

Kim Dremstrup  
Institutleder  
Institut for Medicin og Sundhedsteknologi  
Aalborg Universitet  
Tilknyttet Center for Sanske-Motorisk Interaktion



Fredrik Bajers Vej 7, D2-212  
9220, Aalborg Ø  
Danmark  
E-mail: [kdn@hst.aau.dk](mailto:kdn@hst.aau.dk)  
Telefon: 9940 8811  
Fax: 9815 4008  
Mobil: 2465 5246

Kim Dremstrup, MSc-BME, PhD, is since 2003 Head of Department of Health Science and Technology and Associate Professor within the Faculty of Medicine at Aalborg University. The department has the mission to establish competencies at the highest scientific level within technological and medical aspects of the health scene - spanning from molecule to society. The department has more than 240 scientific and 50 technical/administrative employees. The department is main responsible for 1700+ graduate and postgraduate BME, sport science, medical and other students and app. 100 phd students. The annual budget for the department is app. Dkr 200 mill.

KD is President for The Danish Society for Biomedical Engineering.

ResearchKD's personal research is focused on methods for retrieving and analysis of information from the brain. Especially methods for EEG-analysis, rehabilitation technology, brain computer interfaces and sleep re-search have been points of foci. KD was the inventor of the commercialized Nightingale Automatic Sleep Analyzer System and co-inventor of the widely used bio-data-format EDF which is used worldwide for exchange and storage of bio-signals. KD initiated sleep research and build up a sleep laboratory at AAU, and did also initiate research within BCI at AAU. He is heading the BCI-laboratory at AAU. The Aalborg BCI group was one of the first movers within BCI used for stroke-rehabilitation. The group has three times been nominated amongst top10 for the prestigious international BCI-price.

#### Teaching

KD has been main supervisor for more than 100 MSc and Bsc student and for 8 PhD's. He has developed and taught courses within computer science, signal processing and electrophysiology. KD was one of the main developers of the 5-year AAU BME curriculum, which started in 2000. Positions Head of Department, HST AAU 2003; Head of Studies, AAU 2002; Associate professor, AAU 1993; Assistant professor, AUC 1988; Research assistant, AUC 1984;

#### International collaboration

Kim Dremstrup has participated in following international research programs: Comac-BME EU Concerted action on biosignal storage format EDF (European Data Format) now used worldwide. SIESTA - an "acronym" for an EU-project on Sleep Research methods and standards. The European Neurological Network – ENN, an EU-telematics program. CEN TC251 WG5-pt21 project team on standardization of vital signs information exchange. Neuromath: EU-COST program BM601. FTP-BCI-project 2117-05-0083. Future Patients Project. Innovation Fund DK project REMAP 2017.

#### Reviewer

KD acts as reviewer for several research councils, international journals and book-publishers, eg.: IEEE-Transactions NSRE, New England Journal of Medicine, Journal of Neuroscience Methods, Sleep Medicine Reviews, Respiratory Medicine, Jour. Med & Bio. Eng & Comp, Journal of Neural Engineering, Medical Engineering and Physics. KD act as reviewer for research-funds ao., EU, The Danish, Austrian and Singapore national re-search councils.

Boards etc KD is President of the Danish Society for Biomedical Engineering, and national representative in IFMBE.; Co-founder and board member in The Danish Society of Engineers, IDA, group on Biomedical Engineering. Co-founder of the Danish Sleep Research Society; Co-founder and board member in AAU- and regional networks on Medicoteknik, Handiatek and BioMedCom; Head of Board in Den Nordjyske Trivselsfond.

#### Publications

Kim Dremstrup is author and coauthor of more than 190 research publications including more than 80 peer rev. journal papers. H-index=27. Please find full list of publications on AAU's research portal.

## Publikationer

Dremstrup, K. (2020). Ny viden giver udvikling. *Medicoteknik*, 7(4), 6-11.  
<http://ipaper.ipapercms.dk/TechMedia/Medicoteknik/2020/>

Usama, N., Leerskov, K., Niazi, I. K., Dremstrup, K., & Jochumsen, M. (Accepted/In press). Classification of error-related potentials from single-trial EEG in association with executed and imagined movements: a feature and classifier investigation. *Medical & Biological Engineering & Computing*. <https://doi.org/10.1007/s11517-020-02253-2>

- Kæseler, R. L., Jochumsen, M., Leerskov, K., Struijk, L. N. S. A., & Dremstrup, K. (2019). Designing a brain computer interface for control of an assistive robotic manipulator using steady state visually evoked potentials. I *2019 IEEE 16th International Conference on Rehabilitation Robotics, ICORR 2019* (s. 1067-1072). [8779376] IEEE. I E E E International Conference on Rehabilitation Robotics. Proceedings <https://doi.org/10.1109/ICORR.2019.8779376>
- Xu, R., Dosen, S., Jiang, N., Yao, L., Farooq, A., Jochumsen, M., Mrachacz-Kersting, N., Dremstrup, K., & Farina, D. (2019). Continuous 2-D control via state-machine triggered by endogenous sensory discrimination and a fast brain switch. *Journal of Neural Engineering*, *16*(5), [056001]. <https://doi.org/10.1088/1741-2552/ab20e5>
- Jochumsen, M., Niazi, I. K., Nedergaard, R. W., Navid, M. S., & Dremstrup, K. (2018). Effect of subject training on a movement-related cortical potential-based brain-computer interface. *Biomedical Signal Processing and Control*, *41*, 63-68. <https://doi.org/10.1016/j.bspc.2017.11.012>
- Jochumsen, M., Oppermann, H., & Dremstrup, K. (2018). *Single-channel movement prediction in stroke and cerebral palsy patients from single-trial EEG*. Poster præsenteret ved World Congress on Medical Physics and Biomedical Engineering, Prague, Tjekket.
- Aliakbaryhosseinabadi, S., Kostic, V., Pavlovic, A., Radovanovic, S., Kamavuako, E. N., Jiang, N., Petrini, L., Dremstrup, K., Farina, D., & Mrachacz-Kersting, N. (2017). Influence of attention alternation on movement-related cortical potentials in healthy individuals and stroke patients. *Journal of Clinical Neurophysiology*, *128*(1), 165-175. <https://doi.org/10.1016/j.clinph.2016.11.001>
- Jochumsen, M., Rovsing, C., Rovsing, H., Niazi, I. K., Dremstrup, K., & Kamavuako, E. N. (2017). Classification of hand grasp kinetics and types using movement-related cortical potentials and EEG rhythms. *Computational Intelligence and Neuroscience*, *2017*, [7470864]. <https://doi.org/10.1155/2017/7470864>
- Mrachacz-Kersting, N., Yao, N., Gervasio, S., Jiang, N., Palsson, T., Graven-Nielsen, T., Falla, D., Dremstrup, K., & Farina, D. (2017). A Brain-Computer-Interface to combat musculoskeletal pain. I C. Guger, A. Brendan, & EC. Leuthardt (red.), *Brain-Computer-Interface Research – A state of the art summary* (5 udg., s. 123-130). Springer. [https://doi.org/10.1007/978-3-319-57132-4\\_10](https://doi.org/10.1007/978-3-319-57132-4_10)
- Mrachacz-Kersting, N., Voigt, M., Stevenson, A. J. T., Aliakbaryhosseinabadi, S., Jiang, N., Dremstrup, K., & Farina, D. (2017). The effect of type of afferent feedback timed with motor imagery on the induction of cortical plasticity. *Brain Research*, *1674*, 91-100. <https://doi.org/10.1016/j.brainres.2017.08.025>
- Dremstrup, K. (2016). Sundhedsinnovation. *Medicoteknik*, *3*(3), 4. <http://ipaper.ipapercms.dk/TechMedia/Medicoteknik/2016/3/>
- Dremstrup, K. (2016). Universiteternes tre roller. *Medicoteknik*, *3*(3), 6-9. <http://ipaper.ipapercms.dk/TechMedia/Medicoteknik/2016/3/>
- Jochumsen, M., Niazi, I. K., Dremstrup, K., & Kamavuako, E. N. (2016). Detecting and classifying three different hand movement types through electroencephalography recordings for neurorehabilitation. *Medical & Biological Engineering & Computing*, *54*(10), 1491-1501. <https://doi.org/10.1007/s11517-015-1421-5>
- Jochumsen, M., Rovsing, C., Rovsing, H., Kamavuako, E. N., & Dremstrup, K. (2016). The effect of detection time on movement intention detection. I *38th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, EMBC, 16-20 August 2016, Orlando, FL, USA* IEEE.
- Lelic, D., Niazi, I. K., Holt, K., Jochumsen, M., Dremstrup, K., Yelder, P., Murphy, B., Drewes, A., & Haavik, H. (2016). Manipulation of dysfunctional spinal joints affects sensorimotor integration in the prefrontal cortex: a brain source localization study. *Neural Plasticity*, *2016*, [3704964]. <https://doi.org/10.1155/2016/3704964>

Mrachacz-Kersting, N., Jiang, N., Stevenson, A. J. T., Niazi, I. K., Kostic, V., Pavlović, A. M., Radovanovic, S., Djuric-Jovicic, M., Agosta, F., Dremstrup, K., & Farina, D. (2016). Efficient neuroplasticity induction in chronic stroke patients by an associative brain-computer interface. *Journal of Neurophysiology*, *115*(3), 1410-1421. <https://doi.org/10.1152/jn.00918.2015>

Riaz, F., Hassan, A., Rehman, S., Niazi, I. K., & Dremstrup, K. (2016). EMD-based temporal and spectral features for the classification of EEG signals using supervised learning. *IEEE Transactions on Neural Systems and Rehabilitation Engineering*, *24*(1), 28-35. <https://doi.org/10.1109/TNSRE.2015.2441835>

Xu, R., Jiang, N., Dosen, S., Lin, C., Mrachacz-Kersting, N., Dremstrup, K., & Farina, D. (2016). Endogenous sensory discrimination and selection by a fast brain switch for a high transfer rate brain-computer interface. *IEEE Transactions on Neural Systems and Rehabilitation Engineering*, *24*(8), 901-910. <https://doi.org/10.1109/TNSRE.2016.2523565>

Xu, R., Jiang, N., Mrachacz-Kersting, N., Dremstrup, K., & Farina, D. (2016). Factors of influence on the performance of a short-latency non-invasive brain switch: evidence in healthy individuals and implication for motor function rehabilitation. *Frontiers in Neuroscience*, *9*, [527]. <https://doi.org/10.3389/fnins.2015.00527>

Aliakbaryhosseinabadi, S., Jiang, N., Vuckovic, A., Dremstrup, K., Farina, D., & Mrachacz-Kersting, N. (2015). Detection of movement intention from single-trial movement-related cortical potentials using random and non-random paradigms. *Brain-Computer Interfaces*, *2*(1), 29-39. <https://doi.org/10.1080/2326263X.2015.1053301>

Aliakbaryhosseinabadi, S., Jiang, N., Petrini, L., Farina, D., Dremstrup, K., & Mrachacz-Kersting, N. (2015). Robustness of movement detection techniques from motor execution: single trial movement related cortical potential. I *7th IEEE EMBS Conference on Neural Engineering*, 22-24 April 2015, Montpellier, France (s. 13-16). IEEE Press. <https://doi.org/10.1109/NER.2015.7146548>

Hassan, A., Riaz, F., Rehman, S., Jochumsen, M., Niazi, I. K., & Dremstrup, K. (2015). An empirical study to remove noise from single-trial MRCP for movement intention detection. *Canadian Conference on Electrical and Computer Engineering*, 2015(June), 184-189. [7129183]. <https://doi.org/10.1109/CCECE.2015.7129183>

Jiang, N., Gizzi, L., Mrachacz-Kersting, N., Dremstrup, K., & Farina, D. (2015). A brain-computer interface for single-trial detection of gait initiation from movement related cortical potentials. *Clinical Neurophysiology*, *126*(1), 154-159. <https://doi.org/10.1016/j.clinph.2014.05.003>

Jochumsen, M., Niazi, I. K., Mrachacz-Kersting, N., Jiang, N., Farina, D., & Dremstrup, K. (2015). Comparison of spatial filters and features for the detection and classification of movement-related cortical potentials in healthy individuals and stroke patients. *Journal of Neural Engineering*, *12*(5), [056003]. <https://doi.org/10.1088/1741-2560/12/5/056003>

Jochumsen, M., Niazi, I. K., Taylor, D., Farina, D., & Dremstrup, K. (2015). Detecting and classifying movement-related cortical potentials associated with hand movements in healthy subjects and stroke patients from single-electrode, single-trial EEG. *Journal of Neural Engineering*, *12*(5), [056013]. <https://doi.org/10.1088/1741-2560/12/5/056013>

Jochumsen, M., Niazi, I. K., Navid, M. S., Anwar, M. N., Farina, D., & Dremstrup, K. (2015). Online multi-class brain-computer interface for detection and classification of lower limb movement intentions and kinetics for stroke rehabilitation. *Brain-Computer Interfaces*, *2*(4), 202-210. <https://doi.org/10.1080/2326263X.2015.1114978>

Kamavuako, E. N., Jochumsen, M., Niazi, I. K., & Dremstrup, K. (2015). Comparison of features for movement prediction from single-trial movement-related cortical potentials in healthy subjects and stroke patients. *Computational Intelligence and Neuroscience*, 2015, [858015]. <https://doi.org/10.1155/2015/858015>

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

- Mrachacz-Kersting, N., Jiang, N., Aliakbaryhosseinabadi, S., Xu, R., Petrini, L., Lontis, R., Dremstrup, K., & Farina, D. (2015). The changing brain: bidirectional learning between algorithm and user. I C. Guger, G. Müller-Putz, & B. Allison (red.), *Brain-Computer Interface Research: A State-of-the-Art Summary 4* (s. 115-125). Springer. SpringerBriefs in Electrical and Computer Engineering [https://doi.org/10.1007/978-3-319-25190-5\\_11](https://doi.org/10.1007/978-3-319-25190-5_11)
- Niazi, I. K., Jochumsen, M., Holt, K., Dremstrup, K., & Haavik, H. (2015). Combined effects of spinal manipulation and a brain computer interface based plasticity protocol on corticospinal excitability. I *Proceedings, WFC 13th Biennial Congress and ECU Annual Convention, 13-16 May 2015, Athens, Greece* (s. 119). World Federation of Chiropractic.
- Scheel, H., Xu, R., Jiang, N., Mrachacz-Kersting, N., Dremstrup, K., & Farina, D. (2015). Influence of external cues on synchronized brain-computer interface based on movement related cortical potentials. I *7th IEEE EMBS Conference on Neural Engineering, 22-24 April 2015, Montpellier, France* (s. 45-48). IEEE Press. <https://doi.org/10.1109/NER.2015.7146556>
- Taylor, D., Niazi, I. K., Signal, N., Jochumsen, M., Demstrup, K., & Farina, D. (2015). A brain computer interface (BCI) intervention to increase corticomotor excitability in the lower limb in people with stroke. *Physiotherapy, 101*(Suppl. 1), e1495. [eS258]. <https://doi.org/10.1016/j.physio.2015.03.1473>
- Taylor, D., Niazi, I. K., Signal, N., Jochumsen, M., & Dremstrup, K. (2015). *The Aalborg Brain Computer Interface: a protocol for inducing neural plasticity*. Abstract fra Stroke Rehab: From No-Tech to Go-Tech Conference, Christchurch, New Zealand.
- Aliakbaryhosseinabadi, S., Jiang, N., Vuckovic, A., Lontis, R., Dremstrup, K., Farina, D., & Mrachacz-Kersting, N. (2014). Detection of movement intention from movement-related cortical potentials with different paradigms. I W. Jensen, O. K. Andersen, & M. Akay (red.), *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* (s. 237-244). Springer. Biosystems and Biorobotics, Nr. 7 [https://doi.org/10.1007/978-3-319-08072-7\\_42](https://doi.org/10.1007/978-3-319-08072-7_42)
- Aliakbaryhosseinabadi, S., Petrini, L., Jiang, N., Farina, D., Dremstrup, K., & Mrachacz-Kersting, N. (2014). *Effect of different attentional level and task repetition on single-trial movement-related cortical potential*. Poster præsenteret ved International Brain-Computer Interface Conference, BCI, Graz, Østrig.
- Dremstrup, K., Niazi, I. K., Jochumsen, M., Jiang, N., Mrachacz-Kersting, N., & Farina, D. (2014). Rehabilitation using a brain computer interface based on movement related cortical potentials: a review. I L. M. Roa Romero (red.), *XIII Mediterranean Conference on Medical and Biological Engineering and Computing, MEDICON 2013, 25-28 September 2013, Seville, Spain* (s. 1659-1662). Springer. IFMBE Proceedings, Bind. 41 [https://doi.org/10.1007/978-3-319-00846-2\\_409](https://doi.org/10.1007/978-3-319-00846-2_409)
- Hassan, A., Niazi, I. K., Jochumsen, M., Riaz, F., & Dremstrup, K. (2014). Classification of kinetics of movement for lower limb using covariate shift method for brain computer interface. I *IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP, 4-9 May 2014, Florence, Italy* (s. 5854-5858). IEEE Press. <https://doi.org/10.1109/ICASSP.2014.6854726>
- Hassan, A., Akhtar, H., Khan, M. J., Riaz, F., Hassan, F., Niazi, I. K., Jochumsen, M., & Dremstrup, K. (2014). Use of empirical mode decomposition for classification of MRCP based task parameters. I E. Corchado, J. A. Lozano, H. Quintián, & H. Yin (red.), *Proceedings of the 15th International Conference on Intelligent Data Engineering and Automated Learning, IDEAL 2014, Salamanca, Spain* (s. 77-84). Springer. Lecture Notes in Computer Science, Bind. 8669 [https://doi.org/10.1007/978-3-319-10840-7\\_10](https://doi.org/10.1007/978-3-319-10840-7_10)
- Jiang, N., Mrachacz-Kersting, N., Xu, R., Dremstrup, K., & Farina, D. (2014). An accurate, versatile, and robust brain switch for neurorehabilitation. I C. Guger, T. Vaughan, & B. Allison (red.), *Brain-Computer Interface Research: A State-of-the-Art Summary 3* (s. 47-61). Springer. SpringerBriefs in Electrical and Computer Engineering [https://doi.org/10.1007/978-3-319-09979-8\\_5](https://doi.org/10.1007/978-3-319-09979-8_5)

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). Detection of movement intentions through a single channel of electroencephalography. I W. Jensen, O. K. Andersen, & M. Akay (red.), *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* (s. 465-472). Springer. Biosystems and Biorobotics, Nr. 7 [https://doi.org/10.1007/978-3-319-08072-7\\_69](https://doi.org/10.1007/978-3-319-08072-7_69)

Jochumsen, M., Navid, M. S., Nedergaard, R. W., Anwar, M. N., Niazi, I. K., & Dremstrup, K. (2014). Online detection and classification of movement kinetics. I G. Müller-Putz, G. Bauernfeind, C. Brunner, D. Steyrl, S. Wriessnegger, & R. Scherer (red.), *Proceedings of the 6th International Brain-Computer Interface Conference, 16-19 September 2014, Graz, Austria: The Future of Brain-Computer Interaction : Basics, Shortcomings, Users* [035-1] Verlag der Technischen Universität Graz. <https://doi.org/10.3217/978-3-85125-378-8-35>

Mrachacz-Kersting, N., Jiang, N., Dremstrup, K., & Farina, D. (2014). A novel brain-computer interface for chronic stroke patients. I C. Guger, B. Allison, & E. C. Leuthardt (red.), *Brain-Computer Interface Research: A State-of-the-Art Summary 2* (s. 51-61). Springer. Biosystems and Biorobotics, Bind. 6 [https://doi.org/10.1007/978-3-642-54707-2\\_6](https://doi.org/10.1007/978-3-642-54707-2_6)

Mrachacz-Kersting, N., Jiang, N., Xu, R., Dremstrup, K., & Farina, D. (2014). Plasticity following skilled learning and the implications for BCI performance. I G. Müller-Putz, G. Bauernfeind, C. Brunner, D. Steyrl, S. Wriessnegger, & R. Scherer (red.), *Proceedings of the 6th International Brain-Computer Interface Conference, 16-19 September 2014, Graz, Austria: The Future of Brain-Computer Interaction : Basics, Shortcomings, Users* [069-1] Verlag der Technischen Universität Graz. <https://doi.org/10.3217/978-3-85125-378-8-69>

Mrachacz-Kersting, N., Jiang, N., Dremstrup, K., & Farina, D. (2014). Plasticity following skilled learning and the implications for BCI performance. I *Annual Meeting of the Society for Neuroscience, Neuroscience 2014, 15-19 November 2014, Washington, DC, USA* (s. Poster No. 252.22/KK25 ) <http://www.abstractsonline.com/Plan/ViewAbstract.aspx?sKey=dcf68e43-c9ce-47e4-a9e8-7d6b8f22905c&cKey=02d756c4-d107-455f-b6db-b4b74a0cfe2f&mKey={54C85D94-6D69-4B09-AFAA-502C0E680CA7}>

Niazi, I. K., Jochumsen, M., Duehna, J., Kingett, M., Dremstrup, K., & Haavik, H. (2014). Chiropractic, cortical excitability and BCI. I W. Jensen, O. K. Andersen, & M. Akay (red.), *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* (s. 121-125). Springer. Biosystems and Biorobotics, Nr. 7 [https://doi.org/10.1007/978-3-319-08072-7\\_23](https://doi.org/10.1007/978-3-319-08072-7_23)

Riaz, F., Hassan, A., Rehman, S., Niazi, I. K., Jochumsen, M., & Dremstrup, K. (2014). Processing movement related cortical potentials in EEG signals for identification of slow and fast movements. I *36th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, IEEE EMBS, 26-30 August 2014, Chicago, IL, USA* (s. 4908-4911). IEEE Press. Proceedings of the International Conference of the IEEE Engineering in Medicine and Biology Society <https://doi.org/10.1109/EMBC.2014.6944724>

Savic, A., Lontis, R., Malesevic, N., Popovic, M., Jiang, N., Dremstrup, K., Farina, D., & Mrachacz-Kersting, N. (2014). Feasibility of an asynchronous event related desynchronization based brain switch for control of functional electrical stimulation. *Biomedizinische Technik, 59*(s1), S209-S212. <https://doi.org/10.1515/bmt-2014-5002>

Savić, A., Lontis, R., Jiang, N., Popović, M., Farina, D., Dremstrup, K., & Mrachacz-Kersting, N. (2014). Movement related cortical potentials and sensory motor rhythms during self initiated and cued movements. I W. Jensen, O. K. Andersen, & M. Akay (red.), *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* (s. 701-707). Springer. Biosystems and Biorobotics, Nr. 7 [https://doi.org/10.1007/978-3-319-08072-7\\_98](https://doi.org/10.1007/978-3-319-08072-7_98)

Xu, R., Jiang, N., Mrachacz-Kersting, N., Lin, C., Prieto, G. A., Moreno, J. C., Pons, J. L., Dremstrup, K., & Farina, D. (2014). A closed-loop brain-computer interface triggering an active ankle-foot orthosis for inducing cortical neural plasticity. *IEEE Transactions on Biomedical Engineering, 61*(7), 2092-2101. <https://doi.org/10.1109/TBME.2014.2313867>

- Xu, R., Jiang, N., Lin, C., Mrachacz-Kersting, N., Dremstrup, K., & Farina, D. (2014). Enhanced low-latency detection of motor intention from EEG for closed-loop brain-computer interface applications. *IEEE Transactions on Biomedical Engineering*, 61(2), 288-296. <https://doi.org/10.1109/TBME.2013.2294203>
- Xu, R., Jiang, N., Vuckovic, A., Hasan, M., Mrachacz-Kersting, N., Allan, D., Fraser, M., Nasserolelami, B., Conway, B., Dremstrup, K., & Farina, D. (2014). Movement-related cortical potentials in paraplegic patients: abnormal patterns and considerations for BCI-rehabilitation. *Frontiers in Neuroengineering*, 7, [35]. <https://doi.org/10.3389/fneng.2014.00035>
- Chavez, A., Caltenco, H., Dremstrup, K., & Cabrera, A. F. (2013). Autonomous wheelchair for patients with severe motor disabilities. I J-L. Ferrier, O. Gusikhin, K. Madani, & J. Sasiadek (red.), *Proceedings of the 10th International Conference on Informatics in Control, Automation and Robotics, ICINCO 2013, 29-31 July 2013, Reykjavik, Iceland: Volume 2* (s. 93-101). SCITEPRESS Digital Library.
- Dremstrup, K., Gu, Y., do Nascimento, O. F., & Farina, D. (2013). Movement-related cortical potentials and their application in brain-computer interfacing. I D. Farina, W. Jensen, & M. Akay (red.), *Introduction to Neural Engineering for Motor Rehabilitation* (s. 253-266). Wiley-IEEE press. IEEE Press Series in Biomedical Engineering [http://eu.wiley.com/WileyCDA/WileyTitle/productCd-0470916737\\_descCd-tableOfContents.html](http://eu.wiley.com/WileyCDA/WileyTitle/productCd-0470916737_descCd-tableOfContents.html)
- Gu, Y., Farina, D., Murguialday, A. R., Dremstrup, K., & Birbaumer, N. (2013). Comparison of movement related cortical potential in healthy people and amyotrophic lateral sclerosis patients. *Frontiers in Neuroscience*, 7, [65]. <https://doi.org/10.3389/fnins.2013.00065>
- Jochumsen, M., Niazi, I. K., Farina, D., & Dremstrup, K. (2013). Classifying speed and force from movement intentions using entropy and a support vector machine. I J. D. R. Millán, S. Gao, G. R. Müller-Putz, J. R. Wolpaw, & J. E. Huggins (red.), *Proceedings of the Fifth International Brain-Computer Interface Meeting : Defining the Future, 3-7 June 2013, Pacific Grove, CA, USA* (s. Article No. 136). Verlag der Technischen Universität Graz. [https://doi.org/10.3217/978-3-85125-260-6](https://doi.org/10.3217/978-3-85125-260-6-136), <https://doi.org/10.3217/978-3-85125-260-6>
- Jochumsen, M., Niazi, I. K., Mrachacz-Kersting, N., Farina, D., & Dremstrup, K. (2013). Detection and classification of movement-related cortical potentials associated with task force and speed. *Journal of Neural Engineering*, 10(5), [056015]. <https://doi.org/10.1088/1741-2560/10/5/056015>
- Mrachacz-Kersting, N., Niazi, I. K., Jiang, N., Pavlovic, A. M., Radovanovic, S., Kostic, V., Popovic, D. B., Dremstrup, K., & Farina, D. (2013). A novel brain-computer interface for chronic stroke patients. I J. L. Pons, D. Torricelli, & M. Pajaro (red.), *Converging Clinical and Engineering Research on Neurorehabilitation: International Conference on NeuroRehabilitation, ICNR 2012, 14-16 November 2012, Toledo, Spain* (Bind Part II, s. 837-841). Springer Publishing Company. Biosystems and Biorobotics, Bind. 1 [https://doi.org/10.1007/978-3-642-34546-3\\_136](https://doi.org/10.1007/978-3-642-34546-3_136)
- Niazi, I. K., Jochumsen, M., Farina, D., & Dremstrup, K. (2013). *Detection of movement intentions in mixed paradigms of internally cued and non-cued movement-related cortical potentials*. Abstract fra International IEEE EMBS Conference on Neural Engineering, San Diego, CA, USA. [https://embs.papercept.net/conferences/conferences/NER13/program/NER13\\_ContentListWeb\\_1.html#wedt5\\_17](https://embs.papercept.net/conferences/conferences/NER13/program/NER13_ContentListWeb_1.html#wedt5_17)
- Niazi, I. K., Jiang, N., Jochumsen, M., Nielsen, J. F., Dremstrup, K., & Farina, D. (2013). Detection of movement-related cortical potentials based on subject-independent training. *Medical & Biological Engineering & Computing*, 51(5), 507-512. <https://doi.org/10.1007/s11517-012-1018-1>
- Dremstrup, K. (2012). Olympiske rekorder og medicoteknik. *Medicinsk Teknologi & Informatik*, 9(4), 18. <http://www.e-pages.dk/scanpub/329/>
- Dremstrup, K., & Rasmussen, P. O. (2012). WC2012 i Beijing. *Medicinsk Teknologi & Informatik*, 9(4), 28-30. <http://www.e-pages.dk/scanpub/329/>
- Haavik, H., Sherwin, D., Flavel, S., Dremstrup, K., & Niazi, I. K. (2012). Neuroplastic changes in upper limb cortical excitability following spinal manipulation. I *Proceedings of the XIXth Congress of the International Society of Electrophysiology & Kinesiology, ISEK2012, 19-21 July 2012, Brisbane, Australia* (s. 248, No. SENS\_O3.1). ISEK. <http://isekconference2012.com/wp-content/uploads/2012/07/ISEK-2012-Conference-Proceedings.pdf>

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

Kersting, U. G., Morlock, M. M., Jirova-Enzmann, D., & Dremstrup, K. (red.) (2012). *Proceedings, Expert Scientific Meeting, ESM 2012, 1-4 August 2012, Aalborg, Denmark*. Department of Health Science and Technology. Aalborg University.

Mrachacz-Kersting, N., Jiang, N., Niazi, I. K., Pavlović, A. M., Radovanović, S., Kostić, V. S., Dremstrup, K., & Farina, D. (2012). The potential of imagination and artificial afference in stroke rehabilitation. I *11th Symposium on Neural Network Applications in Electrical Engineering, NEUREL 2012, 20-22 September 2012, Belgrade, Serbia* (s. 115-117). IEEE Press. <https://doi.org/10.1109/NEUREL.2012.6419979>

Niazi, I. K., Dremstrup, K., Jochumsen, M., Niemeier, M. J., Jensen, A. Å., Van, T. D., & Haavik, H. (2012). Lower limb cortical excitability changes and alterations to early Bereitschafts potential following spinal manipulation. I *Proceedings of the XIXth Congress of the International Society of Electrophysiology & Kinesiology, ISEK2012, 19-21 July 2012, Brisbane, Australia* (s. 245, No. SENS\_O2.2). ISEK. <http://isekconference2012.com/wp-content/uploads/2012/07/ISEK-2012-Conference-Proceedings.pdf>

Niazi, I. K., Mrachacz-Kersting, N., Jiang, N., Dremstrup, K., & Farina, D. (2012). Peripheral electrical stimulation triggered by self-paced detection of motor intention enhances motor evoked potentials. *IEEE Transactions on Neural Systems and Rehabilitation Engineering*, 20(4), 595-604, Article No. 6189795. <https://doi.org/10.1109/TNSRE.2012.2194309>

Dremstrup, K. (2011). 15th Nordic-Baltic Conference on Biomedical Engineering and Medical Physics in Aalborg, Denmark. *IFMBE News*, (87), 21-22. <http://ifmbe.org/attachments/article/104/IFMBE-News87.zip>

Dremstrup, K., Rees, S. E., & Jensen, M. Ø. (red.) (2011). *15th Nordic-Baltic Conference on Biomedical Engineering and Medical Physics (NBC 2011) 14-17 June 2011, Aalborg Denmark*. Springer. IFMBE Proceedings, Nr. 34 <https://doi.org/10.1007/978-3-642-21683-1>

Dremstrup, K. (2011). Kære læser. *Medicinsk Teknologi & Informatik*, 8(6), 4. <http://www.e-pages.dk/scanpub/299/>

Dremstrup, K. (2011). Medicoteknisk landsmøde: nu i Aalborg. *Medicinsk Teknologi & Informatik*, 8(3), 4. <http://www.e-pages.dk/scanpub/262/>

Dremstrup, K., & Elberg, P. B. (2011). Sundhedsteknologisk forskning og afledte uddannelser. *Medicinsk Teknologi & Informatik*, 8(2), 16-19. <http://www.e-pages.dk/scanpub/254/>

Gu, Y., & Dremstrup, K. (2011). Comparing MRCP of healthy subjects with that of ALS patients. *International Federation for Medical and Biological Engineering Proceedings*, 34, 141-143. [https://doi.org/10.1007/978-3-642-21683-1\\_35](https://doi.org/10.1007/978-3-642-21683-1_35)

Mrachacz-Kersting, N., Kristensen, S. R., Niazi, I. K., Dremstrup, K., & Farina, D. (2011). Motor imagination combined with peripheral stimulation increases cortical excitability. I *Proceedings Ninth Göttingen Meeting of the German Neuroscience Society and 33rd Göttingen Neurobiology Conference, 23-27 March 2011, Göttingen, Germany* (s. No. T21-11B). Neurowissenschaftliche Gesellschaft. [http://www.nwg-goettingen.de/2011/upload/file/Proceedings\\_2011.pdf](http://www.nwg-goettingen.de/2011/upload/file/Proceedings_2011.pdf)

Niazi, I. K., Jiang, N., Tiberghien, O., Nielsen, J. F., Dremstrup, K., & Farina, D. (2011). Detection of movement intention from single-trial movement-related cortical potentials. *Journal of Neural Engineering*, 8(6), Article No. 066009. <https://doi.org/10.1088/1741-2560/8/6/066009>

Plascencia, A. C., & Dremstrup, K. (2011). *Differential mobile robot based wheelchair*. Department of Health Science and Technology. Aalborg University. Report / Aalborg University, Department of Health Science and Technology, Nr. 2011:1

Prasad, S., Tan, Z-H., Prasad, R., Cabrera, A. R., Gu, Y., & Dremstrup, K. (2011). Feature Selection Strategy for Classification of Single-Trial EEG Elicited by Motor Imagery. *Proceedings of the Wireless Personal Multimedia Communications Symposia*, 1-4. <http://www.wpmc2011.org/>

Cabrera, A. F., Farina, D., & Dremstrup, K. (2010). Comparison of feature selection and classification methods for a brain-computer interface driven by non-motor imagery. *Medical & Biological Engineering & Computing*, 48(2), 123-132. <https://doi.org/10.1007/s11517-009-0569-2>

Dremstrup, K. (2010). Sundhedsteknologi: ikke blot det bedste fra flere fagdiscipliner, men et selvstændigt fagområde. I *ScandMedTech 2010 Program, abstracts, udstillere* (s. 7) [http://www.dskt.dk/sites/default/files/scandmedtech2010\\_abstracts\\_program\\_exhibitors.pdf](http://www.dskt.dk/sites/default/files/scandmedtech2010_abstracts_program_exhibitors.pdf)

Dremstrup, K. (2010). Velkommen til det 28. Medicotekniske Landsmøde i Brædstrup. *Medicinsk Teknologi og Informatik*, 7(4), 4. <http://www.e-pages.dk/scanpub/202/>

Niazi, I. K., Jiang, N., Lorrain, T., Cabrera, A. R., Mrachacz-Kersting, N., Dremstrup, K., & Farina, D. (2010). *Changes in cortical excitability following the use of a BCI with abstract feedback*. Abstract fra BCI International Meeting, Asilomar, CA, USA. [http://bcimeeting.org/2010/poster\\_abstracts.shtml#Q6](http://bcimeeting.org/2010/poster_abstracts.shtml#Q6)

Niazi, I. K., Jiang, N., Mrachacz-Kersting, N., Dremstrup, K., & Farina, D. (2010). Effect of abstract feedback following use of brain computer interface for upper limb rehabilitation. I D. Falla, & D. Farina (red.), *Abstracts of the XVIII Congress of the International Society of Electrophysiology and Kinesiology, ISEK 2010, 16-19 June 2010, Aalborg, Denmark [CD-ROM]* Department of Health Science and Technology. Aalborg University.

Tiberghien, O., Niazi, I. K., Jiang, N., Dremstrup, K., & Farina, D. (2010). Self paced brain computer interface (SBCI) using movement related cortical potentials. I 28. *Danske Medicotekniske Landsmøde, 21.-23. september 2010, Brædstrup, Danmark* Dansk Medicoteknisk Selskab.

Cabrera, A. R., & Dremstrup, K. (2009). Auditory and spatial navigation imagery in Brain-Computer Interface using optimized wavelets. *Journal of Neuroscience Methods*, 174(1), 135-146. <https://doi.org/10.1016/j.jneumeth.2008.06.026>

Cabrera, A. R., Farina, D., & Dremstrup, K. (2009). Smario: a toolbox for Brain-Computer Interfacing analysis and design. I *Proceedings of the 4th International IEEE EMBS Conference on Neural Engineering, April 29-May 2 2009, Antalya, Turkey* (s. 429-432). IEEE. <https://doi.org/10.1109/NER.2009.5109324>

Dremstrup, K., & Elberg, P. B. (2009). Aalborg Universitet satser på uddannelser indenfor sundhed: huser det største sundhedsteknologiske institut i Danmark med fem sundhedsrelaterede uddannelser. *Tidsskrift for Dansk Sundhedsvaesen*, 85(2), 34-38.

Gu, Y., Farina, D., Murguialday, A. R., Dremstrup, K., Montoya, P., & Birbaumer, N. (2009). Offline identification of imagined speed of wrist movements in paralyzed ALS patients from single-trial EEG. *Frontiers in Neuroscience*, 3, Article No. 62. <https://doi.org/10.3389/neuro.20.003.2009>

Gu, Y., Dremstrup, K., & Farina, D. (2009). Single-trial discrimination of type and speed of wrist movements from EEG recordings. *Clinical Neurophysiology*, 120(8), 1596-1600. <https://doi.org/10.1016/j.clinph.2009.05.006>

Cabrera, A. R., do Nascimento, O. F., Farina, D., & Dremstrup, K. (2008). Brain-Computer Interfacing: how to control computers with thoughts. I *1st International Symposium on Applied Sciences in Biomedical and Communication Technologies, ISABEL 2008, 25-28 October 2008, Aalborg, Denmark* (s. 1-4). IEEE. <https://doi.org/10.1109/ISABEL.2008.4712629>

Cabrera, A. R., & Dremstrup, K. (2008). *Steady-State Visual Evoked Potentials to drive a Brain Computer Interface*. Department of Health Science and Technology. Aalborg University. Report / Aalborg University, Department of Health Science and Technology, Nr. 2008:1



Dremstrup, K., & Elberg, P. B. (2008). Five year biomedical engineering curriculum: experiences and results from the first eight years. *International Federation for Medical and Biological Engineering Proceedings*, 20, 409-412. <http://www.springerlink.com/content/x544607158441w63/fulltext.pdf>

Dremstrup, K., & Cabrera, A. R. (2008). Synchronous and non-synchronous man-machine interfaces based on the electroencephalogram. I *14th Nordic-Baltic Conference on Biomedical Engineering and Medical Physics, NBC 2008, 16-20 June 2008, Riga, Latvia* (s. 167, No. P6.02). Riga Technical University.

Dremstrup, K., & Lindvig, B. K. (2008). Velkommen til det 26. Medicotekniske Landsmøde! *Medicinsk Teknologi og Informatik*, 5(4), 4.

Wang, K., Liu, T., Svensson, P., Jadidi, F., Dremstrup, K., & Arendt-Nielsen, L. (2008). Feedback stimulation on polysomnographic recordings in patient with sleep bruxism. *Journal of Dental Research*, 87(Special issue B), No. 2748.

Webster, J. G., & Dremstrup, K. (2008). Around the world: biomedical engineering is strong in Denmark. *IEEE Engineering in Medicine and Biology Magazine*, 27(1), 7-9. <https://doi.org/10.1109/MEMB.2007.911964>

Nielsen, K. D. (2007). En sund sjæl i et sundt legeme. *Sundhed, Teknologi, Informatik*, (maj), 3-4.

Nielsen, K. D. (2007). Oprustning på samarbejdsaktiviteter. *Sundhed, Teknologi, Informatik*, 2007(februar), 1-2.

Cabrera, A. R., Lund, M. E., Christensen, D. M., Nielsen, T. N., Skov-Madsen, G., & Nielsen, K. D. (2006). Brain-computer interface based on non-motor imagery. I *Proceedings of the 3rd International Brain-Computer Interface Workshop and Training Course 2006, 21-24 September 2006, Graz, Austria* (s. 68-69). <Forlag uden navn>.

Drewes, A. M., Sami, S., Dimcevski, G., Nielsen, K. D., Funch-Jensen, P., Valeriani, M., & Arendt-Nielsen, L. (2006). Cerebral processing of painful oesophageal stimulation: a study based on independent component analysis of the EEG. *Gut*, 55(5), 619-629. <https://doi.org/10.1136/gut.2005.068460>

Nascimento, O. D., Nielsen, K. D., & Voigt, M. (2006). Movement-related parameters modulate cortical activity during imaginary isometric plantar-flexions. *Experimental Brain Research*, 171(1), 78-90. <https://doi.org/10.1007/s00221-005-0247-z>

Nielsen, K. D., Cabrera, A. R., & Nascimento, O. D. (2006). EEG based BCI - towards a better control. Brain-Computer Interface research at Aalborg University. *IEEE Transactions on Neural Systems and Rehabilitation Engineering*, 14(2), 202-204. <https://doi.org/10.1109/TNSRE.2006.875529>

Nielsen, K. D. (2006). Tankestyret computerkontrol: fakta eller fiktion? *Sundhed, Teknologi, Informatik*, (Juni), 5-6.

Nielsen, K. D. (2006). Tankestyret computerkontrol: fakta eller fiktion? *Medicinsk Teknologi og Informatik*, (8), 27-28.

Sami, S., Rössel, P., Dimcevski, G., Nielsen, K. D., Funch-Jensen, P., Valeriani, M., Arendt-Nielsen, L., & Drewes, A. M. (2006). Cortical changes to experimental sensitization of the human esophagus. *Neuroscience*, 140(1), 269-279. <https://doi.org/10.1016/j.neuroscience.2006.02.031>

do Nascimento, O. F., Nielsen, K. D., & Voigt, M. (2005). Influence of directional orientations during gait initiation and stepping on movement-related cortical potentials. *Behavioural Brain Research*, 161(1), 141-154. <https://doi.org/10.1016/j.bbr.2005.02.031>

do Nascimento, O. F., Nielsen, K. D., & Voigt, M. (2005). *Modulation of cortical activity by movement-related parameters during imaginary isometric plantar-flexions*. Abstract fra Brain-Computer Interface Technology, Third International Meeting: Making a Difference, Rensselaerville, NY, USA. <http://www.bciresearch.org/2005BCIMeeting/ABSTRACTS.pdf>

do Nascimento, O. F., Nielsen, K. D., & Voigt, M. (2005). Relationship between plantar-flexor torque generation and the magnitude of the movement-related potentials. *Experimental Brain Research*, 160(2), 154-165. <https://doi.org/10.1007/s00221-004-1996-9>

Nielsen, K. D., & Struijk, J. J. (2005). BME education: the project organized and problem based learning model is the choice. I *The 3rd European Medical and Biological Engineering Conference, EMBEC '05, Proceedings of the International Federation for Medical & Biological Engineering, IFMBE, 20-25 November 2005, Prague, Czech Republic* IFMBE Proceedings, Nr. 1, Bind. 11

Nielsen, K. D., do Nascimento, O. F., & Cabrera, A. R. F. (2005). *Brain-computer interface research at Aalborg University*. Abstract fra Brain-Computer Interface Technology, Third International Meeting: Making a Difference, Rensselaerville, NY, USA. <http://www.bciresearch.org/2005BCIMeeting/ABSTRACTS.pdf>

Nielsen, L-G., Sami, S., Drewes, A. M., Nielsen, K. D., & Gaihede, M. (2005). Central control of human middle ear pressure: preliminary evidence based on brain evoked potentials. *Otology & Neurotology*, 26(2), 305-306.

Nielsen, K. D., Cabrera, A. R. F., & do Nascimento, O. F. (2005). EEG as command signal in rehabilitation devices. I *The 3rd European Medical and Biological Engineering Conference, EMBEC '05, Proceedings of the International Federation for Medical & Biological Engineering, IFMBE, 20-25 November 2005, Prague, Czech Republic* IFMBE Proceedings, Nr. 1, Bind. 11

Nielsen, K. D. (2005). Kuvøsen: ny inkubator i det sundhedsfaglige miljø på Aalborg Universitet. *Sundhed - Teknologi - Informatik*, 2005(september), 5.

Nielsen, K. D., Rijkhoff, N., & Struijk, L. N. S. A. (2005). Rehabiliteringsteknologi. *Sundhed - Teknologi - Informatik*, 2005 (maj), 2-3.

Yao, D., Wang, L., Oostenveld, R., Nielsen, K. D., Arendt-Nielsen, L., & Chen, A. C. N. (2005). A comparative study of different references for EEG spectral mapping: the issue of the neutral reference and the use of the infinity reference. *Physiological Measurement*, 26(3), 173-184. <https://doi.org/10.1088/0967-3334/26/3/003>

Andersen, S. K., & Nielsen, K. D. (2004). At lære eller ikke at lære. *Sundhed - Teknologi - Informatik*, 2004(november), 1.

Cabrera, A. R. F., & Nielsen, K. D. (2004). Brain computer interface based on steady-state visual evoked potentials. *Biomedizinische Technik*, 49(Suppl. 1), 37-38.

Paiva, T., Penzel, T., Zulley, J., Binnie, C., Russel, M., Escourrou, P., Araujo, M. T., Fred, A., Varri, A., Spreng, M., Nielsen, K. D., Belo, C., Rosa, A., & Guilleminault, C. (2004). The ENN project: a telematics experience in neurology. *Somnologie*, 8, 3-13.

Sami, S., & Nielsen, K. D. (2004). Communication speed enhancement for visual based Brain Computer Interfaces. I D. Wood, & P. Taylor (red.), *Getting FES into clinical practice, Proceedings of IFESS-FESnet 2004, 9th Annual Conference of the International Functional Electrical Stimulation Society and the 2nd Conference of FESnet, 6-9 September 2004, Bournemouth, United Kingdom* (s. 228-230). <Forlag uden navn>. <https://ifess.org/ifess04/control%20techniques/poster/samis.pdf>

Yao, D., Wang, L., Nielsen, K. D., Arendt-Nielsen, L., & Chen, A. C. N. (2004). Cortical mapping of EEG alpha power using a Charge Layer model. *Brain Topography*, 17(2), 65-71.

Yao, D., Wang, L., Oostenveld, R., Nielsen, K. D., Arendt-Nielsen, L., & Chen, A. C. N. (2004). Cortical power mapping of alpha activities by Charge-Layer modelling. I *10th Annual Meeting of the Organization for Human Brain Mapping, HBM 2004, 13-17 June 2004, Budapest, Hungary* (s. No. WE 333)

Yao, D., Wang, L., Oostenveld, R., Nielsen, K. D., Arendt-Nielsen, L., & Chen, A. C. N. (2004). Systematic effect of reference on power mapping of EEG: the use of infinity reference. I *10th Annual Meeting of the Organization for Human Brain Mapping, HBM 2004, 13-17 June 2004, Budapest, Hungary* (s. No. WE 334)

do Nascimento, O. F., Voigt, M., & Nielsen, K. D. (2003). Movement related potentials preceding and accompanying lower limb muscle activation. I *Society for Neuroscience 33rd Annual Meeting, 8-12 November 2003, New Orleans, LA, USA [CD-ROM]* (s. No. 607.23)

Nielsen, K. D. (2003). Analysis of sleep macro- and microstructure. I *Proceedings of the 10th Meeting of the Scandinavian Sleep Research Society, SSRS 2003, 22-24 May 2003, Copenhagen, Denmark* (s. S03.2)

Nielsen, K. D., Rasmussen, C., Arima, T., Svensson, P., Rössel, P., & Drewes, A. M. (2003). Automatic slow wave sleep deprivation by detection of micro-sleep patterns. I *Proceedings of the 10th Meeting of the Scandinavian Sleep Research Society, SSRS 2003, 22-24 May 2003, Copenhagen, Denmark* (s. No. P19)

Sinkjær, T., Haugland, M. K., Inmann, A., Hansen, M., & Nielsen, K. D. (2003). Biopotentials as command and feedback signals in functional electrical stimulation systems. *Medical Engineering & Physics*, 25(1), 29-40.

Ahmed-Khalid, S. S., & Nielsen, K. D. (2002). Expanding the prospects of visual based Brain Computer Interfacing. I *12th Nordic Baltic Conference on Biomedical Engineering and Medical Physics, 12NBC 2002, Proceedings of the International Federation for Medical & Biological Engineering, IFMBE, 18-22 June 2002, Reykjavik, Iceland* (s. 224-225). <Forlag uden navn>.

Nielsen, K. D., Struijk, J. J., & Sinkjær, T. (2002). Five years BME curriculum with problem based and project organized learning at Aalborg University. I *12th Nordic Baltic Conference on Biomedical Engineering and Medical Physics, 12NBC 2002, Proceedings of the International Federation for Medical & Biological Engineering, IFMBE, 18-22 June 2002, Reykjavik, Iceland* (s. 112-113). <Forlag uden navn>.

Wahnoun, R., Saigal, R., Gu, Y., Paquet, N., DePauw, S., Chen, A. C. N., Ahmed-Khalid, S. S., & Nielsen, K. D. (2002). A real-time brain-computer interface based on steady-state visual evoked potentials. I *7th Annual Conference of the International Functional Electrical Stimulation Society, IFESS 2002, 25-29 June 2002, Ljubljana, Slovenia* (s. 161-163) [http://www.ifess.org/ifess02/muscles\\_nerves/WahnounR.pdf](http://www.ifess.org/ifess02/muscles_nerves/WahnounR.pdf)

Arima, T., Svensson, P., Rasmussen, C., Nielsen, K. D., Drewes, A. M., & Arendt-Nielsen, L. (2001). The relationship between selective sleep deprivation, nocturnal jaw-muscle activity and pain in healthy men. *Journal of Oral Rehabilitation*, 28(2), 140-148.

Dorffner, G., Sykacek, P., Roberts, S., Schlog, A., Värri, A., Rappelsberger, P., Anderer, P., Klosch, G., Saletu, B., Barbanoj, M. J., Hermann, W., Himanen, S., Kemp, B., Penzel, T., Roschke, J., & Nielsen, K. D. (2000). Analysis of the sleep-awake continuum: the Siesta Biomed II project. *Hypnos*, 1(1), 28.

Drewes, A. M., Nielsen, K. D., Hansen, B., Taagholt, S. J., Bjerregård, K., & Svendsen, L. (2000). A longitudinal study of clinical symptoms and sleep parameters in rheumatoid arthritis. *Rheumatology*, 39(11), 1287-1289.

Drewes, A. M., Nielsen, K. D., Rasmussen, C., Arima, T., Svensson, P., Rössel, P., & Arendt-Nielsen, L. (2000). The effects of controlled delta sleep deprivation on experimental pain in healthy subjects. *Journal of Musculoskeletal Pain*, 8(3), 49-67.

Juul, P. R., Ladouceur, M., & Nielsen, K. D. (2000). Coding of lower limb muscle force generation in associated EEG movement related potentials: preliminary studies toward a feed-forward control of FES-assisted walking. I T. Sinkjær, D. Popovic, & J. J. Struijk (red.), *IFESS 2000. NP 2000, Proceedings, 5th Annual Conference of the International Functional Electrical Stimulation Society, 6th Triennial Conference "Neural Prosthesis: Motor Systems", 18-24 June 2000, Aalborg, Denmark* (s. 335-337). Center for Sensory-Motor Interaction (SMI), Department of Health Science and Technology, Aalborg University.

Lassen, J. L., Møller, R. C., Nielsen, K. D., & Voigt, M. (2000). Comparison of event related brain potentials of fast and slow reacting human subjects. I T. Sinkjær, D. Popovic, & J. J. Struijk (red.), *IFESS 2000. NP 2000, Proceedings, 5th Annual Conference of the International Functional Electrical Stimulation Society, 6th Triennial Conference "Neural Prostheses: Motor Systems", 18-24 June 2000, Aalborg, Denmark* (s. 331-334). Center for Sensory-Motor Interaction (SMI), Department of Health Science and Technology, Aalborg University.

Nielsen, K. D., & Drewes, A. M. (2000). Analysis of the microstructure of sleep. *Hypnos*, 1(1), 26.

Nielsen, K. D., & Drewes, A. M. (2000). Experimental pain stimuli during wake-fullness and sleep. *Hypnos*, 1(1), 27.

Nielsen, K. D., Struijk, J. J., & Sinkjær, T. (2000). New five year biomedical engineering curriculum at Aalborg University. I T. Sinkjær, D. Popovic, & J. J. Struijk (red.), *IFESS 2000. NP 2000, Proceedings, 5th Annual Conference of the International Functional Electrical Stimulation Society, 6th Triennial Conference "Neural Prostheses: Motor Systems", 18-24 June 2000, Aalborg, Denmark* (s. 505-508). Center for Sensory-Motor Interaction (SMI), Department of Health Science and Technology, Aalborg University.

Nielsen, K. D., Rasmussen, C., & Russell, M. B. (2000). The diagnostic headache diary: a headache expert system. I T. Paiva, & T. Penzel (red.), *European Neurological Network: ENN* (s. 149-160). IOS Press. Studies in Health Technology and Informatics, Bind. 78

Russell, M. B., Nielsen, K. D., Rasmussen, C., Schoenen, J., & Paiva, T. (2000). Headache tutorial. I T. Paiva, & T. Penzel (red.), *European Neurological Network : ENN* (s. 207-212). IOS Press. Studies in Health Technology and Informatics, Nr. 78

Russell, M. B., Nielsen, K. D., Rasmussen, C., Schoenen, J., & Paiva, T. (2000). Multimedia education in headache: the European Neurological Network. *European Journal of Neurology*, 7(3), 355-362. <https://doi.org/10.1046/j.1468-1331.2000.00076.x>

Drewes, A. M., Nielsen, K. D., Steengaard-Pedersen, K., Birket-Smith, L., Hansen, L. M., & Arendt-Nielsen, L. (1999). Electroencephalographic reactions during experimental superficial and deep pain stimuli in awake healthy subjects. *Journal of Musculoskeletal Pain*, 7(4), 29-44.

Rasmussen, C., Nielsen, K. D., & Jennum, P. (1999). Decision support for diagnosis of sleep apnea. I *Proceedings from the 3rd IMIA/IMFBE Workshop on Biosignal Interpretation, 1999* (s. 170-174)

Drewes, A. M., Svendsen, L., Taagholt, S. J., Bjerregaard, K., Nielsen, K. D., & Hansen, B. (1998). Il sonno nell'artrite reumatoide: confronto con sogetti sani e studi sulle interazioni sonno/veglia. *British Journal of Rheumatology : Edizione Italiana*, 2(3), 19-30.

Drewes, A. M., Svendsen, L., Taagholt, S. J., Bjerregaard, K., Nielsen, K. D., & Hansen, B. (1998). Sleep in rheumatoid arthritis: a comparison with healthy subjects and studies of sleep/wake interactions. *British Journal of Rheumatology*, 37(1), 71-81.

Drewes, A. M., Bjerregaard, K., Taagholt, S. J., Svendsen, L., & Nielsen, K. D. (1998). Zopiclone as night medication in rheumatoid arthritis. *Scandinavian Journal of Rheumatology*, 27, 180-187.

Kemp, B., Penzel, T., Värr, A., Sykacek, P., Roberts, S. J., & Dremstrup, K. (1998). EDF: a simple format for graphical analysis results from polygraphic Siesta recordings. *Journal of Sleep Research*, 7(Suppl. 2), 132, No. 263.

Penzel, T., Guillemainault, C., Kesper, K., Mayer, G., Dremstrup, K., Paiva, T., & Zulley, J. (1998). A multimedia database of sleep recordings for The European Neurological Network. *Sleep*, 21(Suppl.), 275.

Rasmussen, C., Dremstrup, K., Arima, T., Svensson, P., Rössel, P., & Drewes, A. M. (1998). An automatic system for selective and standardized sleep deprivation. *Journal of Sleep Research*, 7(Suppl. 2), 221, No. 441.

Rasmussen, C., Nielsen, K. D., Arima, T., Svensson, P., & Drewes, A. M. (1998). System til automatisk og selektiv deprivation af delta søvn. I *Foredragskonkurrence udskrivet af Dansk Mediko Teknisk Selskab*, 27. november 1998 (s. 8)

Dremstrup, K., Drewes, A. M., Arendt-Nielsen, L., Birket-Smith, L., & Hansen, L. M. (1997). Pain and the electroencephalogram: quantification of nociceptive stimulus response by power spectral analysis of the EEG. *Medical & Biological Engineering & Computing*, 35(Suppl. 1), 536.

Dremstrup, K., Penzel, T., Värr, A., Guilleminault, C., & Paiva, T. (1997). Sleep, headache and epilepsy reference database with Internet access: The European Neurological Network Project. *Medical & Biological Engineering & Computing*, 35(Suppl. 2), 1303.

Drewes, A. M., Rössel, P., Arendt-Nielsen, L., Nielsen, K. D., Hansen, L. M., Birket-Smith, L., & Stengaard-Pedersen, K. (1997). Sleepiness does not modulate experimental joint pain in healthy volunteers. *Scandinavian Journal of Rheumatology*, 26(5), 399-400.

Drewes, A. M., Nielsen, K. D., Arendt-Nielsen, L., Birket-Smith, L., & Hansen, L. M. (1997). The effect of cutaneous and deep pain on the electroencephalogram during sleep: an experimental study. *Sleep*, 20(8), 632-640.

Nielsen, K. D., Kjær, A., Jensen, W., Dyrby, T., Andreasen, L. N. S., Andersen, J., & Andreassen, S. (1997). Causal probabilistic network and power spectral estimation used in sleep stage classification. *Methods of Information in Medicine*, 36, 345-348.

Penzel, T., Kesper, K., Mayer, G., Zulley, J., Nielsen, K. D., Värr, A., Paiva, T., & Guilleminault, C. (1997). Europäisches Neurologisches Netzwerk (ENN). I Satyer, G. ...[et al.] (red.), *TELEMED'97 : Telematik im Gesundheitswesen, 1997, Berlin, Deutschland* (s. 136-142). <Forlag uden navn>.

Rasmussen, C., Dremstrup, K., & Drewes, A. M. (1997). Decision support for diagnosis of sleep disorders. *Medical & Biological Engineering & Computing*, 35(Suppl. 1), 381.

Värr, A., Hellmann, G., Penzel, T., Dremstrup, K., Macerata, A., Gottlieb, L., Hassing, K., & Zywiets, C. (1997). A new standard biosignal storage format. *Medical & Biological Engineering & Computing*, 35(Suppl. 2), 1302.

Drewes, A. M., Nielsen, K. D., Taagholt, S. J., Svendsen, L., Bjerregaard, K., Nielsson, L., & Kristensen, L. E. (1996). Ambulatory polysomnography using a new programmable amplifier system with on-line digitization of data: technical and clinical findings. *Sleep*, 19(4), 347-354.

Drewes, A. M., Arendt-Nielsen, L., Steengaard-Petersen, K., Birket-Smith, L., Hansen, L. M., Dremstrup, K., & Jensen, M. P. (1996). Sleep and pain: assessment of sleep microstructure during experimental nociceptive stimuli. I *Abstracts 8th World Congress on Pain, 17-22 August 1996, Vancouver, Canada* (s. 335-336, No. 18). IASP Press.

Nielsen, K. D., Andersen, J. M., Andreasen, L. N. S., Dyrby, T., Jensen, W., Kjær, A. G., & Andreassen, S. (1996). Causal probabilistic network and power spectral estimation used for sleep classification. I *Proceedings of the 2nd IFMBE-IMIA International Workshop on Biosignal Interpretation, International Federation for Medical and Biomedical Engineering (IFMBE), 1996* (s. 211-214)

Penzel, T., Fuchs, K., Hassing, K., Hellmann, G., Macerata, A., Dremstrup, K., Värr, A., & Zywiets, C. (1996). Scenarios on vital signs and derivation of a domain information model. *Medical & Biological Engineering & Computing*, 34(Suppl. 1), 119-120.

Värri, A., Hellmann, G., Penzel, T., Dremstrup, K., Macerata, A., Gottlieb, L., Hassing, K., & Zywiets, C. (1996). Object oriented design of a new, standard file exchange format for vital signs. *Medical & Biological Engineering & Computing*, 34 (Suppl. 1), 407-408.

Bjerregård, K., Drewes, A. M., Taagholt, S., Svendsen, L., & Dremstrup, K. (1995). Clustering of sleep electroencephalographic patterns in patients with the fibromyalgia syndrome. *Rheumatology in Europe*, 24(Suppl. 3), 54, No. A160.

Drewes, A. M., Gade, J., Nielsen, K. D., Bjerregaard, K., Taagholt, S. J., & Svendsen, L. (1995). Clustering of sleep electroencephalographic patterns in patients with the fibromyalgic syndrome. *British Journal of Rheumatology*, 34, 1151-1156.

Drewes, A. M., Gade, J., Nielsen, K. D., Bjerregaard, K., Taagholt, S. J., & Svendsen, L. (1995). Recognition of sleep electroencephalographic patterns in fibromyalgia using linked clustering analysis. I I. J. Russell (red.), *MYOPAIN'95, Abstracts from the 3rd World Congress on Myofascial Pain and Fibromyalgia, 30 July-3 August 1995, San Antonio, TX, USA* Haworth Press.

Drewes, A. M., Svendsen, L., Bjerregaard, K., Taagholt, S. J., & Dremstrup, K. (1995). Sleep in rheumatoid arthritis: a comparative study based on home polysomnographic recordings. *Rheumatology in Europe*, 24(Suppl. 3), 150, No. C30.

Drewes, A. M., Nielsen, K. D., Taagholt, S. J., Svendsen, L., Bjerregaard, K., & Gade, J. (1995). Sleep intensity in fibromyalgia: focus on the microstructure of the sleep process. *British Journal of Rheumatology*, 34(7), 629-635.

Drewes, A. M., Nielsen, K. D., Taagholt, S. J., Bjerregaard, K., Svendsen, L., & Gade, J. (1995). Slow wave sleep in fibromyalgia. I I. J. Russell (red.), *MYOPAIN'95, Abstracts from the 3rd World Congress on Myofascial Pain and Fibromyalgia, 30 July-3 August 1995, San Antonio, TX, USA* Haworth Press.

Drewes, A. M., Bjerregaard, K., Svendsen, L., Taagholt, S. J., & Dremstrup, K. (1995). Treatment of sleep disturbances in rheumatoid arthritis: a double-blind study with zopiclone. *Rheumatology in Europe*, 24(Suppl. 3), 150, No. C31.

Nielsen, K. D., Drewes, A. M., Arendt-Nielsen, L., Bak, P., Andersen, L., & Hansen, L. M. (1995). EEG og smerte: kvantificering af nociceptiv stimuli respons vha. effektspektrum analyse af elektroencefalogrammet. I *Nordisk Kongres, Nordisk Møde for Kliniske Neurofysiologer, Aalborg, Denmark, August* Dansk Selskab for Klinisk Neurofysiologi.

Svendsen, L., Drewes, A. M., Bjerregaard, K., Taagholt, S. J., & Dremstrup, K. (1995). Structure of sleep in patients with fibromyalgia compared to patients with rheumatoid arthritis. *Rheumatology in Europe*, 24(Suppl. 3), 53, No. A157.

Svendsen, L., Drewes, A. M., Bjerregaard, K., Taagholt, S. J., Dremstrup, K., & Gade, J. (1995). The microstructure of sleep in fibromyalgia: focus on sigma bands. *Rheumatology in Europe*, 24(Suppl. 3), 53, No. A156.

Värri, A., Kemp, B., Rosa, A. C., Nielsen, K. D., Gade, J., Penzel, T., Hasan, J., Hirvonen, K., Häkkinen, V., Kamphuisen, H. A. C., & Mourtazaev, M. S. (1995). Multi-center Comparison of five Eye Movement Detection Algorithms. *Journal of Sleep Research*, 4, 119-130.

Drewes, A. M., Svendsen, L., Nielsen, K. D., Taagholt, S., & Bjerregård, K. (1994). Quantification of Alpha-EEG activity during sleep in fibromyalgia: a study based on ambulatory sleep monitoring. *Journal of Musculoskeletal Pain*, 2(4), 33-53.

Drewes, A. M., Jennum, P., Andreasen, A., Sjø, A., & Nielsen, K. D. (1994). Self-reported sleep disturbances and daytime complaints in women with fibromyalgia and rheumatoid arthritis. *Journal of Musculoskeletal Pain*, 2(4), 15-31.

Drewes, A. M., Taagholt, S., Bjerregård, K., Svendsen, L., & Nielsen, K. D. (1994). Sleep abnormalities in rheumatoid arthritis: preliminary results from treatment with Zopiclone. *Journal of Sleep Research*, Vol. 3(Suppl. 1), 69. <https://doi.org/10.1111/j.1365-2869.1994.tb00140.x>

Gade, J., Drewes, A. M., Nielsen, K. D., Taagholt, S., Bjerregård, K., & Svendsen, L. (1994). Clustering of sleep patterns in fibromyalgia patients and controls. *Journal of Sleep Research*, 3(Suppl. 1), 84. <https://doi.org/10.1111/j.1365-2869.1994.tb00140.x>

Nielsen, K. D., Drewes, A. M., Svendsen, L., Bjerregård, K., & Taagholt, S. (1994). Ambulatory recording and power spectral analysis by autoregressive modelling of polygraphic sleep signals in patients suffering from chronic pain. *Methods of Information in Medicine*, 33, 76-79.

Nielsen, K. D., Drewes, A. M., Nilsson, L., Svendsen, L., Bjerregård, K., & Taagholt, S. (1994). New digital ambulatory polygraphic system applied to sleep in fibromyalgia and rheumatoid arthritis. *Journal of Sleep Research*, 3(Suppl. 1), 179. <https://doi.org/10.1111/j.1365-2869.1994.tb00140.x>

Drewes, A. M., Nielsen, K. D., Jennum, P., & Andreasen, A. (1993). Alpha intrusion in fibromyalgia. *Journal of Musculoskeletal Pain*, 1(3-4), 223-228. [https://doi.org/10.1300/J094v01n03\\_23](https://doi.org/10.1300/J094v01n03_23)

Jennum, P., Drewes, A. M., Andreasen, A., & Nielsen, K. D. (1993). Sleep and different symptoms in primary fibromyalgia and in normal controls. *Journal of Rheumatology*, 20(10), 1756-1759.

Nielsen, K. D. (1993). *Computer assisted sleep analysis*. Aalborg University. Department of Medical Informatics and Image Analysis.

Kemp, B., Värri, A., Rosa, A. C., Nielsen, K. D., & Gade, J. (1992). A simple format for exchange of digitized polygraphic recordings. *Electroencephalography and Clinical Neurophysiology*, 82, 391-393.

Nielsen, K. D., Drewes, A. M., & Wildschjødztz, G. (1992). Automatic versus manual analysis of sleep using the Nightingale sleep analyzer. *Journal of Sleep Research*, 1(1), 61.

Nielsen, K. D., Drewes, A. M., Jennum, P., & Andreasen, A. (1992). Quantitative analysis of alpha intrusion of deep sleep in fibromyalgia. *Journal of Sleep Research*, 1 (1), 160.

Drewes, A. M., Andreasen, A., Jennum, P., & Nielsen, K. D. (1991). Sleep related disturbances in fibromyalgia compared to normal controls. *Journal of Sleep Research*, 20A, No. 418.

Drewes, A. M., Andreasen, A., Jennum, P., & Dremstrup, K. (1991). Zopiclone in the treatment of sleep abnormalities in fibromyalgia. *Scandinavian Journal of Rheumatology*, 20, 288-293.

Kemp, B., Värri, A., Rosa, A. C., Nielsen, K. D., Gade, J., & Penzel, T. (1991). Analysis of brain synchronization, based on noise-driven feedback models. I *13th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 1991, Orlando, FL, USA* (s. 2305-2306)

Nielsen, K. D., Drewes, A. M., Andreasen, A., & Jennum, P. (1991). Computer analysis of sleep in primary fibromyalgia. *Journal of Sleep Research*, 20A, No. 506.

Drewes, A. M., Nielsen, K. D., Andreasen, A., & Jennum, P. (1990). Subjective evaluation and automatic sleep analysis in treatment of primary fibromyalgia. I *Proceedings of the 8th Nordic Meeting on Medical and Biological Engineering, June 1990, Aalborg, Denmark* (s. A51)

Drewes, A. M., Andreasen, A., Jennum, P., & Nielsen, K. D. (1990). Zopiclone in the treatment of sleep disorders in primary fibromyalgia. I *Proceedings 10th Congress of the European Sleep Research Society, 1990, Strassbourg, France* (s. 390)

Jennum, P., Drewes, A. M., Andreasen, A., & Nielsen, K. D. (1990). Sleep abnormalities and daytime performance in primary fibromyalgia compared to normality. I *Proceedings 10th Congress of the European Sleep Research Society, 1990, Strassbourg, France* (s. 776)

Nielsen, K. D., Drewes, A. M., Andreasen, A., & Jennum, P. (1990). Automatic analysis of sleep in primary fibromyalgia. I *Proceedings of the 8th Nordic Meeting on Medical and Biological Engineering, June 1990, Aalborg, Denmark* (s. A52)

Nielsen, K. D. (1988). Automatic sleep analysis and display system. I *European Workshop in Methodology for Sleep Analysis EEC - COMAC - BME, 1988, Lisboa, Portugal*

Nielsen, K. D., Simonsen, E., & Wildschjødtz, G. (1987). Computer polygraphic display system for sleep scoring. *Clinical Neurology and Neurosurgery, 89-2*(Suppl. 1), 109.

Nielsen, K. D., & Wildschjødtz, G. (1987). Microcomputer based sleep analysis and display system. I *Proceedings of the 5th International Congress of Sleep Research, 1987, Copenhagen, Denmark*

Rosenfalck, A., Nielsen, K. D., & Thomsen, C. (1987). Computerbaseret analyse af hjernens elektriske aktiviteter under søvn og anæstesi. I *Årsberetning for AUC 1984-1986* (s. 83-97). Aalborg Universitetscenter.

Simonsen, E., Nielsen, K. D., & Wildschjødtz, G. (1987). Computerized polygraphic display system for sleep recording and sleep scoring. *Journal of Sleep Research, 16*.

Rosenfalck, A., Kristensen, L. E., Nielsen, K. D., & Thomsen, C. E. (1986). *ON-LINE ANALYSIS OF EEG*. 418-422.

Rosenfalck, A., Kristensen, L. E., Nielsen, K. D., & Thomsen, C. E. (1986). On-line EEG analysis. I *8th Annual Conference of the IEEE Engineering in Medicine and Biology Society, November 1986, Dallas-Fort Worth, TX, USA* (s. 418-422)

Nielsen, K. D. (1985). Microprocessor based system for sleep analysis in multiples of realtime. *Electroencephalography and Clinical Neurophysiology, 61*(3), S202, No. P38.01.

Rosenfalck, A., Andreassen, S., Johansen, K., Kristensen, L. E., Nielsen, K. D., Nielsen, F., Nørregaard, K., Sinkjær, T., Thomsen, C. E., & Simonsen, E. (1985). On line analysis of EEG. I *XIV ICMBE and VII ICMP, 1985, Espoo, Finland* (s. 1-2, Bilag III)