

CNS*2026 Halifax

A Announcements
 B Break
 K Keynote
 R Reception/Party
 G Registration/Organization
 T Tutorial

JULY 11 • SATURDAY

8:15am – 7:00pm	G	Registration	Ballroom Salon
9:00am – 12:00pm	T	From Graphs to Foundation Models: Modern Approaches to Neural Population Analysis <i>Speakers: Moein Khajehnejad, Adeel Razi, Forough Habibollahi</i>	Room 502
9:00am – 12:00pm	T	Multiscale modeling with MOOSE and Jadesigner <i>Speakers: Bhanu Priya Somashekar, Gautham Dathatreyan, Upinder Singh Bhalla, Subhasis Ray</i>	Room 505
9:00am – 5:00pm	G	OCNS Board Meeting	Room 508
9:00am – 5:00pm	T	Building mechanistic biophysical models using NEURON and NetPyNE: from molecules to circuit dynamics to LFP/EEG measures <i>Speakers: Valery Bragin, Adam Newton, Salvador Dura-Bernal, Robert McDougal, Bill Lytton</i>	Room 501
PINNED 10:10am – 10:40am	B	Coffee break	Ballroom Salon
1:00pm – 5:00pm	T	From single-cell modeling to large-scale network dynamics with NEST Simulator <i>Speakers: Noah Ostendorf, Agnes Korcsak-Gorzo, Charl Linssen</i>	Room 505
1:00pm – 5:00pm	T	Let there be Neulite: A short introduction to a light-weight neuron simulator <i>Speakers: Tadashi Yamazaki</i>	Room 502
PINNED 3:00pm – 3:30pm	B	Coffee break	Ballroom Salon
5:00pm – 5:20pm	A	Welcome and Announcements	Ballroom B1
5:20pm – 6:20pm	K	Keynote 1: Bratislav Misic	Ballroom B1
6:20pm – 8:00pm	R	Welcome Reception	TBA

A Announcements **B** Break **K** Keynote **O** Oral Session Featured **L** Oral Session Talk
P Poster session **S** Posters **G** Registration/Organization

JULY 12 • SUNDAY

8:15am – 5:00pm	G	Registration	TBA
9:00am – 9:10am	A	Announcements	Ballroom B1
9:10am – 10:10am	K	Keynote 2: Mac Shine, "The Neurobiological Basis of Consciousness"	Ballroom B1
PINNED 10:10am – 10:40am	B	Coffee Break	Ballroom Salon
10:40am – 11:10am	O	FO1: The Synapse-Pairing Tradeoff: How Clustering, Bursts, and Dendritic Location Enable Robust Plasticity In-Vivo <i>Speakers: Dhuruva Priyan Gowri Mariyappan</i>	Ballroom B1
11:10am – 11:30am	L	O1: Biologically plausible credit assignment via neuronal frequency multiplexing <i>Speakers: Marcus K Benna</i>	Ballroom B1
11:30am – 11:50am	L	O2: A unifying account of rTMS and rTFUS neurostimulation effects based on calcium-dependent synaptic plasticity theory and an equivalent-energy principle <i>Speakers: John Griffiths</i>	Ballroom B1
11:50am – 12:10pm	L	O3: Compartmentalized learning through coupled electrochemical adaptation in cortical pyramidal neurons <i>Speakers: Renato Duarte</i>	Ballroom B1
12:10pm – 12:30pm	L	O4: Rewarding Control: Feedback-Phase-Dependent 2Hz Medial Frontal Transcranial Alternating Current Stimulation Shifts the Expected Value of Control <i>Speakers: Eric Rawls</i>	Ballroom B1
2:00pm – 2:30pm	O	FO2: Norepinephrine Restores Cortical Dynamics and Enables Machine Learning–Based Severity Mapping in a Multiscale Model of Parkinson’s Disease <i>Speakers: Jeeyune (Ji youn) Jung</i>	Ballroom B1
2:30pm – 2:50pm	L	O5: Impact of EAAT2 Dysfunction on AMPA/NMDA-Mediated Excitability in Neuronal Activity <i>Speakers: Hannah van Susteren</i>	Ballroom B1
2:50pm – 3:10pm	L	O6: Multiscale modeling of neural markers for adaptive deep brain stimulation in Parkinson’s Disease <i>Speakers: Alberto Mazzoni</i>	Ballroom B1
3:10pm – 3:30pm	L	O7: Decreased alpha/theta temporal ExSEnt of left prefrontal cortex: a robust biomarker of dementia <i>Speakers: Sara Kamali</i>	Ballroom B1
3:30pm – 3:50pm	L	O8: Frequency-dependent modulation of cortical traveling waves during general anesthesia <i>Speakers: Duan Li</i>	Ballroom B1
PINNED 3:50pm – 4:20pm	B	Coffee break	Ballroom Salon
PINNED 4:20pm – 6:20pm	P	Poster Session 1	Ballroom B2

4:20pm – 6:20pm	S	P001: Blind identification of sleep spindles through trispectral modulation analysis <i>Speakers: Christopher Kovach, Stephen Gliske, Leslie West, Junjie Liu, Michael Summers, Sukhbinder Kumar, Julie Leibig, Owen Cox, Eric Tsang, John Thompson, Clete Kushida, Aviva Abosch</i>	Ballroom B2
4:20pm – 6:20pm	S	P002: How Can Spiking Networks Remain Resilient Under Degeneration? <i>Speakers: Simachew Mengiste, Demian Battaglia, Arvind Kumar, Ad Aertsen</i>	Ballroom B2
4:20pm – 6:20pm	S	P003: How long we live? Insights into neural ageing using fractional harmonic oscillator <i>Speakers: Srishty Aggarwal</i>	Ballroom B2
4:20pm – 6:20pm	S	P004: Beyond Optimality: Neural Mechanisms of Heuristic Decision-Making <i>Speakers: Doris Voina, Christopher Pack, Shahab Bakhtiari</i>	Ballroom B2
4:20pm – 6:20pm	S	P005: A Brain-Wide Atlas of Intrinsic Neural Timescales in Mice <i>Speakers: Suheyl Gülenç, Kayla Stafford, Zhiyi Yang, Vikramaditya Bisani</i>	Ballroom B2
4:20pm – 6:20pm	S	P006: Disentangling Sensory Drivers of Spatial Codes with Recurrent Audiovisual Models in VR <i>Speakers: Sihao Liu, Caswell Barry, Jennifer Bizley</i>	Ballroom B2
4:20pm – 6:20pm	S	P007: Spatial attention shapes the pupillary light response <i>Speakers: Jaspreet Dodd, Jonathan Coutinho, Douglas Munoz, Gunnar Blohm</i>	Ballroom B2
4:20pm – 6:20pm	S	P008: Movement representations for classification and perception: posture dominates over dynamics <i>Speakers: Gunnar Blohm, Arefeh Farahmandi</i>	Ballroom B2
4:20pm – 6:20pm	S	P009: Optimal Self-Organization in Mean-Field Multi-Agent Neuronal Networks <i>Speakers: Gunnar Blohm, Connor Braun, Serdar Yüksel</i>	Ballroom B2
4:20pm – 6:20pm	S	P010: Computing Motor Error with Inhibition: A Minimal Excitatory-Inhibitory Circuit Motif <i>Speakers: Gunnar Blohm, Emils Matiss, Dominic Standage</i>	Ballroom B2
4:20pm – 6:20pm	S	P011: Dendrites Learn to Detect Input Sequences Through Local Plasticity <i>Speakers: Kota Suzuki, Kyros Mama, Kwabena Boahen</i>	Ballroom B2
4:20pm – 6:20pm	S	P012: Integrating Neuroimaging and Omics to Characterize Parkinson's Disease Progression <i>Speakers: Beñat Lazkano Rodríguez, Begoña Garate Andikoetxea, Giulio Bonifazi</i>	Ballroom B2
4:20pm – 6:20pm	S	P013: Relationships Between Connectivity and Longitudinal Memory Decline Using Network Analysis and Partial Least Squares <i>Speakers: Dominique Hughes, Sharon Crook, B. Blair Braden</i>	Ballroom B2
4:20pm – 6:20pm	S	P014: Modeling box jellyfish obstacle avoidance behavior with evolutionary optimization and small feedforward neural networks <i>Speakers: Wilhelm Braun, Ozan Can Okay, Jan Bielecki</i>	Ballroom B2
4:20pm – 6:20pm	S	P015: A biologically grounded spiking model of feedback-gated prediction broadcasting in cortical Layer 5 <i>Speakers: Elnaz Nemati, Catherine Davey, Hamish Meffin, Anthony Burkitt</i>	Ballroom B2
4:20pm – 6:20pm	S	P016: Vestibular predictions during maternal gait help shape development of neural of timekeeping <i>Speakers: Davey Gregg, Jonathan Cannon</i>	Ballroom B2
4:20pm – 6:20pm	S	P017: Adapting the reconstruction of the cerebellar cortex to the shape of the brain <i>Speakers: Dimitri Rodarie, Egidio D'Angelo, Claudia Casellato</i>	Ballroom B2
4:20pm – 6:20pm	S	P018: Digital Twins in stroke and spreading depression <i>Speakers: Adam Newton, Robert McDougal, William W Lytton, Jung Lee, Jeeyune (Ji youn) Jung, Gunnar Cedersund</i>	Ballroom B2

4:20pm – 6:20pm	S	P019: A Unified Deep Oscillatory Network Model of the Hippocampal Sharp Wave Ripples <i>Speakers: Kandepu Sindhuramrutha, Madhuvanthi Muliya, V Srinivasa Chakravarthy</i>	Ballroom B2
4:20pm – 6:20pm	S	P020: Prefrontal and Parietal Local Field Potentials Employ Different Visuospatial Codes for Reach: A Complex-Valued Network Classification Approach <i>Speakers: Ashkan Karimi, Veronica Nacher-Carda, Jennifer Lin, Brando Sheldrick, Hongying Wang, Saihong Sun, Xiaogang Yan, Julio Martinez-Trujillo**, J. Douglas Crawford</i>	Ballroom B2
4:20pm – 6:20pm	S	P021: Local dendritic voltage provides a reliable read-out of global synaptic activity <i>Speakers: Hermann Cuntz, Alexander Bird, Daria Hennrichs, Martin Mittag, Peter Jedlicka</i>	Ballroom B2
4:20pm – 6:20pm	S	P022: Electrophysiological and computational analysis of burst generation in Drosophila class III cold nociceptors <i>Speakers: Akira Sakurai, Sergiy Korogod, Daniel Cox, Gennady Cymbalyuk</i>	Ballroom B2
4:20pm – 6:20pm	S	P023: Low-Dimensional Projections of Neural Population Activity in M1, PMd, and PMv Hand Representations Demonstrate Differences in Effector Dependence <i>Speakers: Ryan Vogt, Soraya Rahimi, Ian Moreau-Debord, Ali Falaki, Stephan Quessy, Guillaume Lajoie, Numa Dancause</i>	Ballroom B2
4:20pm – 6:20pm	S	P024: Shared-input structure determines functional connectivity in neural oscillator networks <i>Speakers: Arthur Légaré, Nicolas Doyon, Patrick Desrosiers</i>	Ballroom B2
4:20pm – 6:20pm	S	P025: A Conductance-Based Whole-Brain Modeling Framework for Isolating Pharmacological Effects on Excitation-Inhibition Dynamics <i>Speakers: Milad Soltanzadeh, Zheng Wang, Gabrielle Allohverdi, John Griffiths, André Schmidt, Franz X. Vollenweider, Andreea Diaconescu</i>	Ballroom B2
4:20pm – 6:20pm	S	P026: Compartment-specific calcium dynamics drive local, co-dependent excitatory and inhibitory plasticity in cortical networks <i>Speakers: Beatriz Barros, Renato Duarte</i>	Ballroom B2
4:20pm – 6:20pm	S	P027: Adaptive Homeostasis: Coupling Synaptic Plasticity, Homeostatic Scaling, and Intrinsic Plasticity <i>Speakers: Renato Duarte, Raquel Figueiredo</i>	Ballroom B2
4:20pm – 6:20pm	S	P028: Reliability of Eigenspectra Decay and Variance Scaling in 3T and 7T fMRI <i>Speakers: Vanessa Morgan, Oscar Miranda-Domínguez, Julien “Bene” Ramirez, Richard Betzel, Audrey Sederberg, Damien Fair</i>	Ballroom B2
4:20pm – 6:20pm	S	P029: Modeling Emotional Contagion in Rats Using Dynamical State-Space Models <i>Speakers: Tousif Jamal, Elif Ayten, Frédéric Michon Linde, Christian Keysers, Valeria Gazolla</i>	Ballroom B2
4:20pm – 6:20pm	S	P030: Scalable Modular Architectures for Naturalistic Behavior and Cognitive Mapping in Biological and Artificial Intelligence <i>Speakers: Ekaterina Gribkova, Rhanor Gillette</i>	Ballroom B2
4:20pm – 6:20pm	S	P031: Pathway-Specific Temporal Structure of Behavior-Predictive Modeling from Dopaminergic Striatal Activity <i>Speakers: Sergey Grigorovich, Maryia Bairachnaya, Bruno Giros</i>	Ballroom B2
4:20pm – 6:20pm	S	P032: AnalySim data and project sharing site: admin panel, notebook and CSV browser expansion <i>Speakers: Uday Biswas, Anca Doloc-Mihu, Cengiz Gunay</i>	Ballroom B2
4:20pm – 6:20pm	S	P033: Greater segregation, not integration, accompanies increasing working memory load <i>Speakers: Jennika Veinot, Cameron Calder, Javeria Hashmi</i>	Ballroom B2
4:20pm – 6:20pm	S	P034: Rising threat, merging networks: dynamic heat pain lowers segregation and turns S2, a core pain region, into an integrative hub <i>Speakers: Javeria Hashmi, Yatin Pratap Singh, Adam Sunavsky</i>	Ballroom B2

4:20pm – 6:20pm	S	P035: Chronic Pain Uncouples Functional Brain Network Segregation From Cognitive Performance in Aging <i>Speakers: Cameron Calder, Javeria Hashmi</i>	Ballroom B2
4:20pm – 6:20pm	S	P036: Inferring microcircuit aging from subject EEG and linking to cognitive decline <i>Speakers: Etay Hay, Alexandre Guet-McCreight, Etienne Sibille</i>	Ballroom B2
4:20pm – 6:20pm	S	P037: The effects of reduced somatostatin interneuron inhibition in depression on multilayered human cortical microcircuit activity. <i>Speakers: Etay Hay, Heng Kang Yao</i>	Ballroom B2
4:20pm – 6:20pm	S	P038: Cerebellar Isolation with Multi-Modality MRI Images Using Deep Learning <i>Speakers: Yao Li, Juan Fernandez Ruiz, Jorn Diedrichsen, Carlos Hernandez-Castillo</i>	Ballroom B2
4:20pm – 6:20pm	S	P039: The Self-Organization of Serotonergic Axons at the Surface of a Vertebrate Brain: A Myopic Self-Avoiding FBM Model <i>Speakers: Dahyana Arroyo, Rashad Bakhshizada, Ralf Metzler, Thomas Vojta, Skirmantas Janusonis</i>	Ballroom B2
4:20pm – 6:20pm	S	P040: Dendritic calcium dynamics shape functionally relevant human E-/MEG ~20Hz beta events: a biophysical modeling study <i>Speakers: Katharina Duecker, Darcy A. Waller, Jeremy Murphy, Sarah Pugliese, Christopher I. Moore, Stephanie Jones</i>	Ballroom B2
4:20pm – 6:20pm	S	P041: Predicting natural video motion from spiking activity across the mouse visual pathway <i>Speakers: Peter Beech, Marc de Kamps</i>	Ballroom B2
4:20pm – 6:20pm	S	P042: Neural Heterogeneity Controls Neural Network Development <i>Speakers: Helmut Schmidt, Richard Gast, Ann Kennedy</i>	Ballroom B2
4:20pm – 6:20pm	S	P043: Modeling Network Effects of Transcranial Magnetic Stimulation on Obsessive Compulsive Disorder <i>Speakers: Helmut Schmidt, Jaroslav Hlinka, Ying Jing, Shih-Cheng Chien, Nina Biačková, Ana Čechová, Barbora Jelínková, David Greguš, Thomas R. Knösche, Monika Klírová</i>	Ballroom B2
4:20pm – 6:20pm	S	P044: Discovering the dynamics of evoked responses to near-threshold tactile stimuli: A layer-specific neural mass model of the somatosensory microcircuit <i>Speakers: Shih-Cheng Chien, Thomas R. Knösche, Rosa Großmann, Sara Mecozzi, Arno Villringer</i>	Ballroom B2
4:20pm – 6:20pm	S	P045: A biophysical model of coil-orientation dependent Transcranial Magnetic Stimulation (TMS) evoked I-waves in the motor cortex <i>Speakers: Shih-Cheng Chien, Thomas R. Knösche, Erik Müller, Konstantin Weise, Federico Ranieri, Vincenzo Di Lazzaro</i>	Ballroom B2
4:20pm – 6:20pm	S	P046: Phase-Dependent Deep Brain Stimulation to Suppress Pathological Neural Oscillations in Parkinson's Disease <i>Speakers: Thomas R. Knösche, Prerana Keerthi, Luka Milosevic</i>	Ballroom B2
4:20pm – 6:20pm	S	P047: Feature Extraction of Neuronal Morphology with a Variational Auto-Encoder <i>Speakers: Ibuki Sugimura, Moe Matsuda, Jun Nishii, Taira Kobayashi</i>	Ballroom B2
4:20pm – 6:20pm	S	P048: Noise-Driven Spiking Dynamics and Synchronization Transitions in an Ensemble of Neuromorphic Oscillators <i>Speakers: Hermann Kohlstedt, Wilhelm Braun, Sophia Bauer, Maximiliane Noll, Luis Berndt, Robert Rieger, Petro Feketa</i>	Ballroom B2

A Announcements **B** Break **K** Keynote **O** Oral Session Featured **L** Oral Session Talk
P Poster session **S** Posters **R** Reception/Party **G** Registration/Organization

JULY 13 • MONDAY

8:15am – 5:00pm	G	Registration	TBA
9:00am – 9:10am	A	Announcements	Ballroom B1
9:10am – 10:10am	K	Keynote 3: Blake Richards, "Exponentiated gradients support effective learning in biologically relevant scenarios"	Ballroom B1
PINNED 10:10am – 10:40am	B	Coffee break	Ballroom Salon
10:40am – 11:10am	O	FO3: Gene Gradients Reveal Directed Structural Connectivity Across Species <i>Speakers: Benjamin Snow Sipes</i>	Ballroom B1
11:10am – 11:30am	L	O9: Low-Dimensional Communication Subspaces Reveal Distributed Information Across Neural Areas <i>Speakers: Farzad Karimi</i>	Ballroom B1
11:30am – 11:50am	L	O10: A mathematical language for large-scale spike recordings from hundreds to thousands of neurons <i>Speakers: Alexandra Busch</i>	Ballroom B1
11:50am – 12:10pm	L	O11: SEM to Simulation: Bringing Ultrastructural Detail to Multiscale Modeling <i>Speakers: Cecilia Romaro</i>	Ballroom B1
12:10pm – 12:30pm	L	O12: A new platform technology to explore and leverage the computational properties of biological neural cultures <i>Speakers: Brett J. Kagan</i>	Ballroom B1
12:30pm – 2:00pm	G	OCNS Board Meeting	TBA
2:00pm – 2:30pm	O	FO4: Selective routing of spatial information in dentate granule cells emerges through disparate combinations of synaptic and intrinsic plasticity <i>Speakers: Sanjna Kumari</i>	Ballroom B1
2:30pm – 2:50pm	L	O13: A Developmental Ring Attractor Model for the Head Direction System <i>Speakers: Shujia Liu</i>	Ballroom B1
2:50pm – 3:10pm	L	O14: How synchronization, excitability, and variability shape CPG rhythmic bursting sequences across different time scales <i>Speakers: Pablo Sanchez-Martin</i>	Ballroom B1
3:10pm – 3:30pm	L	O15: Exact mathematical description of computation with transient spatiotemporal dynamics in recurrent neural networks <i>Speakers: Roberto Budzinski</i>	Ballroom B1
3:30pm – 3:50pm	L	O16: The role of cell types in critical neural activity <i>Speakers: Adrián Ponce-Alvarez</i>	Ballroom B1
PINNED 3:50pm – 4:20pm	B	Coffee break	Ballroom Salon
PINNED 4:20pm – 6:20pm	P	Poster Session 2	Ballroom B2

4:20pm – 6:20pm	S	P049: Extracellular dipole and quadrupole fields from axonal branching patterns <i>Speakers: Paula Kuokkanen</i>	Ballroom B2
4:20pm – 6:20pm	S	P050: Fano-like information filtering profiles in coupled neuronal models. <i>Speakers: Franquelin Lambert</i>	Ballroom B2
4:20pm – 6:20pm	S	P051: Stimulation Induced Effects on the Collective Dynamics of a Recurrently-Connected Excitatory-Inhibitory Network <i>Speakers: Thomas R. Knösche, Spandan Sengupta, Shervin Safavi, Milad Lankarany</i>	Ballroom B2
4:20pm – 6:20pm	S	P052: Recurrent Inhibition Drives Frequency-Selective Deep Brain Stimulation Efficacy via Bistability and Hopf Bifurcation in a Continuous Attractor Network <i>Speakers: Milad Lankarany, Ma Xiangyu</i>	Ballroom B2
4:20pm – 6:20pm	S	P053: Decoding decisions from neuronal activity in different animals with canonical correlation analysis <i>Speakers: William Barnett, Alexey Kuznetsov, Christopher Lapish</i>	Ballroom B2
4:20pm – 6:20pm	S	P054: Single-cell adaptation makes heterogeneity a dynamic feature of neural networks <i>Speakers: Jeremie Lefebvre, Daniel Trotter, Taufik Valiante</i>	Ballroom B2
4:20pm – 6:20pm	S	P055: Thalamocortical myelination controls cortical states <i>Speakers: Jeremie Lefebvre, Thomas Nguyen</i>	Ballroom B2
4:20pm – 6:20pm	S	P056: Hippocampus-Inspired Artificial Neural Network Enables Robust Classification under Sparsity: Structured versus Brute-Force Robustness <i>Speakers: Sang-Yoon Kim, Woochang Lim</i>	Ballroom B2
4:20pm – 6:20pm	S	P057: Input-side Competition Predicts Action Selection and Switching in The Basal Ganglia <i>Speakers: Sang-Yoon Kim, Woochang Lim</i>	Ballroom B2
4:20pm – 6:20pm	S	P058: Direct Quantification of Stability for Linear Dynamical Systems on Networks <i>Speakers: Jieru Liao, Joseph Lizier</i>	Ballroom B2
4:20pm – 6:20pm	S	P059: Whole-brain effective connectivity from residual-based ridge regression in resting-state fMRI <i>Speakers: Joseph Lizier, Wenqi Wang, Riley Jones, Eli Muller</i>	Ballroom B2
4:20pm – 6:20pm	S	P060: Biological Reservoir Computing in Modular Human iPSC-Derived Neuronal Networks <i>Speakers: Forough Habibollahi, Kwaku Dad Abu-Bonsrah, Azin Azadi, Candice Desouza, Hui Wen Chan, Finn Doensen, Brad Watmuff, Brett J. Kagan, Alon Loeffler</i>	Ballroom B2
4:20pm – 6:20pm	S	P061: Learning Conduction Delay Distributions from Neural Activity to Study Stability in Delayed Nonlinear Neural Networks <i>Speakers: Jeremie Lefebvre, Grégoire Berger-Malette, André Longtin</i>	Ballroom B2
4:20pm – 6:20pm	S	P062: Mutual information of time sequences in working memory is maximized by parametric heterogeneity in response adaptation and threshold <i>Speakers: André Longtin, Raphael Lafond-Mercier, Leonard Maler</i>	Ballroom B2
4:20pm – 6:20pm	S	P063: Shared dynamics between active sensing movements and rate-based sensory sampling in electric fish <i>Speakers: André Longtin, Alexandre Melanson, Kiana Maillet</i>	Ballroom B2
4:20pm – 6:20pm	S	P064: Complementary roles of neuronal and synaptic adaptation in regulating network stability <i>Speakers: Brian Lundstrom, Thomas Richner, Angel Canal-Alonso, Martynas Dervinis</i>	Ballroom B2
4:20pm – 6:20pm	S	P065: Characterizing Epileptic Brain Dynamics Through Fractional-Order Modelling <i>Speakers: Brian Lundstrom, Thomas Richner, Martynas Dervinis, Ángel Canal-Alonso</i>	Ballroom B2

4:20pm – 6:20pm	S	P066: Variability and Degeneracy In Simulations of Primary Motor Cortex Pyramidal Tract Neurons <i>Speakers: William W Lytton, Jeeyune (Ji youn) Jung, Adam J. H. Newton, Don Doherty, Liqiang Chen, Hong-Yuan Chu</i>	Ballroom B2
4:20pm – 6:20pm	S	P067: Modeling spreading depolarization in neocortical microcircuits <i>Speakers: Robert McDougal, William W Lytton, Adam J. H. Newton, Craig Kelley, Amy Guo, Joy Wang, Marcello DiStasio</i>	Ballroom B2
4:20pm – 6:20pm	S	P068: A novel method to characterize spatiotemporal propagation <i>Speakers: Thomas Kreuz, Elena Montagni, Manuel Ambrosone, Anna Letizia Allegra Mascaro</i>	Ballroom B2
4:20pm – 6:20pm	S	P069: EFFECT OF Ca²⁺ BUFFERS WITH MULTIPLE BINDING SITES ON SHORT-TERM SYNAPTIC PLASTICITY <i>Speakers: Andrew White, Victor Matveev</i>	Ballroom B2
4:20pm – 6:20pm	S	P070: Modeling of Cross-Frequency Brain Dynamics in Mice Cortical Region <i>Speakers: Maria de Neves de Fonseca, Federico Stella, Manuel Mazo Jr.</i>	Ballroom B2
4:20pm – 6:20pm	S	P071: Balanced E–I gain sets spike predictability from synaptic history <i>Speakers: Robert McDougal, Huihong Li, Jinnie Sun</i>	Ballroom B2
4:20pm – 6:20pm	S	P072: Event-based machine-learned reduction of biophysically detailed neuron models <i>Speakers: Robert McDougal, Jiaxing Li</i>	Ballroom B2
4:20pm – 6:20pm	S	P073: Evaluating parameter space stiffness of maximum entropy models and departure from criticality <i>Speakers: Alexandre Melanson, Paul-Henry Glinel</i>	Ballroom B2
4:20pm – 6:20pm	S	P074: Dynamic Functional Connectivity Resolves Brain Integration-Segregation Trade-off Under Costly Links <i>Speakers: Simachew Mengiste, Demian Battaglia</i>	Ballroom B2
4:20pm – 6:20pm	S	P075: Simulating bilingual naming in laterally-connected self-organizing maps <i>Speakers: Divya Prabhakaran, Uli Grasemann, Swathi Kiran, Risto Mikkulainen</i>	Ballroom B2
4:20pm – 6:20pm	S	P076: A Recurrent Circuit for Two Streams of Evidence Accumulation As a Decision-Making Model <i>Speakers: Amir Dori, Mauro Monslave-Mercado, Gal Vishne, Kenneth Miller</i>	Ballroom B2
4:20pm – 6:20pm	S	P077: Homophily-informed generative models of brain maps <i>Speakers: Vincent Bazinet, Zhen-Qi Liu, Filip Milisav, Andrea Luppi, Bratislav Misic</i>	Ballroom B2
4:20pm – 6:20pm	S	P078: Identifying Neural Markers of Chronic Pain in Children with Cerebral Palsy Using Electroencephalography and Machine Learning <i>Speakers: Tom Chau, Ariel Motsenyat</i>	Ballroom B2
4:20pm – 6:20pm	S	P079: Competitive dynamics in a biophysical model of rat somatosensory cortex <i>Speakers: Nghi Nguyen, Dhuruva Priyan Gowri Mariyappan, James Isbister, András Ecker, Giuseppe Chindemi, Michael Reimann, Eilif Muller</i>	Ballroom B2
4:20pm – 6:20pm	S	P080: The Synapse-Pairing Tradeoff: How Clustering, Bursts, and Dendritic Location Enable Robust Plasticity In-Vivo <i>Speakers: Dhuruva Priyan Gowri Mariyappan, Eilif Muller</i>	Ballroom B2
4:20pm – 6:20pm	S	P081: Estimating spiking activity of cerebellar projections to the substantia nigra dopaminergic neurons during a Pavlovian task <i>Speakers: Isidro Gauto, Germán Heim, Junichi Yoshida, Kamran Khodakhah, Horacio Rotstein, Farzan Nadim</i>	Ballroom B2

4:20pm – 6:20pm	S	P082: Balancing stability and flexibility: a meta-learning algorithm for behavioral adaptation in mice <i>Speakers: Coline Chevallier, Emma Debos, Juan Cobos Alvarez, Emma Marillat, Julie Perroy, Jérémie Naudé</i>	Ballroom B2
4:20pm – 6:20pm	S	P083: Biophysical model of auditory thalamocortical circuit reveals GABAB-dependent control of N1 deficits in Schizophrenia <i>Speakers: Salvador Dura-Bernal, Ethan Irby, Nikita Novikov, Scott McElroy, Andrea Balla, Charles Schroeder, Monica N O'Connell, Daniel Javitt, Samuel A. Neymotin</i>	Ballroom B2
4:20pm – 6:20pm	S	P084: Mapping excitation-inhibition balance in schizophrenia with white-matter-microstructure informed modeling <i>Speakers: Xiaojun Zhou, Kailin Zhu, Georg Reich, Trang Anh Estelle Nghiem</i>	Ballroom B2
4:20pm – 6:20pm	S	P085: Effect of visual distortion on the perception of straight lines and reaching trajectories <i>Speakers: Moe Matsuda, Jun Nishii, Taira Kobayashi</i>	Ballroom B2
4:20pm – 6:20pm	S	P086: Examining mnemonic discrimination performance in a hippocampus model using the mnemonic similarity task <i>Speakers: Selenia Singh, Abraham Nunes, Christian Guianrd, Thomas Trappenberg</i>	Ballroom B2
4:20pm – 6:20pm	S	P087: High-Order Interactions Predict the Dimensionality of Recurrent Hidden Dynamics Across Cognitive Tasks <i>Speakers: Andrés Montenegro, Ignacio Ampuero, Javier Díaz, Patricio Orio</i>	Ballroom B2
4:20pm – 6:20pm	S	P088: From Pixels to Percepts: Understanding Texture Discrimination in the Mouse Visual Cortex <i>Speakers: James Gardner, Jimin Park, Shiella Caldejon, Carter Peene, Ahad Bawany, Avalon Amaya, Warren Han, Tye Johnson, Jaimie Kenney, Henry Loeffler, Alex Stearns, Jackie Swapp, Madeline Tom, Julie Weber, Ali Williford, Ahrial Young, Tim Murphy, Peter Groblewski, Jerome Lecoq, Federico Bolaños, Javier Orlandi</i>	Ballroom B2
4:20pm – 6:20pm	S	P089: Biologically plausible Dopamine-Modulated STDP Model of Pavlovian Learning in Spiking Neural Networks <i>Speakers: Kyoung Jin Lee, Woojun Park</i>	Ballroom B2
4:20pm – 6:20pm	S	P090: Modeling and Analytical Characterization of Neuronal Networks Constructed from Reservoir Computing Based Model <i>Speakers: Ilya Auslender, Lorenzo Pavesi</i>	Ballroom B2
4:20pm – 6:20pm	S	P091: The Drosophila connectome reveals axo-axonic synapses on descending neurons <i>Speakers: Cesar Ceballos, Juan Lopez, Ty Roachford, Daniel Sanchez, Sabrina Jara, Kelli Robbins, Casey Spencer, Rodney Murphey, Rodrigo De Oliveira Pena</i>	Ballroom B2
4:20pm – 6:20pm	S	P092: A Proposed Etiological, Pathophysiological, and Rehabilitative Framework for Focal Task-Specific Dystonia: A Theoretical-Empirical Approach <i>Speakers: Rodrigo De Oliveira Pena, Norman Lu</i>	Ballroom B2
4:20pm – 6:20pm	S	P093: Stabilizing Fractional Dynamical Networks Effectively Suppresses Epileptic Seizures <i>Speakers: Yaoyue Wang, Arian Ashourvan, Guilherme Ramos, Emily Pereira</i>	Ballroom B2
4:20pm – 6:20pm	S	P094: Neuron–Astrocyte Coupling Regulates Ion Homeostasis and Neuronal Excitability in a Multi-Compartment Model <i>Speakers: Maurizio De Pitta, Michelangelo Volpi, Zhenyang Sun, Antoine Fauroux</i>	Ballroom B2
4:20pm – 6:20pm	S	P095: Universal rules for growing artificial astrocytes at electron microscopy resolution <i>Speakers: Hermann Cuntz, Maurizio De Pitta, Alexander Bird, Peter Jedlicka, Michelangelo Volpi, Zhenyang Sun, Antoine Fauroux, Alexandra Rother, Joergen Kornfeld</i>	Ballroom B2
7:45pm – 9:45pm	R	Banquet Dinner	Waterfront Warehouse (1549 Lower Water Street)

B Break
K Keynote
P Poster session
S Posters
R Reception/Party
G Registration/Organization

W Workshop

JULY 14 • TUESDAY

8:15am – 5:00pm	G	Registration	Ballroom Salon
9:00am – 12:30pm	W	Building clinically impactful models in computational psychiatry: A worked example using induced pluripotent stem-cell derived neuronal data <i>Speakers: Selena Singh, Abraham Nunes</i>	Room 506
9:00am – 12:30pm	W	Constraining large-scale models of brain dynamics with local biological properties: Methods and applications <i>Speakers: James Pang</i>	Room 504
9:00am – 12:30pm	W	Controlling Neural Network Stability <i>Speakers: Brian Lundstrom</i>	Room 507
9:00am – 12:30pm	W	Mapping extracellular waveforms produced by the three neuronal compartments <i>Speakers: Paula Kuokkanen, Jérémie Sibille</i>	Room 505
9:00am – 12:30pm	W	Modeling Ion Dynamics in the Brain: From Cells to Networks and Global (Dys)-Functional States <i>Speakers: Helmut Schmidt, Jaroslav Hlinka, Guillaume Girier, Isa Dallmer-Zerbe</i>	Room 502
9:00am – 12:30pm	W	Neuronal heterogeneity's role in network dynamics and computation <i>Speakers: Scott Rich, Richard Gast</i>	Room 501
9:00am – 12:30pm	W	Social Neuro-AI <i>Speakers: Guillaume Dumas, Trang-Anh Nghiem, Anne-Marie Wolff, Xiaojun Zhou</i>	Room 602
9:00am – 12:30pm	W	Evolution, Computation and the Origins of Nervous Systems: from Animal Models to Neuromorphic Engineering <i>Speakers: Hermann Kohlstedt, Jan Steinkuehler, Wilhelm Braun</i>	Room 603
9:00am – 5:30pm	W	Workshop on Methods of Information Theory in Computational Neuroscience <i>Speakers: Joseph T. Lizier, Marilyn Gatica</i>	Room 604
PINNED 10:30am – 11:00am	B	Coffee Break	
2:10pm – 3:20pm	K	Keynote 4: Stephanie Jones (Brown University), "Uncovering the Mechanism and Meaning of EEG/MEG Measured Brain Dynamics with the Human Neocortical Neurosolver Software"	Ballroom B1
3:20pm – 3:30pm	G	Conference Photo	TBA
PINNED 3:30pm – 4:00pm	B	Coffee break	Ballroom Salon
4:00pm – 5:00pm	G	Member's meeting	Ballroom B1
PINNED 5:00pm – 7:00pm	P	Poster Session 3	Ballroom B2
5:00pm – 7:00pm	S	P096: Toward Auditory-Like Sparse Representations: Adaptive Central Frequencies Locally Competitive Algorithm for Efficient Neuromorphic Speech Recognition <i>Speakers: Soufiyan Bahadi, Jean ROUAT, Éric Plourde</i>	Ballroom B2

5:00pm – 7:00pm	S	P097: How Axon Refractory Dynamics and Ionic Excitability Shape Peripheral Nerve Stimulation Responses <i>Speakers: Jitender Kumar, Steven Prescott</i>	Ballroom B2
5:00pm – 7:00pm	S	P098: CompNeuroVis: Connecting Existing Computational Neuroscience Workflows to Interactive Applications <i>Speakers: Orren Ravid</i>	Ballroom B2
5:00pm – 7:00pm	S	P099: Hierarchical Multi-Timescale learning in a mushroom body network model <i>Speakers: Subhasis Ray, Gautham Dathatreyan</i>	Ballroom B2
5:00pm – 7:00pm	S	P100: JARDESIGNER: Installation-free in-browser modeling of multiscale models with signaling and conductances in multicompartment neurons. <i>Speakers: Subhasis Ray, Upinder Singh Bhalla, Ashish Anshuman, Pragathi Raghava, Banhita Maitra, Jayesh Poojari</i>	Ballroom B2
5:00pm – 7:00pm	S	P101: BrainSymphony Reveals Psilocybin-Induced Network Reorganization <i>Speakers: Forough Habibollahi, Moein Khajehnejad, Devon Stoliker, Adeel Razi</i>	Ballroom B2
5:00pm – 7:00pm	S	P102: Long-timescale Plasticity Mediated by ER-Dependent Synaptic Stabilization <i>Speakers: Scott Rich, Christopher Engborg</i>	Ballroom B2
5:00pm – 7:00pm	S	P103: Pathological cortical oscillations disrupted by the cholinergic response to vagus nerve stimulation <i>Speakers: Scott Rich, Michael Schneider</i>	Ballroom B2
5:00pm – 7:00pm	S	P104: Characterization of nontrivial voltage noise in electrosensory pyramidal neurons <i>Speakers: Alexandre Melanson, Samuel Fontaine, J��r��my Guy Belliveau, Gr��goire Richard</i>	Ballroom B2
5:00pm – 7:00pm	S	P105: Gamma Oscillations in Conductance-Based QIF Networks: A Three-Stage Progression and Its Limits <i>Speakers: Kingsley Zheng, John Rinzel</i>	Ballroom B2
5:00pm – 7:00pm	S	P106: Controlling the Speed–Accuracy Trade-Off in Brain–Computer Interfaces <i>Speakers: Javier Jim��nez, Francisco B Rodr��guez</i>	Ballroom B2
5:00pm – 7:00pm	S	P107: Resonance-Driven Phase Locking and Temporal Coding in CA1 Pyramidal Neurons <i>Speakers: Horacio Rotstein, Joshua Schreibeis</i>	Ballroom B2
5:00pm – 7:00pm	S	P108: Computational Phenotyping of Neurotrauma Using High-Throughput Actigraphy-Derived Sleep Signatures <i>Speakers: Andrea Lugo, Nadia Gosselin, Catherine Duclos, H��l��ne Blais, Rachel K Rowe</i>	Ballroom B2
5:00pm – 7:00pm	S	P109: Imperfectly synchronous dynamics of gamma rhythms and its response to network inputs <i>Speakers: Quynh-Anh Nguyen, Sunday Gbodogbe, Leonid Rubchinsky</i>	Ballroom B2
5:00pm – 7:00pm	S	P110: The thalamocortical spiking model demonstrating the kinetics of sleep spindle suppression upon noradrenergic neuromodulation <i>Speakers: Wojciech Goch, Oxana Eschenko, Pavel Sanda</i>	Ballroom B2
5:00pm – 7:00pm	S	P111: VIP-Mediated Attentional Modulation of Persistent Activity in a Cortical Microcircuit Model <i>Speakers: Helmut Schmidt, Jaroslav Hlinka, Shih-Cheng Chien, Thomas R. Kn��sche</i>	Ballroom B2
5:00pm – 7:00pm	S	P112: Biologically Realistic Models of Synaptic Release at Human Cortical Synapses <i>Speakers: Richa Agarwal, Jules Lallouette, Iain Hepburn, Erik De Schutter</i>	Ballroom B2
5:00pm – 7:00pm	S	P113: Model of Mossy Fiber Bouton (MFB) in hippocampus- the detonator synapse with vesicle release in realistic EM morphology <i>Speakers: Jules Lallouette, Iain Hepburn, Erik De Schutter, Yinyun Li, Weiliang Chen</i>	Ballroom B2

5:00pm – 7:00pm	S	P114: The effect of weak electric deep brain stimulation fields on the synchronization of multi-compartment neuron models <i>Speakers: Maud Bosman, Bettina Schwab</i>	Ballroom B2
5:00pm – 7:00pm	S	P115: Digital Twins Enable Early Alzheimer's Disease Diagnosis <i>Speakers: Alberto Mazzoni, Lorenzo Gaetano Amato, Michael Lassi, Pierpaolo Sorrentino</i>	Ballroom B2
5:00pm – 7:00pm	S	P116: Vasoactive intestinal polypeptide-expressing neurons (VIPs) as a mechanism for flexible cognitive control <i>Speakers: Gunnar Blohm, Dominic Standage, Kaitlyn Hoesterey</i>	Ballroom B2
5:00pm – 7:00pm	S	P117: Neurite heterogeneity controls signal propagation in a model of the ctenophore syncytial nerve net <i>Speakers: Jan Steinkuehler, Wilhelm Braun</i>	Ballroom B2
5:00pm – 7:00pm	S	P118: Development and Validation of a Multi-scale Model of Cerebellar Transcranial Magnetic Stimulation <i>Speakers: Eleonora Bernasconi, Nada Yousif, Volker Steuber</i>	Ballroom B2
5:00pm – 7:00pm	S	P119: Low-Effort Attention as Free-Energy Optimization via Cingulo–Autonomic Control <i>Speakers: Rongxiang Tang, Yi-Yuan Tang</i>	Ballroom B2
5:00pm – 7:00pm	S	P120: Adaptive Multisensory Support for Low-Effort Attention in Embodied Agents <i>Speakers: Yi-Yuan Tang, Tamar Kokaia</i>	Ballroom B2
5:00pm – 7:00pm	S	P121: Optogenetic WiChR based seizure control in a potassium driven epilepsy model <i>Speakers: Thomas Tarnaud, Emmeric Tanghe, Laila Weyn, Wout Joseph, Robrecht Raedt</i>	Ballroom B2
5:00pm – 7:00pm	S	P122: Computational modeling of ultrasonic neuromodulation in realistic cortical cells <i>Speakers: Thomas Tarnaud, Emmeric Tanghe, Wout Joseph, Joaquín Gázquez</i>	Ballroom B2
5:00pm – 7:00pm	S	P123: Population-based Functional Source Separation enables identification of cortical sources in new individuals <i>Speakers: Karolina Armonaite, Camillo Porcaro, Livio Conti, Paolo Roselli, Federico Cecconi, Luca Paulon, Franca Tecchio</i>	Ballroom B2
5:00pm – 7:00pm	S	P124: Power Spectrum Harmonics Provide a Signature of Balanced Excitation-Inhibition Across Cortical Scales <i>Speakers: Camille Godin, Jean-Philippe Thivierge</i>	Ballroom B2
5:00pm – 7:00pm	S	P125: Learning Barrel Cortex Representations from Whisker Dynamics and Multimodal Convergence <i>Speakers: Candace Ng, Kevin Kleczka, Terry Stewart, Mitra Hartmann, Bryan Tripp</i>	Ballroom B2
5:00pm – 7:00pm	S	P126: Remapping Convolutional Layers to Fit Cortical Connectivity <i>Speakers: Bryan Tripp, Kinjal Pravinbhai Patel</i>	Ballroom B2
5:00pm – 7:00pm	S	P127: Distinguishing between fetal alcohol spectrum disorders and attention-deficit/hyperactivity disorder using diffusion modelling and spiking neurons <i>Speakers: Todd Capes, Eirini Mavritsaki, Shriya Kashyap, Silvio Aldrovandi, Virginia Amanatidou, Loukia Tsaprouni</i>	Ballroom B2
5:00pm – 7:00pm	S	P128: Ion Channels Tune Population-Level Intrinsic Biophysical Heterogeneity <i>Speakers: Taufik Valiante, Yvonne Yang, Homeira Moradi Chameh</i>	Ballroom B2
5:00pm – 7:00pm	S	P129: Sequential variability of Steady State Visually Evoked Potentials and its relation with BCI performance <i>Speakers: Tania Romero-Segura, Pablo Varona</i>	Ballroom B2

5:00pm – 7:00pm	S	P130: Burst-to-burst information resetting in Central Pattern Generators <i>Speakers: Francisco B Rodriguez, Pablo Varona, Irene Elices Ocón, Pablo Sanchez-Martin, Alicia Garrido-Peña, Carlos Garcia-Saura, Rafael Levi</i>	Ballroom B2
5:00pm – 7:00pm	S	P131: Decreased alpha/theta temporal ExSEnt of left prefrontal cortex in dementia: a robust biomarker <i>Speakers: Pablo Varona, Sara Kamali, Fabiano Baroni</i>	Ballroom B2
5:00pm – 7:00pm	S	P132: A Knowledge Integration Workflow to Define Functional Interactomes in Neural Systems <i>Speakers: Mahtab Zamanian Yazdi, Sharmila Venugopal</i>	Ballroom B2
5:00pm – 7:00pm	S	P133: A Learning-Rule-Independent Method for Evaluating Memory Capacity in Biophysical Neuron Models <i>Speakers: Taira Kobayashi, Shunichi Watanabe</i>	Ballroom B2
5:00pm – 7:00pm	S	P134: Coupling TMS induced electric fields to neural state variables <i>Speakers: Thomas R. Knösche, Konstantin Weise, Aaron Miller</i>	Ballroom B2
5:00pm – 7:00pm	S	P135: A Dendritic Brunel Network for Studying NMDA-Driven Working Memory <i>Speakers: Noah Ostendorf, Joshua Böttcher, Abigail Morrison, Willem Wybo</i>	Ballroom B2
5:00pm – 7:00pm	S	P136: Implementation of Dendritic Hierarchical Scheduling for the Neulite kernel <i>Speakers: Tadashi Yamazaki, Reyza Widiapradipta</i>	Ballroom B2
5:00pm – 7:00pm	S	P137: A Spiking Neural Network Model of Hierarchical Reinforcement Learning in a Maze Navigation Task <i>Speakers: Tadashi Yamazaki, Yuto Tokumitsu</i>	Ballroom B2
5:00pm – 7:00pm	S	P138: The Functional Contribution of Synaptic Plasticity in the Deep Cerebellar Nuclei to Real-Time Adaptive Robot Control <i>Speakers: Nada Yousif, Volker Steuber, Mahsa Ali Akbarzadeh, Frank Foerster</i>	Ballroom B2
5:00pm – 7:00pm	S	P139: Spatial neuroaesthetics in perception of topological and visual characteristics of natural landscapes and in route decision-making <i>Speakers: Margarita Zaleshina, Alexander Zaleshin</i>	Ballroom B2
5:00pm – 7:00pm	S	P140: Unsupervised Machine Learning Analysis of Extracellular Waveforms <i>Speakers: Sharon Crook, Katherine Doxey, Benjamin Amtsfeld, Yi Zhou</i>	Ballroom B2
5:00pm – 7:00pm	S	P141: Different training paradigms yield distinct learned structures in recurrent neural network models <i>Speakers: Ivyer Qu, Yuqing Zhu</i>	Ballroom B2
5:00pm – 7:00pm	S	P142: Building neural manifolds from membrane biophysics and circuit topology <i>Speakers: Charles Cohen, Minxian Peng, Qiang Liu, Manuel Zimmer</i>	Ballroom B2
PINNED 9:30pm – 11:59pm	R	Party Garrison Brewing Company (Seaport Hall, 1149 Marginal Rd, Halifax)	

B Break **G** Registration/Organization **W** Workshop

JULY 15 • WEDNESDAY

8:15am – 5:00pm	G	Registration	TBA
9:00am – 12:30pm	W	Computational modeling of neuromodulation technologies <i>Speakers: Thomas Tarnaud, Emmeric Tanghe</i>	Room 502
9:00am – 12:30pm	W	Detailed models of brain microcircuit activity and signals in clinical applications <i>Speakers: Kant (Heng Kang) Yao, Etay Hay, Alexandre Guet-McCreight</i>	Room 501
9:00am – 12:30pm	W	Evolution, Computation and the Origins of Nervous Systems: from Animal Models to Neuromorphic Engineering <i>Speakers: Hermann Kohlstedt, Jan Steinkuehler, Wilhelm Braun</i>	Room 505
9:00am – 5:30pm	W	Workshop on Methods of Information Theory in Computational Neuroscience <i>Speakers: Joseph T. Lizier, Marilyn Gatica</i>	Room 506/7
9:00am – 6:00pm	W	The 4D Connectome: Development, Structure, Function and Dynamics <i>Speakers: Katharina Duecker, Alberto Mazzoni, Alex Bird, Hermann Cuntz, Maurizio De Pitta, Jeremie Lefebvre, Gabriel Benigno</i>	Room 503
PINNED 10:30am – 11:00am	B	Coffee Break	Ballroom Salon
PINNED 3:30pm – 4:00pm	B	Coffee break	Ballroom Salon
