

Centre de recherches mathématiques
Université de Montréal

Atelier : Méthodologie statistique pour la modélisation de systèmes
dynamiques
Du 9 au 13 juillet 2007

Workshop: Statistical Methods for Modeling Dynamic Systems
Du 9 au 13 juillet 2007
July 9-13, 2007

HORAIRE / *PROGRAM*

Conférences : salle 1360
Pauses-café et lunchs : salle 1221
Démonstrations sur ordinateur : salle 1340

Lectures: Room 1360
Coffee Breaks and Lunches: Room 1221
Computer Demo: Room 1340

Le lundi 9 juillet 2007 / *Monday, July 9, 2007*

08:30 - 09:00 Inscription et Café (1221) / *Registration and Coffee (1221)*

09:00 - 10:30 **Theodoro Koulis** (JSS Medical Research)

James O. Ramsay (McGill University)

“An Introduction to Dynamic Systems”

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

(Salle / *Room* 1221)

11:00 - 12:00 **Kim McAuley** (Queen’s University)

“Fundamental Modeling of Chemical Processes – Statistical Challenges and Approaches”

12:00 - 14:30 Déjeuner (1221) / *Lunch (1221)*

14:30 - 16:00 **Michael C. Mackey** (McGill University)

“Modeling the Clinical Data in Periodic Hematological Disease”

16:15 Cocktail de bienvenue (6245) / *Welcoming reception (6245)*

Le mardi 10 juillet 2007 / Tuesday, July 10, 2007

08:30 - 09:00 Café (1221) / *Coffee (1221)*

09:00 - 10:30 **Lorenz Biegler** (Carnegie Mellon University)
“Parameter Estimation of Dynamic Systems using Simultaneous Collocation and Large-scale Nonlinear Programming”

10:30 - 11:00 Pause-café / *Coffee break*
(Salle / Room 1221)

11:00 - 12:30 **Stephen Ellner** (Cornell University)
“Understanding Simple Population Dynamics”

12:30 - 14:00 Déjeuner (1221) / *Lunch (1221)*

14:00 - 15:00 Session d’affiches et démonstration sur ordinateur (L. Biegler et G. Hooker) / *Poster Session and Computer Demo (L. Biegler and G. Hooker)*
(Salle / Room 1340)

15:00 - 15:30 Pause-café / *Coffee break*
(Salle / Room 1221)

15:30 - 17:00 **James O. Ramsay** (McGill University)
Giles Hooker (Cornell University)
David Campbell (McGill University)
Jiguo Cao (McGill University)
“Parameter Estimation for Differential Equations: A Generalized Smoothing Approach”

Le mercredi 11 juillet 2007 / Wednesday, July 11, 2007

08:30 - 09:00 Café (1221) / *Coffee (1221)*

09:00 - 10:00 **Hulin Wu** (University of Rochester)

“Modeling Pathogenesis of Viral Infections: Statistical Inverse Problems for ODE Models”

10:00 - 11:00 **David Campbell** (McGill University)

“Bayesian Collocation Tempering and Other MCMC Methods for Differential Equation Models”

11:00 - 11:30 Pause-café / *Coffee break*
(Salle / *Room* 1221)

11:30 - 12:30 **Michael Dowd** (Dalhousie University)

“Statistical Data Assimilation in Oceanography and Meteorology”

12:30 - 13:30 Déjeuner (1221) / *Lunch (1221)*

13:30 - 15:00 Session d'affiches et démonstration sur ordinateur / *Poster Session and Computer Demo*
(Salle / *Room* 1340)

15:00 Pause-café / *Coffee break*
(Salle / *Room* 1221)

Le jeudi 12 juillet 2007 / *Thursday, July 12, 2007*

08:30 - 09:00 Café (1221) / *Coffee (1221)*

09:00 - 10:30 **Johannes Schlöder** (Universität Heidelberg)
“Numerical Methods for Nonlinear Parameter Estimation and Optimum Experimental Design in Differential Equation Systems”

10:30 - 11:00 Pause-café / *Coffee break*
 (Salle / *Room* 1221)

11:00 - 11:30 **Sy-Miin Chow** (University of Notre Dame)
Ji-Yun Zu (University of Notre Dame)
Manshu Yang (University of Notre Dame)
“State-Space Techniques for Fitting Linear and Nonlinear Dynamic Models”

11:30 - 12:00 **Caroline Palmer** (McGill University)
“Motion dynamics in music performance”

12:00 - 12:30 **Jesse Spencer-Smith** (University of Illinois at Urbana Champaign)
“Facial expressions as dynamic events: when a smile isn’t a smile”

12:30 - 14:00 Déjeuner (1221) / *Lunch (1221)*

14:00 - 15:00 Session d’affiches et démonstration sur ordinateur (J. Cao et G. Hooker) / *Poster Session and Computer Demo (J. Cao and G. Hooker)*
 (Salle / *Room* 1340)

15:00 - 15:30 Pause-café / *Coffee break*
 (Salle / *Room* 1221)

15:30 - 16:30 **Subhash R. Lele** (University of Alberta)
“Data Cloning: A simple approach to likelihood inference for dynamical systems”

16:30 - 17:30 **Edward Ionides** (University of Michigan)
“Ecology of Infectious Diseases: Cholera as a Case Study”

Le vendredi 13 juillet 2007 / *Friday, July 13, 2007*

08:30 - 09:00 Café (1221) / *Coffee (1221)*

09:00 - 10:30 **Michael Robert Osborne** (Australian National University)
“ODE Estimation - Statistical Properties and Computational Problems”

10:30 - 11:00 Pause-café / *Coffee break*
(Salle / *Room 1221*)

11:00 - 12:30 **Cosma Shalizi** (University of Michigan)
“Reconstructing stochastic state spaces from discrete time series”

12:30 - 14:00 Déjeuner (1221) / *Lunch (1221)*

14:00 - 15:00 Session de discussion animée par Bart Childs ”Themes and Future Directions” /
Discussion Session ”Themes and Future Directions”, lead by Bart Childs

15:00 - 15:30 Pause-café / *Coffee break*
(Salle / *Room 1221*)

15:30 - 17:00 **Robert Clewley** (Cornell University)
Giles Hooker (Cornell University)
“Qualitative Measures of Fit for Nonlinear Dynamics”