

B Break **K** Keynote **R** Registration **S** Social **T** Tutorial

JULY 15 • SATURDAY

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|---------------|---|---------------|
| 08:00 – 17:00 | R REGISTRATION | Kongresshalle |
| 09:00 – 10:10 | T T01: Building mechanistic multiscale models with NEURON, NetPyNE, and TREES <i>Speakers: Adam Newton, Robert McDougal, William W Lytton, Salvador Dura-Bernal, Hermann Cuntz, Thomas Künzel</i> | Handel |
| 09:00 – 10:10 | T T02: From single-cell modeling to large-scale network dynamics with NEST Simulator <i>Speakers: Sebastian Spreizer, Charl Linssen, Wenqing Wei, Jens Bruchertseifer, Pooja Babu</i> | Mahler |
| 09:00 – 10:10 | T T03: Modeling dendritic computations in spiking neural networks with Brian 2 and DendriFY <i>Speakers: Spyridon Chavlis, Marcel Stimberg, Michalis Pagkalos</i> | Telemann |
| 09:00 – 10:10 | T T04: Modeling astrocytes and neuron-astrocyte interactions <i>Speakers: Giulio Bonifazi, Peter Bork, Audrey Denizot, Kerstin Lenk</i> | Schumann |
| 09:00 – 10:10 | T T05: A guide to reconstructing Dynamical Systems from neural measurements using Recurrent Neural Networks <i>Speakers: Manuel Brenner, Daniel Durstewitz, Max Thurm</i> | Goethe |
| 09:00 – 10:10 | T T06: Spectral analysis of experimental neural signals: Fundamentals and phase dynamics <i>Speakers: Axel Hutt</i> | Leibniz |
| 09:00 – 10:10 | T T07: Hands-on tutorial on PyNN: A simulator-independent language for building neuronal network models <i>Speakers: Andrew Davison, Shailesh Appukuttan, Nitin Anisetty, Chitaranjan Mahapatra</i> | Bach |
| 09:00 – 10:10 | T T08: Using open tools to build efficient workflows for data access, management and analysis <i>Speakers: Thomas Wachtler, Michael Denker, Reema Gupta, Moritz Kern</i> | Schiller |
| 10:10 – 10:40 | B COFFEE BREAK | Kongresshalle |
| 10:40 – 12:10 | T T01: Building mechanistic multiscale models with NEURON, NetPyNE, and TREES <i>Speakers: Adam Newton, Robert McDougal, William W Lytton, Salvador Dura-Bernal, Hermann Cuntz, Thomas Künzel</i> | Handel |
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| 12:10 – 14:00 | B LUNCH BREAK | Leipzig |
| 14:00 – 15:30 | T T01: Building mechanistic multiscale models with NEURON, NetPyNE, and TREES <i>Speakers: Adam Newton, Robert McDougal, William W Lytton, Salvador Dura-Bernal, Hermann Cuntz, Thomas Künzel</i> | Handel |

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| 14:00 – 15:30 | T | T09: Applied Dynamical Systems Methods in the Neuroscience <i>Speakers: Richard Gast, Bastian Pietras</i> | Leibniz |
| 14:00 – 15:30 | T | T10: Introduction to STEPS, and interaction with other computational neuroscience software for multiscale simulations <i>Speakers: Stephanie Battini, Polina Shichkova, Nicola Cantarutti, Christos Kotsalos</i> | Lessing |
| 14:00 – 15:30 | T | T11: Simulation of spiking and BOLD signals using the ANNarchy simulator <i>Speakers: Fred Hamker, Helge Dinkelbach, Julien Vitay</i> | Bach |
| 14:00 – 15:30 | T | T12: Vast parameter space exploration using L2L on EBRAINS <i>Speakers: Alper Yegenoglu, Aaron Perez Martin, Sandra Diaz, Michiel van der Vlag</i> | Goethe |
| 14:00 – 15:30 | T | T13: Introduction to Optical Neuroimage Studio (OptiNiSt) <i>Speakers: Kenji Doya, Yukako Yamane</i> | Schiller |
| 15:30 – 16:00 | B | COFFEE BREAK | Kongresshalle |
| 16:00 – 17:20 | T | T01: Building mechanistic multiscale models with NEURON, NetPyNE, and TREES <i>Speakers: Adam Newton, Robert McDougal, William W Lytton, Salvador Dura-Bernal, Hermann Cuntz, Thomas Künzel</i> | Handel |
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| 17:20 – 18:30 | K | Welcome and Keynote 1: Netta Cohen "The mind of a worm" <i>Moderators: Thomas Nowotny</i> | Kongresshalle |
| 18:30 – 20:30 | S | Welcome Reception | Kongresshalle |

B Break
 K Keynote
L Oral Session
P Poster
N Poster Session
R Registration

JULY 16 • SUNDAY

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|---------------|---|---|---------------|
| 08:30 – 17:00 | R | REGISTRATION | Kongresshalle |
| 09:00 – 10:10 | K | Keynote 2: Gesa Hartwigsen "Using non-invasive brain stimulation to modulate cognitive functions" | Kongresshalle |
| 10:10 – 10:40 | B | COFFEE BREAK | Kongresshalle |
| 10:39 – 12:30 | L | Oral Session 1: Sensory Processing <i>Moderators: Axel Hutt</i> | Kongresshalle |
| 10:40 – 11:10 | L | FO1: Critical scaling of whole brain activity <i>Speakers: Adrián Ponce-Alvarez</i> | Kongresshalle |
| 11:10 – 11:30 | L | O01: Early subcortical response at the fundamental frequency of continuous speech measured with MEG <i>Speakers: Alina Schüller</i> | Kongresshalle |
| 11:30 – 11:50 | L | O02: Recruiting native representations for electrically induced perception in blind humans <i>Speakers: Karolína Korvasová</i> | Kongresshalle |
| 11:50 – 12:10 | L | O03: Multimodal units extract comodulated information <i>Speakers: Marcus Ghosh</i> | Kongresshalle |
| 12:10 – 12:30 | L | O04: Neural correlates of perceptual constancy in the auditory cortex an effect of behavioural training <i>Speakers: Carla Griffiths</i> | Kongresshalle |
| 12:30 – 14:00 | B | Lunch Break | Leipzig |
| 13:59 – 15:30 | L | Oral Session 2: Dynamics of neural processes <i>Moderators: Amelie Aussen</i> | Kongresshalle |
| 14:00 – 14:30 | L | FO2: An E-I Firing Rate model for PING and ING oscillations <i>Speakers: Yiqing Lu</i> | Kongresshalle |
| 14:30 – 14:50 | L | O05: Local excitation and lateral inhibition enable the simultaneous processing of multiple signals in recurrent neural networks <i>Speakers: Emmanouil Giannakakis</i> | Kongresshalle |
| 14:50 – 15:10 | L | O06: Connecting the structure of individual networks to the dynamics in neural systems <i>Speakers: Roberto Budzinski</i> | Kongresshalle |
| 15:10 – 15:30 | L | O07: Neuronal activation sequences in primate prefrontal cortex encode working memory episodes <i>Speakers: Alexandra Busch</i> | Kongresshalle |
| 15:30 – 16:00 | B | COFFEE BREAK | Kongresshalle |
| 15:59 – 17:20 | L | Oral Session 3: Role of cellular and subcellular properties <i>Moderators: Skirmantas Janusonis</i> | Kongresshalle |
| 16:00 – 16:20 | L | O08: The molecular communication between synapses influences synaptic plasticity <i>Speakers: Shirin Shafiee</i> | Kongresshalle |
| 16:20 – 16:40 | L | O09: Combining the pieces of the puzzle: Modelling synaptic vesicle targeting to - and fusion with the plasma membrane <i>Speakers: Manon Berns</i> | Kongresshalle |
| 16:40 – 17:00 | L | O10: Neural activity induces strongly coupled electro-chemo-mechanical interactions and fluid flow in astrocyte networks and extracellular space <i>Speakers: Marte Julie Sætra</i> | Kongresshalle |
| 17:00 – 17:20 | L | O11: Bistability and switching in a model of glial membrane voltage driven by open potassium pores <i>Speakers: Predrag Janjic</i> | Kongresshalle |
| 17:19 – 19:20 | N | Poster Session 1 | Kongresshalle |

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| 17:20 – 19:20 | P | P001: Machine learning enabled pattern discovery in large-scale spatial gene expression datasets <i>Speakers: Reza Abbasi-Asl</i> | Kongresshalle |
| 17:20 – 19:20 | P | P002: Exploring the Critical State in the Hippocampus: A Computational Approach to Neurogenic-enhanced Dynamics <i>Speakers: Erdem Altuntac, Xin Hu, Brett Addison Emery, Shahrukh Khanzada, Hayder Amin</i> | Kongresshalle |
| 17:20 – 19:20 | P | P003: Propagation-response analysis reveals the disruption of integrative and broadcasting networks in pathological loss of consciousness <i>Speakers: Gorka Zamora-López, Matthieu Gilson, Rajanikant Panda, Ane López-Gonzalez, Jitka Annen</i> | Kongresshalle |
| 17:20 – 19:20 | P | P004: Multiplex network analysis of neural population activity <i>Speakers: Nikita Pospelov, Vladimir Sotskov, Viktor Plusnin, Konstantin Anokhin</i> | Kongresshalle |
| 17:20 – 19:20 | P | P005: A spiking neural network model unifying structured activity, travelling waves, and optogenetic perturbation in the resting state of V1 <i>Speakers: Tibor Rózsa, Rémy Cagnol, Jan Antolik</i> | Kongresshalle |
| 17:20 – 19:20 | P | P006: Single neuron effects are relevant for spatially precise optogenetic stimulation <i>Speakers: David Berling, Luca Baroni, Jan Antolik</i> | Kongresshalle |
| 17:20 – 19:20 | P | P007: A model-free, reinforcement learning algorithm for perceptual decision making under uncertainty <i>Speakers: Jamal Esmaily, Rani Moran, Yasser Roudi, Bahador Bahrami</i> | Kongresshalle |
| 17:20 – 19:20 | P | P008: Cortical state effects vary across different neuronal subclasses in the primary visual cortex <i>Speakers: Jinani Sooriyaarachchi, Chang'an Zhan, Curtis Baker</i> | Kongresshalle |
| 17:20 – 19:20 | P | P009: Perturbations in brain functional connectivity patterns after waking from slow wave sleep under different cognitive states <i>Speakers: Luis Jimenez, Cassie Hilditch, Erin Flynn-Evans, Javier Garcia, Nita Shattuck, Kanika Bansal</i> | Kongresshalle |
| 17:20 – 19:20 | P | P010: Reconstruction of Recurrent Neuronal Network Connectivity From Integrate-And-Fire Model Dynamics and Compressive Sensing Theory <i>Speakers: Victor Barranca</i> | Kongresshalle |
| 17:20 – 19:20 | P | P011: Dynamic co-generation of interacting beta and gamma oscillations and their implication in neural communication. <i>Speakers: Jungyoung Kim, Jee Hyun Choi, Demian Battaglia</i> | Kongresshalle |
| 17:20 – 19:20 | P | P012: Modelling the autistic cerebellum: alterations in granule cells and propagation of effects through the microcircuit <i>Speakers: Claudia Casellato, Alessio Marta, Robin De Schepper, Stefano Masoli, Egidio D'Angelo, Ludovica Torsello, Danilo Benozzo</i> | Kongresshalle |
| 17:20 – 19:20 | P | P013: Neural mass modeling of physiologic synaptic plasticity <i>Speakers: Elif Koksal Ersoz, Fabrice Wendling, Pascal Benquet</i> | Kongresshalle |
| 17:20 – 19:20 | P | P014: AutSim: Principled, data-driven model development and abstraction for synaptic translation signaling in Autism Spectrum Disorders and healthy control <i>Speakers: Nisha Viswan, Upinder Bhalla</i> | Kongresshalle |
| 17:20 – 19:20 | P | P015: Depolarization baseline: a common error in multicompartment models, and how to fix it. <i>Speakers: Anal Kumar, Upinder Bhalla</i> | Kongresshalle |
| 17:20 – 19:20 | P | P016: Investigating Navigation Strategies in the Morris Water Maze through Deep Reinforcement Learning <i>Speakers: Andrew Liu, Alla Borisyuk</i> | Kongresshalle |
| 17:20 – 19:20 | P | P017: Computational Modelling of Nervous and Musculoskeletal Systems Reveals Mechanisms of Transitions between Swimming and Struggling in Xenopus Tadpole <i>Speakers: Saeed Farjami, Andrey Palyanov, Wenchang Li, Andrea Ferrario, Joel Tabak, Roman Borisyuk</i> | Kongresshalle |
| 17:20 – 19:20 | P | P018: Burst-based stimulation paradigms in a model of the thalamocortical-basal ganglia network <i>Speakers: Nada Yousif, Peter Bain, Dipankar Nandi, Roman Borisyuk</i> | Kongresshalle |
| 17:20 – 19:20 | P | P019: An evaluation tool to provide guidance for establishing consistent, credible Modeling and Simulation practices in neurobiology <i>Speakers: Jeeyune(jiyoun) Jung, William W Lytton, Rajanikanth Vadigepalli, Alexandra Manchel, Jerry Myers, Andrew Drach, Ahmet Erdemir, Lealem Mulugeta, Marc Horner, Joy Ku, Bruno Rego, Amir Khalighi, Anders Garlid, Alex Bui</i> | Kongresshalle |

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| 17:20 – 19:20 | P P020: WITHDRAWN <i>Speakers: Yanbo Lian, Anthony Burkitt</i> | Kongresshalle |
| 17:20 – 19:20 | P P021: Capturing Interpretable Dynamics of Population-Level Learning <i>Speakers: Arthur Pellegrino, Angus Chadwick, N Alex Cayco-Gajic</i> | Kongresshalle |
| 17:20 – 19:20 | P P022: Synchronisation of Molecular Layer Interneurons <i>Speakers: H el ene Todd, Boris Gutkin, N Alex Cayco-Gajic</i> | Kongresshalle |
| 17:20 – 19:20 | P P023: Principles of sensory feedback for control of rhythmic movements <i>Speakers: Peter Thomas, Zhuojun Yu, Maxwell Kreider, Yangyang Wang, Hillel Chiel</i> | Kongresshalle |
| 17:20 – 19:20 | P P024: Neuroscience Gateway Enabling Large Scale Modeling Data Processing and Dissemination of Neuroscience Software <i>Speakers: Amitava Majumdar, Subhashini Sivagnanam, Kenneth Yoshimoto, Ted Carnevale, Martin Kandes, Steven Yeu, Fernando Garzon, Dongju Choi</i> | Kongresshalle |
| 17:20 – 19:20 | P P025: A model shows regulation by a voltage activated potassium channel of calcium integration involved in Purkinje cell synaptic plasticity <i>Speakers: Fidel Santamaria, Bahram Pahlavan, Zhen Yang, Jason Christie</i> | Kongresshalle |
| 17:20 – 19:20 | P P026: Dynamical richness and statistical synergy are both maximized in networks with small-world topology. <i>Speakers: Patricio Orio, Javier Palma-Espinosa, Sebasti an Orellana, Rodrigo Cofr e</i> | Kongresshalle |
| 17:20 – 19:20 | P P027: Detailed Dynamical Model of the Neuron-Glia-Vasculature Ensemble Metabolism and Physiology <i>Speakers: Polina Shichkova, Henry Markram, Daniel Keller, Jay Coggan</i> | Kongresshalle |
| 17:20 – 19:20 | P P028: Integrating model development across computational neuroscience, cognitive science and machine learning using the Model Description Format - MDF <i>Speakers: Pdraig Gleeson, Sharon Crook, Ankur Sinha, Jonathan Cohen</i> | Kongresshalle |
| 17:20 – 19:20 | P P029: Transformer Encoder Based MEA Epileptic Seizure Prediction <i>Speakers: Marco Hern andez P erez,  ngel Canal-Alonso, Sara Rodr guez, Fernando de la Prieta, Javier Prieto, Juan Manuel Corchado, Ang lica Gonz lez, Guillermo Hern andez</i> | Kongresshalle |
| 17:20 – 19:20 | P P030: Optimising local dendritic diameters <i>Speakers: Alexander Bird, Peter Jedlicka, Hermann Cuntz</i> | Kongresshalle |
| 17:20 – 19:20 | P P031: Modeling roles of TRP channels in cold nociception of Drosophila larva <i>Speakers: Natalia V. Maksymchuk, Sergiy M. Korogod, Akira Sakurai, Jamin M. Letcher, Daniel N. Cox, Gennady Cymbalyuk</i> | Kongresshalle |
| 17:20 – 19:20 | P P032: Dynamics of episodic activity in a model of leech heartbeat central pattern generator <i>Speakers: Mykhailo Fomenko, Emily Smith, Gennady Cymbalyuk</i> | Kongresshalle |
| 17:20 – 19:20 | P P033: Impact of the cerebellum on macroscale brain dynamics during tasks <i>Speakers: Marialaura De Grazia, Alessio Marta, Alice Geminiani, Claudia Casellato, Egidio D'Angelo</i> | Kongresshalle |
| 17:20 – 19:20 | P P034: Reconstruction of phase-amplitude dynamics from electrophysiological signals <i>Speakers: Azamat Yeldesbay, Gemma Huguet, Silvia Daun</i> | Kongresshalle |
| 17:20 – 19:20 | P P035: Noradrenergic and Dopaminergic modulation of control and metacontrol <i>Speakers: Sara Ershadmanesh, Sahar Rajabi, Reza Rostami, Rani Moran, Peter Dayan</i> | Kongresshalle |
| 17:20 – 19:20 | P P036: A decision-theoretic approach to binocular rivalry <i>Speakers: Shervin Safavi, Peter Dayan</i> | Kongresshalle |
| 17:20 – 19:20 | P P037: Building an atlas of astrocyte single-cells to decipher sex differences in Alzheimer's Disease <i>Speakers: Giulio Bonifazi, Celia Luchena, Adhara Gaminde-Blasco, Carolina Ortiz-Sanz, Estibaliz Capetillo-Zarate, Carlos Matute, Elena Alberdi, Urko Marigorta, Maurizio De Pitt </i> | Kongresshalle |
| 17:20 – 19:20 | P P038: Modeling branch-specific clustered parallel fiber input in a Purkinje cell model with heterogenous ion channel densities <i>Speakers: Gabriela Cirtala, Erik De Schutter</i> | Kongresshalle |
| 17:20 – 19:20 | P P039: Investigating the Influence of Joint-Perception on Behavioral and Brain Correlates of Perceptual Decision-Making <i>Speakers: Mustafa Yavuz, Jamal Esmaily, Bahador Bahrami, Ophelia Deroy</i> | Kongresshalle |

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| 17:20 – 19:20 | P | P040: Modelling the microcircuit of the human cerebellar cortex <i>Speakers: Alessio Marta, Robin De Schepper, Egidio D'Angelo, Claudia Casellato, Andrea Di Francesco</i> | Kongresshalle |
| 17:20 – 19:20 | P | P041: Modeling hypoxia and spreading depolarization at the subcellular, population, and network scales <i>Speakers: Adam J.H. Newton, Robert McDougal, William W Lytton, Craig Kelley, Amy Guo, Joy Wang, Sydney Zink, Marcello DiStasio</i> | Kongresshalle |
| 17:20 – 19:20 | P | P042: Sensitivity Analysis of Point Neuron Model Simulations Implemented on Neuromorphic Hardware <i>Speakers: Srijanie Dey, Alexander Dimitrov</i> | Kongresshalle |
| 17:20 – 19:20 | P | P043: Cross-modal application of a neuromorphic olfactory learning algorithm <i>Speakers: Michael Helde, Alexander Dimitrov</i> | Kongresshalle |
| 17:20 – 19:20 | P | P044: Learning Successor Representations: Exploring Temporally Asymmetric and Symmetric Plasticity Rules <i>Speakers: Janis Keck, Juergen Jost, Christian Doeller</i> | Kongresshalle |
| 17:20 – 19:20 | P | P045: Can a Sparse-Autoencoder learn place-cell-like activity with visual input only? <i>Speakers: Viktor Studenyak, Janis Keck, Meent Mangels, Jürgen Jost, Christian Doeller</i> | Kongresshalle |
| 17:20 – 19:20 | P | P046: Memory consolidation through combined burst-induced homeostatic reset and structural plasticity <i>Speakers: Kathleen Jacquerie, Danil Tyulmankov, Pierre Sacré, Guillaume Dron</i> | Kongresshalle |
| 17:20 – 19:20 | P | P047: Disk-Drive-Like Operations in the Hippocampus <i>Speakers: Wilten Nicola, Claudia Clopath, David Dupret</i> | Kongresshalle |
| 17:20 – 19:20 | P | P048: Closed-loop neurostimulation for the treatment of pathological brain rhythms in mental disorders <i>Speakers: Thomas Wahl, Axel Hutt, Michel Duprez</i> | Kongresshalle |
| 17:20 – 19:20 | P | P049: Actin dynamics and spine geometry following LTP <i>Speakers: Mitha Thomas, Michael Fauth</i> | Kongresshalle |
| 17:20 – 19:20 | P | P050: Using the response to perturbation to evaluate changes of cortical excitability in healthy subjects <i>Speakers: Wei Qin, Anthony Burkitt, Paul B Fitzgerald, Phillipa Karoly, Jodie Feil</i> | Kongresshalle |
| 17:20 – 19:20 | P | P051: Multisensory Integration in the Mouse Hippocampus Using Widefield Calcium Imaging <i>Speakers: Dechuan Sun, Ranjith Rajasekharan Unnithan, Chris French</i> | Kongresshalle |
| 17:20 – 19:20 | P | P052: Synchrony, oscillations, and non-random phase relationships in collective neuronal activity: a highly-comparative overview of methods <i>Speakers: Fabiano Baroni, Ben Fulcher</i> | Kongresshalle |
| 17:20 – 19:20 | P | P053: Motor preparation as sub-threshold initialisation of neuronal excitability <i>Speakers: Rory Byrne, Dan Goodman, Juan Alvaro Gallego</i> | Kongresshalle |
| 17:20 – 19:20 | P | P054: Full-scale point-neuron model of the mouse hippocampal microcircuits <i>Speakers: Giulia Maria Boiani, Sergio Solinas, Giacomo Preti, Aurora Manini, Michele Migliore, Jonathan Mapelli, Daniela Gandolfi</i> | Kongresshalle |
| 17:20 – 19:20 | P | P055: Biophysically Detailed Cellular and Network Models of Right Atrial Ganglionic Plexus <i>Speakers: Adam J.H. Newton, Suranjana Gupta, James S. Schwarber, Rajanikanth Vadigepalli, William W Lytton, Michelle Gee</i> | Kongresshalle |
| 17:20 – 19:20 | P | P056: Modeling gamma oscillations and high-frequency oscillations in the rodent olfactory bulb <i>Speakers: Katherine Doxey, Justas Birgiolas, Sharon Crook, Elliot Smith, Richard C. Gerkin</i> | Kongresshalle |
| 17:20 – 19:20 | P | P057: Delta-theta-gamma interplay for contextualized speech parsing <i>Speakers: Olesia Dogonasheva, Denis Zakharov, Boris Gutkin, Anne-Lise Giraud</i> | Kongresshalle |
| 17:20 – 19:20 | P | P058: Diverse responses of a basal ganglia output nucleus integrating multiple input streams in control and dopamine-depleted conditions <i>Speakers: John Parker, Jonathan Rubin, Asier Aristieta, Aryn Gittis</i> | Kongresshalle |
| 17:20 – 19:20 | P | P059: Relative neural population size modulates learnability of cyclic features of neural codes <i>Speakers: Nikolas Schonsheck, Chad Giusti</i> | Kongresshalle |
| 17:20 – 19:20 | P | P060: Inhibition-directed assemblies form spontaneously and are robust to synaptic perturbations <i>Speakers: Dylan Festa, Julijana Gjorgjieva</i> | Kongresshalle |

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| 17:20 – 19:20 | P | P061: Facilitating the development of data-driven, standardised cortical models in the cloud using NeuroML and Open Source Brain v2 <i>Speakers: Ankur Sinha, Filippo Ledda, Matteo Cantarelli, Salvador Dura-Bernal, Angus Silver, Pdraig Gleeson</i> | Kongresshalle |
| 17:20 – 19:20 | P | P062: Modelling Dysregulation of Ryanodine Receptors, A Key Mechanism Involved in Neurodegenerative Diseases <i>Speakers: Hugo Enrique Romero-Campos, Carmen Adani Pérez-Leaños, Virginia González-Vélez</i> | Kongresshalle |
| 17:20 – 19:20 | P | P063: Modules learn specialized functions under strong resource constraints <i>Speakers: Gabriel Béna, Dan Goodman</i> | Kongresshalle |
| 17:20 – 19:20 | P | P064: Spectral features in baseline LFP distinguish context-related brain states <i>Speakers: Alexa Aucoin, Kevin K. Lin, Anne Martin, Kati Gothard</i> | Kongresshalle |
| 17:20 – 19:20 | P | P065: Correlations of connectivity weights of a neural mass model with the numbers of seizures in a rat model of epilepsy <i>Speakers: Parvin Zarei Eskikand, Artemio Soto-Breceda, Anthony Burkitt, David Grayden</i> | Kongresshalle |
| 17:20 – 19:20 | P | P066: A multi-scale approach for exploring the dynamics of neural networks in the visual cortex <i>Speakers: Artemio Soto-Breceda, Parvin Zarei Eskikand, Phillipa Karoly, Levin Kuhlmann, David Grayden</i> | Kongresshalle |
| 17:20 – 19:20 | P | P067: Modelling the Effects of Carbamazepine on Seizure Transitions within Neural Mass Models <i>Speakers: Sepehr Kazemi, Parvin Zarei Eskikand, Alan Lai, Sebastien Bauquier, Chris French, Mark Cook, David Grayden</i> | Kongresshalle |
| 17:20 – 19:20 | P | P069: Learning Cortical Hierarchies with Calcium Control <i>Speakers: Pau Vilimelis Aceituno, Sander de Haan, Benjamin Grewe</i> | Kongresshalle |
| 17:20 – 19:20 | P | P070: The brain dynamics of falling asleep <i>Speakers: Junheng Li, Robert Peach, Edward Rhodes, Derk-Jan Dijk, Nadia Gosselin, Julie Carrier, Mauricio Barahona, Nir Grossman</i> | Kongresshalle |
| 17:20 – 19:20 | P | P071: Anatomical network model with embedded synfire chains is consistent with cortical spatio-temporal spike patterns <i>Speakers: Alexander Kleinjohann, David Berling, Alessandra Stella, Günther Palm, Tom Tetzlaff, Sonja Gruen</i> | Kongresshalle |
| 17:20 – 19:20 | P | P072: Towards classification of spatio-temporal wave patterns based on principal component analysis <i>Speakers: Junji Ito, Sven Krausse, Michael Denker, Sonja Gruen, Robin Gutzen</i> | Kongresshalle |
| 17:20 – 19:20 | P | P073: Identification and Removal of Artifacts in Massively Parallel Recordings <i>Speakers: Jonas Oberste-Frielinghaus, Simon Essink, Alexander Kleinjohann, Julia Sprenger, Junji Ito, Sonja Gruen</i> | Kongresshalle |
| 17:20 – 19:20 | P | P074: AnalySim: A web platform for collaborative data sharing and analysis for research <i>Speakers: Anca Doloc-Mihu, Cengiz Gunay</i> | Kongresshalle |
| 17:20 – 19:20 | P | P075: Spatiotemporal dynamics in a V1 model caused by surround delays in retinal cells <i>Speakers: René Larisch, Fred Hamker</i> | Kongresshalle |
| 17:20 – 19:20 | P | P076: ANN-to-SNN conversion in the neural simulator ANNarchy <i>Speakers: Helge Dinkelbach, René Larisch, Julien Vitay, Fred Hamker</i> | Kongresshalle |
| 17:20 – 19:20 | P | P077: How the basal ganglia could contribute to the optimal tuning of the attentional template: A neuro-computational study <i>Speakers: Erik Syniawa, Oliver Maith, Alex Schwarz, Fred Hamker</i> | Kongresshalle |
| 17:20 – 19:20 | P | P078: Consequences of sparse connectivity for random recurrent neural networks obeying Dale's law <i>Speakers: Hamish Meffin, Anthony Burkitt, Andre Peterson, Isabelle Harris</i> | Kongresshalle |
| 17:20 – 19:20 | P | P079: A Calcium-Imaging-Based Brain-Machine Interface for Virtual Navigation <i>Speakers: Ethan Sorrell, Timothy O'Leary, Daniel E. Wilson, Michael E. Rule, Helen Yang, Christopher D. Harvey</i> | Kongresshalle |
| 17:20 – 19:20 | P | P080: The effect of frequency filtering and noise on functional brain connectivity and its relation to brain structure <i>Speakers: Helmut Schmidt, Antonin Skoch, Filip Spaniel, David Tomecek, Pavel Sanda, Jaroslav Hlinka</i> | Kongresshalle |
| 17:20 – 19:20 | P | P081: Topological motifs define attractors in a model of excitable brain dynamics for inferring the most suitable deep brain stimulation targets <i>Speakers: Mariia Popova, Claus Hilgetag, Marc-Thorsten Hütt</i> | Kongresshalle |

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| 17:20 – 19:20 | P P082: Visual processing in marsupial primary visual cortex <i>Speakers: Ali Almasi, Sebastien Bauquier, Marilyn Renfree, Hamish Meffin, Young Jun Jung, Shi Sun, Molis Yunzab, Michael R Ibbotson</i> | Kongresshalle |
| 17:20 – 19:20 | P P083: Characterizing the spiking activity of neuroendocrine stress circuit using dynamic clamp <i>Speakers: Samuel Mestern, Lyle Muller, Wataru Inoue</i> | Kongresshalle |
| 17:20 – 19:20 | P P084: Characterizing the Role of Activity Dependent Homeostatic Plasticity in Central Pattern Generation <i>Speakers: Lindsay Stolting, Randall D Beer, Eduardo J Izquierdo</i> | Kongresshalle |
| 17:20 – 19:20 | P P085: Modelling suggests biophysics of dentate granule cells are Pareto optimal for simultaneous maximization of energy efficiency and pattern separation <i>Speakers: Martin Mittag, Alexander Bird, Hermann Cuntz, Peter Jedlicka</i> | Kongresshalle |
| 17:20 – 19:20 | P P170: The Mid-level Vision Toolbox for computing structural properties of real-world images <i>Speakers: Dirk Bernhardt-Walther, Delaram Farzanfar, Seohee Han, Morteza Rezanejad</i> | Kongresshalle |
| 17:20 – 19:20 | P P237: The brain-wide communication architecture transcends the subcortical - cortical - cerebellar subdivisions <i>Speakers: Julian Schulte, Mario Senden, Gustavo Deco, Xenia Kobeleva, Gorka Zamora-López</i> | Kongresshalle |
| 17:20 – 19:20 | P P238: Sex-specific effect of early life stress on criticality in the developing prefrontal and amygdala networks <i>Speakers: Zoia Kharybina, Henrike Hartung, Tomi Taira</i> | Kongresshalle |
| 17:20 – 19:20 | P P239: Weight versus Node Perturbation Learning in Temporally Extended Tasks: Weight Perturbation Often Performs Similarly or Better <i>Speakers: Paul Züge, Christian Klos, Raoul-Martin Memmesheimer</i> | Kongresshalle |
| 17:20 – 19:20 | P P240: WITHDRAWN <i>Speakers: Vassilis Cutsuridis, Nikolaos Andreacos, Shigang Yue</i> | Kongresshalle |
| 17:20 – 19:20 | P P241: Development of a biochemical signalling model of GABAB receptor activation <i>Speakers: Tuomo Mäki-Marttunen, Jan Fredrik Kismul, Tiina Manninen, Marja-Leena Linne, Gaute Einevoll, Ole A Andreassen, Jeanette Hellgren Kotaleski, Kadri Pajo</i> | Kongresshalle |

B Break
 K Keynote
L Oral Session
P Poster
N Poster Session
R Registration
S Social

JULY 17 • MONDAY

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| 08:30 – 17:00 | R | REGISTRATION | Kongresshalle |
| 09:00 – 10:10 | K | Keynote 3: Alain Destexhe "Mean-field approach to biophysical models of spiking networks" <i>Moderators: Gennady Cymbalyuk</i> <i>Speakers: Alain Destexhe</i> | Kongresshalle |
| 10:10 – 10:40 | B | COFFEE BREAK | Kongresshalle |
| 10:39 – 12:30 | L | Oral Session 4: Learning in biological and artificial networks <i>Moderators: Sang Wan Lee</i> | Kongresshalle |
| 10:40 – 11:10 | L | FO3: A brain-constrained deep neural-network model that can account for the readiness potential in self-initiated volitional action <i>Speakers: Max Garagnani</i> | Kongresshalle |
| 11:10 – 11:30 | L | O12: Spike sequentiality increases throughout the learning of an interval timing task <i>Speakers: Luis Fernando de Oliveira</i> | Kongresshalle |
| 11:30 – 11:50 | L | O13: Efficient predictive coding <i>Speakers: Simo Vanni</i> | Kongresshalle |
| 11:50 – 12:10 | L | O14: Computational study of the role of motivational dopamine in action selection <i>Speakers: Nitin Anisetty</i> | Kongresshalle |
| 12:10 – 12:30 | L | O15: Hippocampal indexing alters the stability landscape of synaptic weight space allowing life-long learning <i>Speakers: Maxim Bazhenov</i> | Kongresshalle |
| 12:30 – 14:00 | B | LUNCH BREAK | Leipzig |
| 13:59 – 16:10 | L | Oral Session 5: Cortical and sub cortical circuits <i>Moderators: Jugoslava Acimovic</i> | Kongresshalle |
| 14:00 – 14:30 | L | FO4: Uncertainty-modulated prediction errors in cortical microcircuits <i>Speakers: Katharina Anna Wilmes</i> | Kongresshalle |
| 14:30 – 14:50 | L | O16: Canonical cortical circuits multiplex communication across different frequencies to maximize high-order synergies <i>Speakers: SAMY Nicolas CASTRO</i> | Kongresshalle |
| 14:50 – 15:10 | L | O17: The nature-nurture transform underlying the emergence of reliable cortical representations <i>Speakers: Sigrid Traegenap</i> | Kongresshalle |
| 15:10 – 15:20 | L | O18: Cortico-basal ganglia-thalamic control ensembles shift decision policies to maximize reward rate during learning <i>Speakers: Jyotika Bahuguna</i> | Kongresshalle |
| 15:30 – 15:50 | L | O19: The shared geometry of biological and recurrent neural network dynamics <i>Speakers: Arthur Pellegrino</i> | Kongresshalle |
| 15:50 – 16:10 | L | O20: WITHDRAWN <i>Speakers: Shivshankar NA</i> | Kongresshalle |
| 16:10 – 16:40 | B | COFFEE BREAK | Kongresshalle |
| 16:39 – 18:40 | N | Poster Session 2 | Kongresshalle |
| 16:40 – 18:40 | P | P068: Making dynamic whole-brain models realistic using efficient data-driven parameter estimation <i>Speakers: Xenia Kobeleva, Nahid Hasan, Stephan Grein</i> | Kongresshalle |

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| 16:40 – 18:40 | P | P086: Consolidation of Memory by Noise-Driven Bursts: A Case Study Using a Three-Factor STDP Pavlovian Learning SNN System <i>Speakers: Kyoung Jin Lee, In Hoi Jeong</i> | Kongresshalle |
| 16:40 – 18:40 | P | P087: Inverse stochastic resonance in a neuron model: a mathematical analysis <i>Speakers: Marius Yamakou, Juergen Jost</i> | Kongresshalle |
| 16:40 – 18:40 | P | P088: Mesoscale structural differences in the connectome of schizophrenia patients revealed by topological data analysis <i>Speakers: Emil Dmitruk, Christoph Metzner, Volker Steuber, Shabnam Kadir</i> | Kongresshalle |
| 16:40 – 18:40 | P | P089: The topology of optimally wired neuronal dendrites <i>Speakers: Hermann Cuntz, Lida Kanari</i> | Kongresshalle |
| 16:40 – 18:40 | P | P090: A decrease of synaptic learning rate explains network reorganization during fear learning <i>Speakers: Thomas Lai, Jens-Bastian Eppler, Dominik Aschauer, Simon Rumpel, Matthias Kaschube</i> | Kongresshalle |
| 16:40 – 18:40 | P | P091: The time it takes spontaneous activity to traverse its space <i>Speakers: Maren Wehrheim, Jonas Elpelt, Matthias Kaschube</i> | Kongresshalle |
| 16:40 – 18:40 | P | P092: Modulation of blood flow by astrocytic activity <i>Speakers: Stephanie Battini, Nicola Catarutti, Alexis Arnaudon, Cyrille Favreau, Daniel Keller</i> | Kongresshalle |
| 16:40 – 18:40 | P | P093: Predicting Click-Evoked Single Auditory Unit Contributions to EEG in the Barn Owl <i>Speakers: Paula Kuokkanen, Ira Kraemer, Christine Köppl, Catherine Carr, Richard Kempter</i> | Kongresshalle |
| 16:40 – 18:40 | P | P094: Effects of Neural Heterogeneity on the Low-Dimensional Dynamics of Spiking Neural Networks <i>Speakers: Richard Gast, Sara A. Solla, Ann Kennedy</i> | Kongresshalle |
| 16:40 – 18:40 | P | P095: Exact avalanche distributions in arbitrarily coupled finite networks of spiking neurons <i>Speakers: Maik Schünemann, Udo Ernst, Marc Keßeböhmer</i> | Kongresshalle |
| 16:40 – 18:40 | P | P096: Revisiting the cerebellar memory consolidation mechanism from AI perspective: The cerebellum as a dual learning machine <i>Speakers: Hyojin Bae, Jewoo Seo, Sang Jeong Kim, Chang-Eop Kim</i> | Kongresshalle |
| 16:40 – 18:40 | P | P097: How are tDCS effects different between AD patients and normal persons? – A computational study <i>Speakers: Sung Jun, Cheolki Im, Chae-Bin Song, Hyeon Seo, Jongseung Lee, Donghyeon Kim</i> | Kongresshalle |
| 16:40 – 18:40 | P | P098: An open-source simulation package for heterogeneous neuromuscular systems <i>Speakers: Hojeong Kim</i> | Kongresshalle |
| 16:40 – 18:40 | P | P099: iCaChip: A Python-based Toolbox for Multimodal Analysis of Large-scale Neural Recordings <i>Speakers: Xin Hu, Hayder Amin, Diana Kluetsch</i> | Kongresshalle |
| 16:40 – 18:40 | P | P100: Training recurrent SNNs efficiently in EventProp <i>Speakers: Thomas Nowotny, James P. Turner, James Knight</i> | Kongresshalle |
| 16:40 – 18:40 | P | P101: Collision avoidance using a spiking model of the locust LGMD <i>Speakers: Anindya Ghosh, Thomas Nowotny, James Knight</i> | Kongresshalle |
| 16:40 – 18:40 | P | P102: Directional Sensitivity of Cortical Neurons Towards TMS Induced Electric Fields <i>Speakers: Konstantin Weise, Torge Worbs, Benjamin Kolloch, Victor Souza, Aurélien Tristan Jaquier, Werner Van Geit, Axel Thielscher, Thomas R. Knösche</i> | Kongresshalle |
| 16:40 – 18:40 | P | P103: When Neural Activity Fails to Reveal Causal Contributions <i>Speakers: Kayson Fakhar, Claus Hilgetag, Shrey Dixit, Fatemeh Hadaeghi, Konrad Kording</i> | Kongresshalle |
| 16:40 – 18:40 | P | P104: Odor background increases the pheromone coding efficiency in moth olfactory receptor neurons <i>Speakers: Rimjhim Tomar, Paul Clemençon, Elodie Demondion, Christelle Monsempes, Philippe Lucas, Lubomir Kostal</i> | Kongresshalle |
| 16:40 – 18:40 | P | P105: Controlling Neocortical Epileptic Seizures using Forced Temporal Spike-Time Stimulation <i>Speakers: Gautam Kumar, Joseph Schmalz, Rachel Quinarez, Mayuresh Kothare</i> | Kongresshalle |
| 16:40 – 18:40 | P | P106: Influence of stimulus variability on classification performance of large feed-forward and recurrent neural network with field-theoretic methods <i>Speakers: Javed Lindner, Moritz Helias, Michael Krämer</i> | Kongresshalle |

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| 16:40 – 18:40 | P | P107: Inhibitory synaptic currents in the nucleus laminaris of the barn owl: characterization and modeling <i>Speakers: Zahra M Faghani, Catherine Carr, Richard Kempter, Paula Kuokkanen</i> | Kongresshalle |
| 16:40 – 18:40 | P | P108: Unveiling the gap among the connectivity in neural networks, neural dynamics, and their response in hetero-associative task <i>Speakers: Tomoki Kurikawa</i> | Kongresshalle |
| 16:40 – 18:40 | P | P109: A piece-wise linear recurrent neural network identifies generalizable dynamics from neural measurements during decision-making in rodents <i>Speakers: William Barnett, Daniel Durstewitz, Alexey Kuznetsov, Christopher Lapiš</i> | Kongresshalle |
| 16:40 – 18:40 | P | P110: Neuronal mechanisms for sequential activation of memory items: Dynamics, reliability and branching <i>Speakers: Elif Koksal Ersoz, Pascal Chossat, Martin Krupa, Frédéric Lavinge</i> | Kongresshalle |
| 16:40 – 18:40 | P | P111: Analysis of Spiking Dynamics and Network Morphology in a Dopamine-Reward Pavlovian Learning Spiking Neural Network <i>Speakers: In Hoi Jeong, Kyoung Jin Lee</i> | Kongresshalle |
| 16:40 – 18:40 | P | P112: Neural substrates of flexibly stable learning <i>Speakers: Minsu Abel Yang, Kevin J. Miller, Min Whan Jung, Sang Wan Lee</i> | Kongresshalle |
| 16:40 – 18:40 | P | P113: GPe Astrocytes Selectively Represent Routine Formation <i>Speakers: Minsu Abel Yang, Sa-Ik Hong, Shinwoo Kang, Jeyeon Lee, Minryung Song, Doo-sup Choi, Sang Wan Lee</i> | Kongresshalle |
| 16:40 – 18:40 | P | P114: The functional network emerged from structural network in a large-scale spiking population model of zebrafish <i>Speakers: Dongmyeong Lee, Hae-Jeong Park, Yelim Lee</i> | Kongresshalle |
| 16:40 – 18:40 | P | P115: Correlated input drives population homogenization and synchronization <i>Speakers: Daniel Trotter, Taufik Valiante, Jeremie Lefebvre</i> | Kongresshalle |
| 16:40 – 18:40 | P | P116: Diverse myelination impacts on action potential conduction timing <i>Speakers: Afroditi Talidou, Jeremie Lefebvre</i> | Kongresshalle |
| 16:40 – 18:40 | P | P117: Development of circuit model for delta oscillations, with application to schizophrenia physiology <i>Speakers: Jan Fredrik Kismul, Tuomo Mäki-Marttunen, Gaute Einevoll, Torbjørn V. Ness, Marja-Leena Linne</i> | Kongresshalle |
| 16:40 – 18:40 | P | P118: Analysis of network-level properties in neuron-astrocyte interaction models <i>Speakers: Tiina Manninen, Jugoslava Acimovic, Marja-Leena Linne</i> | Kongresshalle |
| 16:40 – 18:40 | P | P119: Simulating the N400 congruence effect in Alzheimer's disease <i>Speakers: Nirav Porwal, Howard Bowman, Maxine Lintern, Eirini Mavritsaki</i> | Kongresshalle |
| 16:40 – 18:40 | P | P120: Analysis of flexibility and diverse functionality of small recurrent neural motifs <i>Speakers: Ming-Ju Hsieh, Belle Liu, Alexander White, Kuo-An Wu, Chung-Chuan Lo</i> | Kongresshalle |
| 16:40 – 18:40 | P | P121: An Envelope-Phase Model For Stimulus-Induced Gamma Rhythms In Monkey V1. <i>Speakers: Arthur Powanwe, André Longtin</i> | Kongresshalle |
| 16:40 – 18:40 | P | P122: The neuron frequency mixer <i>Speakers: Robert Peach, Edward Rhodes, Nir Grossman, Charlotte Luff</i> | Kongresshalle |
| 16:40 – 18:40 | P | P123: Adaptation timescales determine the stability of recurrent neural networks <i>Speakers: Thomas Richner, Brian Lundstrom</i> | Kongresshalle |
| 16:40 – 18:40 | P | P124: Constructing and optimizing morphologically detailed Bergmann glial cell model with Blender-based toolkit CellRemorph <i>Speakers: Laura Keto, Tiina Manninen</i> | Kongresshalle |
| 16:40 – 18:40 | P | P125: A Potential Role for Ion Channel Kinetics in Activity-Dependent Homeostasis <i>Speakers: Yugarshi Mondal, Eve Marder</i> | Kongresshalle |
| 16:40 – 18:40 | P | P126: Optimising DWI-derived Connectivity in Whole-brain Mean Field Simulations <i>Speakers: Gurleen Singh, Gonzalo Maso Talou</i> | Kongresshalle |
| 16:40 – 18:40 | P | P127: Proposal of an function-oriented SCID method for reverse engineering a wide range of brain regions <i>Speakers: Hiroshi Yamakawa, Naoya Arakawa, Yoshimasa Tawatsuji, Ayako Fukawa, Yuta Ashihara, Yutaka Matsuo</i> | Kongresshalle |

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| 16:40 – 18:40 | P | P128: BDBRA: Database for extracting descriptions of neural projections and brain regions from neuroscience literature with dialogue prompts <i>Speakers: Yuta Ashihara, Hiroshi Yamakawa, Iriya Horiguchi, Yutaka Matsuo</i> | Kongresshalle |
| 16:40 – 18:40 | P | P129: Extracellular potentials of Allen Institute's V1 model approximated with spatiotemporal kernels <i>Speakers: Nicolo Meneghetti, Torbjørn V. Ness, Alberto Mazzoni</i> | Kongresshalle |
| 16:40 – 18:40 | P | P130: Spike-time and state prediction from limited synaptic and spiking history <i>Speakers: Evan Cudone, Robert McDougal</i> | Kongresshalle |
| 16:40 – 18:40 | P | P131: A Markovian Neural Barcode Representing Mesoscale Cortical Spatiotemporal Dynamics <i>Speakers: Jordan Culp, Wilten Nicola, Donovan Ashby, George Antis, Gordon Teskey, Alexander McGirr</i> | Kongresshalle |
| 16:40 – 18:40 | P | P132: Comparing Data-driven Models of Visual Receptive Fields: The Generalized Quadratic Model versus the Nonlinear Input Model <i>Speakers: Ali Almasi, Shi Sun, Young Jun Jung, Michael R Ibbotson, Hamish Meffin</i> | Kongresshalle |
| 16:40 – 18:40 | P | P133: Spatio-temporal correlation structure in human intracranial EEG – hierarchy and perturbations <i>Speakers: Paul Müller, Christian Meisel</i> | Kongresshalle |
| 16:40 – 18:40 | P | P134: Neural Oscillatory Models for Multiscale Time Representations in Novel Reinforcement Learning Automata <i>Speakers: Michael Tarlton, Anis Yazidi, Gustavo Mello</i> | Kongresshalle |
| 16:40 – 18:40 | P | P135: Decomposition of higher-order spectra applied to spike sorting <i>Speakers: Christopher K. Kovach, João Pedro Carvalho Moreira, Joel Berger, Matthew Howard, Laura Gwilliams, Aria Fallah, Lindy Comstock, Eduardo Mendes</i> | Kongresshalle |
| 16:40 – 18:40 | P | P136: Effects of Ih channel modulation on excitability and dendritic integration in layer V pyramidal cells in health and in schizophrenia <i>Speakers: Ankur Sinha, Tuomo Mäki-Marttunen, Klaus Obermayer, Volker Steuber, Christoph Metzner</i> | Kongresshalle |
| 16:40 – 18:40 | P | P137: Emergence of oscillations in a biologically realistic model of a V1 cortical column <i>Speakers: Giulia Moreni</i> | Kongresshalle |
| 16:40 – 18:40 | P | P138: Hypothalamic persistent activity states evoked by stress <i>Speakers: Tamas Fuzesi, Neilen Rasiah, Wilten Nicola, Jaideep Bains, Mijail Rojas Carvajal, Taylor Chomiak, David Rosenegger, Anupam Bisht, Kathryn Simone, Leonardo Molina, Gavin Petrie, Matthew Hill, Kartikeya Murari</i> | Kongresshalle |
| 16:40 – 18:40 | P | P139: A Computational Model to understand Hemispheric Specialization in Motor Control <i>Speakers: Sundari Elango, V Srinivasa Chakravarthy, Pratik Mutha</i> | Kongresshalle |
| 16:40 – 18:40 | P | P140: Statistical Properties of Connectomic Flag Complexes <i>Speakers: Florian Unger, Jonathan Krebs, Michael G. Müller</i> | Kongresshalle |
| 16:40 – 18:40 | P | P141: WITHDRAWN <i>Speakers: Sanjay Ghosh, Ashish Raj, Srikantan Nagarajan</i> | Kongresshalle |
| 16:40 – 18:40 | P | P142: Recurrent spike patterns and oscillations of in neocortical network model with self-sustained activity <i>Speakers: Jeeyune(jiyoun) Jung, Salvador Dura-Bernal, William W Lytton, Don Doherty, Samuel Neymotin</i> | Kongresshalle |
| 16:40 – 18:40 | P | P143: Synaptic effect on the temporal patterning of intermittent gamma synchrony <i>Speakers: Leonid Rubchinsky, Quynh-Anh Nguyen</i> | Kongresshalle |
| 16:40 – 18:40 | P | P144: Correlated structure across spiking and mean-field neural networks with FORCE training <i>Speakers: Thomas Newton, Wilten Nicola</i> | Kongresshalle |
| 16:40 – 18:40 | P | P145: Training spiking neural networks efficiently and with ease in mGeNN <i>Speakers: James Knight, Thomas Nowotny</i> | Kongresshalle |
| 16:40 – 18:40 | P | P146: Bio-Inspired Backpropagation in Spiking Neural Networks <i>Speakers: Fabian Schubert, Thomas Nowotny</i> | Kongresshalle |
| 16:40 – 18:40 | P | P147: Reconstruction of an Even number of EEG channels from ODD EEG electrode and frequency transfer using a deep oscillatory network. <i>Speakers: Sayan Ghosh, V Srinivasa Chakravarthy, Rohan Nurani Rajagopal</i> | Kongresshalle |

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| 16:40 – 18:40 | P | P148: Multistability and metastability in whole-brain models: a characterization of the dynamical landscape and model comparison <i>Speakers: Cristiana Dimulescu, Klaus Obermayer</i> | Kongresshalle |
| 16:40 – 18:40 | P | P149: Optimal control of oscillations, synchrony, and phase-locking in nonlinear models of neural dynamics <i>Speakers: Lena Salfenmoser, Klaus Obermayer</i> | Kongresshalle |
| 16:40 – 18:40 | P | P150: Certainty-weighted integration of information in individual cortical neurons <i>Speakers: Ben von Hünenbein, Cyriel Pennartz, Walter Senn, Jakob Jordan, Mihai A. Petrovici, Matthijs oude Lohuis, Pietro Marchesi, Umberto Olcese</i> | Kongresshalle |
| 16:40 – 18:40 | P | P151: Mooney Face Image Processing in Deep Convolutional Neural Networks Compared to Humans <i>Speakers: Astrid Zeman, Tim Leers, Hans Op de Beeck</i> | Kongresshalle |
| 16:40 – 18:40 | P | P152: WITHDRAWN <i>Speakers: Ivan Bulygin, James Ferguson, Juan Sebastián Calderón García, Tim P. Vogels</i> | Kongresshalle |
| 16:40 – 18:40 | P | P153: Human brain activity's time-reversal symmetry is differentially modulated by neuropsychiatric pathology <i>Speakers: David Papo</i> | Kongresshalle |
| 16:40 – 18:40 | P | P154: Visual System Architecture Enhances Network Stability and Performance Through Layers, Delays, and Feedback <i>Speakers: Osvaldo Velarde, Hernan Makse, Lucas Parra</i> | Kongresshalle |
| 16:40 – 18:40 | P | P155: Predicting the effects on dendrite active properties of wild type and mutated delayed-rectifier Kv2 channels <i>Speakers: Marianne Renner, Anne-Lise Paupiah</i> | Kongresshalle |
| 16:40 – 18:40 | P | P156: Solution to the Stability-Plasticity Dilemma in Spatio-Temporal Pattern Learning <i>Speakers: Mohammad Dehghani, Klaus Pawelzik</i> | Kongresshalle |
| 16:40 – 18:40 | P | P157: Modelling the dynamic brain response to TMS inhibitory perturbations in early recovery from alcohol dependence: A TMS-EEG study <i>Speakers: Jodie Feil, Wei Qin, Anthony Burkitt, Phillipa Karoly, Paul B Fitzgerald, Dianne M Sheppard, Dan I Lubman, John L Bradshaw, Andre Peterson</i> | Kongresshalle |
| 16:40 – 18:40 | P | P158: Photic stimulation as a human perturbation paradigm to track brain dynamics <i>Speakers: Michaela Vranic-Peters, Patrick O'brien, Udaya Seneviratne, David Grayden, Mark Cook, Andre Peterson</i> | Kongresshalle |
| 16:40 – 18:40 | P | P159: Response to perturbation as a measurement of cortical excitability uncovers the circadian cycle in a rat model <i>Speakers: Wei Qin, Anthony Burkitt, Andre Peterson</i> | Kongresshalle |
| 16:40 – 18:40 | P | P160: Learning efficient backprojections across cortical hierarchies in real time <i>Speakers: Kevin Max, Laura Kriener, Thomas Nowotny, Walter Senn, Mihai A. Petrovici, Garibaldi Pineda Garcia</i> | Kongresshalle |
| 16:40 – 18:40 | P | P161: Sinusoidal activations support a noise-resilient neural circuit for navigation <i>Speakers: Pau Vilimelis Aceituno, Dominic Dall'Osto, Ioannis Pisokas</i> | Kongresshalle |
| 16:40 – 18:40 | P | P162: Skip Connections Increase the Capacity of Variable Binding Mechanisms <i>Speakers: Yi Xie, Yichen Li, Akshay Rangamani, Tomaso Poggio</i> | Kongresshalle |
| 16:40 – 18:40 | P | P163: Whole-brain dynamical modeling for classification of Parkinson's disease <i>Speakers: Kyesam Jung, Esther Florin, Kaustubh Patil, Julian Caspers, Christian Rubbert, Simon Eickhoff, Oleksandr Popovych</i> | Kongresshalle |
| 16:40 – 18:40 | P | P164: Effects of extracellular conditions on saltatory conduction. <i>Speakers: Nooshin Abdollahi, Steve Prescott</i> | Kongresshalle |
| 16:40 – 18:40 | P | P165: Infomorphic Networks: A Locally Learning Approach to Neural Computation based on Partial Information Decomposition <i>Speakers: Andreas Schneider, Abdullah Makkeh, Valentin Neuhaus, Michael Wibral, Viola Priesemann</i> | Kongresshalle |
| 16:40 – 18:40 | P | P166: A Neuron as a Direct Data-Driven Controller (DD-DC) <i>Speakers: Dmitri Chklovskii, Alexander Genkin, Jason Moore, Rob R. de Ruyter van Steveninck</i> | Kongresshalle |
| 16:40 – 18:40 | P | P167: WITHDRAWN <i>Speakers: Benjamin Sipes, Parul Verma, Srikantan Nagarajan, Ashish Raj</i> | Kongresshalle |

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| 16:40 – 18:40 | P | P168: Up and Down dynamics in a detailed network model of the prefrontal cortex <i>Speakers: Antonio Carlos Roque, Marcelo Rempel</i> | Kongresshalle |
| 16:40 – 18:40 | P | P169: Nonlinear dimensionality reduction with normalizing flows for analysis of electrophysiological recordings <i>Speakers: Peter Bouss, Moritz Helias, Sandra Nestler, Kirsten Fischer, Claudia Merger, Alexandre René</i> | Kongresshalle |
| 16:40 – 18:40 | P | P194: Development of a biologically realistic cerebellar model to study the effects of non-invasive stimulation <i>Speakers: Eleonora Bernasconi, Nada Yousif, Volker Steuber</i> | Kongresshalle |
| 16:40 – 18:40 | P | P236: Signatures of criticality in efficient coding networks <i>Speakers: Shervin Safavi, Matthew Chalk, Nikos Logothetis, Anna Levina</i> | Kongresshalle |
| 16:40 – 18:40 | P | P242: Identifying the active properties of layer 5 myelinated axons with automated and robust optimization of action potential propagation <i>Speakers: Charles Cohen, Maarten Kole</i> | Kongresshalle |
| 16:40 – 18:40 | P | P243: Modelling the Effect of Allopregnanolone on the Resolution of Spike-Wave Discharges <i>Speakers: Maliha Ahmed, Sue Ann Campbell</i> | Kongresshalle |
| 16:40 – 18:40 | P | P244: Modelling the theta-gamma interactions in the hippocampal CA1-CA3 areas <i>Speakers: Claudio Mirasso, Santiago Canals, Dimitrios Chalkiadakis, Jaime Sánchez-Claros</i> | Kongresshalle |
| 16:40 – 18:40 | P | P245: Parameterizing Models of Dynamic Synapses in terms of frequency responses <i>Speakers: Dominik Krenzer, Martin Bogdan, Max Braungardt, Ferney Beltran Velandia</i> | Kongresshalle |
| 16:40 – 18:40 | P | P266: Using information theory to measure the emergence of artificial free will in a spiking brain-constrained model of the human cortex <i>Speakers: Josh Bourne, Fernando Rosas, Max Garagnani</i> | Kongresshalle |
| 19:10 – 21:40 | S | Conference Dinner | Ratskeller |

B Break **K** Keynote **O** OCNS Business **P** Poster **N** Poster Session **R** Registration **S** Social **W** Workshop

JULY 18 • TUESDAY

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| 08:30 – 17:00 | R | REGISTRATION | Kongresshalle |
| 09:00 – 12:30 | W | W01: Computational modeling of transcranial magnetic stimulation <i>Speakers: Shih-Cheng Chien, Helmut Schmidt, Thomas R. Knösche, Konstantin Weise, Aaron Miller, Torge Worbs, Vincenzo Di Lazzaro, Laura Marzetti</i> | Goethe |
| 09:00 – 12:30 | W | W03: External stimulation in visual cortex: from experiments to models <i>Speakers: Jan Antolik, Matthias Kaschube, Karolína Korvasová, Mathew Chalk, Cristina Soto-Sánchez, Bodo Rückauer, David Berling, Sigrid Trägenap</i> | Schiller |
| 09:00 – 12:30 | W | W04: Methods of Information Theory in Computational Neuroscience <i>Speakers: Nadine Spychala, Benjamin Lindner, Patricio Orio, Rainer Engelken, Demian Battaglia</i> | Mahler |
| 09:00 – 12:30 | W | W05: Multiscale modeling of cerebral cortex, from neural circuits to whole brain models <i>Speakers: Leonardo Dalla Porta, Giulia Moreni, Gorka Zamora-López, Mihai A. Petrovici, Pier Stanislao Paolucci, Rajanikant Panda, Alain Destexhe, Galyna Malieieva, Johanna Senk</i> | Telemann |
| 09:00 – 12:30 | W | W06: Optimality, evolutionary trade-offs, Pareto theory and degeneracy in neuronal modelling <i>Speakers: Peter Jedlicka, Zahid Padamsey, Philipp Norton, Astrid Prinz, Anna Levina, Rishikesh Narayanan</i> | Leibniz |
| 09:00 – 12:30 | W | W07: The impact of photopharmacology on brain circuits research: present and future prospects <i>Speakers: Galyna Malieieva, Alexandre Gomila Juaneda</i> | Lessing |
| 10:20 – 10:50 | B | COFFEE BREAK | Kongresshalle |
| 12:30 – 14:10 | B | LUNCH BREAK | Leipzig |
| 14:10 – 15:20 | K | Keynote 4: Demian Battaglia "Function follows Dynamics: controlling system states to modify information processing" <i>Moderators: Maurizio De Pittà</i> <i>Speakers: Demian Battaglia</i> | Kongresshalle |
| 15:20 – 15:50 | B | COFFEE BREAK | Kongresshalle |
| 15:50 – 16:50 | O | Members Meeting | Kongresshalle |
| 16:49 – 18:50 | N | Poster Session 3 | Kongresshalle |
| 16:50 – 18:50 | P | P171: Brain Stimulation, Adaptation and Fractional Differentiation: Window to Underlying Neuroexcitability <i>Speakers: Brian Lundstrom, Thomas Richner</i> | Kongresshalle |
| 16:50 – 18:50 | P | P172: Interfacing biophysical circuits with whole-brain networks using The Virtual Brain and NetPyNE <i>Speakers: Valery Bragin, Salvador Dura-Bernal, James Chen, Roopa Kalsank Pai, Dionysios Perdakis, Jil Mona Meier, Lia Domide, Michael Schirner, Petra Ritter</i> | Kongresshalle |
| 16:50 – 18:50 | P | P173: An ODE Model for fMRI <i>Speakers: Amrit Kashyap, Eloy Geenjaer, Patrik Bey, Katharina Glomb, Jaskiret Dhindsa, Sergey Plis, Shella Keilholz, Petra Ritter</i> | Kongresshalle |
| 16:50 – 18:50 | P | P174: Modelling the developing neurobiology underlying sleep behaviour in an infant <i>Speakers: Lachlan Webb, Andrew Phillips, James A Roberts</i> | Kongresshalle |
| 16:50 – 18:50 | P | P175: Searching for functionally equivalent temporal sequences of neural activity using Victor-Purpura distance and surrogate candidates. <i>Speakers: Alberto Ayala, Angel Lareo, Pablo Varona, Francisco B Rodriguez</i> | Kongresshalle |
| 16:50 – 18:50 | P | P176: The role of cortico-thalamic feedback for visual information processing <i>Speakers: Wenqing Wei, Stefan Rotter</i> | Kongresshalle |
| 16:50 – 18:50 | P | P177: The Dynamics of Adult Neurogenesis in the Dentate Gyrus <i>Speakers: Stefan Rotter</i> | Kongresshalle |

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| 16:50 – 18:50 | P | P178: Modeling the Temporal Dynamics of the Songbird's Premotor Nucleus <i>Speakers: Fjola Hyseni, Arthur Leblois, Nicolas P. Rougier</i> | Kongresshalle |
| 16:50 – 18:50 | P | P179: Learning spatio-temporal properties of visual cells <i>Speakers: Anthony Burkitt, Yanbo Lian, Marko Ruslim</i> | Kongresshalle |
| 16:50 – 18:50 | P | P180: Exploring the effect of long-range connectivity on cortical spatiotemporal complexity in a computational model of the cerebral cortex. <i>Speakers: Lluc Tresserras Pujadas, Leonardo Dalla Porta, Maria V. Sanchez-Vives</i> | Kongresshalle |
| 16:50 – 18:50 | P | P181: Multiscale exploration of cortical state transitions: from M-current to network dynamics <i>Speakers: Leonardo Dalla Porta, Almudena Barbero-Castillo, Jose Manuel Sanchez-Sanchez, Maria V. Sanchez-Vives</i> | Kongresshalle |
| 16:50 – 18:50 | P | P182: Emergent collective behavior of cortical networks during exogenous sinusoidal modulation <i>Speakers: Martina Cortada Pérez, Joana Covelo, Gianni V. Vinci, Maurizio Mattia, Maria V. Sanchez-Vives</i> | Kongresshalle |
| 16:50 – 18:50 | P | P183: On the coupling between hemodynamics and electrophysiology: A data-driven 2D model of the blood flow dynamics during slow wave activity in the cortex <i>Speakers: Alex Suarez Perez, Diana Casas Torremocha, Sumana Chetia, Giulia De Bonis, Pier Stanislao Paolucci, Turgut Durduran, Maria Victoria Sanchez Vives</i> | Kongresshalle |
| 16:50 – 18:50 | P | P184: Mesoscopic description of hippocampal replay and metastability in spiking neural networks with short-term plasticity <i>Speakers: Bastian Pietras, Tilo Schwalger, Valentin Schmutz</i> | Kongresshalle |
| 16:50 – 18:50 | P | P185: Analog Simulation of Biological Neurons with Superconducting Circuits <i>Speakers: Patrick Crotty, Kenneth Segall, Daniel Schult</i> | Kongresshalle |
| 16:50 – 18:50 | P | P186: How Sparse Connectivity and Heterogeneity Shape Mesoscopic Models of Spiking Neural Networks <i>Speakers: Nils Erik Greven, Jonas Ranft, Tilo Schwalger</i> | Kongresshalle |
| 16:50 – 18:50 | P | P187: Diversity-induced decoherence in a globally coupled neural network <i>Speakers: Marius Yamakou, Els Heinsalu, Marco Patriarca, Stefano Scialla</i> | Kongresshalle |
| 16:50 – 18:50 | P | P188: One at a time: A dynamic mean-field model of frontal eye fields performing sequential visual target selection in naturalistic stimuli <i>Speakers: Vaishnavi Narayanan, Rainer Goebel, Mario Senden</i> | Kongresshalle |
| 16:50 – 18:50 | P | P189: Layered Structure of Cortex Explains Reversal Dynamics in Bistable Perception <i>Speakers: Kris Evers, Judith Peters, Rainer Goebel, Mario Senden</i> | Kongresshalle |
| 16:50 – 18:50 | P | P190: Dynamical Independence: Identification and discovery of emergent macroscopic phenomena in complex neural systems <i>Speakers: Lionel Barnett, Anil Seth</i> | Kongresshalle |
| 16:50 – 18:50 | P | P191: Learning invariance manifolds of V1 neurons in macaque and mouse <i>Speakers: Luca Baroni, Jan Antolik, Mohammad Bashiri, Konstantin F. Willeke, Fabian H. Sinz</i> | Kongresshalle |
| 16:50 – 18:50 | P | P192: Optogenetic inhibition reveals large-scale intracortical interactions during early development <i>Speakers: Deyue Kong, Haleigh Mulholland, Matthias Kaschube, Gordon Smith</i> | Kongresshalle |
| 16:50 – 18:50 | P | P193: Using brain-computer interfaces to identify learning algorithms <i>Speakers: Friedrich Schuessler, Henning Sprekeler</i> | Kongresshalle |
| 16:50 – 18:50 | P | P195: Brian in the Browser: Running Neural Simulations with WebAssembly <i>Speakers: Marcel Stimberg</i> | Kongresshalle |
| 16:50 – 18:50 | P | P196: Brief body-mind intervention changes age-related executive control network and plasma biomarkers <i>Speakers: Rongxiang Tang, Jessica Langbaum, Terrie Moffitt, Yi-Yuan Tang</i> | Kongresshalle |
| 16:50 – 18:50 | P | P197: Using a machine learn-based approach to reveal relationship between sleep quality and mental health, trait mindfulness, and negative mood <i>Speakers: Xiaolian Ding, Qingmin Li, Zirong Yang, Yi-Yuan Tang</i> | Kongresshalle |
| 16:50 – 18:50 | P | P198: Towards realistic modelling of cortical spreading depolarization in migraine <i>Speakers: Laila Weyn, Ruben Schoeters, Thomas Tarnaud, Wout Joseph, Emmeric Tanghe</i> | Kongresshalle |

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| 16:50 – 18:50 | P | P199: Quantitative analysis of three dimensional and subcellular optogenetics in CA1 cells <i>Speakers: Ruben Schoeters, Thomas Tarnaud, Wout Joseph, Robrecht Raedt, Emmeric Tanghe</i> | Kongresshalle |
| 16:50 – 18:50 | P | P200: Probabilistic sequential memory recall in spiking neuronal networks <i>Speakers: Younes Bouhadjar, Dirk J. Wouters, Markus Diesmann, Tom Tetzlaff</i> | Kongresshalle |
| 16:50 – 18:50 | P | P201: Emergence of asynchronous quenching in a recurrent circuit model of transcranial stimulation <i>Speakers: Camille Godin, Jean-Philippe Thivierge</i> | Kongresshalle |
| 16:50 – 18:50 | P | P202: Behavioral and neural signatures of decision points in an information gathering task. <i>Speakers: Xiaochen Zhao, Paul Tiesinga</i> | Kongresshalle |
| 16:50 – 18:50 | P | P203: Making the Hindmarsh-Rose model adaptable in the slow interburst hyperpolarization dynamics <i>Speakers: Pablo Varona, Alvaro Sanchez-Romero, Joaquin J. Torres</i> | Kongresshalle |
| 16:50 – 18:50 | P | P204: Whole-brain dynamical modeling of adolescent developing brain <i>Speakers: Amin Saberi, Kevin Wischnewski, Kyesam Jung, Lina Schaare, Oleksandr Popovych, Simon Eickhoff, Sofie Valk</i> | Kongresshalle |
| 16:50 – 18:50 | P | P205: Biophysically detailed cortical neuron models with genetically-defined ion channels <i>Speakers: Darshan Mandge, Yann Roussel, Stijn van Dorp, Tanguy Damart, Aurélien Tristan Jaquier, Henry Markram, Daniel Keller, Rajnish Ranjan, Werner Van Geit</i> | Kongresshalle |
| 16:50 – 18:50 | P | P206: A data-driven network description of the event-related waves during a working memory task in healthy and multiple sclerosis groups: an MEG study <i>Speakers: Chiara Rossi, Diego Vidaurre, Lars Costers, Fahimeh Akbarian, Guy Nagels, Jeroen Van Schependom</i> | Kongresshalle |
| 16:50 – 18:50 | P | P207: Neurocognitive Models of Perceptual Decision Making <i>Speakers: Ramesh Srinivasan, Qinhua Jenny Sun, Khuong Vo, Michael Nunez, Joachim Vandekerckhove</i> | Kongresshalle |
| 16:50 – 18:50 | P | P208: Exploring the ability of biophysical models to reproduce the functional variability of neurons <i>Speakers: Alicia Garrido-Peña, Pablo Sánchez-Martín, Irene Elices, Manuel Reyes-Sanchez, Blanca Berbel, Roberto Latorre, Francisco B Rodriguez, Pablo Varona</i> | Kongresshalle |
| 16:50 – 18:50 | P | P209: Identifying robust sequences in EEG signals: challenges and promises <i>Speakers: Sara Kamali, Fabiano Baroni, Pablo Varona</i> | Kongresshalle |
| 16:50 – 18:50 | P | P210: Toward a Predictive Model of Serotonergic Densities: A Supercomputing Simulation of Reflected Fractional Brownian Motion in a 3D-Mouse Brain Shape <i>Speakers: Skirmantas Janusonis, Justin Haiman, Ralf Metzler, Thomas Vojta</i> | Kongresshalle |
| 16:50 – 18:50 | P | P211: WITHDRAWN <i>Speakers: Anil Cengiz, Alla Borisyuk, Matt Wachowiak</i> | Kongresshalle |
| 16:50 – 18:50 | P | P212: A Bayesian observer model reveals a prior for natural daylights underlying perceptual bias in color vision <i>Speakers: Yannan Su, Thomas Wachtler</i> | Kongresshalle |
| 16:50 – 18:50 | P | P213: Tools and services for managing and sharing research data: facilitating data integration and collaboration <i>Speakers: Reema Gupta, Michael Sonntag, Thomas Wachtler</i> | Kongresshalle |
| 16:50 – 18:50 | P | P214: A model of contextual influences in color vision based on a non-uniform population code <i>Speakers: Felix Schrader, Thomas Wachtler</i> | Kongresshalle |
| 16:50 – 18:50 | P | P215: Functional network analysis of cortical dynamics seen with fast wide-field voltage imaging in a right/left cued decision lick task <i>Speakers: Dieter Jaeger, Yunmiao Wang</i> | Kongresshalle |
| 16:50 – 18:50 | P | P216: A Biological Model of Spinal and Peripheral Motor Pathways for TMS-induced MEPs <i>Speakers: Shih-Cheng (Vincent) Chien, Christian Röse, Peng Wang, Helmut Schmidt, Thomas R. Knösche, Konstantin Weise</i> | Kongresshalle |
| 16:50 – 18:50 | P | P217: A Neural Mass Model of TMS induced I-waves in the Primary Motor Cortex <i>Speakers: Aaron Miller, Thomas R. Knösche, Konstantin Weise</i> | Kongresshalle |
| 16:50 – 18:50 | P | P218: Presynaptic calcium dynamics in cytosol and ER and the interplay of ER membrane located pumps and channels <i>Speakers: Ranjita Dutta Roy, Markus Breit, Gabriel Wittum, Markus M. Knodel</i> | Kongresshalle |

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| 16:50 – 18:50 | P | P219: Influence of T-bar on calcium concentration impacting release probability <i>Speakers: Markus M. Knodel, Ranjita Dutta Roy, Gabriel Wittum</i> | Kongresshalle |
| 16:50 – 18:50 | P | P220: Modeling homeostasis in human connectomes <i>Speakers: Fabian Czappa, Marvin Kaster, Markus Butz-Ostendorf, Felix Wolf</i> | Kongresshalle |
| 16:50 – 18:50 | P | P221: Encoding an image in a homeostatic neural network modeling structural plasticity <i>Speakers: Marvin Kaster, Fabian Czappa, Markus Butz-Ostendorf, Felix Wolf</i> | Kongresshalle |
| 16:50 – 18:50 | P | P222: Model Reductions for Oscillatory Brain Dynamics <i>Speakers: Tianyi Wu, Yuhang Cai, Louis Tao, Zhuo-Cheng Xiao</i> | Kongresshalle |
| 16:50 – 18:50 | P | P223: NeuroElectroMagnetic data Archive and tools Resource - an open access data, tools and compute resource operating on neuroelectromagnetic data <i>Speakers: Amitava Majumdar, Scott Makeig, Kenneth Yoshimoto, Subhashini Sivagnanam, Arnaud Delorme, Dung Truong, Choonhan Youn</i> | Kongresshalle |
| 16:50 – 18:50 | P | P224: Efficient models of the cortex via coarse-grained interactions and local response functions <i>Speakers: Zhuo-Cheng Xiao, Kevin K. Lin, Lai-Sang Young</i> | Kongresshalle |
| 16:50 – 18:50 | P | P225: Identifying control ensembles that tune decision policies within the cortico-basal ganglia-thalamic circuit <i>Speakers: Jonathan Rubin, Catalina Vich Llompert, Matthew Clapp, Timothy Verstynen, Julia Badya, Jyotika Bahuguna, Eric Yttri</i> | Kongresshalle |
| 16:50 – 18:50 | P | P226: Dynamics of neuronal activity based on a flocking method for optogenetics <i>Speakers: Margarita Zaleshina, Alexander Zaleshin</i> | Kongresshalle |
| 16:50 – 18:50 | P | P227: Inhibitory neurons control the consolidation of neural assemblies via adaptation to selective stimuli <i>Speakers: Raphaël Bergoin, Alessandro Torcini, Gustavo Deco, Mathias Quoy, Gorka Zamora-López</i> | Kongresshalle |
| 16:50 – 18:50 | P | P228: Audiovisual speech enhancement with synthetic facial animations as well as simplified visual stimuli <i>Speakers: Tobias Reichenbach, Enrico Varano, Konstantinos Vougioukas, Pingchuan Ma, Stavros Petridis, Maja Pantic, Dorothea Kolossa, Steffe Zeiler</i> | Kongresshalle |
| 16:50 – 18:50 | P | P229: Ascending somatosensory pathway in the whisker system of the rodent: A mechanoreceptor to brainstem model <i>Speakers: Nicolas Rault, Tansu Celikel, Fleur Zeldenrust</i> | Kongresshalle |
| 16:50 – 18:50 | P | P230: Visual alpha generators in a full-density spiking thalamocortical model <i>Speakers: Renan Oliveira Shimoura, Sacha van Albada, Antonio Carlos Roque</i> | Kongresshalle |
| 16:50 – 18:50 | P | P231: Multi-Scale Spiking Network Model of Human Cerebral Cortex <i>Speakers: Jari Pronold, Alexander van Meegen, Hannah Vollenbröcker, Renan Oliveira Shimoura, Mario Senden, Alexandros Goulas, Claus Hilgetag, Rembrandt Bakker, Sacha van Albada</i> | Kongresshalle |
| 16:50 – 18:50 | P | P232: The NEST module for computational modeling and simulation of neuron-astrocyte networks <i>Speakers: Jugoslava Acimovic, Han-Jia Jiang, Tiina Manninen, Jonas Stapmans, Mikko Lehtimäki, Marja-Leena Linne, Markus Diesmann, Sacha van Albada</i> | Kongresshalle |
| 16:50 – 18:50 | P | P233: Computing PDFs and Entropy from Triple Correlation Relative to Noise: Insights into Neural Network Behavior <i>Speakers: Sarita Deshpande, Graham Smith, Wim van Drongelen</i> | Kongresshalle |
| 16:50 – 18:50 | P | P234: Spatial transcriptomics whole-brain modelling explains non-linear functional effects of atomoxetine by a receptor binding affinity principle <i>Speakers: Martí Monge, Murat Demirtas, Gustavo Deco, Thomas Pfeffer, Jakub Vohryzek, Yonatan Sanz-Perl, Ruud Lucas van den Brink, Gorka Zamora-López</i> | Kongresshalle |
| 16:50 – 18:50 | P | P235: Perception and propagation of activity through the cortical hierarchy is determined by neural variability <i>Speakers: James M Rowland, Matthias Loidolt, Viola Priesemann, Adam M Packer, Rob Lees, Joshua Keeling, Jonas Dehning, Thomas Akam, Thjis van der Plas</i> | Kongresshalle |
| 16:50 – 18:50 | P | P246: Modelling the Effects of CACNA1C Variants on Single-Cell Dynamics in Cortical Pyramidal Cells: Applications to Timothy Syndrome <i>Speakers: Miranda Moore, Tuomo Mäki-Marttunen, Marja-Leena Linne</i> | Kongresshalle |

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| 16:50 – 18:50 | P | P247: Controlling morpho-electrophysiological variability of neurons with detailed biophysical models <i>Speakers: Alexis Arnaudon, Henry Markram, Werner Van Geit, Lida Kanari, Maria Reva, Michael Zbili</i> | Kongresshalle |
| 16:50 – 18:50 | P | P248: Connecting the Neurovascular coupling and Electrophysiological signaling – a modeling approach <i>Speakers: Henrik Podéus, Salvador Dura-Bernal, Gunnar Cedersund, Malin Silverå Ejneby, Maria Engström</i> | Kongresshalle |
| 16:50 – 18:50 | P | P249: NREM and REM: cognitive and energetic gains in thalamo-cortical sleeping and awake spiking model <i>Speakers: Leonardo Tonielli, Pier Stanislaio Paolucci</i> | Kongresshalle |
| 16:50 – 18:50 | P | P250: Organizational principles of spatial connectivity in macaque primary visual cortex <i>Speakers: Jasper Albers, Markus Diesmann, Sacha van Albada, Anno C. Kurth</i> | Kongresshalle |
| 16:50 – 18:50 | P | P251: Applying simulation based inference in the Human Neocortical Neurosolver neural modeling software to study the mechanisms of electrical biomarkers <i>Speakers: Nicholas Tolley, Alexandre Gramfort, Stephanie Jones, Pedro Rodrigues</i> | Kongresshalle |
| 16:50 – 18:50 | P | P252: Off-center considerations in three-dimensional size perception <i>Speakers: Dawson Lin, Akihito Maruya, Qasim Zaidi</i> | Kongresshalle |
| 16:50 – 18:50 | P | P253: Topology of activity in macaque V1 is highly dependent on bottom-up and top-down signals <i>Speakers: Aitor Morales-Gregorio, Alexander Kleinjohann, Sonja Gruen, Sacha van Albada, Frederic Barthelemy, Thomas Brochier, Anno C. Kurth</i> | Kongresshalle |
| 16:50 – 18:50 | P | P254: Integrate-and-fire neuron with potassium dynamics capturing activity-mediated switches in firing regimes <i>Speakers: Louisiane Lemaire, Susanne Schreiber, Mahraz Behbood, Jan-Hendrik Schleimer</i> | Kongresshalle |
| 16:50 – 18:50 | P | P255: Statistical learning in biological neuronal networks <i>Speakers: Matthieu Gilson, Sandra Nestler, Moritz Helias</i> | Kongresshalle |
| 16:50 – 18:50 | P | P256: Using the Neocortical Microcircuit as a Realistic Ground Truth To Map Spike Sorting Biases <i>Speakers: Steeve Laquitaine, Milo Imbeni, Michael Reimann, Joseph Tharayil</i> | Kongresshalle |
| 16:50 – 18:50 | P | P257: A Deep Dive into the Rat CA1 Network: Insights from Network Science and Deep Learning <i>Speakers: Kerem Kurban, Alexis Arnaudon, Henry Markram, Armando Romani</i> | Kongresshalle |
| 16:50 – 18:50 | P | P258: Large-scale mapping of stimulus-related information in the ferret brain during decision-making <i>Speakers: Loren Kocillari, Andreas Engel, Edgar Galindo-Leon, Stefano Panzeri, Florian Pieper</i> | Kongresshalle |
| 16:50 – 18:50 | P | P259: A Dual-input Firing Rate Model for CA1 Place Cell Phase Precession and Theta Sequences <i>Speakers: Yiqing Lu, Antonio Fernández-Ruiz, John Rinzel</i> | Kongresshalle |
| 16:50 – 18:50 | P | P260: Estimating the structure of lateral interactions in a computational model of cortical networks <i>Speakers: Lorenzo Butti, Haleigh Mulholland, Gordon Smith, Matthias Kaschube</i> | Kongresshalle |
| 16:50 – 18:50 | P | P261: Towards an EBRAINS service for brain wave analysis: Cobrawap <i>Speakers: Irene Bernava, Maria V. Sanchez-Vives, Maurizio Mattia, Sonja Gruen, Andrew Davison, Pier Stanislaio Paolucci, Michael Denker, Giulia De Bonis, Cristiano Capone, Robin Gutzen, Sofia Karvounari, Chiara De Luca, Cosimo Lupo, Arnau Manasanch, Anna Letizia Allegra Mascaro, Eleni Mathioulaki, Elena Pastorelli, Francesco Saverio Pavone, Francesco Resta</i> | Kongresshalle |
| 16:50 – 18:50 | P | P262: Spatial pattern of macaques' solo and dyadic foraging in an experimentally controlled terrain <i>Speakers: Neda Shahidi, Zurna Ahmed, Yuliya Badayeva, Alexander Gail, Irene Lacal</i> | Kongresshalle |
| 16:50 – 18:50 | P | P263: Impaired Predictions in MDD in a Computer Model of a Neocortical Layer based on HTM. <i>Speakers: Mohamed Sherif, Joshua Brown, Linda Carpenter, Mostafa Khalil, Rammohan Shukla</i> | Kongresshalle |
| 16:50 – 18:50 | P | P264: Computational modelling of the pathway between dopamine receptors and Ca2+ channels in layer II stellate cells <i>Speakers: Chitaranjan Mahapatra, Andrew Davison</i> | Kongresshalle |
| 16:50 – 18:50 | P | P265: The structured flow on the brain's resting state manifold <i>Speakers: Jan Fousek, Giovanni Rabuffo, Kashyap Gudibanda, Viktor Jirsa, Spase Petkoski, Hiba Sheheitli</i> | Kongresshalle |

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| 16:50 – 18:50 | P | P267: BigNeuron: a resource to benchmark and predict performance of algorithms for automated tracing of neurons | Kongresshalle |
| | | <i>Speakers: Linus Manubens-Gil, Daniel N. Cox, Marcel Oberlaender, Paulo Aguiar, Giorgio A. Ascoli, Erhan Bas, Kristofer E. Bouchard, Alessandro Bria, Weidong Cai, Hanbo Chen, Li Cheng, Ann-Shyn Chiang, Hollis T. Cline, Eduardo Conde-Sousa, Chinh Dang, Pascal Fua, Todd Gillette, Paloma Gonzalez-Bellido, Lin Gu, Yike Guo, Michael Hawrylycz, Hai-yan He, Sean Hill, Daniel Maxim Iascone, Kei Ito, Gregory Jefferis, Shuiwang Ji, Jinhyun Kim, Christof Koch, Xiang Li, Yujie Li, Yufeng Liu, Xiaoxiao Liu, Tianming Liu, Siqi Liu, Rick Livesey, Erik Meijering, Leila Muresan, Sumit Nanda, Aljoscha Nern, Hanchuan Peng, Manuel Peter, Lei Qu, Miroslav Radojevic, Arvind Ramanathan, Jane Roskams, Badrinath Roysam, Zongcai Ruan, Edwin Rubel, Michel Simonneau, Amos Sironi, Jochen F. Staiger, Janine Stevens, Georgia Tourassi, Ching-Wei Wang, Yuan Wang, Jian Yang, Jianhua Yao, Bing Ye, Hongchuan Yu, Hongkui Zeng, Ting Zhao, Ning Zhong, Jie Zhou, Zhi Zhou</i> | |
| 16:50 – 18:50 | P | P268: An Information-Geometric Formulation of Pattern Separation and Evaluation of Existing Indices | Kongresshalle |
| | | <i>Speakers: Harvey Wang, Thomas Trappenberg, Abraham Nunes, Selena Singh</i> | |
| 16:50 – 18:50 | P | P269: Model-driven epileptic brain state classification in rat and human EEG | Kongresshalle |
| | | <i>Speakers: Jaroslav Hlinka, Jan Chvojka, Isa Margarethe Irene Dallmer-Zerbe, Nikola Jajcay, Radek Janča, Petr Jezdik, Premysl Jiruska, Pavel Krsek, Petr Marusic</i> | |
| 16:50 – 18:50 | P | P270: SparseProp: Efficient Event-Based Simulation and Training of Sparse Recurrent Spiking Neural Networks | Kongresshalle |
| | | <i>Speakers: Rainer Engelken</i> | |
| 16:50 – 18:50 | P | P271: Modulation by movement speed as a predictor of grid-code integrity | Kongresshalle |
| | | <i>Speakers: Marzieh Fereidouni, Hamed Nili, Martin Riemer, Vladislava Segen, Thomas Wolbers</i> | |
| 16:50 – 18:50 | P | P272: Unifying evoked responses and oscillatory neuronal dynamics | Kongresshalle |
| | | <i>Speakers: Alina Studenova, Vadim Nikulin, Denis A. Engemann, Carina Forster, Ulrich Hegerl, Tilman Hensch, Markus Loeffler, Nicole Mauche, Christian Sander, Arno Villringer</i> | |
| 20:10 – 00:00 | S | CNS Party | Moritzbastei |

B Break **R** Registration **W** Workshop

JULY 19 • WEDNESDAY

| | | | |
|---------------|---|--|---------------|
| 08:30 – 17:00 | R | REGISTRATION | Kongresshalle |
| 09:00 – 12:30 | W | W02: Evidence, value, and action: from cortex to behavior, and everything in between <i>Speakers: Jonathan Rubin, Fred Hamker, Jyotika Bahuguna, Robert Schmidt, Clay Holroyd, Elodie Fino, Christelle Baunez, Anke Braun, Elisabet Pares-Pujolras, Laurent Venance</i> | Lessing |
| 09:00 – 12:30 | W | W05: Multiscale modeling of cerebral cortex, from neural circuits to whole brain models <i>Speakers: Leonardo Dalla Porta, Giulia Moreni, Gorka Zamora-López, Mihai A. Petrovici, Pier Stanislaw Paolucci, Rajanikant Panda, Alain Destexhe, Galyna Malieieva, Johanna Senk</i> | Telemann |
| 09:00 – 12:30 | W | W06: Optimality, evolutionary trade-offs, Pareto theory and degeneracy in neuronal modelling <i>Speakers: Alexander Bird, Dylan Festa, Susanne Schreiber, Arnd Roth, Suhita Nadkarni, Marcel Oberländer</i> | Leibniz |
| 09:00 – 12:30 | W | W08: Neuroscience Gateway Enabling Neuroscience Software Dissemination and Large-Scale Neuronal Modeling and Data Processing on Supercomputers <i>Speakers: Amitava Majumdar, Robert McDougal, Pdraig Gleeson, Subhashini Sivagnanam, Kenneth Yoshimoto, Ted Carnevale, William W Lytton, Anirban Datta, Luca L. Bologna</i> | Goethe |
| 09:00 – 12:30 | W | W12: Multiscale spatial and temporal neural computation <i>Speakers: Andre Peterson, Brian Lundstrom, Christian Meisel, Anna Levina, Michael Wenzel, Tom Riehner, Audrey Sederberg</i> | Schiller |
| 09:00 – 17:50 | W | W04: Methods of Information Theory in Computational Neuroscience <i>Speakers: Marilyn Gatica, Pedro Mediano, Maria Pope, Andres Canales-Johnson, Sarah Marzen, Jürgen Jost, Andreas Schneider</i> | Mahler |
| 09:00 – 17:50 | W | W09: Graph modeling of macroscopic brain functional activity dynamics <i>Speakers: Thanos Manos, Mark Woolrich, Leonardo Novelli, Rezvan Farahibozorg, Giovanni Rabuffo, Alessandra Griffa, Patricio Orio, William W Lytton, Parul Verma, Ashish Raj</i> | Schumann |
| 09:00 – 17:50 | W | W10: Neuro-Inspired Topology and Machine Learning <i>Speakers: Robert McDougal, William W Lytton, Claudia Clopath, Maxim Bazhenov, Salvador Dura-Bernal, Celia Hacker, Erik Hermansen, Aitor Morales-Gregorio, Brittany Story, Nick Tolley, Manish Saggarr, Vasileios Christopoulos</i> | Bach |
| 09:00 – 17:50 | W | W11: Multiscale personalized brain network modelling: Towards clinical applications <i>Speakers: Jil Mona Meier, Petra Ritter, Patrik Bey, Christoph Hüttel, Leon Martin, Jeehye An, Leon Stefanovski, Valery Bragin, Anaïs Halimi, Taher Halgurd, Julie Courtiol</i> | Handel |
| 10:20 – 10:50 | B | COFFEE BREAK | Kongresshalle |
| 12:30 – 14:10 | B | LUNCH BREAK | Leipzig |
| 14:10 – 17:50 | W | W02: Evidence, value, and action: from cortex to behavior, and everything in between <i>Speakers: Jonathan Rubin, Fred Hamker, Jyotika Bahuguna, Robert Schmidt, Clay Holroyd, Elodie Fino, Christelle Baunez, Anke Braun, Elisabet Pares-Pujolras, Laurent Venance</i> | Lessing |
| 14:10 – 17:50 | W | W13: Low-dimensional manifolds of neural dynamics and their role in brain function <i>Speakers: Helmut Schmidt, Richard Gast, Ann Kennedy, Juan Alvaro Gallego</i> | Telemann |
| 14:20 – 15:50 | W | W06: Optimality, evolutionary trade-offs, Pareto theory and degeneracy in neuronal modelling <i>Speakers: Timothy O'Leary, Albert Gidon, Wiktor Mlynarski</i> | Leibniz |
| 15:20 – 15:50 | B | COFFEE BREAK | Kongresshalle |