

INM Retreat 2024

November 18-20

Monday 18.11.2024

| Student meeting | |
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| 14:00 | Building 15.9v – Room 4001b |

Tuesday 19.11.2024

| Tutorials / Workshops | |
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| 9:00 | Session I |
| 10:45 | <i>Coffee Break</i> |
| 11:15 | Session II |

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| 13:00 | <i>Lunch</i> |
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| Opening Session | | |
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| 14:00 | Alexander Drzezga | Welcome |

| Scientific Presentations | | | |
|--------------------------|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|------|
| 14:15 | Ali Gordjinejad | Single dose creatine improves cognitive performance and induces changes in cerebral high energy phosphates during sleep deprivation | P.01 |
| 14:35 | Dennis Scheidt | Wave Brain Hologscope: Peering into the 3D World of Rat Brain Tissue with Digital Holographic Microscopy | P.22 |
| 14:55 | Guanxiao Qi | Transport-Related Effects on Intrinsic and Synaptic Properties of Human Cortical Neurons: A Comparative Study | P.11 |
| 14:58 | Mahan Hosseini | AutoGaitA - Automated Gait Analysis in Python | P.16 |
| 15:01 | Katharina Peitz | The influence of bilingualism on gray matter volume within subregions of the hippocampal formation | P.18 |
| 15:04 | Natalia Chechko | Maternal Neuroplasticity and Mental Health during the Transition to Motherhood | P.23 |
| 15:07 | Usman Khalid | Design and Construction of a Head Phantom with Internal Carotid Flow for Image-Derived Input Function with 3T or 7T MR-BrainPET Studies | P.24 |
| 15:10 | Charl Linssen | Rapid prototyping in spiking neural network modeling with NESTML and NEST Desktop | P.25 |
| 15:13 | Linnea Hoheisel | Effect of anaesthesia on dynamic functional connectivity in rats | P.26 |
| 15:16 | Camilla Mendl-Heinisch | Prediction of individual cognitive test performance based on imaging and non-imaging data in older adults | P.45 |
| 15:19 | Nils Richter | Alzheimer-typical neurodegeneration is associated with a more significant cholinergic deficit in clinically diagnosed Alzheimer's disease | P.46 |

| Poster Session I with finger food and drinks | |
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| 15:30 | Even numbers |
| 16:15 | Odd numbers |

Wednesday 20.11.2024

| Scientific Introductory Talks | | |
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| 9:00 | Casey Paquola | New working group - Multiscale Neurodevelopment |
| 9:10 | Masoud Tahmasian | New working group - Sleep, Brain, Behaviour |
| 9:20 | Christian Schiffer | New young investigator group - Large-Scale AI for Brain Mapping |
| 9:30 | Federico Raimondo | New team - Research and Infrastructural Software Engineering for Machine Learning |
| 9:40 | Timo Dickscheid | Helmholtz AI |
| 9:45 | Boris Orth | EBRAINS National Node Germany |
| 9:50 | Alexandra Stein | Bernstein Network Computational Neuroscience |
| 10:05 | Robert Speck | Helmholtz Platform for Research Software Engineering (HIRSE) and JuRSE |
| 10:20 | Christian Faber | From sequence to structure: Tackling a fundamental protein puzzle with Nobel Prize-winning AI |

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| 10:35 | <i>Coffee Break</i> |
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| Scientific Presentations | | | |
|--------------------------|----------------------------|-----------------------------------------------------------------------------------------------------------------------|------|
| 11:00 | Julia Thoennissen | Scalable Data Management for High-Resolution Microscopy of the Human Brain: Challenges and Future Directions | P.44 |
| 11:20 | Jonas Oberste-Frielinghaus | Emergence of Synfire Chains in Functional Multi-Layer Spiking Neural Networks | P.17 |
| 11:40 | Federico Natale | Photoswitches in 5-HT _{2A} Receptor | P.02 |
| 11:43 | Christoph Lerche | MR-PET Imaging performance of the 7T MR BrainPET insert | P.19 |
| 11:46 | Christiane Jockwitz | Prediction of individual cognitive test scores from brain and non-brain data across the adult lifespan | P.27 |
| 11:49 | Leon Lotter | Mapping brain functional synchronization to underlying neurotransmitter systems | P.28 |
| 11:52 | Michael Gemki | Synthesis and Preclinical Evaluation of (S)-7-[¹⁸ F]-FT-2102: A Candidate for mDHD1-Selective PET Imaging | P.29 |
| 11:55 | Otari Gokhadze | Evaluation of tryptophan and tyrosine-based newly developed PET tracers in U87 glioma model | P.30 |
| 11:58 | Nora Bittner | Impact of methodological choices when reconstructing specific streamline fiber tracts | P.47 |
| 12:01 | Julian Quabs | Structural connectivity differences reflect micro-structural heterogeneity of the human insular cortex | P.48 |
| 12:04 | Natalia Zhukova | Reduced dynamic functional connectivity in higher ages: are older brains less adaptable? | P.49 |

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| 12:10 | <i>Lunch</i> |
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| Poster Session II | |
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| 13:00 | Even numbers |
| 14:00 | Odd numbers |

| Closing Session | |
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| 15:00 | Concluding Remarks and Poster Prize |

| PI Meeting | |
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| 15:30 | Foyer of the Central Library |