

Centre de recherches mathématiques
Université de Montréal

Atelier INSDC “Analyse de données directionnelles avec applications en
biomécanique et en imagerie médicale”
Du 25 au 27 novembre 2009

*NICDS Workshop “The Analysis of Directional Data with Applications to
Biomechanics and Biomedical Imaging”
November 25-27, 2009*

HORAIRE / PROGRAM

Conférences : salle 6214

Pauses-café : salle 6245

Lectures: Room 6214

Coffee Breaks: Room 6245

Le mercredi 25 novembre 2009 / Wednesday, November 25, 2009

08:30 - 09:00 Inscription (salle 5345) et café-croissants (salle 6245) / *Registration (Room 5345) and Coffee & Croissants (Room 6245)*

- Statistics and Biomechanics - I

09:00 - 10:00 Aurelio Cappozzo (Università degli Studi di Roma - Foro Italico)
“Reconstruction of Human Skeletal Movement in the 3-D Virtual Space”

10:00 - 10:50 Michael Pierrynowski (McMaster University)
“Using Geometry to Reveal Small Differences in the Kinematics of the Knee During Gait”

10:50 - 11:10 Pause-café / *Coffee break*
(Salle / Room 6245)

11:10 - 12:00 Jim Dickey (University of Western Ontario)
“On Application of Statistical Theory to Multi-Axis Kinematic Data”

12:00 - 13:50 Pause-déjeuner / *Lunch break*

- Statistics and Biomechanics - II

13:50 - 14:40 Jeffrey J. Thomason (University of Guelph)
“The Mechanical Interaction of Hoof and Track Surface in Racehorses”

14:40 - 15:10 Pause-café / *Coffee break*
(Salle / Room 6245)

15:10 - 16:00 Louis-Paul Rivest (Université Laval)
“On the Estimation of Rotation Axes”

Le jeudi 26 novembre 2009 / *Thursday, November 26, 2009*

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

- *Statistical Issues in Image Analysis - I*

09:00 - 10:00 **Christian Beaulieu** (University of Alberta)

“Directional Measurements of Water Diffusion using MRI”

10:00 - 10:50 **Hongtu Zhu** (The University of North Carolina at Chapel Hill)

“Intrinsic Regression Models for Medial Representation and Diffusion Tensor Data”

10:50 - 11:10 Pause-café / *Coffee break*

(Salle / Room 6245)

11:10 - 12:00 **Moo K. Chung** (University of Wisconsin-Madison)

“White Matter Fiber Shape and Brain Network Analysis using Diffusion Tensor Imaging”

12:00 - 13:50 Déjeuner (6245) / *Lunch (6245)*

- *Statistical Issues in Image Analysis - II*

13:50 - 14:40 **Hélène Massam** (York University)

“Wishart Distributions for Graphical Gaussian Models”

14:40 - 15:10 Pause-café / *Coffee break*

(Salle / Room 6245)

15:10 - 16:00 **Peter T. Kim** (University of Guelph)

“Wishart Mixtures and Diffusion Tensor Imaging”

Le vendredi 27 novembre 2009 / *Friday, November 27, 2009*

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

- *Statistical Methods*

09:00 - 10:00 **Peter E. Jupp** (University of St Andrews)
“Embeddings, Earthquakes and Orthogonal Axial Frames”

10:00 - 10:50 **Giseon Heo** (University of Alberta)
“An Application of Persistent Homology for 3 Dimensional Landmark Data”

10:50 - 11:10 Pause-café / *Coffee break*
(Salle / *Room 6245*)

11:10 - 12:00 **James O. Ramsay** (McGill University)
“When the Data are Functions”