

McGILL MEG DAYZ

REAL-TIME IMAGING OF THE NEURAL DYNAMICS OF BRAIN SYSTEMS

JUNE 4 & 5, 2019

De Grandpré Communications Centre, The Neuro, 3801 University Street

JUNE 4 8:30AM - 6:00PM

GREAT SCIENCE FROM FAST BRAIN SIGNALS: MEG USERS SHOW OFF THEIR SKILLS

Audition

R. Zatorre (The Neuro)
S. Puschmann (The Neuro)
E. de Villers-Sidani (The Neuro)
J. Côté (The Neuro)

Vision

J. Mendola (Vision Group, McGill)
K. Nasiotis (The Neuro)
R. Kupers (U Copenhagen)

Predictive coding in audition & language

B. Morillon (INSERM, Marseille)
P. Donhauser (The Neuro)
S. Samiee (The Neuro)

Sleep

E. Coffey (Concordia U)

Motor Systems

M.H. Boudrias (McGill)

Neuromodulation

R. Matsushita (The Neuro)
R. Zatorre (The Neuro)

From the bedside: Epilepsy & Pain

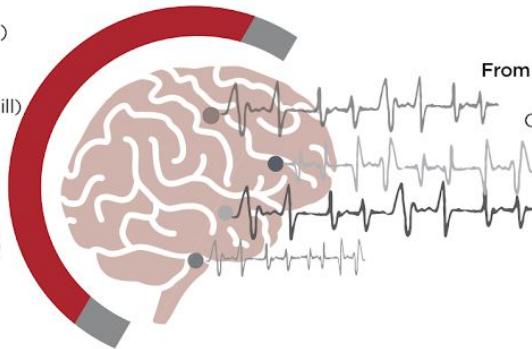
R. Dudley (McGill)
C. Grova (Concordia & McGill)
J. Moreau (The Neuro)
C. de Vos (U of Rotterdam)

Method updates

S. Baillet (The Neuro)
M. Lalancette (The Neuro)
M. Cousineau (The Neuro)
K. Nasiotis (The Neuro)

Decoding & Machine Learning

D. Pantazis (MIT)



KEYNOTE: KILLAM SEMINAR 4:00PM

THE AUDITORY SYSTEM AND MOTOR SYSTEM, IN TIME



David Poeppel

New York University, USA
& Max-Planck-Institute for Empirical Aesthetics, Frankfurt

JUNE 5 10:00AM - 6:00PM

OPEN LABS & HANDS-ON DECODING OF BRAIN TIME-SERIES WITH BRAINSTORM
(BRING YOUR LAPTOP!)

Dimitrios Pantazis

McGovern Institute for Brain Research at MIT

SPONSORS



Registration is free but mandatory: <https://neuroimage.usc.edu/brainstorm/WorkshopMontreal2019>

HOSTED BY THE MEG@MCGILL CORE UNIT, THE NEURO



MEG Dayz, June 04-05, 2019
Montreal Neurological Institute, McGill

Program and free registration:

<https://neuroimage.usc.edu/brainstorm/WorkshopMontreal2019>

Day 1: Tuesday June 04, 2019

Great science from fast brain signals: local MEG users show off their skills (+ special guests.)

08:30 – 09:00 am	Welcome & registration		
09:00 – 09:10 am	Julien Doyon Sylvain Baillet		Introductory remarks
Audition			
09:10 - 09:25 am	Robert Zatorre	MNI, McGill	Hemispheric asymmetries in the representation of spectral and temporal sound features.
09:25 - 09:40 am	Sebastian Puschmann	MNI, McGill	Effects of musical training on auditory cortex connectivity using inter-subject phase-locking.
09:40 – 09:55 am	Jonathan Côté Etienne de Villers-Sidani	MNI, McGill	A novel MEG method to map the auditory cortical functional organization.
Sleep			
09:55 – 10:10 am	Emily Coffey	Concordia U	Sleep in the MEG: stage-dependent oscillatory activity.
Methods update I			
10:10 – 10:20 am	Marc Lalancette	MNI, McGill	BIDS for MEG and EEG.
10:20 – 10:30 am	Sylvain Baillet	MNI, McGill	OMEGA: The Open MEG repository.

10:30 – 10:40 am	Konstantinos Nasiotis	MNI, McGill	New <i>Brainstorm</i> tools for multiscale electrophysiology.
10:40 – 11:00 am	Coffee break		
From the clinics			
11:00 – 11:15 am	Roy Dudley	Montreal Children's Hospital McGill	Impact of a new multimodal presurgical evaluation strategy for focal poorly-defined focal epilepsy in children.
11:15 – 11:30 am	Jeremy Moreau	MCH/MNI, McGill	Ictal MEG in children with drug-resistant epilepsy.
11:30 – 11:45 am	Christophe Grova	Concordia U	MEG Source imaging in epilepsy: insights from resting state fluctuations to predict postsurgical outcome.
11:45 – 12:00 pm	Cecile de Vos	MNI, McGill U Rotterdam	Mechanisms of analgesic effects of spinal Cord stimulation.
12:00 – 12:45 pm	Lunch break		
Vision			
12:45 – 1:00 pm	Konstantinos Nasiotis	MNI, McGill	Fast processes of visual remapping.
1:00 – 1:15 pm	Janine Mendola	McGill	Phase-Locked Frequency Tagging of Binocular Rivalry Isolates a Cortical Network that Predicts Alternation Rate.
1:15 – 1:30 pm	Ron Kupers	U Copenhagen	A novel subcortical pathway in cross-modal brain plasticity.
Predictive coding			
1:30 – 1:45 pm	Benjamin Morillon	INSERM Marseille	How the temporal structure of sound streams is encoded by neural dynamics

1:45 – 2:00 pm	Soheila Samiee	MNI, McGill	Neurophysiological network dynamics for pitch discrimination.
2:00 – 2:15 pm	Peter Donhauser	MNI, McGill	Two distinct neural time scales organize predictive speech processing in the human brain.
2:15 – 2:45 pm	Coffee break		
Motor systems			
2:45: 3:00 pm	Marie-Hélène Boudrias	School of Occupational Therapy, McGill	Effects of aging and exercise on beta oscillations during the performance of unimanual handgrip
Neuromodulation			
3:00 – 3:15 pm	Robert Zatorre	MNI, McGill	Selective Entrainment of Theta Oscillations in the Dorsal Stream Causally Enhances Auditory Working Memory Performance.
3:15 – 3:30 pm	Reiko Matsushita	MNI, McGill	MEG reveals neurophysiological evidence of tDCS effect on the auditory system.
Decoding			
3:30 – 3:45 pm	Dimitrios Pantazis	McGovern Institute MIT	Understanding MEG signals through the lens of machine learning: Recent advances, challenges, and future prospects.
Methods update II			
3:45 – 4:00 pm	Martin Cousineau	MNI, McGill	Virtual fiber tracks for visualization of MEG/EEG connectivity.

4:00 – 5:00 pm	David Poeppel Special Killam Lecture	NYU, Max Planck Institute	The auditory system and motor system, in time.
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Day 2: Wednesday June 05, 2019

Hands-on for great science: living lab & advanced data analytics for decoding brain time series.

10:00 – 12:00 pm	Marc Lalancette Sylvain Baillet	Open doors and live demos.
1:00 – 6:00 pm	Dimitrios Pantazis Martin Cousineau Sylvain Baillet	Hands-on decoding of brain time-series with <i>Brainstorm</i> (bring your laptop!).

For more information: sylvain.baillet@mcgill.ca