

Events

Find out when our team has speaking engagements at conferences, events, talks or hosting work shops below.



All times listed in EST.

DATE:

EVENT DETAILS / TOPIC:

SPEAKER(S):

Upcoming:

Wednesday, **June 9**, 2021 at 11:00 to 12:30 PM

World Dementia Council: Leading the Global Action Against Dementia

Participant [List](#)

Topic: Global dialogue on data sharing for dementia research. The dementia landscape project

Monday, **June 21**, 2021 at 10:00 AM to 5:00 PM

Krembil Centre for Neuroinformatics Virtual Open House

Register [here](#)

Please join us on Monday, June 21, 2021 for the Krembil Centre for Neuroinformatics (KCNI) 2nd annual virtual open house from 10 to 5pm EST.

The KCNI team will share highlights over the last year and speak to future developments at the Centre. The team is joined by Drs. David Goldbloom, Stefan Kloiber, Abigail Ortiz, and George Foussias for an open panel discussion to end the day. Learn more about the day's itinerary [here](#).

If you have any questions, please contact [Krembil Centre](#)

Past:

Thursday, **May 27**, 2021 at 5:30 to 6:30 PM

Brain Connectivity Workshop 2021

Topic: Linking Brain Connectivity, Excitability, Cognition and Sleep

[Agenda](#)

Dr. Sean Hill is the Inaugural Director of the Krembil Centre for Neuroinformatics, at the Centre for Addiction and Mental Health (CAMH) in Toronto, Canada and Professor in the Departments of Psychiatry and Physiology at the University of Toronto. He is also a Titular Professor at the École polytechnique fédérale de Lausanne, Switzerland. Under Dr. Hill's leadership, the Krembil Centre for Neuroinformatics applies state-of-the-art data science, machine learning and multi-scale computational modeling to accelerate the diagnosis, prediction and treatment of brain disorders. After completing his Ph.D. in computational neuroscience at the Université de Lausanne, Dr. Hill held postdoctoral positions at The Neurosciences Institute in La Jolla, California and the University of Wisconsin, Madison. He then joined the IBM T. J. Watson Research Center, as Project Manager for Computational Neuroscience on the Blue Brain Project. Dr. Hill has served as a co-director of the Blue Brain Project, leading the Neuroinformatics division. He led the Neuroinformatics strategy and platform development in the Human Brain Project (2013-2016). He has also served as Executive Director (2011-2013) and Scientific Director (2014-2016) of the International Neuroinformatics Coordinating Facility at the Karolinska Institutet in Stockholm, Sweden. Dr. Hill has extensive experience in large-scale data integration, and building and simulating biophysically-detailed models of brain circuitry. His research explores the principles underlying the structure and dynamics of neocortical and thalamocortical microcircuitry across sleep and wakefulness in health and disease.

Tuesday, **May 25**, 2021 at 9:00 to 10:00 AM

Brain Connectivity Workshop 2021

Topic: Modelling Abnormal Beliefs using Bayesian Inference

Agenda

Dr Andreea Diaconescu is an Independent Scientist at the Krembil Centre for Neuroinformatics (CAMH) and Assistant Professor in the Department of Psychiatry at the University of Toronto.

Andreea completed her PhD in Cognitive Neuroscience with Prof. Randy McIntosh at the Rotman Research Institute (University of Toronto). Following her PhD training, she held a postdoctoral position at the Translational Neuromodeling Unit (University of Zurich and ETH Zurich). Under the supervision of Prof. Klaas Enno Stephan, she developed, validated, and applied hierarchical Bayesian models of social learning and decision-making to examine persecutory ideation in early psychosis. Andreea has recently been supported by the Swiss National Foundation at the University in Basel in the Department of Psychiatry to lead a project on early detection of psychosis using computational models of persecutory delusions fit to behaviour and neuroimaging (EEG and fMRI) data.

At the Krembil Centre for Neuroinformatics, Andreea focuses on neurocomputational models of suicidal ideation in psychoaffective disorders.

Wednesday, **April 4**, 2021 at 4:00 to 5:00 PM

CNFUN Engagement Rounds - Dr. Sean Hill

@CNFUN_RCSN

Engagement Rounds is now available to watch online: <https://cnfun.ca/meetings-presentations/>

Topic: BrainHealth Databank: Towards digital twins for mental health

Dr. Sean Hill is the Inaugural Director of the Krembil Centre for Neuroinformatics, at the Centre for Addiction and Mental Health (CAMH) in Toronto, Canada and Professor in the Departments of Psychiatry and Physiology at the University of Toronto. He is also a Titular Professor at the École polytechnique fédérale de Lausanne, Switzerland. Under Dr. Hill's leadership, the Krembil Centre for Neuroinformatics applies state-of-the-art data science, machine learning and multi-scale computational modeling to accelerate the diagnosis, prediction and treatment of brain disorders. After completing his Ph.D. in computational neuroscience at the Université de Lausanne, Dr. Hill held postdoctoral positions at The Neurosciences Institute in La Jolla, California and the University of Wisconsin, Madison. He then joined the IBM T. J. Watson Research Center, as Project Manager for Computational Neuroscience on the Blue Brain Project. Dr. Hill has served as a co-director of the Blue Brain Project, leading the Neuroinformatics division. He led the Neuroinformatics strategy and platform development in the Human Brain Project (2013-2016). He has also served as Executive Director (2011-2013) and Scientific Director (2014-2016) of the International Neuroinformatics Coordinating Facility at the Karolinska Institutet in Stockholm, Sweden. Dr. Hill has extensive experience in large-scale data integration, and building and simulating biophysically-detailed models of brain circuitry. His research explores the principles underlying the structure and dynamics of neocortical and thalamocortical microcircuitry across sleep and wakefulness in health and disease.

Wednesday, **April 4**, 2021 at 9:00 to 11:30 AM

Max Planck - University of Toronto Centre for Neural Science & Technology Inaugural Event

Registration: https://harthouseca.zoom.us/webinar/register/WN_I0D5JQQzTLuCuQ1YJHdPsQ
Individual links are sent to each attendee upon registration

Event Objective:
Max-Planck-Gesellschaft and the University of Toronto entered into a new research collaboration agreement on January 1st 2021, creating the Max Planck – University of Toronto Centre for Neural Science and Technology. This event serves as the ceremonial inauguration of this new centre, and as a celebratory marking of this new partnership between these institutions.

Tuesday, **March 16**, 2021 at 1:00 to 3:00 PM

Symposium Talk at Cognitive Neuroscience Society 2021

Event [details](#)

TALK 3: MODULATION OF CORTICOTHALAMIC RHYTHMOGENIC CIRCUITS IN DEPRESSED PATIENTS BY RTMS NEUROSTIMULATION

Repetitive transcranial magnetic stimulation (rTMS) is routinely used in the clinic as an alternative therapy for patients with treatment-resistant depression. Very little is known, however, about the physiological basis of rTMS effects, and how these relate to alleviation of symptoms. In this talk I summarize our recent work examining the influence of rTMS on spatiotemporal brain dynamics using an established model of EEG rhythm generation in the corticothalamic system. Comparison of parameter estimates from models fitted to patient EEG data before and after rTMS therapy yields putative physiological changes induced by the intervention. In particular, we find statistically significant reductions in excitatory corticothalamic gains in models fitted to post-as compared to pre-stimulation therapy resting EEG data. Interestingly, these modulations extend well beyond the primary stimulation site in the frontal lobe, indicating a key role for large-scale networks in the transmission of modulatory rTMS effects. Projection to the model's reduced 3-dimensional parameter space allows interpretation of these rTMS-induced changes in terms of the principal instabilities, and associated spectral signatures, of corticothalamic activity.

John D. Griffiths, is a cognitive and computational neuroscientist, with particular research interests in mathematical modelling of large-scale neural dynamics, multimodal neuroimaging data analysis methods, and brain stimulation in the context of neuropsychiatric and neurological disease. He is currently an Independent Scientist at the Krembil Centre for Neuroinformatics at CAMH, where he leads a team focused on whole-brain and multi-scale neurophysiological modelling. He is also an Assistant Professor in the University of Toronto Department of Psychiatry. Dr. Griffiths obtained his PhD in Cognitive Neuroscience from the University of Cambridge, and subsequently held postdoctoral positions at the University of Sydney School of Physics, and then in Toronto at the Rotman Research Institute (Baycrest Hospital) and Krembil Research Institute (UHN Toronto Western Hospital)

Thursday, **February 25**, 2021 at 10:00-11:30am

KCN Hub Talk

TOPIC: Reduced inhibition in depression degrades cortical processing in human neuronal microcircuits

ABSTRACT: Depression is the leading cause of disability in Canada and worldwide. Recent studies implicate a reduction in circuit inhibition as a mechanism underlying some of the cognitive deficits associated with depression. We integrate cellular, circuit and gene-expression data from human cortical tissue into detailed computational models of human cortical microcircuits in health and depression. We use these models to study the implications of reduced inhibition in depression on cortical processing, and thus establish the underlying mechanisms. We are further using these computational models and results to test new pharmacology for depression in-silico, and identify high-resolution biomarkers in clinically-relevant brain signals to improve diagnosis and monitoring of depression and mental health.

Zoom [link](#)

Dr. Etay Hay is an Independent Scientist at Krembil Centre for Neuroinformatics, Centre for Addiction and Mental Health. He is an Assistant Professor in the Department of Psychiatry, and the Department of Physiology at the University of Toronto. Dr. Hay's research uses computational models of cortical microcircuits to study the mechanisms of brain processing in health and mental disorders. Dr. Hay and his team integrate human cellular, circuit and gene-expression data to develop detailed computational models of human cortical microcircuits in health, depression and schizophrenia. Hay lab uses the models to better understand the neuronal circuit mechanisms of brain function and mental health, test *in silico* new pharmacology for treatment, and identify high-resolution biomarkers in clinically-relevant brain signals to improve the diagnosis and monitoring of mental health.

Friday, **February 5**, 2021 at 11:00 to 4:00PM

Brain Data Standards Grants: Cell type Summary and Presentation Workshop

This series of workshops, co-hosted by The National Institutes of Health (NIH) BRAIN Initiative and the Department of Energy (DOE) Office of Science, brings together researchers with broad expertise to discuss the **state of the art** in mapping complete neural circuits, the **opportunities** for advancing connectomics technologies, and the **challenges** that need to be addressed to generate comprehensive maps of brain connectivity—“wiring diagrams” spanning the entire mammalian brain.

Event [details](#)

LIVE (day of) video [link](#)

Dr. Sean Hill is inaugural Director of the Krembil Centre for Neuroinformatics at the Centre for Addiction and Mental Health in Toronto, Canada. He is also titular professor at Ecole Polytechnique Fédérale de Lausanne, Switzerland. His background is in Computational Neuroscience and following post-doctoral studies in San Diego and Wisconsin, he joined the Computational Biology team at IBM Research. He has led the development of multiple large-scale neuroinformatics infrastructures and initiatives, in the Blue Brain Project, European Human Brain Project, and served as the Executive and Scientific Director of the International Neuroinformatics Coordinating Facility in Stockholm. His research is focused on the cellular basis of brain states, with a focus on thalamocortical circuitry. He has developed numerous large-scale models of cortical and corticothalamic systems during wakefulness, sleep and anesthetic conditions, which have contributed to our understanding of the cellular and synaptic mechanisms underlying diverse brain states.

TOPIC: Neuron Phenotype Ontology at **12:40pm EST**

Tuesday, **October 20**, 2020 at 12 to 1pm

CAMH Trainee Seminar Series: *This CAMH seminar series is an opportunity to learn about the work of research trainees across CAMH. Talks will resume on Sept. 8, and be held every second Tuesday from 12-1 pm.*

Topic: Predicting post-treatment MDD symptom severity based on topic modelling features from psychiatric notes

Zoom [link](#)

Dr. Marta Maslej, post-doctoral fellow of Dr. Sean Hill

Wednesday, **October 21**, 2020 at 9 to 10am

Scientific Computing Working Group presents: an Introduction to SQL

- Table operations: create, update, and drop a table
- Data operations: insert, update, and delete data
- Query Syntax: basic select statements, filter, join, group conditions and aggregation

Register [here](#) | Webex [link](#)

Adeel Ansari, Knowledge Engineering Lead

Wednesday, **October 28**, 2020 at 9:30 to 12:30pm

Fairness and Equity Workshop: The proposed workshop will explore the ways that bias “gets baked into” our data and models at five different stages of the research cycle: 1) Research Design; 2) Data Collection; 3). Data Editing and Analysis; 4) Model Construction and Validation; 5) Knowledge Translation and Exchange.

Key objectives of this workshop are to identify potential sources of bias in our own research, and promote best practices in the field and among our peers.

This workshop is **FULL** - Sign up for Nov 4!

Dr. Laura Sikstrom is a CIHR Health System Impact Fellow and Lecturer in the Department of Anthropology at the University of Toronto. Her ongoing teaching and research engages with the intersection between evidence based medicine, health equity and social justice. Her current project is an institutional ethnography of *fairness* at CAMH.

Wednesday, **October 28**, 2020 at 10 to 11:30am

Scientific Computing Working Group presents: an Introduction to R and RStudio

Marcos Sanches, Biostatistician

- R and RStudio
- R Markdown and reproducible research
- Objects in R
- R packages
- Some statistical functions
- Missing values in R
- Basic Statistics in R (time permitting)

Register [here](#) | Webex [link](#)

Wednesday, **November 4**, 2020 at 9:30 to 12:30pm

Fairness and Equity Workshop: The proposed workshop will explore the ways that bias “gets baked into” our data and models at five different stages of the research cycle: 1) Research Design; 2) Data Collection; 3). Data Editing and Analysis; 4) Model Construction and Validation; 5) Knowledge Translation and Exchange.

Key objectives of this workshop are to identify potential sources of bias in our own research, and promote best practices in the field and among our peers.

Register [here](#)

Wednesday, **November 4**, 2020 at 3 to 3:40pm

FWD50 (*This year's conference spans five days of packed content, from keynotes and workshops to breakouts and meeting rooms.*)

TOPIC: Brain data: How machine learning and computation tackle mental health

[TICKETS](#) | [Schedule](#)

Dr. Laura Sikstrom is a CIHR Health System Impact Fellow and Lecturer in the Department of Anthropology at the University of Toronto. Her ongoing teaching and research engages with the intersection between evidence based medicine, health equity and social justice. Her current project is an institutional ethnography of *fairness* at CAMH.

Dr. Sean Hill is inaugural Director of the Krembil Centre for Neuroinformatics at the Centre for Addiction and Mental Health in Toronto, Canada. He is also titular professor at Ecole Polytechnique Fédérale de Lausanne, Switzerland. His background is in Computational Neuroscience and following post-doctoral studies in San Diego and Wisconsin, he joined the Computational Biology team at IBM Research. He has led the development of multiple large-scale neuroinformatics infrastructures and initiatives, in the Blue Brain Project, European Human Brain Project, and served as the Executive and Scientific Director of the International Neuroinformatics Coordinating Facility in Stockholm. His research is focused on the cellular basis of brain states, with a focus on thalamocortical circuitry. He has developed numerous large-scale models of cortical and corticothalamic systems during wakefulness, sleep and anesthetic conditions, which have contributed to our understanding of the cellular and synaptic mechanisms underlying diverse brain states.

Friday, **November 20**, 2020 at 10 to 12pm

STATISTICAL METHODS FOR GENETICS & GENOMICS - RESEARCH SEMINAR AND JOURNAL CLUB

TOPIC: Linking central and peripheral inflammation in Alzheimer's disease using genetics and transcriptomics

Dr. Daniel Felsky is an Independent Scientist and Head of Whole Person Modeling in the Krembil Centre for Neuroinformatics at CAMH. He is also an Assistant Professor in the Department of Psychiatry at the University of Toronto.

Abstract: Neurodegeneration due to Alzheimer's disease is the most common cause of major cognitive impairment in late life and is characterized by the presence of amyloid plaques, neurofibrillary tangles, and chronic inflammation in the brain. The brain's resident immune cells, microglia, mediate the destructive series of events leading to neuron loss. However, these cells are inaccessible in living humans. Peripheral blood monocytes, on the other hand, bear morphological and functional similarity to microglia and are directly testable. A series of published and unpublished results seeking to clarify the roles of microglia and monocytes in Alzheimer's disease will be presented, showcasing approaches to studying the integrative multi-omic, ante- and post-mortem datasets collected on participants from the Rush University Religious Orders Study and Memory and Aging Project.

Readings:

1. Felsky et al (2019) <https://www.nature.com/articles/s41467-018-08279-3>
2. Bennett et al (2018) <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6380522/>
<https://content-iospress-com.myaccess.library.utoronto.ca/articles/journal-of-alzheimers-disease/jad179939?resultNumber=0&totalResults=448&start=0&q=Bennett&resultsPageSize=10&rows=10>

Zoom link

Meeting ID: 845 1361 2646
Passcode: 824465

Wednesday, **November 25**, 2020 at 12:15 to 1pm

Monthly BrainHealth Databank Speaker Series

TOPIC: the current state of our Clinical Knowledge Graph including adoption of FIHR, establishment of data quality metrics, and demonstration of ability to search and prepare MDD-ICP clinical data, from I-CARE and Clinical REDCap, for analyses.

Webex link

Thursday, **November 26**, 2020 at 6:30 to 7:30pm

OBI Public Talk - Brain-CODE/Data Sharing

Twitter: <https://bit.ly/3emWCLh>
LinkedIn: <https://bit.ly/3eqtsv4>
Facebook: <https://bit.ly/3kTj1Tb>

Register [here](#)

Wednesday, **December 2 to 4**, 2020

BrainHack Global 2020: Ontario

A virtual event co-hosted by BrainHack Western and BrainHack Toronto

Registration is now opened for our first **virtual BrainHack Global - Ontario** co-hosted by BrainHack Western and BrainHack Toronto. Join us on **December 2nd to 4th** over Chowdcast for a **completely free event focused on neuroscience** and the promotion of open-source resources in an accessible way across disciplines and experience levels including **hacking, education, panels, and networking**.

Dr. Felsky completed his PhD in neuroimaging and genetics of Alzheimer's disease at CAMH in 2015. Following this, Dr. Felsky completed postdoctoral fellowships at the Anne Romney Center for Neurologic Diseases at Brigham and Women's Hospital, Harvard Medical School, in Boston, and the Centre for Translational and Computational Neuroimmunology at Columbia University Medical Centre in New York. As a postdoctoral fellow, Dr. Felsky studied the genetic links between central and peripheral immune diseases and the morphology of the brain's resident immune cells, microglia. While in Boston and New York, Dr. Felsky collaborated closely with investigators at Rush University Medical Centre in Chicago, publishing the first genome-wide study of microglial activation in humans.

Adeel Ansari, Knowledge Engineering Lead

Dr. Sean Hill, Director of the Krembil Centre for Neuroinformatics will deliver a talk on transforming mental health care through new approaches to gathering data inside and outside the clinic, providing next generation AI decision support to clinicians, and constructing multi-scale computational models that integrate genomics, cells and circuits, whole brain dynamics, cognitive networks and whole person level data.

BrainHacks are collaborative events that focus on the open sharing of ideas, models, code, and data. We will be featuring speakers, panels, and tutorials. Attendees will have the opportunity to work with others to pitch ideas, create projects, and share their achievements with others.

For more information, please visit the BrainHack site (<https://brainhackto.github.io/global-ON-2020/>), which will be updated regularly. If you have any questions, please feel free to contact us brainhacktoronto@gmail.com or brainhack.western@gmail.com

Register [here](#)

Even though we will be physically distant, there will be the possibility to come together and socialize on the Brainhack Ontario GatherTown platform. We will be using the platform to host exciting social activities throughout the event. Stay tuned for the social activities program!

We invite all neuroscience aficionados, students of neuroscience-related subjects, professors and professionals to participate. Registrations are now open [here](#).

Thursday, **December 10**, 2020 at 4 to 5pm

University of Toronto Seminar Series for Physiology

Event details: TBC.

Dr. Sean Hill is inaugural Director of the Krembil Centre for Neuroinformatics at the Centre for Addiction and Mental Health in Toronto, Canada. He is also titular professor at Ecole Polytechnique Fédérale de Lausanne, Switzerland. His background is in Computational Neuroscience and following post-doctoral studies in San Diego and Wisconsin, he joined the Computational Biology team at IBM Research. He has led the development of multiple large-scale neuroinformatics infrastructures and initiatives, in the Blue Brain Project, European Human Brain Project, and served as the Executive and Scientific Director of the International Neuroinformatics Coordinating Facility in Stockholm. His research is focused on the cellular basis of brain states, with a focus on thalamocortical circuitry. He has developed numerous large-scale models of cortical and corticothalamic systems during wakefulness, sleep and anesthetic conditions, which have contributed to our understanding of the cellular and synaptic mechanisms underlying diverse brain states.

Thursday, **December 10**, 2020 at 10 to 11:30am

KCNhub Event

TOPIC: Hierarchical Bayesian inference underpins human social learning

Zoom link

Meeting ID: 896 8176 7784

Passcode: 593617

Dr Andreea Diaconescu is an Independent Scientist at the Krembil Centre for Neuroinformatics (CAMH) and Assistant Professor in the Department of Psychiatry at the University of Toronto.

Andreea completed her PhD in Cognitive Neuroscience with Prof. Randy McIntosh at the Rotman Research Institute (University of Toronto). Following her PhD training, she held a postdoctoral position at the Translational Neuromodeling Unit (University of Zurich and ETH Zurich). Under the supervision of Prof. Klaas Enno Stephan, she developed, validated, and applied hierarchical Bayesian models of social learning and decision-making to examine persecutory ideation in early psychosis. Andreea has recently been supported by the Swiss National Foundation at the University in Basel in the Department of Psychiatry to lead a project on early detection of psychosis using computational models of persecutory delusions fit to behaviour and neuroimaging (EEG and fMRI) data.

At the Krembil Centre for Neuroinformatics, Andreea focuses on neurocomputational models of suicidal ideation in psychoaffective disorders.

Tuesday, **December 15**, 2020 at 12 to 1pm

Dr. Michael Wainberg, post-doc of Dr. Shreejoy Tripathy

CAMH Trainee Seminar Series: *The CAMH research trainee seminars are back! This seminar series is an opportunity to learn about the work of research trainees across CAMH. Talks will resume on Sept. 8, and be held every second Tuesday from 12-1 pm.*

Topic: MRI-based subtyping of depression in the UK Biobank

Zoom [link](#)

Tuesday, **January 26, 2021** at 12-1pm

CAMH Trainee Seminar Series: *This seminar series is an opportunity to learn about the work of research trainees across CAMH. Talks are held every second Tuesday from 12-1 pm.*

Title: Development and application of a laminar-specific gene expression meta-analysis of the human neocortex

[Join the Zoom meeting](#)

Meeting ID: 918 7799 4541

Passcode: 432907

Dial in: [+1 647-558-0588](#) Canada

Ethan Kim is a Master's student at the University of Toronto, studying neuroinformatics in Drs. Shreejoy Tripathy and Leon French at the Krembil Centre for Neuroinformatics at CAMH.

Thursday, **January 28, 2021** at 11 to 12pm

Tübingen Neuro Campus (TNC) Virtual talk

Event details: Zoom TBC

Dr. Sean Hill, Director of the Krembil Centre for Neuroinformatics will deliver a talk on transforming mental health care through new approaches to gathering data inside and outside the clinic, providing next generation AI decision support to clinicians, and constructing multi-scale computational models that integrate genomics, cells and circuits, whole brain dynamics, cognitive networks and whole person level data.

Recurring Events:

DATE:

EVENT DETAILS / TOPIC:

SPEAKER(S):

Monthly

KCNI Speaker Series - Find out more information [here](#).