



| Date  | Time                      | Track  | Presentation Title  | Speaker   |
|-------|---------------------------|--|---|---|
| 8-Mar | 06:30<br>-<br>07:30<br>AM | NIH BRAIN Initiative:<br>Artificial Neural Networks<br>and Explainable AI models<br>at the Service of<br>Neuroscience Research | Keynote Presentation: Designing Machine Learning Processes For Equitable Health Systems with Live Q&A                         | Marzyeh Ghassemi, PhD<br>Assistant Professor, Electrical Engineering and Computer Science, Institute for Medical Engineering and Science, MIT   |
| 8-Mar | 07:30<br>-<br>08:30<br>AM | New Developments in<br>Neurodegenerative<br>Disease Research   | Keynote Presentation: Improving Research Translation in Dementia: Humanized Mouse Models, Cognition and Imaging with Live Q&A | Marco A.M. Prado, Pharm, MSc, PhD<br>Canada Research Chair in Neurochemistry of Dementia;<br>Scientist, Robarts Research Institute; Professor, Department of Physiology and Pharmacology and Department of Anatomy & Cell Biology, The University of Western Ontario; Deputy Editor in Chief, Journal of Neurochemistry                                 |
| 8-Mar | 08:30<br>-<br>09:30<br>AM | NIH BRAIN Initiative:<br>Artificial Neural Networks<br>and Explainable AI models<br>at the Service of<br>Neuroscience Research | Panel Presentation: Liquid Neural Networks with Live Q&A  | Mathias Lechner, PhD<br>Postdoctoral Research Associate, Computer Science and Artificial Intelligence Laboratory (CSAIL), Massachusetts Institute of Technology (MIT)<br>Ramin Hasani, PhD<br>Principal AI and Machine Learning Scientist, Computer Science and Artificial Intelligence Laboratory (CSAIL), Massachusetts Institute of Technology (MIT) |
| 8-Mar | 09:00<br>-<br>10:00<br>AM | NIH BRAIN Initiative:<br>Artificial Neural Networks<br>and Explainable AI models<br>at the Service of<br>Neuroscience Research | Keynote Presentation: Towards Multi-system Neural Network Models of Brain Functions with Live Q&A                             | Guangyu Robert Yang, PhD<br>Assistant Professor, Department of Brain and Cognitive Sciences, Computational Neuroscientist, Massachusetts Institute of Technology  |
| 8-Mar | 10:30<br>-<br>11:30<br>AM | Neuroscience, Ethics, and Society: Hopes and Challenges  | Keynote Presentation: How Closed Is The Loop? The Ethics of Agency in Future of Adaptive Neurostimulation with Live Q&A       | Timothy E. Brown, PhD<br>Assistant Professor, Department of Bioethics & Humanities, University of Washington School of Medicine   |

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| 8-Mar | 12:00<br>-<br>01:30<br>PM | NIH BRAIN Initiative:<br>Artificial Neural Networks<br>and Explainable AI models<br>at the Service of<br>Neuroscience Research | Plenary Panel: Challenges and<br>Opportunities of Artificial Intelligence in<br>Neuroscience and Explainability with Live<br>Q&A   | Chengxu Zhuang, PhD<br>ICoN Postdoctoral Fellow, MIT<br>Guillermo Cecchi, PhD<br>Principal Research Staff and Manager, Computational Psychiatry<br>and Neuroimaging, T.J. Watson IBM Research Laboratory<br>Konrad Kording, PhD<br>Moderator - Professor, The University of Pennsylvania; Co-<br>founder, Neuromatch |
| 8-Mar | 01:30<br>-<br>02:30<br>PM | Progress in Mapping and<br>Targeted Modulations of<br>Psychiatric Disease<br>Biomarkers  | Spatial Mapping of Pain-Associated G-<br>Protein Coupled Receptors and Biomarker<br>Localization in Mouse Brain Using<br>RNAscope HiPlex v2 and RNA-Protein Co-<br>Detection Assay with Live Q&A | Sayantani Basak, PhD<br>Applications Scientist, Advanced Cell Diagnostics, Bio-Techne  |
| 8-Mar | 06:00<br>-<br>06:00<br>AM | New Developments in<br>Neurodegenerative<br>Disease Research   | Accurately Modeling Mild Traumatic Brain<br>Injury to Better Understand Function<br>Mechanisms   | Brian Christie, PhD<br>Professor, Division of Medical Sciences, University of Victoria   |
| 8-Mar | 06:00<br>-<br>06:00<br>AM | NIH BRAIN Initiative:<br>Artificial Neural Networks<br>and Explainable AI models<br>at the Service of<br>Neuroscience Research | Explainable AI with Applications for Brain<br>Imaging and Drug Discovery   | Jagath Rajapakse, PhD, FIEEE<br>Professor of Computer Engineering, School of Computer Science<br>and Engineering, Nanyang Technological University   |
| 8-Mar | 06:00<br>-<br>06:00<br>AM | Neuroscience, Ethics, and<br>Society: Hopes and<br>Challenges  | Health Equity in ADRD Research for the<br>Black Community  | Kacie D. Deters, PhD<br>Assistant Professor, Department of Integrative Biology &<br>Physiology, University of California Los Angeles   |
| 8-Mar | 06:00<br>-<br>06:00<br>AM | NIH BRAIN Initiative:<br>Artificial Neural Networks<br>and Explainable AI models<br>at the Service of<br>Neuroscience Research | Interpretable Latent Variable Models<br>Demonstrate Flexible Neural Control of<br>Spinal Motor Units   | Joshua I. Glaser, PhD<br>Assistant Professor of Neurology, Assistant Professor of<br>Computer Science (by courtesy), Northwestern University<br>Feinberg School of Medicine  |
| 8-Mar | 06:00<br>-<br>06:00<br>AM | NIH BRAIN Initiative:<br>Artificial Neural Networks<br>and Explainable AI models<br>at the Service of<br>Neuroscience Research | Leveraging What We Know: Knowledge<br>Discovery and Knowledge Exploitation as<br>Complementary Aspects of Explainable AI   | Guillermo Cecchi, PhD<br>Principal Research Staff and Manager, Computational Psychiatry<br>and Neuroimaging, T.J. Watson IBM Research Laboratory   |
| 8-Mar | 06:00<br>-<br>06:00<br>AM | NIH BRAIN Initiative:<br>Artificial Neural Networks<br>and Explainable AI models<br>at the Service of<br>Neuroscience Research | Neural Network Models of Visual Learning<br>and Development  | Chengxu Zhuang, PhD<br>ICoN Postdoctoral Fellow, MIT   |

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| 8-Mar | 06:00<br>-<br>06:00<br>AM | New Developments in Neurodegenerative Disease Research   | Novel Tools for Drug Discovery in Neurodegenerative Diseases  | Jacob McPhail, PhD<br>R&D Scientist, StressMarq Biosciences Inc.  |
| 8-Mar | 06:00<br>-<br>06:00<br>AM | NIH BRAIN Initiative: Artificial Neural Networks and Explainable AI models at the Service of Neuroscience Research | Recurrent Neural Networks in Brains and Machines  | Christopher Cueva, PhD<br>Research Scientist, Department of Brain and Cognitive Sciences, MIT   |
| 8-Mar | 06:00<br>-<br>06:00<br>AM | New Developments in Neurodegenerative Disease Research   | Selective Neuronal Vulnerability in Neurodegeneration   | Marija Cvetanovic, PhD<br>Associate Professor, Department of Neuroscience, University of Minnesota, Institute for Translational Neuroscience                        |
| 8-Mar | 06:00<br>-<br>06:00<br>AM | Neuroscience, Ethics, and Society: Hopes and Challenges  | The Distinction Between Curative and Assistive Technology: The Hard Case of Bidirectional Brain Computer Interfaces | Joseph A. Stramondo, PhD, MA<br>Associate Professor, Department of Philosophy, Director, Institute for Ethics and Public Affairs (IEPA), San Diego State University |
| 8-Mar | 06:00<br>-<br>06:00<br>AM | New Developments in Neurodegenerative Disease Research   | Tool Kit for Dopaminergic Progenitor Cell Production  | Tilo Kunath, PhD<br>Institute for Regeneration and Repair, Centre for Regenerative Medicine, The University of Edinburgh  |
| 8-Mar | 06:00<br>-<br>06:00<br>AM | New Developments in Neurodegenerative Disease Research   | Understanding the Role of Alzheimer's Disease Pathologies in Spatial Memory Dysfunction                             | Abid Hussaini, PhD<br>Assistant Professor of Pathology and Cell Biology, The Taub Institute, Columbia University Irving Medical Center                              |