

Centre de recherches mathématiques
Université de Montréal

Atelier «La modélisation de l'activité neuronale : des petites vers les
grandes échelles»
Du 17 au 22 août 2009

Workshop "Brain Activity Modeling: From Fine to Coarse Scale"
August 17-22, 2009

HORAIRE / PROGRAM

Conférences : salle 6214
Pauses-café et lunchs : salle 6245

Lectures: Room 6214
Coffee Breaks & lunches: Room 6245

Le lundi 17 août 2009 / *Monday, August 17, 2009*

08:30 - 09:00 Café croissants (6245) / *Coffee & Croissants (6245)*

08:30 - 09:00 Inscription (5343) / *Registration (5343)*

09:00 - 10:30 **Edith Hamel** (McGill University)

“Mapping pathways and cellular interactions that lead to hemodynamic changes”

10:30 - 11:00 Pause-café / *Coffee break*

(Salle / *Room* 6245)

11:00 - 12:00 **Jean-Marc Lina** (École de Technologie Supérieure)

“Wavelet based estimation of the hemodynamic response in diffuse optical imaging”

12:00 - 13:30 Déjeuner sur place (6245) / *Lunch on site (6245)*

13:30 - 14:30 **Srinivas Laxminarayan** (Northeastern University)

“A dynamical systems approach to modeling habituation in evoked responses as observed in concurrent EEG / optical measurements in rats”

14:30 - 15:00 Pause-café / *Coffee break*

(Salle / *Room* 6245)

15:00 - 16:00 **Julien Cohen-Adad** (Harvard Medical School / Massachusetts General Hospital)

“How to detect BOLD responses in spinal cord fMRI? Acquisition, pre-processing and statistical issues”

16:00 - 17:00 À venir / *TBA*

Le mardi 18 août 2009 / *Tuesday, August 18, 2009*

08:30 - 09:00 Café croissants (6245) / *Coffee & Croissants (6245)*

09:00 - 10:30 **Renaud Jolivet** (University Hospital Zurich)
“Modeling in vivo neuron-astrocyte metabolic interactions”

10:30 - 11:00 Pause-café / *Coffee break*
(Salle / Room 6245)

11:00 - 12:00 **Mathieu Dehaes** (INSERM - Fac. de Médecine Pierre et Marie Curie - Pitié-Salpêtrière)
“Investigation on the influence of the sinus tissue structure on measurements in diffuse optical imaging”

12:00 - 13:30 Pause-déjeuner / *Lunch break*

13:30 - 15:00 **David Boas** (Massachusetts General Hospital)
“Microscopic Measurements and Modeling of Oxygen Delivery”

15:00 - 15:30 Pause-café / *Coffee break*
(Salle / Room 6245)

15:30 - 16:30 **Beau Ances** (Washington University in St. Louis)
“HIV and Aging: A Strain on Brain Function”

16:30 - 17:30 **Réjean Plamondon** (École Polytechnique de Montréal)
“The Kinematic Theory of rapid human movements: background and applications”

Le mercredi 19 août 2009 / *Wednesday, August 19, 2009*

08:30 - 09:00 Café croissants (6245) / *Coffee & Croissants (6245)*

09:00 - 10:30 **Richard B. Buxton** (University of California San Diego)
“Quantitative fMRI: Modeling the Physiological Changes Associated with Brain Activation”

10:30 - 11:00 Pause-café / *Coffee break*
(Salle / *Room* 6245)

11:00 - 12:00 **Amir Shmuel** (Montreal Neurological Institute and Hospital)
“À venir”
“TBA”

12:00 - 13:30 Déjeuner sur place (6245) / *Lunch on site (6245)*

13:30 - 15:00 **Theodore J. Huppert** (University of Pittsburgh Medical Center)
“Investigating a neurovascular basis for multimodal fusion”

15:00 - 15:30 Pause-café / *Coffee break*
(Salle / *Room* 6245)

15:30 - 16:30 À venir / *TBA*

16:30 - 17:30 À venir / *TBA*

17:30 Réception vin et fromages (6245) / *Wine-and-cheese reception (6245)*

Le jeudi 20 août 2009 / Thursday, August 20, 2009

08:30 - 09:00 Café croissants (6245) / *Coffee & Croissants (6245)*

09:00 - 10:30 **Ying Zheng** (The University of Sheffield)

“Modelling haemodynamic response to activation: a demonstration of the importance of biophysical constraints”

10:30 - 11:00 Pause-café / *Coffee break*

(Salle / *Room* 6245)

11:00 - 12:00 **Hélène Girouard** (Université de Montréal)

“Neurovascular coupling in health and disease”

12:00 - 13:30 Pause-déjeuner / *Lunch break*

13:30 - 14:30 **Richard Hoge** (Université de Montréal)

“A review of MRI calibration methods”

14:30 - 15:00 Pause-café / *Coffee break*

(Salle / *Room* 6245)

15:00 - 16:00 À venir / *TBA*

16:00 - 17:00 À venir / *TBA*

Le vendredi 21 août 2009 / *Friday, August 21, 2009*

08:30 - 09:00 Café croissants (6245) / *Coffee & Croissants (6245)*

09:00 - 10:30 **Jorge Riera** (Tohoku University)

“The most important neuronal signatures in neuroimaging: a view of the mesoscale”

10:30 - 11:00 Pause-café / *Coffee break*
(Salle / *Room 6245*)

11:00 - 12:00 À venir / *TBA*

12:00 Fin de l'atelier / *Closure of the workshop*