Mads Rovsing Jochumsen
Associate Professor
Department of Health Science and Technology
The Faculty of Medicine
Neural Engineering and Neurophysiology
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Center for Rehabilitation Robotics
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Research profile

My primary research areas are centered around control of external devices using the electrophysiological signals from the body, especially from the brain and muscles. I am working with Brain-Computer Interfaces for stroke, cerebral palsy and multiple sclerosis rehabilitation and to allow control of assistive devices for individuals with severe motor impairments after e.g. spinal cord injury or ALS (amyotrophic lateral sclerosis). The assistive technology include robots, exoskeletons, and computers. Besides signal processing and pattern recognition, I focus on the application of the control interfaces in terms of induction of plasticity in the human nervous system, rehabilitation (movement restoration and replacement), and gaming for increased motivation in the rehabilitation process. Lastly, my research involves quantifying changes in the brain associated with various neurological conditions (stroke, Mild Cognitive Impairment etc.), and changes throughout the human nervous system in response to various types of interventions for rehabilitation and basic science using magnetic and electrical stimulation.

Qualifications

Biomedical Engineering, PhD, Analysis of Movement-Related Cortical Potentials for Brain-Computer Interfacing in Stroke Rehabilitation
1 Sept 2012 → 15 Oct 2015
Award Date: 15 Oct 2015

Management - CBS, Research Management Course
26 Oct 2021 → 4 Mar 2022

Project management, Project management for Researchers
May 2018 → Aug 2018

University pedagogics for assistant lecturers
1 Nov 2015 → 31 Dec 2016

Biomedical Engineering, Master of Science
1 Sept 2010 → 30 Jun 2012

Entrepreneurship, Student Entrepreneurship at Aalborg University
2010 → 2012

Biomedical Engineering, Bachelor of Science
1 Sept 2007 → 30 Jun 2010

Employment

Associate Professor

Associate Professor
Department of Health Science and Technology
The Faculty of Medicine
Gistrup, Denmark
1 Sept 2012 → 31 Dec 4712

Associate Professor

Associate Professor
The Faculty of Medicine
Gistrup, Denmark

1 Sept 2012 → 31 Dec 4712

Neural Engineering and Neurophysiology
The Faculty of Medicine
Gistrup, Denmark
1 Dec 2015 → present

Associate Professor
Associate Professor
Neural Engineering and Neurophysiology
The Faculty of Medicine
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1 Sept 2012 → 31 Dec 4712

Center for Rehabilitation Robotics
The Faculty of Medicine
Gistrup, Denmark
1 Apr 2021 → present

Research outputs

Detection of movement-related cortical potentials associated with upper and low limb movements in patients with multiple sclerosis for brain-computer interfacing
Jochumsen, M., Petersen, B. S., Mikkelsen Vestergaard, L., Falborg, N. F., Wisler, L., Olesen, M. V., Andersen, M. S., Sørensen, N. B. & Jørgensen, S. T., 15 Jul 2025, (E-pub ahead of print) In: Journal of Neural Engineering.

Patient Perspectives on the 'Future Patient' Telerehabilitation Program for Atrial Fibrillation: A Qualitative Study
Joensen, E. D. R., Albertsen, A. E., Spindler, H., Jensen, K. M., Frost, L., Dittmann, L., Gunasegaram, M., Johnsen, S. P., Jochumsen, M. R., Svenstrup, D. & Dinesen, B., 15 May 2025, (Accepted/In press) In: JMIR Cardio.

Experience of Virtual Help in a Simulated BCI Stroke Rehabilitation Serious Game and How to Measure It
Hougaard, B. I., Knoche, H., Kristensen, M. S. & Jochumsen, M. R., May 2025, In: Sensors. 25, 9, 30 p., 2742.

Future Patient-Telerehabilitation of Patients With Atrial Fibrillation: Protocol for a Multicenter, Mixed Methods, Randomized Controlled Trial
Dinesen, B., Albertsen, A. E., Joensen, E. D. R., Spindler, H., Jensen, K. M., Kidholm, K., Frost, L., Dittman, L., Gunasegaram, M., Johnsen, S. P., Jochumsen, M. R. & Svenstrup, D., 18 Feb 2025, In: JMIR Research Protocols. 14, p. e64259 e64259.

Kommunikation med tankens kraft
Jochumsen, M. R. (Producer), 4 Feb 2025

Development of a Machine Learning Model for Screening Sleep Apnea in Heart Failure Patients Using Sleep Sensor
Gunasegaram, M., Dinesen, B., Larsen, N., Gilavaie, G., Østergaard, M. & Jochumsen, M. R., 2025, (Submitted).

Mastering Tongue-Computer Interfaces: A Pilot Study on How Users Improve Over Time
Cardoso, A. S. S., Kæseler, R. L., Ammitzbøll, A., Hagen, E.-M., Blicher, J., Obál, I., Kirtas, O., Khan, J. S., Mohammadi, M., Jochumsen, M. R. & Struijk, L. N. S. A., 2025, (Accepted/In press) *47th Annual International Conference of the IEEE Engineering in Medicine and Biology Society*.

Wearable Focal Muscle Vibration Improves Upper Limb Function in People with Sub-acute Stroke
Niazi, I. K., Amjad, I., Farooq, I., Shafi, H., Rashid, U., Kumari, N., Shaikh, N., Jochumsen, M., Holt, K., Haavik, H., Farmer, S. F. & Pujari, A. N., 11 Nov 2024, medRxiv, 20 p.

Utilizing machine learning to predict episodes of atrial fibrillation based on sleep parameters extracted from an in-bed sleep sensor
Gunasegaram, M., Dinesen, B., Røge, K., Svenstrup, D., Frost, L., Albertsen, A. E. & Jochumsen, M. R., Oct 2024.

Detection of Movement-Related Brain Activity Associated with Hand and Tongue Movements from Single-Trial Around-Ear EEG
Gulyás, D. & Jochumsen, M., 17 Sept 2024, In: Sensors (Basel, Switzerland). 24, 18, 6004.

Single-trial movement intention detection estimation in patients with Parkinson's disease: a movement-related cortical potential study
Jochumsen, M., Poulsen, K. B., Sørensen, S. L., Sulkjær, C. S., Corydon, F. K., Strauss, L. S. & Roos, J. B., 1 Aug 2024, In: Journal of Neural Engineering. 21, 4, 046036.

Future Patient – Telerehabilitation of Patients with Atrial Fibrillation: Protocol for a Multicenter, Mixed methods, and Randomized Controlled Trial
Dinesen, B., Albertsen, A. E., Joensen, E. D. R., Spindler, H., Jensen, K. M., Kidholm, K., Frost, L., Dittman, L., Gunasegaram, M., Johnsen, S. P., Jocumsen, M. R. & Svenstrup, D., 12 Jul 2024, JMIR Publications, 37 p.

The Effect of Caffeine on Movement-Related Cortical Potential Morphology and Detection
Jochumsen, M., Lavesen, E. R., Griem, A. B., Falkenberg-Andersen, C. & Jensen, S. K. G., 20 Jun 2024, In: Sensors (Basel, Switzerland). 24, 12, 4030.

“Future patient II” telerehabilitation for patients with heart failure: Protocol for a randomized controlled trial
Dinesen, B., Hansen, E. T., Refsgaard, J., Lundsgaard, S. V., Dittmann, L., Larsen, K., Spindler, H., Jochumsen, M. & Hollingdal, M., Mar 2024, In: International Journal of Cardiology Cardiovascular Risk and Prevention. 20, 200239.

Evaluation of an adaptive hybrid tongue-brain control framework by individuals with amyotrophic lateral sclerosis
Kæseler, R. L., Johansen, D., Pálsdóttir, A. A., Farina, D., Bentsen, B., Blicher, J. U., Obál, I., Dremstrup, K., Jochumsen, M. R. & Struijk, L. N. S. A., 18 Oct 2023, TechRxiv, 23 p.

Assessing Mode-Switching Strategies for Assistive Robotic Manipulators Using a Preliminary Version of the Novel Non-invasive Tongue-Computer Interface
Santos Cardoso, A. S., Mohammadi, M., Kaseler, R. L., Jochumsen, M. & Andreasen Struijk, L. N. S., Jul 2023, *2023 45th Annual International Conference of the IEEE Engineering in Medicine and Biology Conference, EMBC 2023 - Proceedings.* IEEE (Institute of Electrical and Electronics Engineers), 10340946. (I E E E Engineering in Medicine and Biology Society. Conference Proceedings).

Adapting to progressive paralysis: A tongue-brain hybrid robot interface for individuals with amyotrophic lateral sclerosis
Kæseler, R. L., Farina, D., Bentsen, B., Obál, I., Vinge, L., Dremstrup, K., Jochumsen, M. R. & Struijk, L. N. S. A., 5 Feb 2023, TechRxiv, 14 p.

Brain patterns generated while using a tongue control interface: a preliminary study with two individuals with ALS
Kæseler, R. L., Jochumsen, M. R., Cardoso, A. S. S. & Struijk, L. N. S. A., 2023, *2023 IEEE International Conference on Systems, Man, and Cybernetics (SMC): Improving the Quality of Life, SMC 2023 - Proceedings.* IEEE (Institute of Electrical and Electronics Engineers), p. 4242-4246 5 p. 10394071. (Conference Proceedings - IEEE International Conference on Systems, Man and Cybernetics).

Can water-based EEG caps record robust movement-related cortical potentials (MRCPs) for single and multiple joint movements?
Ghani, U., Jochumsen, M., Gyldenvang, M. B. & Niazi, I. K., 2023, *2023 45th Annual International Conference of the IEEE Engineering in Medicine and Biology Conference, EMBC 2023 - Proceedings.* IEEE (Institute of Electrical and Electronics Engineers), 10340665. (I E E E Engineering in Medicine and Biology Society. Conference Proceedings).

Implementing Performance Accommodation Mechanisms in Online BCI for Stroke Rehabilitation: A Study on Perceived Control and Frustration
Jochumsen, M. R., Hougaard, B. I., Kristensen, M. S. & Knoche, H., 22 Nov 2022, In: Sensors. 22, 23, 9051.

Modulating Heart Rate Variability through Deep Breathing Exercises and Transcutaneous Auricular Vagus Nerve Stimulation: A Study in Healthy Participants and in Patients with Rheumatoid Arthritis or Systemic Lupus Erythematosus
Jensen, M. K., Andersen, S. S., Andersen, S. S., Liboriussen, C. H., Kristensen, S. & Jochumsen, M., 17 Oct 2022, In: Sensors (Basel, Switzerland). 22, 20, 7884.

Investigating the Dose-Response Relationship between Deep Breathing and Heart Rate Variability in Healthy Participants and Across-Days Reliability in Patients with Rheumatoid Arthritis and Systemic Lupus Erythematosus
Liboriussen, C. H., Andersen, S. S., Andersen, S. S., Jensen, M. K., Jochumsen, M. & Kristensen, S., 10 Sept 2022, In: Sensors (Basel, Switzerland). 22, 18, 6849.

Modulating Frustration and Agency Using Fabricated Input for Motor Imagery BCIs in Stroke Rehabilitation
Hougaard, B. I., Knoche, H., Kristensen, M. S. & Jochumsen, M. R., 4 Jul 2022, In: IEEE Access. 10, p. 72312-72327 16 p., 9813712.

Comparing the Usability of Alternative EEG Devices to Traditional Electrode Caps for SSVEP-BCI Controlled Assistive Robots
Cardoso, A. S. S., Struijk, L. N. S. A., Kæseler, R. L. & Jochumsen, M. R., 1 Jul 2022, *2022 IEEE International Conference on Rehabilitation Robotics (ICORR)..* IEEE (Institute of Electrical and Electronics Engineers), Vol. 2022. p. 1-6 6 p. 9896588. (I E E E International Conference on Rehabilitation Robotics. Proceedings).

Manual 3D Control of an Assistive Robotic Manipulator Using Alpha Rhythms and an Auditory Menu: A Proof-of-Concept
Santos Cardoso, A. S., Kæseler, R. L., Jochumsen, M. R. & Struijk, L. N. S. A., 16 Jun 2022, In: Signals. 3, 2, p. 396-409 14 p.

The effect of transcutaneous auricular vagus nerve stimulation and deep breathing exercises on heart rate variability in healthy participants and patients with rheumatoid arthritis and systemic lupus erythematosus
Jensen, M. K., Andersen, S. S., Liboriussen, C. H., Andersen, S. S., Jochumsen, M. R. & Kristensen, S., Jun 2022, In: Annals of the Rheumatic Diseases. 81, Suppl. 1, p. 569-570

Associative cued asynchronous BCI induces cortical plasticity in stroke patients
Niazi, I. K., Navid, M. S., Rashid, U., Amjad, I., Olsen, S., Haavik, H., Alder, G., Kumari, N., Signal, N., Taylor, D., Farina, D. & Jochumsen, M., May 2022, In: Annals of clinical and translational neurology. 9, 5, p. 722-733 12 p.

Deep breathing increases heart rate variability in healthy participants and in patients with rheumatoid arthritis and systemic lupus erythematosus: an interventional dose-response study
Liboriussen, C. H., Andersen, S. S., Jensen, M. K., Andersen, S. S., Jochumsen, M. R. & Kristensen, S., May 2022, In: Annals of the Rheumatic Diseases. 81, Suppl. 1, p. 1262-1263

Scalable tensor factorization for recovering multiday missing intramuscular electromyography data
Akmal, M., Zubair, S., Jochumsen, M. R., Rehman, M. Z. U., Kamavuako, E. N., Irfan Abid, M. & Niazi, I. K., 25 Apr 2022, In: Journal of Intelligent and Fuzzy Systems. 43, 1, p. 1177-1187 11 p.

Feature- and classification analysis for detection and classification of tongue movements from single-trial pre-movement EEG
Kæseler, R. L., Johansson, T. W., Struijk, L. N. S. A. & Jochumsen, M. R., 15 Mar 2022, In: I E E E Transactions on Neural Systems and Rehabilitation Engineering. 30, p. 678-687 10 p.

Single-Trial Classification of Error-Related Potentials in People with Motor Disabilities: A Study in Cerebral Palsy, Stroke, and Amputees
Usama, N., Niazi, I. K., Dremstrup, K. & Jochumsen, M., 21 Feb 2022, In: Sensors. 22, 4, 1676.

Detection of Attempted Stroke Hand Motions from Surface EMG

Jochumsen, M. R., Waris, A. & Niazi, I. K., 2022, *Converging Clinical and Engineering Research on Neurorehabilitation IV: Proceedings of the 5th International Conference on Neurorehabilitation (ICNR2020), October 13–16, 2020.* Springer, p. 47-52 6 p. (Biosystems and Biorobotics, Vol. 28).

Subject-Independent Detection of Movement-Related Cortical Potentials and Classifier Adaptation from Single-Channel EEG

Jochumsen, M. R., 2022, *Converging Clinical and Engineering Research on Neurorehabilitation IV: Proceedings of the 5th International Conference on Neurorehabilitation (ICNR2020), October 13–16, 2020.* Torricelli, D., Akay, M. & L. Pons, J. (eds.). Springer, p. 77-81 5 p. (Biosystems and Biorobotics, Vol. 28).

Effect of Continuous and Discrete Feedback on Agency and Frustration in a Brain-Computer Interface Virtual Reality Interaction.

Kjeldsen, T. K. K., Nielsen, T. B., Ziadeh, H., Lehmann , S., Nielsen, L. D., Gulyás, D., Hougaard, B. I., Knoche, H. & Jochumsen, M. R., 15 Dec 2021, *2021 IEEE 21st International Conference on Bioinformatics and Bioengineering (BIBE).* IEEE (Institute of Electrical and Electronics Engineers), p. 1-5 5 p. 9635586. (International Conference on Bioinformatics and Bioengineering).

Optimizing steady-state visual evoked potential classifiers for high performance and low computational costs in brain-computer interfacing

Kæseler, R. L., Struijk, L. N. S. A. & Jochumsen, M. R., Dec 2021, *IEEE 21st International Conference on Bioinformatics and Bioengineering (BIBE).* IEEE (Institute of Electrical and Electronics Engineers), 9635303. (International Conference on Bioinformatics and Bioengineering).

How can we help? Towards a design framework for performance-accommodation mechanisms for users struggling with input

Rossau, I. G., Bugge Skammelsen , R., Czapla, J., Hougaard, B. I., Knoche, H. & Jochumsen, M. R., 18 Oct 2021, *CHI PLAY 2021 - Extended Abstracts of the 2021 Annual Symposium on Computer-Human Interaction in Play.* New York: Association for Computing Machinery (ACM), p. 10-16 7 p.

Deep Breathing Increases Heart Rate Variability in Patients With Rheumatoid Arthritis and Systemic Lupus Erythematosus

Rovsing, C., Rovsing, H., Liboriussen, C. H., Jensen, M. K., Andersen, S. S., Andersen, S. S., Kristensen, S. & Jochumsen, M., Oct 2021, In: Clinical Rheumatology. 27, 7, p. 261-266 6 p.

Electroencephalographic recording of the movement-related cortical potential in ecologically-valid movements: A scoping review

Olsen, S., Alder, G., Williams, M., Chambers, S., Jochumsen, M. R., Signal, N., Rashid, U., Niazi, I. K. & Taylor, D., 28 Sept 2021, In: Frontiers in Neuroscience. 15, 721387.

Detection of error-related potentials in stroke patients from EEG using an artificial neural network

Usama, N., Niazi, I. K., Dremstrup, K. & Jochumsen, M., Sept 2021, In: Sensors. 21, 18, 6274.

Who willed it? Decreasing Frustration by Manipulating Perceived Control through Fabricated Input for Stroke Rehabilitation BCI Games

Hougaard, B. I., Rossau, I. G., Czapla, J. J., Miko, M. A., Bugge Skammelsen , R., Knoche, H. & Jochumsen, M., Sept 2021, In: Proceedings of the ACM on Human-Computer Interaction. 5, p. 1-19 19 p.

The Danish Future Patient Telerehabilitation Program for Patients with Atrial Fibrillation: Design and Pilot Study in Collaboration with Patients and Their Spouses

Dinesen, B., Gade, J. D., Schacksen, C. S., Spindler, H., Albertsen, A. E., Dittmann, L., Jochumsen, M. R. & Svenstrup, D., 19 Jul 2021, In: JMIR Cardio. 5, 2, 16 p., e27321.

Decoding of Ankle Joint Movements in Stroke Patients Using Surface Electromyography

Noor, A., Waris, A., Gilani, S. O., Kashif, A. S., Jochumsen, M., Iqbal, J. & Niazi, I. K., 24 Feb 2021, In: Sensors (Basel, Switzerland). 21, 5, p. 1-15 15 p., 1575.

Investigating the Intervention Parameters of Endogenous Paired Associative Stimulation (ePAS)
Alder, G., Signal, N., Vandal, A. C., Olsen, S., Jochumsen, M., Niazi, I. K. & Taylor, D., 12 Feb 2021, In: Brain Sciences. 11, 2, p. 1-22 22 p., 224.

Evaluation of windowing techniques for intramuscular EMG-based diagnostic, rehabilitative and assistive devices
Ashraf, H., Waris, A., Gilani, S. O., Kashif, A. S., Jamil, M., Jochumsen, M. R. & Niazi, I. K., Feb 2021, In: Journal of Neural Engineering. 18, 1, 016017.

Induction of Neural Plasticity Using a Low-Cost Open Source Brain-Computer Interface and a 3D-Printed Wrist Exoskeleton
Jochumsen, M. R., Janjua, T., Arceo Luzanilla, J. C., Lauber, J., Simoneau-Buessinger, E. & Kæseler, R. L., 15 Jan 2021, In: Sensors. 21, 2, p. 1-14 14 p., 572.

Decoding kinetic features of hand motor preparation from single-trial EEG using convolutional neural networks
Gatti, R., Atum, Y., Schiaffino, L., Jochumsen, M. & Biurrun Manresa, J., Jan 2021, In: European Journal of Neuroscience. 53, 2, p. 556-570 15 p.

Development of Future Patient - Telerehabilitation of Patients with Atrial Fibrillation
Svenstrup Møller, D., Gade, J. D., Schacksen, C. S., Spindler, H., Albertsen, A. E., Dittmann, L., Jochumsen, M. R., Mogensen, H. M. & Dinesen, B., 2021, *Abstract Book: Rehabilitation International World Congress 2021, 7–9 September 2021, Aarhus, Denmark* . p. 373 587

"Mine works better" - Examining the influence of embodiment in virtual reality on the sense of agency during a binary motor imagery task with a brain-computer interface
Ziadeh, H., Gulyás, D., Nielsen, L. D., Lehmann , S., Nielsen, T. B., Kjeldsen, T. K. K., Hougaard, B. I., Jochumsen, M. R. & Knoche, H., 2021, In: Frontiers in Psychology. 12, 11 p., 806424.

Detection and classification of tongue movements from single-trial EEG
Kæseler, R. L., Struijk, L. N. S. A. & Jochumsen, M., Dec 2020, *The 20th IEEE International Conference on BioInformatics And BioEngineering.* IEEE (Institute of Electrical and Electronics Engineers), p. 376-379 4 p. 9288026. (International Conference on Bioinformatics and Bioengineering).

Investigating the feasibility of combining EEG and EMG for controlling a hybrid human computer interface in patients with spinal cord injury
Leerskov, K., Rehman, M. Z. U., Niazi, I. K., Cremoux, S. & Jochumsen, M. R., Dec 2020, *20th IEEE Conference on Bioinformatics and Bioengineering (BIBE-2020).* IEEE Press, 8 p. 9288158. (International Conference on Bioinformatics and Bioengineering).

Decoding Attempted Hand Movements in Stroke Patients Using Surface Electromyography
Jochumsen, M., Niazi, I. K., Zia ur Rehman, M., Amjad, I., Shafique, M., Gilani, S. O. & Waris, A., 26 Nov 2020, In: Sensors. 20, 23, p. 1-14 14 p., 6763.

Classification of error-related potentials from single-trial EEG in association with executed and imagined movements: a feature and classifier investigation
Usama, N., Leerskov, K., Niazi, I. K., Dremstrup, K. & Jochumsen, M., 1 Nov 2020, In: Medical & Biological Engineering & Computing. 58, 11, p. 2699-2710 12 p.

Detection and classification of single-trial movement-related cortical potentials associated with functional lower limb movements
Jochumsen, M. & Niazi, I. K., 3 Jul 2020, In: Journal of Neural Engineering. 17, 3, 035009.

A Multiday Evaluation of Real-Time Intramuscular EMG Usability with ANN
Waris, A., Zia Ur Rehman, M., Niazi, I. K., Jochumsen, M., Englehart, K., Jensen, W., Haavik, H. & Kamavuako, E. N., 15 Jun 2020, In: Sensors (Basel, Switzerland). 20, 12, p. 1-13 13 p., 3385.

Peripheral Electrical Stimulation Paired With Movement-Related Cortical Potentials Improves Isometric Muscle Strength and Voluntary Activation Following Stroke
Olsen, S., Signal, N., Niazi, I. K., Rashid, U., Alder, G., Mawston, G., Nedergaard, R. B., Jochumsen, M. & Taylor, D., 15 May 2020, In: Frontiers in Human Neuroscience. 14, 14 p., 156.

EEG Headset Evaluation for Detection of Single-Trial Movement Intention for Brain-Computer Interfaces
Jochumsen, M., Knoche, H., Kjaer, T. W., Dinesen, B. & Kidmose, P., 14 May 2020, In: Sensors (Basel, Switzerland). 20, 10, 2804.

Upper Limb Complex Movements Decoding From Pre-Movement EEG Signals Using Wavelet Common Spatial Patterns
Mohseni, M., Shalchyan, V., Jochumsen, M. & Niazi, I. K., 1 Jan 2020, In: Computer Methods and Programs in Biomedicine. 183, 105076.

Evaluation of EEG Headset Mounting for Brain-Computer Interface-Based Stroke Rehabilitation by Patients, Therapists, and Relatives
Jochumsen, M., Knoche, H., Kidmose, P., Kjær, T. W. & Dinesen, B. I., 2020, In: Frontiers in Human Neuroscience. 14, 10 p., 13.

Tongue-Brain Computer Interface For Robotic Control
Kæseler, R. L., Struijk, L. N. S. A. & Jochumsen, M., 9 Oct 2019, p. 1. 1 p.

EMG-versus EEG-Triggered Electrical Stimulation for Inducing Corticospinal Plasticity
Jochumsen, M., Navid, M. S., Rashid, U., Haavik, H. & Niazi, I. K., 1 Sept 2019, In: IEEE Transactions on Neural Systems and Rehabilitation Engineering. 27, 9, p. 1901-1908 8 p.

Continuous 2-D control via state-machine triggered by endogenous sensory discrimination and a fast brain switch
Xu, R., Dosen, S., Jiang, N., Yao, L., Farooq, A., Jochumsen, M., Mrachacz-Kersting, N., Dremstrup, K. & Farina, D., 23 Jul 2019, In: Journal of Neural Engineering. 16, 5, 056001.

Designing a brain computer interface for control of an assistive robotic manipulator using steady state visually evoked potentials
Kæseler, R. L., Jochumsen, M., Leerskov, K., Struijk, L. N. S. A. & Dremstrup, K., Jul 2019, *2019 IEEE 16th International Conference on Rehabilitation Robotics, ICORR 2019.* IEEE (Institute of Electrical and Electronics Engineers), p. 1067-1072 6 p. 8779376. (I E E E International Conference on Rehabilitation Robotics. Proceedings).

Automated Labeling of Movement- Related Cortical Potentials Using Segmented Regression
Rashid, U., Niazi, I. K., Jochumsen, M., Krol, L. R., Signal, N. & Taylor, D., 1 Jun 2019, In: I E E E Transactions on Neural Systems and Rehabilitation Engineering. 27, 6, p. 1282-1291 10 p., 8708693.

Decoding covert speech for intuitive control of brain-computer interfaces based on single-trial EEG: a feasibility study
Tøttrup, L., Leerskov, K., Hadsund, J. T., Kamavuako, E. N., Kæseler, R. L. & Jochumsen, M., Jun 2019, *2019 International 16th Conference on Rehabilitation Robotics (ICORR) .* IEEE (Institute of Electrical and Electronics Engineers) , p. 689-693 5 p. 8779499. (I E E E International Conference on Rehabilitation Robotics. Proceedings, Vol. 16).

Therapeutic effects of aerobic exercise on EEG parameters and higher cognitive functions in mild cognitive impairment patients
Amjad, I., Toor, H. G. M., Niazi, I. K., Afzal, H., Jochumsen, M., Shafique, M., Allen, K., Haavik, H. & Ahmed, T., Jun 2019 , In: International Journal of Neuroscience. 129, 6, p. 551-562 12 p.

Xbox 360 Kinect cognitive games improve slowness, complexity of EEG, and cognitive functions in subjects with mild cognitive impairment: A randomized control trial
Amjad, I., Toor, H., Niazi, I. K., Pervaiz, S., Jochumsen, M., Shafique, M., Haavik, H. & Ahmed, T., 8 Apr 2019, In: Games for Health. 8, 2, p. 144-152 9 p.

A tensor-based method for completion of missing electromyography data
Akmal, M., Zubair, S., Jochumsen, M., Kamavuako, E. N. & Niazi, I. K., 2019, In: IEEE Access. 7, p. 104710-104720 11 p. , 8777071.

Functional and corticomuscular changes associated with early phase of motor training
Cremoux, S., Elie, D., Rovsing, C., Rovsing, H., Jochumsen, M., Haavik, H. & Niazi, I. K., 2019, *Converging Clinical and Engineering Research on Neurorehabilitation III: Proceedings of the 4th International Conference on NeuroRehabilitation (ICNR2018), October 16-20, 2018, Pisa, Italy.* Masia, L., Micera, S., Akay, M. & Pons, J. L. (eds.). Springer, p. 759-763 (Biosystems and Biorobotics, Vol. 21).

Modeling and Control of Rehabilitation Robotic Device: motoBOTTE
Arceo, J. C., Lauber, J., Robinault, L., Paganelli, S., Jochumsen, M., Niazi, I. K., Simoneau, E. & Cremoux, S., 2019, *ICNR 2018: Converging Clinical and Engineering Research on Neurorehabilitation III.* Springer, p. 546-550 5 p. (Biosystems and Biorobotics, Vol. 21).

Multi-Day Real-time Myoelectric Control using Intramuscular EMG
Waris, M. A., Ur-Rehman, Z. M., Niazi, I. K., Jochumsen, M. & Kamavuako, E. N., 2019, *Trent International Prosthetics Symposium (TIPS) 2019.*

Self-Paced Online vs. Cue-Based Offline Brain–Computer Interfaces for Inducing Neural Plasticity
Jochumsen, M., Navid, M. S., Nedergaard, R. W., Signal, N., Rashid, M. U., Hassan, A., Haavik, H., Taylor, D. & Niazi, I. K., 2019, In: Brain Sciences. 9, 6, 13 p., 127.

Movement intention detection in adolescents with cerebral palsy from single-trial EEG
Jochumsen, M., Shafique, M., Hassan, A. & Niazi, I. K., Dec 2018, In: Journal of Neural Engineering. 15, 6, 8 p., 066030.

Investigation of optimal afferent feedback modality for inducing neural plasticity with a self-paced brain-computer interface
Jochumsen, M., Cremoux, S., Robinault, L., Lauber, J., Arceo, J. C., Navid, M. S., Nedergaard, R. W., Rashid, U., Haavik, H. & Niazi, I. K., 3 Nov 2018, In: Sensors (Switzerland). 18, 11, 13 p., 3761.

Performance of Combined Surface and Intramuscular EMG for Classification of Hand Movements
Rehman, M. Z. U., Gillani, S. O., Waris, A., Jochumsen, M., Niazi, I. K. & Kamavuako, E. N., 26 Oct 2018, *40th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, EMBC 2018.* IEEE (Institute of Electrical and Electronics Engineers), Vol. 2018-July. p. 5220-5223 4 p. 8513480. (Conference proceedings : ... Annual International Conference of the IEEE Engineering in Medicine and Biology Society. IEEE Engineering in Medicine and Biology Society. Annual Conference).

Chiropractic spinal manipulation alters TMS induced I-wave excitability and shortens the cortical silent period
Haavik, H., Niazi, I. K., Jochumsen, M., Uginčius, P., Sebik, O., Yılmaz, G., Navid, M. S., Özyurt, M. G. & Türker, K. S., 1 Oct 2018, In: Journal of Electromyography & Kinesiology. 42, p. 24-35 12 p.

Multiday EMG-based classification of hand motions with deep learning techniques
Zia Ur Rehman, M., Waris, A., Gilani, S. O., Jochumsen, M., Niazi, I. K., Jamil, M., Farina, D. & Kamavuako, E. N., 1 Aug 2018, In: Sensors. 18, 8, 16 p., 2497.

Effect of aerobic exercise on electroencephalogram parameters and cognitive functions in patients with mild cognitive impairment
Niazi, I. K., Amjad, I., Toor, H. G. M., Afzal, H., Jochumsen, M., Shafiq, M., Allen, K., Haavik, H. & Ahmed, T., 2018, *Abstracts, presentations, International Society of Electrophysiology and Kinesiology, ISEK, 30 June-2 July 2018, Dublin, Ireland.* ISEK, p. 99 O11.4

Effect of different pre-processing methods on somatosensory evoked potentials
Niazi, I. K., El-Omar, B., Dhillon, N. S., Navid, M. S., Nedergaard, R. W., Jochumsen, M. & Haavik, H., 2018, *Abstracts, presentations, International Society of Electrophysiology and Kinesiology, ISEK, 30 June-2 July 2018, Dublin, Ireland.* ISEK, p. 53 PI.41

Effect of subject training on a movement-related cortical potential-based brain-computer interface
Jochumsen, M., Niazi, I. K., Nedergaard, R. W., Navid, M. S. & Dremstrup, K., 2018, In: Biomedical Signal Processing and Control. 41, p. 63-68 6 p.

Examining underlying mechanisms of neglect patients' reaction to the Wall method through flash visual evoked potentials
Topp, C. S. R., Kristensen, N. S., Jensen, S. H. B., Jensen, J., Evald, L., Jochumsen, M., Struijk, L. N. S. A. & Spaich, E. G., 2018, *Proceedings of the 36th International Australasian Winter Conference on Brain Research, AWCBR, 25-29 august 2018, Queenstown, New Zealand*. Hillman, K. (ed.). University of Otago Press, p. 27 (Australasian Winter Conference on Brain Research Proceedings; No. 36).

Modeling and control of rehabilitation robotic device: motoBOTTE
Arceo, J. C., Lauber, J., Robinault, L., Paganelli, S., Jochumsen, M., Niazi, I. K., Simoneau, E. & Cremoux, S., 2018.

Paired associative stimulation delivered by pairing movement-related cortical potentials with peripheral electrical stimulation: An investigation of the duration of neuromodulatory effects
Olsen, S., Signal, N., Niazi, I. K., Christensen, T., Jochumsen, M. & Taylor, D., 2018, In: Neuromodulation: Technology at the Neural Interface. 21, 4, p. 362-367 6 p.

Single-channel movement prediction in stroke and cerebral palsy patients from single-trial EEG
Jochumsen, M., Oppermann, H. & Dremstrup, K., 2018.

The effect of arm position on classification of hand gestures with intramuscular EMG
Jochumsen, M., Waris, A. & Kamavuako, E. N., 2018, In: Biomedical Signal Processing and Control. 43, p. 1-8 8 p.

Brain activity associated with skilled hand motor training
Rovsing, C., Rovsing, H. & Jochumsen, M., 2017.

Classification of hand grasp kinetics and types using movement-related cortical potentials and EEG rhythms
Jochumsen, M., Rovsing, C., Rovsing, H., Niazi, I. K., Dremstrup, K. & Kamavuako, E. N., 2017, In: Computational Intelligence and Neuroscience. 2017, 10 p., 7470864.

Effect of arm position on hand gesture classification using intramuscular EMG
Jochumsen, M., Waris, A. & Kamavuako, E. N., 2017.

Effect of system calibration and subject training on long-term brain-computer interface performance
Rovsing, H., Rovsing, C. & Jochumsen, M., 2017.

Impact of spinal manipulation on cortical drive to upper and lower limb muscles
Haavik, H., Niazi, I. K., Jochumsen, M., Sherwin, D., Flavel, S. & Türker, K. S., 2017, In: Brain Sciences. 7, 1, 15 p., 2.

Measuring changes in neuromuscular control following neuromodulation: A feasibility study in people with stroke
Olsen, S., Signal, N., Niazi, I. K., Alder, G., Jochumsen, M. & Taylor, D., 2017, In: International Journal of Stroke. 12, 3_Suppl., p. 56 88.

Plasticity and functional differences following a BCI-controlled robotic intervention in spinal cord injury
Leerskov, K. K., Spaich, E. G., Jochumsen, M. & Struijk Andreasen, L. N. S., 2017, *6th Aalborg U Robotics Workshop, 27 November 2017, Aalborg, Denmark.* p. 7 1 p.

Quantification of movement-related EEG correlates associated with motor training: A study on movement-related cortical potentials and sensorimotor rhythms
Jochumsen, M., Rovsing, C., Rovsing, H., Cremoux, S., Signal, N., Allen, K., Taylor, D. & Niazi, I. K., 2017, In: Frontiers in Human Neuroscience. 11, 12 p., 604.

Transfer learning for electroencephalogram signals
Abid, F., Hassan, A., Abid, A., Niazi, I. K. & Jochumsen, M., 2017, In: International Journal of Bioscience, Biochemistry and Bioinformatics. 7, 3, p. 143-152 DB081.

Detecting and classifying three different hand movement types through electroencephalography recordings for neurorehabilitation
Jochumsen, M., Niazi, I. K., Dremstrup, K. & Kamavuako, E. N., 2016, In: Medical & Biological Engineering & Computing. 54, 10, p. 1491-1501

Feature domain-specific movement intention detection for stroke rehabilitation with brain-computer interfaces
Hadsund, J. T., Sørensen, M. B., Royo, A. C., Niazi, I. K., Rovsing, H., Rovsing, C. & Jochumsen, M., 2016, *38th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, EMBC, 16-20 August 2016, Orlando, FL, USA.* IEEE (Institute of Electrical and Electronics Engineers), p. 5725-5728 (IEEE Engineering in Medicine and Biology Society. Conference Proceedings).

Manipulation of dysfunctional spinal joints affects sensorimotor integration in the prefrontal cortex: a brain source localization study
Lelic, D., Niazi, I. K., Holt, K., Jochumsen, M., Dremstrup, K., Yielder, P., Murphy, B., Drewes, A. & Haavik, H., 2016, In: Neural Plasticity. 2016, 9 p., 3704964.

Pairing voluntary movement and muscle-located electrical stimulation increases cortical excitability
Jochumsen, M., Niazi, I. K., Signal, N., Nedergaard, R. W., Holt, K., Haavik, H. & Taylor, D., 2016, In: Frontiers in Human Neuroscience. 10, 8 p., 482.

Quantifying motor learning from movement-related cortical potentials
Rovsing, C., Rovsing, H., Niazi, I. K. & Jochumsen, M., 2016, *38th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, EMBC, 16-20 August 2016, Orlando, FL, USA.* IEEE (Institute of Electrical and Electronics Engineers)

The effect of detection time on movement intention detection
Jochumsen, M., Rovsing, C., Rovsing, H., Kamavuako, E. N. & Dremstrup, K., 2016, *38th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, EMBC, 16-20 August 2016, Orlando, FL, USA.* IEEE (Institute of Electrical and Electronics Engineers)

Transfer learning for electroencephalogram signals
Abid, F., Hassan, A., Abid, A., Jochumsen, M., Navid, M. S., Nedergaard, R. W. & Niazi, I. K., 2016, *Conference Abstracts, 9th International Conference on Computer and Electrical Engineering, ICCEE, 7-11 December 2016, Barcelona, Spain 2016.* p. 38-39 DB081

Universal matched-filter template versus individualized template for single trial detection of movement intentions of different tasks
Akmal, M., Jochumsen, M., Navid, M. S., Shafique, M., Zaidi, S. M. T., Taylor, D. & Niazi, I. K., 2016, *Advances in Neural Networks: Computational Intelligence for ICT.* Bassis, S., Esposito, A., Morabito, F. C. & Pasero, E. (eds.). Springer, p. 275-282 (Smart Innovation, Systems and Technologies; No. 54).

A brain computer interface (BCI) intervention to increase corticomotor excitability in the lower limb in people with stroke
Taylor, D., Niazi, I. K., Signal, N., Jochumsen, M., Demstrup, K. & Farina, D., May 2015, In: Physiotherapy. 101, Suppl. 1, p. e1495 eS258.

Analysis of Movement-Related Cortical Potentials for Brain-Computer Interfacing in Stroke Rehabilitation
Jochumsen, M., 2015, Aalborg Universitetsforlag.

An empirical study to remove noise from single-trial MRCP for movement intention detection
Hassan, A., Riaz, F., Rehman, S., Jochumsen, M., Niazi, I. K. & Dremstrup, K., 2015, In: Canadian Conference on Electrical and Computer Engineering. 2015, June, p. 184-189 7129183.

A review of techniques for detection of movement intention using movement-related cortical potentials
Shakeel, A., Navid, M. S., Anwar, M. N., Mazhar, S., Jochumsen, M. & Niazi, I. K., 2015, In: Computational and Mathematical Methods in Medicine. 2015, 13 p., 346217.

Combined effects of spinal manipulation and a brain computer interface based plasticity protocol on corticospinal excitability
Niazi, I. K., Jochumsen, M., Holt, K., Dremstrup, K. & Haavik, H., 2015, *Proceedings, WFC 13th Biennial Congress and ECU Annual Convention, 13-16 May 2015, Athens, Greece.* World Federation of Chiropractic, p. 119

Comparison of features for movement prediction from single-trial movement-related cortical potentials in healthy subjects and stroke patients
Kamavuako, E. N., Jochumsen, M., Niazi, I. K. & Dremstrup, K., 2015, In: Computational Intelligence and Neuroscience. 2015, 8 p., 858015.

Comparison of spatial filters and features for the detection and classification of movement-related cortical potentials in healthy individuals and stroke patients
Jochumsen, M., Niazi, I. K., Mrachacz-Kersting, N., Jiang, N., Farina, D. & Dremstrup, K., 2015, In: Journal of Neural Engineering. 12, 5, 10 p., 056003.

Decoding movement intentions from single-trial EEG
Jochumsen, M., Nørgaard, A. C., Stausholm, M. N., Skals, R. K., Dahl, S. C. & Kamavuako, E. N., 2015, *Abstracts, 33. Danske Medicotekniske Landsmøde, 15-17 September 2015, Brædstrup, Denmark*. Dansk Medicoteknisk Selskab

Detecting and classifying movement-related cortical potentials associated with hand movements in healthy subjects and stroke patients from single-electrode, single-trial EEG
Jochumsen, M., Niazi, I. K., Taylor, D., Farina, D. & Dremstrup, K., 2015, In: Journal of Neural Engineering. 12, 5, 11 p., 056013.

Induction of long-term depression-like plasticity by pairings of motor imagination and peripheral electrical stimulation
Jochumsen, M., Signal, N., Nedergaard, R. W., Taylor, D., Haavik, H. & Niazi, I. K., 2015, In: Frontiers in Human Neuroscience. 9, 8 p., 644.

Manipulation of dysfunctional spinal joints affects sensorimotor integration in the pre-fontal cortex: a brain source localization study
Lelic, D., Niazi, I. K., Holt, K., Jochumsen, M., Dremstrup, K., Yielder, P., Murphy, B., Drewes, A. & Haavik, H., 2015, *Proceedings, WFC 13th Biennial Congress and ECU Annual Convention, 13-16 May 2015, Athens, Greece.* World Federation of Chiropractic, p. 116

Online multi-class brain-computer interface for detection and classification of lower limb movement intentions and kinetics for stroke rehabilitation
Jochumsen, M., Niazi, I. K., Navid, M. S., Anwar, M. N., Farina, D. & Dremstrup, K., 2015, In: Brain-Computer Interfaces. 2 , 4, p. 202-210

The Aalborg Brain Computer Interface: a protocol for inducing neural plasticity
Taylor, D., Niazi, I. K., Signal, N., Jochumsen, M. & Dremstrup, K., 2015.

Using a portable device for online single-trial MRCP detection and classification
Hassan, A., Ghani, U., Riaz, F., Rehman, S., Jochumsen, M., Taylor, D. & Niazi, I. K., 2015, *Intelligent Data Engineering and Automated Learning, IDEAL 2015: 16th International Conference, 14-16 October, Wroclaw, Poland, Proceedings.* Jackowski, K., Burduk, R., Walkowiak, K., Wozniak, M. & Yin, H. (eds.). Springer, p. 527-534 8 p. (Lecture Notes in Computer Science; No. 9375).

Chiropractic, cortical excitability and BCI
Niazi, I. K., Jochumsen, M., Duehra, J., Kingett, M., Dremstrup, K. & Haavik, H., 2014, *Replace, Repair, Restore, Relieve : Bridging Clinical and Engineering Solutions in Neurorehabilitation: Proceedings of the 2nd International Conference on NeuroRehabilitation, ICNR2014, 24-26 June 2014, Aalborg, Denmark*. Jensen, W., Andersen, O. K. & Akay, M. (eds.).

Springer, p. 121-125 (Biosystems and Biorobotics; No. 7).

Classification of kinetics of movement for lower limb using covariate shift method for brain computer interface

Hassan, A., Niazi, I. K., Jochumsen, M., Riaz, F. & Dremstrup, K., 2014, *IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP, 4-9 May 2014, Florence, Italy.* IEEE Press, p. 5854-5858

Detection of movement intentions through a single channel of electroencephalography

Jochumsen, M., Niazi, I. K., Rovsing, H., Rovsing, C., Nielsen, G. A. R., Andersen, T. K., Dong, N. P. T., Sørensen, M. E., Mrachacz-Kersting, N., Jiang, N., Farina, D. & Dremstrup, K., 2014, *Replace, Repair, Restore, Relieve : Bridging Clinical and Engineering Solutions in Neurorehabilitation: Proceedings of the 2nd International Conference on NeuroRehabilitation, ICNR2014, 24-26 June 2014, Aalborg, Denmark.* Jensen, W., Andersen, O. K. & Akay, M. (eds.). Springer, p. 465-472 (Biosystems and Biorobotics; No. 7).

Improved detection and force decoding through combined near-infrared spectroscopy and electroencephalographic measurements

Hansen, M. H., Kassebaum, E., Plocharska, M. A., Jochumsen, M. & Kamavuako, E. N., 2014, *Replace, Repair, Restore, Relieve : Bridging Clinical and Engineering Solutions in Neurorehabilitation: Proceedings of the 2nd International Conference on NeuroRehabilitation, ICNR2014, 24-26 June 2014, Aalborg, Denmark.* Jensen, W., Andersen, O. K. & Akay, M. (eds.). Springer, p. 411-419 (Biosystems and Biorobotics; No. 7).

Online detection and classification of movement kinetics

Jochumsen, M., Navid, M. S., Nedergaard, R. W., Anwar, M. N., Niazi, I. K. & Dremstrup, K., 2014, *Proceedings of the 6th International Brain-Computer Interface Conference, 16-19 September 2014, Graz, Austria: The Future of Brain-Computer Interaction : Basics, Shortcomings, Users.* Müller-Putz, G., Bauernfeind, G., Brunner, C., Steyrl, D., Wriessnegger, S. & Scherer, R. (eds.). Verlag der Technischen Universität Graz, 4 p. 035-1

Processing movement related cortical potentials in EEG signals for identification of slow and fast movements

Riaz, F., Hassan, A., Rehman, S., Niazi, I. K., Jochumsen, M. & Dremstrup, K., 2014, *36th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, IEEE EMBS, 26-30 August 2014, Chicago, IL, USA.* IEEE Press, p. 4908-4911 (Proceedings of the International Conference of the IEEE Engineering in Medicine and Biology Society).

Rehabilitation using a brain computer interface based on movement related cortical potentials: a review

Dremstrup, K., Niazi, I. K., Jochumsen, M., Jiang, N., Mrachacz-Kersting, N. & Farina, D., 2014, *XIII Mediterranean Conference on Medical and Biological Engineering and Computing, MEDICON 2013, 25-28 September 2013, Seville, Spain.* Roa Romero, L. M. (ed.). Springer, p. 1659-1662 (IFMBE Proceedings, Vol. 41).

Use of empirical mode decomposition for classification of MRCP based task parameters

Hassan, A., Akhtar, H., Khan, M. J., Riaz, F., Hassan, F., Niazi, I. K., Jochumsen, M. & Dremstrup, K., 2014, *Proceedings of the 15th International Conference on Intelligent Data Engineering and Automated Learning, IDEAL 2014, Salamanca, Spain.* Corchado, E., Lozano, J. A., Quintián, H. & Yin, H. (eds.). Springer, p. 77-84 (Lecture Notes in Computer Science, Vol. 8669).

Changes in corticospinal excitability following the use of a BCI based protocol combined with sham visual feedback

Kristensen, S. R., Niazi, I. K., Jochumsen, M., Jiang, N., Farina, D. & Mrachacz-Kersting, N., 2013, *Converging Clinical and Engineering Research on Neurorehabilitation: International Conference on NeuroRehabilitation, ICNR 2012, 14-16 November 2012, Toledo, Spain.* Pons, J. L., Torricelli, D. & Pajaro, M. (eds.). Springer Publishing Company, Vol. Part I. p. 599-602 (Biosystems and Biorobotics, Vol. 1).

Classifying speed and force from movement intentions using entropy and a support vector machine

Jochumsen, M., Niazi, I. K., Farina, D. & Dremstrup, K., 2013, *Proceedings of the Fifth International Brain-Computer Interface Meeting : Defining the Future, 3-7 June 2013, Pacific Grove, CA, USA.* Millán, J. D. R., Gao, S., Müller-Putz, G. R., Wolpaw, J. R. & Huggins, J. E. (eds.). Verlag der Technischen Universität Graz, p. Article No. 136

Detection and classification of movement-related cortical potentials associated with task force and speed

Jochumsen, M., Niazi, I. K., Mrachacz-Kersting, N., Farina, D. & Dremstrup, K., 2013, In: Journal of Neural Engineering. 10, 5, 9 p., 056015.

Detection of movement intentions in mixed paradigms of internally cued and non-cued movement-related cortical potentials
Niazi, I. K., Jochumsen, M., Farina, D. & Dremstrup, K., 2013.

Detection of movement-related cortical potentials based on subject-independent training
Niazi, I. K., Jiang, N., Jochumsen, M., Nielsen, J. F., Dremstrup, K. & Farina, D., 2013, In: Medical & Biological Engineering & Computing. 51, 5, p. 507-512

Detection and classification of movement-related cortical potentials for variations in speed and force for use in rehabilitation
Jochumsen, M., Mrachacz-Kersting, N., Niazi, I. K., Farina, D. & Dremstrup, K., 2012, *30. Danske Medicotekniske Landsmøde, 18.-20. september 2012, Brædstrup, Danmark*. Dansk Medicoteknisk Selskab, p. 2, No. 4

Lower limb cortical excitability changes and alterations to early bereitschafts potential following spinal manipulation
Niazi, I. K., Dremstrup, K., Jochumsen, M., Niemeier, M. J., Jensen, A. Å., Van, T. D. & Haavik, H., 2012, *Proceedings of the XIXth Congress of the International Society of Electrophysiology & Kinesiology, ISEK2012, 19-21 July 2012, Brisbane, Australia.* ISEK, p. 245, No. SENS_O2.2

Dansk Anæstesi Database Dynamisk (DADDY)
Lambert, P. H., Jochumsen, M., Jensen, A. Å., Rauff Hansen, J. H., Stephansen, U. L., Johansen, M. D. & Thorgaard, P., 2010, In: DASINFO. 18, 4, p. 49 1 p.

Dansk Anæstesi Database Dynamisk (DADDY)
Lambert, P. H., Jochumsen, M., Jensen, A. Å., Rauff Hansen, J. H., Stephansen, U. L., Johansen, M. D. & Thorgaard, P., 2010. 1 p.

Activities

The Elsass Foundation Research Day
Jochumsen, M. R. (Participant), Hougaard, B. I. (Participant) & Dalgaard, K. S. (Participant)
29 Oct 2024

Frontiers in Neuroscience (Journal)
Struijk, L. N. S. A. (Editor), Jochumsen, M. R. (Editor), Hansen, J. P. (Editor) & Kamavuako, E. N. (Editor)
14 Jan 2021 → Apr 2021

Faculté des Sciences et Métiers du Sport, University of Valenciennes
Jochumsen, M. R. (Visiting researcher)
2017 → 2018

Auckland University of Technology
Jochumsen, M. R. (Visiting researcher)
2015

64th Lindau Nobel Laureate Meeting on Physiology or Medicine.
Jochumsen, M. R. (Participant)
2014

New Zealand College of Chiropractic
Jochumsen, M. R. (Visiting researcher)
2014 → 2015

Press/Media

Aktuelle navne: Rejsestipendier til unge forskere
Skov, I. R., Birkbak, A. & Jochumsen, M.
14/02/2014
1 item of Media coverage

Banebrydende studie: Lam mand går ved hjælp af trådløs forbindelse
Jochumsen, M. R.
24/05/2023 → 26/05/2023
3 items of Media coverage

Chips i hjernen
Jochumsen, M. R.
23/06/2024
2 items of Media coverage

Computere, der vil lære at læse vores tanker
Jochumsen, M. R.
14/06/2024 → 17/06/2024
2 items of Media coverage

Computere kan læse dine tanker
Jochumsen, M.
25/02/2018
1 item of Media coverage

Computer i hjernen forvandler lam kvindes tanker til tale i realtid
Jochumsen, M. R.
02/04/2025 → 06/04/2025
3 items of Media coverage

Det Frie Forskningsråd sender to unge forskere til årets nobeltræf i Tyskland
Jochumsen, M.
25/06/2014
1 item of Media coverage

De vandt foredragskonkurrencen
Jochumsen, M.
28/11/2017
1 item of Media coverage

De vandt foredrags- og poster-konkurrencerne
Jochumsen, M.
02/11/2015
1 item of Media coverage

Elektroder gav lam mand bevægelse
Jochumsen, M.
29/11/2015
1 item of Media coverage

Elektroder i hjernen giver lam mand bevægelsen igen
Jochumsen, M.
20/11/2015
2 items of Media coverage

Elon Musk vil være tankelæser og forbinde din hjerne til en computer, men inden da vil han få lamme til at gå igen
Jochumsen, M. R.
17/04/2021
2 items of Media coverage

"Hjerne-streaming": Implantat forvandler lam kvindes tanker til tale
Jochumsen, M. R.
23/04/2025
1 item of Media coverage

Hjernestyrede exoskeletter kan give lammede bevægelsen tilbage
Jochumsen, M. R.
15/12/2023
1 item of Media coverage

Kan vi ændre i kriminelles hjerner og forhindre mord?
Jochumsen, M. R.
08/12/2023
1 item of Media coverage

Lam mand går igen
Stevenson, A. J. T. & Jochumsen, M.
24/09/2018
9 items of Media coverage

Med en chip i hjernen kan man få ting til at ske med tankens kraft
Jochumsen, M. R.
25/05/2024
1 item of Media coverage

Navne i noter
Jochumsen, M.
23/03/2014
1 item of Media coverage

Niveauet var højt i årets konkurrence
Jochumsen, M. R.
05/12/2023
1 item of Media coverage

Når tanke bliver til handling
Jochumsen, M.
14/01/2017
3 items of Media coverage

Priser til forskere
Jochumsen, M.
06/02/2014
1 item of Media coverage

Professoren giver håb for demente
Jochumsen, M.
06/02/2014
3 items of Media coverage

På bølgelængde med hjernen
Stevenson, A. J. T., Jochumsen, M. R. & Gervasio, S.
08/02/2024 → 08/02/2024
2 items of Media coverage

Robotarm læser lam mands tanker
Jochumsen, M.
22/05/2015
2 items of Media coverage

Siemens Fonden gives DKK 289,800 to a series of projects with perspective within technology and science
Bak, B. L. V., Jochumsen, M. R. & Sinkjær, T.
31/05/2024
1 item of Media coverage

Store stipendier til tre AAU-forskere
Jochumsen, M., Skov, I. R. & Birkbak, A.
06/02/2014
7 items of Media coverage

Tankelæser kan få lamme aber til at gå igen
Jochumsen, M.
09/11/2016
7 items of Media coverage

Tankelæser lader lam mand gribe gaffel og made sig selv
Jochumsen, M.
29/03/2017
3 items of Media coverage

To projekter vil forske i ny teknologi til genoptræning
Jochumsen, M.
03/07/2018
1 item of Media coverage

To projekter vil forske i ny teknologi til genoptræning
Jochumsen, M.
03/07/2018
1 item of Media coverage

Vidste du det?
Jochumsen, M.
30/12/2015
1 item of Media coverage

Projects

Brain-controlled exoskeletons for stroke rehabilitation: Technology transfer from prototype to home use
Jochumsen, M. R. (PI), Dinesen, B. (Project Participant), Hougaard, B. I. (Project Participant), Kjær, T. W. (Project Participant), Knoche, H. (Project Participant), Kidmose, P. (Project Participant) & Kristensen, M. S. (Project Participant)
Velux Foundation
01/09/2018 → 31/03/2022

Center for Rehabilitation Robotics
Struijk, L. N. S. A. (PI), Dremstrup, K. (Project Participant), Jochumsen, M. R. (Project Participant), Moeslund, T. B. (Project Participant), Rasmussen, J. (Project Participant), Gaihede, M. (Project Participant), Obál, I. (Project Participant),

Bai, S. (Project Participant), Bak, T. (Project Participant), Kanstrup, A. M. (Project Participant), Vinge, L. (Project Participant), Mohammadi, M. (Project Participant), Bengtson, S. H. (Project Participant), Kobbelgaard, F. V. (Project Participant), Kæseler, R. L. (Project Participant), Thøgersen, M. (Project Participant), Leerskov, K. (Project Participant), Bentsen, B. (Project Participant), Johansen, D. (Project Participant), Pálsdóttir, Á. A. (Project Participant) & Kirtas, O. (Project Participant)
24/03/2021 → …

Gamified brain-controlled electrical stimulation for improving hand function in individuals with Cerebral Palsy
Jochumsen, M. R. (PI), Knoche, H. (Project Participant), Hougaard, B. I. (Project Participant), Dalgaard, K. S. (Project Participant) & Sulkjær, C. (Project Participant)
The Elsass Foundation
01/04/2023 → 31/03/2025

CRERoB: Grant form Louis-Hansen fonden: Center for Rehabilitation Robotics - phase II
Struijk, L. N. S. A. (PI), Moeslund, T. B. (Project Participant), Rasmussen, J. (Project Participant), Jochumsen, M. R. (Project Participant), Jochum, E. (Project Participant), Glintborg, C. (Project Participant), Gaihede, M. (Project Participant), Blicher, J. U. (Project Participant), Obál, I. (Project Participant), Mohammadi, M. (Project Participant), Kæseler, R. L. (Project Participant), Bengtson, S. H. (Project Participant), Cardoso, A. S. S. (Project Participant), Khan, J. S. (Project Participant), Leerskov, K. (Project Participant), Kirtas, O. (Project Participant) & Bentsen, B. (Project Participant)
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MultiRob: Independent Research Fund Denmark (grant): Multimodal control of assistive robotic arms for severely disabled individuals
Struijk, L. N. S. A. (Project Licensee), Johansen, D. (Project Participant), Pálsdóttir, Á. A. (Project Participant), Kæseler, R. L. (Project Participant), Jochumsen, M. R. (Project Participant), Dremstrup, K. (Project Participant), Dosen, S. (Project Participant), Cipriani, C. (Project Participant) & Farina, D. (Project Participant)
Independent Research Fund Denmark | Technology and Production sciences
01/10/2018 → 31/12/2022

Intelligent Hybrid Light Weight Tendon Based Exoskeleton for Severely Disabled Individuals
Struijk, L. N. S. A. (PI), Dremstrup, K. (Project Participant), Mohammadi, M. (Project Participant), Jochumsen, M. R. (Project Participant), Moeslund, T. B. (Project Participant), Rasmussen, J. (Project Participant), Gaihede, M. (Project Participant), Kanstrup, A. M. (Project Participant), Bak, T. (Project Participant), Bai, S. (Project Participant), Obál, I. (Project Participant) & Vinge, L. (Project Participant)
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