

Brain Dynamics Graduate School



Newsletter – October '23

*Let us know if you have an announcement, upcoming event, new publication or job posting!
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Events

- **Symposium für Sport- und Bewegungsmedizin**

01.11. 17:30 Hörsaal Zentrales Forschungsgebäude, Liebigstraße 21, 04103 Leipzig

Prof. Dr. Patrick Ragert, Department of Movement Neuroscience, Faculty of Sports Science

„Hirnplastizität und Sport“.

https://www.uniklinikum-leipzig.de/veranstaltungen/Seiten/Veranstaltung_6126.aspx

- **Brain Dynamics Seminar Series**

03.11. 12:00 Paul Flechsig Institute - Center of Neuropathology and Brain Research, Room 3093, Liebigstraße 19 (Haus C), 04103 Leipzig

PD Dr. Dennis Pauls, Institute of Biology, Faculty of Life Sciences, University Leipzig

"Neurophysiological mechanisms of feeding decisions".

17.11. 12:00 Paul Flechsig Institute - Center of Neuropathology and Brain Research, Room 3093, Liebigstraße 19 (Haus C), 04103 Leipzig

Prof. Dr. Hartmut Schmidt, Carl Ludwig Institute of Physiology, Medical Faculty, University Leipzig

"Transmitter release from neocortical synapses: Ca²⁺-sensitivity, area-specificity and regulation".

<https://www.uni-leipzig.de/en/brain-dynamics/graduate-school-brain-dynamics/news-events#c621683>

- **Clinical and neuroscientific colloquium (Klinisch-Neurowissenschaftliches Kolloquium)**

08.11. 17:00 University Hospital Leipzig, House 4: Meeting room "Justus von Liebig", Liebigstraße 20, 04103 Leipzig

Prof. Dr. Christian Plewnia, University Hospital for Psychiatry and Psychotherapy, Tübingen

„Synergie von kognitivem Training und transkranieller elektrischer Stimulation - aktuelle Studien und klinische Perspektiven“.

https://www.uniklinikum-leipzig.de/veranstaltungen/Seiten/Veranstaltung_5880.aspx

News

- **Mental health awareness days 2023 for doctoral researchers and postdocs**

Organised by the graduate academies and occupational health management units from Leipzig, Halle and Jena, The Mental Health Awareness Days aim to inform and sensitise doctoral researchers and postdocs on how to cope with demanding or stressful situations during the research. The program will be held mostly online from the 1st to the 3rd November:

<https://www.ga.uni-leipzig.de/en/graduate-academy-leipzig/workshop-portal/mental-health-awareness-days>

- **How plant-derived nutrients can affect the gut and brain**

PD Dr. Veronica Witte from the Clinic for Cognitive Neurology, University Hospital Leipzig & Department of Neurology, MPI-CBS, Leipzig talks about her latest publication in ‘Gut’:

<https://www.uni-leipzig.de/en/newsdetail/artikel/wie-pflanzliche-ernaehrung-den-darm-und-das-gehirn-beeinflussen-kann-2023-10-10>

- **Call for Abstracts – ECCN 2024**

The upcoming 12th European Conference on Clinical Neuroimaging will be held in Leipzig in March 2024. The call for abstracts is aimed primarily at young scientists who conduct research close to clinical neuroimaging, especially using molecular/functional methods:

<https://www.euroccn.com/>

- **Second Brain Dynamics Scientific Day**

Annual meeting of the Brain Dynamics Graduate School was held on 28th September:

<https://www.uni-leipzig.de/en/brain-dynamics/graduate-school-brain-dynamics/news-events/newsdetail/artikel/leipzig-scientists-meet-at-the-second-brain-dynamics-scientific-day-2023-10-20>

- **Call for Abstracts – Research Festival**

The 17th Leipzig Research Festival for Life Sciences will be held in the Clinical Trial Center of the Faculty of Medicine on January 18th, 2024. The festival focuses on relevant and innovative scientific topics in the fields of medicine and life sciences:

<https://conference.uni-leipzig.de/researchfestival/en/>

- **New insights into how the human brain organises language**

Dr Sabrina Turker, Dr Philipp Kuhnke and Professor Gesa Hartwigsen from the Wilhelm Wundt Institute of Psychology and the Max Planck Institute for Human Cognitive and Brain Sciences conducted the meta-analysis in collaboration with researchers from Forschungszentrum Jülich and published their results in 'Psychological Bulletin':

<https://www.uni-leipzig.de/en/newsdetail/artikel/neue-erkenntnisse-ueber-die-organisation-von-sprache-im-menschlichen-gehirn-2023-09-29>

- **Link between daily sleep patterns and long-term memory identified**

Prof. Dr. Andreas Thum from the Institute of Biology at the Faculty of Life Sciences was part of an international team that published their results in 'Science Advances':

<https://www.uni-leipzig.de/en/newsdetail/artikel/researchers-identify-link-between-daily-sleep-patterns-and-long-term-memory-2023-09-12>

- **Congratulations to Dr. Thomas Grochow**

Brain Dynamics Graduate School member Thomas Grochow completed his doctoral thesis "Establishment and validation of a guinea pig model for (human) congenital toxoplasmosis" at the Faculty of Veterinary Medicine:

<https://www.uni-leipzig.de/en/brain-dynamics/graduate-school-brain-dynamics/news-events/newsdetail/artikel/dr-thomas-grochow-successfully-completed-his-doctoral-work-2023-10-24>

New members

We welcome one new doctoral student and his supervisor to the Brain Dynamics family:

➤ **Tim Ritter**

Research Group Saur, Department of Neurology, University Hospital

Research project: "Neurological failures and their perception in Alzheimer's type dementia"

<https://www.uniklinikum-leipzig.de/einrichtungen/neurologie/Seiten/ag-neuroimaging-englisch.aspx>

Latest publications

➤ Brain Dynamics postdoc **Thomas Grochow** and research group **Fietz**

Neocortex neurogenesis and maturation in the African greater cane rat.

Mustapha O, Grochow T, Olopade J, Fietz SA.

Neural Dev. 2023 Oct 13; 18(1): 7. doi: 10.1186/s13064-023-00175-x.

➤ Brain Dynamics postdoc **Thomas Kaas** and research group **Hallermann**

Phosphatidylinositol 3,5-bisphosphate facilitates axonal vesicle transport and presynapse assembly.

Rizalar FS, Lucht MT, Petzoldt A, Kong S, Sun J, Vines JH, Telugu NS, Diecke S, Kaas T, Bullmann T, Schmied C, Löwe D, King JS, Cho W, Hallermann S, Puchkov D, Sigrist SJ, Haucke V.

Science. 2023 Oct 13; 382(6667): 223-230. doi: 10.1126/science.adg1075.

➤ Brain Dynamics postdoc **Philipp Kuhnke** and research group **Hartwigsen**

Adaptive short-term plasticity in the typical reading network.

Turker S, Kuhnke P, Schmid FR, Cheung VKM, Weise K, Knoke M, Zeidler B, Seidel K, Eckert L, Hartwigsen G.

Neuroimage. 2023 Nov 1;281:120373. doi: 10.1016/j.neuroimage.2023.120373.

Cortical, subcortical, and cerebellar contributions to language processing: A meta-analytic review of 403 neuroimaging experiments.

Turker S, Kuhnke P, Eickhoff SB, Caspers S, Hartwigsen G.

Psychol Bull. 2023 Sep 28. doi: 10.1037/bul0000403.

➤ Research group **Hallermann**

Human NMDAR autoantibodies disrupt excitatory-inhibitory balance, leading to hippocampal network hypersynchrony.

Ceanga M, Rahmati V, Haselmann H, Schmidl L, Hunter D, Brauer AK, Liebscher S, Kreye J, Prüss H, Groc L, Hallermann S, Dalmau J, Ori A, Heckmann M, Geis C.
Cell Rep. 2023 Sep 27; 42(10): 113166. doi: 10.1016/j.celrep.2023.113166.

➤ Research groups **Hartwigsen / Obrig / Friederici**

Electrophysiological correlates of basic semantic composition in people with aphasia.

Graessner A, Duchow C, Zaccarella E, Friederici AD, Obrig H, Hartwigsen G.
Neuroimage Clin. 2023 Sep 23;40:103516. doi: 10.1016/j.nicl.2023.103516.

➤ Research groups **Hartwigsen / Saur**

TMS over the pre-SMA enhances semantic cognition via remote network effects on task-based activity and connectivity.

Martin S, Frieling R, Saur D, Hartwigsen G.
Brain Stimul. 2023 Sep 11;16(5):1346-1357. doi: 10.1016/j.brs.2023.09.009.

➤ Research group **Müller**

Distinct patterns of spatial attentional modulation of steady-state visual evoked magnetic fields (SSVEFs) in subdivisions of the human early visual cortex.

Moratti S, Gundlach C, de Echeagaray J, Müller MM.
Psychophysiology. 2023 Oct 3: e14452. doi: 10.1111/psyp.14452.

➤ Research groups **Pauls / Thum**

Rewarding capacity of optogenetically activating a giant GABAergic central-brain interneuron in larval *Drosophila*.

Mancini N, Thoener J, Tafani E, Pauls D, Mayseless O, Strauch M, Eichler K, Champion A, Kobler O, Weber D, Sen E, Weiglein A, Hartenstein V, Chytoudis H, Jovanic T, Thum AS, Rohwedder A, Schleyer M, Gerber B.
J Neurosci. 2023 Sep 20: JN-RM-2310-22. doi: 10.1523/JNEUROSCI.2310-22.2023.

➤ Research group **Schönwiesner**

Time course of EEG complexity reflects attentional engagement during listening to speech in noise.

Eqlimi E, Bockstael A, Schönwiesner M, Talsma D, Botteldooren D.
Eur J Neurosci. 2023 Oct 9. doi: 10.1111/ejn.16159.

➤ Research group **Valk**

Diversity and evolution of cerebellar folding in mammals.

Heuer K, Traut N, de Sousa AA, Valk SL, Clavel J, Toro R.
Elife. 2023 Sep 22; 12: e85907. doi: 10.7554/eLife.85907.