

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***

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**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**

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**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***

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**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*