA18.6	6
Zhang, Rugang	SaD12.1	151	Zhao, Yao	WeC06.4	9
Zhang, Rui	ThPOS-20.18	65	Zhao, Yifan	SaA03.3	129
Zhang, Ruili	FrPOS-23.6	111	Zhao, Yingying	FrPOS-17.1	108
Zhang, Shanshan	FrPOS-01.9	102	Zhao, Yitian	WePOS-11.3	17
Zhang, Shaomin	ThPOS-20.10	64		FrC03.4	96
	SaC01.1	141		FrPOS-08.4	104
Zhang, Sicong	WePOS-31.44	32		SaA03.3	129
	FrPOS-27.8	112	Zhao, Yongjian	SaC03.5	141
Zhang, Song	ThA02.6	39		SaD15.6	152

Zhao, Yu	WePOS-11.26	19	Zhu, David	WePOS-31.41	32
	FrA01.6	82	Zhu, Hong	ThB18.5	51
Zhao, Zhenghuan	ThPOS-35.7	78	Zhu, Kaiyin	WePOS-08.4	16
Zheng, Chengguang	FrC14.6	99		ThA14.4	42
Zheng, Dingchang	ThA02.1	CC	Zhu, Limin	FrPOS-16.2	108
	ThA02.2	39	Zhu, Mingxing	FrPOS-25.2	111
	ThA02.3	39	Zhu, Rui	SaA16.3	134
	ThC05.5	53	Zhu, Tingting	FrC05.4	96
	ThPOS-21.14	66	Zhu, Xiangyang	ThB01.3	45
	SaD09.1	150		FrPOS-22.12	110
Zheng, Enhao	WePOS-18.2	22		SaC14.1	145
Zheng, Hairong	FrC18.4	101		SaC14.4	145
	SaA12.5	132	Zhu, Xiaoyan	WePOS-21.1	23
Zheng, Haoteng	SaC15.6	145	Zhu, Yanjie	FrC18.1	101
Zheng, Jenny	FrPOS-09.3	105		FrC18.4	101
Zheng, Li	ThPOS-20.11	64		SaD03.6	148
Zheng, Lvpioao	ThPOS-19.4	64	Zhu, Yongjun	FrC12.6	99
	ThPOS-36.11	80	Zhuang, Jyunrong	ThPOS-21.9	65
Zheng, Mao Sheng	FrPOS-36.44	124	Zhuang, Katie	ThPOS-34.46	77
Zheng, Wei-Long	SaD01.1	147	Zhuo, Kaiming	FrC12.6	99
Zheng, Wei-Zhong	ThB02.5	46	Zi, Xingyu	WePOS-15.5	21
	ThPOS-36.25	80	Ziegelman, Liran	FrPOS-25.1	111
Zheng, WenWei	ThPOS-09.2	60	Ziegler, Martin	WePOS-29.2	26
Zheng, Yalin	ThPOS-35.25	79	Zieglowski, Leonie	SaB05.5	137
Zheng, Yaobin	FrPOS-32.1	115	Zieliński, Krzysztof	FrPOS-33.43	117
Zheng, Yi	SaC17.2	146	Zigel, Yaniv	ThPOS-04.3	58
Zheng, Yijia	WePOS-30.8	28		ThPOS-04.6	59
	WePOS-30.9	28		ThPOS-32.12	70
	WePOS-30.10	28		FrPOS-34.41	120
	WePOS-30.11	28		FrPOS-37.8	124
	ThPOS-33.44	75	Zimmer, Veronika	ThPOS-09.3	60
Zheng, Yiming	ThPOS-32.8	70	Zimmermann, Julius	WePOS-14.3	20
Zheng, Yong-Ping	FrPOS-09.3	105		WePOS-31.34	32
Zheng, Yu	WePOS-31.18	31		SaC07.4	143
	WePOS-31.41	32	Zimmermann, Melanie	ThC04.2	53
Zheng, Yunfei	SaD14.5	152	Zinger, Svitlana	FrB03.4	89
Zheng, Bin	FrPOS-28.11	113	Zito, Margherita	WeC18.3	13
Zhong, Boxuan	ThPOS-21.13	66	Zlahoda-Huzior, Adriana	ThPOS-11.2	61
Zhong, Liang	WeA11.1	CC	Zolet, Cerise M. L. S.	ThPOS-13.2	61
	WeA11.4	4	Zommaro, Noha Mohsen	ThPOS-09.2	60
	WeA11.6	4	Zötterman, Johan	ThPOS-33.7	73
	WePOS-10.2	17		FrC13.3	99
	WePOS-31.7	31	Zou, Jincheng	FrPOS-32.1	115
	FrA12.1	C	Zou, Ke	FrPOS-32.1	115
	FrA12.3	85	Zou, Lixian	FrC18.4	101
	FrB12.5	92		FrPOS-09.9	106
	FrPOS-11.6	106		SaD03.6	148
Zhong, Wenjuan	FrPOS-28.11	113	Zsenák, István	WePOS-29.31	28
Zhong, Yizhou	SaC12.6	144	Zsigmond, Peter	FrA18.4	87
Zhou, Feng	ThA15.1	43	Zsom, Andras	ThPOS-31.6	70
Zhou, Guolin	WePOS-02.7	15	Zube, Marcel	SaB01.1	135
	WePOS-32.20	34	Zurbuchen, Adrian	FrPOS-33.50	118
Zhou, Jie	ThB18.5	51	Zychlinsky, Arturo	SaB03.5	136
Zhou, Jing	FrPOS-09.11	106			
Zhou, Kang	SaC03.1	141			
Zhou, Linying	ThPOS-21.4	65			
Zhou, Longfu	WePOS-21.1	23			
Zhou, Luping	ThC14.1	55			
Zhou, Peng	ThPOS-16.4	62			
	ThPOS-21.4	65			
Zhou, Quan	WeA04.5	2			
Zhou, Rong	ThPOS-20.14	64			
Zhou, Shichong	WePOS-11.22	18			
	SaB15.2	139			
Zhou, Tao	FrPOS-28.13	113			
Zhou, Tony	ThPOS-17.8	63			
Zhou, Weijun	WePOS-11.22	18			
Zhou, Wu	WePOS-11.4	17			
Zhou, Xiangrong	ThPOS-32.34	71			
	ThPOS-32.35	72			
Zhou, Xianlian A.	FrPOS-35.10	121			
Zhou, Xiaohu	SaA12.1	132			
	SaD11.4	151			
Zhou, Xiaoyu	SaB01.2	135			
Zhou, Yanjie	SaA12.1	132			
Zhou, Yijie	SaC01.5	141			
Zhou, Yingling	FrC05.4	96			
Zhou, Yi-Shu	ThPOS-36.25	80			
Zhou, Yuan	WeA15.3	5			
	WePOS-22.3	24			
Zhou, Zhiguo	ThB19.6	51			

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