



CURRICULUM VITAE

Dr. Dipl.-Biol. Immo Weber

Born in Magdeburg, 07.10.1986

<https://www.systemsneuroscience.de>

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EDUCATION

- 2019 Graduation, Dr. rer. nat. (*summa cum laude*)
Philipps-University Marburg
Marburg, Hessen, Germany
- 2012 Diploma, Biology (with distinction)
University of Rostock
Rostock, Mecklenburg-Vorpommern, Germany

ACADEMIC CAREER

- 2020 -
today **Group leader *The Dynamical Neuroscience Lab***
University Hospital Gießen & Marburg, Neurology
- 2017 -
2019 **Postdoc, Co-Lead of the *Clinical Systems Neuroscience* group**
University Hospital Gießen & Marburg, Neurology
- 2017 -
2019 **Graduate student**
Phillips-University Marburg
- 2013 -
2017 **Graduate student**
University of Cologne

FUNDING

- 2020 **Department-intern special funds**, Physics department, Philipps-University
Marburg
Co-applicant, Funding: 57000,00 €
- 2018 **Kempkes P.E. Foundation**
Main recipient, Funding: 10888,50 €

REVIEWS

NeuroImage
Israel Science Foundation
IEEE Journal of Biomedical and Health Informatics
Neurology and Neurosurgery
Entropy
Neurobiology of Aging
Annals of Clinical and Translational Neurology

PUBLICATIONS

PEER-REVIEWED JOURNALS AND BOOK CHAPTERS

Philipp Alexander Loehrer, Felix Sebastian Nettersheim, Carina Oehr, Fabienne Homberg, Marc Tittgemeyer, Lars Timmermann, **Immo Weber**. (2021). Increased prefrontal top-down control in older adults predicts motor performance and age-group association. *NeuroImage, in press*

Johannes L. Busch, Femke S. Haeussler, Frank Domahs, Lars Timmermann, **Immo Weber** & Carina R. Oehr. (2021). German normative data with naming latencies for 283 action pictures and 600 action verbs. *Behavior Research Methods, in press (joint senior authorship)*

Weber, I., Niehaus, H., Krause, K., Molitor, L., Peper, M., Schmidt, L., ... & Oehr, C. R. (2021). Trust your gut: vagal nerve stimulation in humans improves reinforcement learning. *Brain communications, 3(2)*, fcab039.

Oehr, C. R., Schöenkorb, J., Timmermann, L., Nenadić, I., **Weber, I.**, & Grant, P. (2021). Schizotypy in Parkinson's disease predicts dopamine-associated psychosis. *Scientific Reports, 11(1)*, 1-10. *(joint senior authorship)*

Weber, I., Florin, E., von Papen, M., Visser-Vandewalle, V., & Timmermann, L. (2020). Characterization of information processing in the subthalamic area of Parkinson's patients. *NeuroImage, 116518*.

Weber, I., Florin, E., Von Papen, M., & Timmermann, L. (2017). The influence of filtering and downsampling on the estimation of transfer entropy. *PloS one, 12(11)*.

Sukiban, J., Voges, N., Dembek, T. A., Pauli, R., Visser-Vandewalle, V., Denker, M., **Weber, I.**, Timmermann, L., Grün, S. (2019). Evaluation of Spike Sorting Algorithms: Application to Human Subthalamic Nucleus Recordings and Simulations. *Neuroscience*, 414, 168-185.

Nettersheim FS, Loehrer PA, **Weber I**, Jung F, Dembek TA, Pelzer EA, Dafsari HS, Huber CA, Tittgemeyer M, Timmermann L. Dopamine substitution alters effective connectivity of cortical prefrontal, premotor, and motor regions during complex bimanual finger movements in Parkinson's disease. *Neuroimage*. 2018 Apr 23.

Oehr, C., **Weber, I.**, (2017). 6 Wirkweise der tiefen Hirnstimulation, in: Voges, J., Timmermann, L. (Eds.), Tiefe Hirnstimulation. De Gruyter, Berlin, Boston, pp. 73–88.

Loehrer PA, Nettersheim FS, Jung F, **Weber I**, Huber C, Dembek TA, Pelzer EA, Fink GR, Tittgemeyer M, Timmermann L. Ageing changes effective connectivity of motor networks during bimanual finger coordination. *Neuroimage*. 2016 Dec; 143:325-342.

Badstuebner K, Gimsa U, **Weber I**, Tuchscherer A, Gimsa J. Deep Brain Stimulation of Hemiparkinsonian Rats with Unipolar and Bipolar Electrodes for up to 6 Weeks: Behavioral Testing of Freely Moving Animals. *Parkinsons Dis*. 2017; 2017:5693589.

MANUSCRIPTS IN PREPARATION/SUBMITTED _____

Weber, I., Oehr, C. NoLiTiA: An Open-Source Toolbox for Nonlinear Time Series Analysis.

Weber, I., Oehr, C. A waveform specific recurrence amplitude spectrum of neural activity.

CONFERENCES _____

POSTER

Weber I, Oehr C, Apetz N, Dembek T, Jung F, Florin E, Timmermann L. Classification of Dopaminergic-State and Motor Activity by Theta, Beta and Gamma Activity in Parkinson's Disease. MOVEMENT DISORDERS. 33,,S815-S815,2018,"WILEY 111 RIVER ST, HOBOKEN 07030-5774, NJ USA"

Oehr C, **Weber I**, Apetz N, Dembek T, Jung F, Florin E, Timmermann L. Subthalamic theta oscillations in Parkinson's disease. MOVEMENT DISORDERS. 33,,S699-S699,2018,"WILEY 111 RIVER ST, HOBOKEN 07030-5774, NJ USA"

Weber I, Florin E, von Papen M, Timmermann L. Information transfer between subthalamic area and forearm muscles during tonic muscle activity in Parkinson's patients. MOVEMENT DISORDERS. 322017,"WILEY 111 RIVER ST, HOBOKEN 07030-5774, NJ USA"

Weber I, Florin E, Jung F, von Papen M, Timmermann L. How does preprocessing affect estimation of causal information transfer in the human brain? *Movement Disorders*. 31,S420,2016,*Movement Disorders*

MEMBERSHIPS

Bernstein Network Computational Neuroscience

SKILLS

Skills: Matlab, Fieldtrip, HTML, CSS, Python, LaTeX, EEG, intraoperative Recordings, Machine Learning, C, Raspberry Pi, Arduino

Languages: German, English, French

INTERESTS

Nonlinear dynamics, information theory, neuronal time series analysis, developing methods, neuronal oscillations