



**Workshop on “Stochastic Dynamical Systems and Climate Modeling”,
April 15–20, 2007, Banff International Research Station, Canada**
http://www.pims.math.ca/birs/birspages.php?task=displayevent&event_id=07w5007

April 16, 2007, Monday Morning

Chair: Jinqiao Duan

9–9:15: Introductory remarks

9:15–10: Majda, Andrew: Systematic Mathematical and Statistical Strategies for Stochastic Climate Modelling

10–10:30: Coffee Break

10:30–11:15: Vallis, Geoff: Deterministic and Stochastic Variability in the Coupled Atmosphere-Ocean-Climate System

12–1 : Lunch

1–2 : Campus tour

2: Group photo

April 16, 2007, Monday Afternoon

Chair: Richard Kleeman

2:15–3: Chu, Peter: First Passage Time for Stochastic Climate Modelling and Prediction

3–3:30 Coffee Break

3:30–4:15: Mu Mu: Conditional nonlinear optimal perturbation and its applications in predictability study, ensemble forecast and adaptive observation

4:15–5:00: Penland, Cecile: Adaptive stochastic modeling using data assimilation

April 17, 2007, Tuesday Morning (Stochastic Dynamical Systems)

Chair: Boualem Khouider

9--9:45 Kening Lu: Lyapunov Exponents for Random Dynamical Systems in a Banach Space

9:45–10:15: Coffee Break

10:15---11: Bjorn Schmalfuss: Models with dynamical boundary conditions

11–11:45: Caraballo, Tomas: Synchronization of a stochastic reaction-diffusion system on a thin two-layer domain

11:45 – 1:30: Lunch

April 17, 2007, Tuesday Afternoon

Chair: Balasubramanya Nadiga

1:30—2:15: Sardeshmukh, Prashant

2:15—3:00: Juan Restrepo: Stochastic parametrization of wave breaking

3—3:30: Coffee Break

3:30—4:15: Monahan, Adam

4:15—5:00: Judith Berner: Stochastic parametrizations for representing model error in weather and climate models

Poster session: 6:30—8:30pm

Vallis, Geoff: The Dynamics of the NAO and Annular Modes: Insight from Stochastic Models

Chen, Baohua: Stochastic dynamics of water vapor

April 18, 2007, Wed Morning (Predictability, Convection & Stochastic Reduction)

Chair: Adam Monahan

9—9:45: Kleeman, Richard

9:45—10:30: Tang, Youmin

10:30—11: Coffee Break

11—11:45: DelSole, Timothy: Stochastic Models of Quasigeostrophic Turbulence

11:45—12:30: Williams, Paul: Noise-induced phenomena in low-order stratospheric dynamics

12:30—1:30 Lunch/Break

April 18, 2007, Wed Afternoon

Chair: Timofeyev, Ilya

1:30—2:15: Nadiga, Balasubramanya

2:15—3: Smith, Leslie: Reduced models for wave and vortical interactions in stochastically forced dispersive systems

3—3:30: Coffee Break

3:30—4:15 Craig, George

4:15—5: Boualem Khouider: Coarse Grained Stochastic Birth-Death Processes for Tropical Convection and Climate

April 19, 2007, Thursday Morning

Chair: Cecile Penland

9—9:45: Bessaih, Hakima

9:45—10:15: Coffee Break

10:15—11: Gentz, Barbara: Geometric singular perturbation theory: Application to simple stochastic climate models

11—11:45: Duan, Jinqiao: A stochastic approach for parameterizing unresolved scales

11:45—1:30 Lunch/Break

April 19, 2007, Thursday Afternoon

Chair: Leslie Smith

1:30—2:15: Timofeyev, Ilya: Stochastic Mode-Reduction in Deterministic Systems

2:15—3: Franzke, Christian: A Hidden Markov Model Perspective on Regimes and Metastability in Atmospheric Flows

3—3:30 Coffee Break

3:30—4:15 Sura, Philip: A Global View of Non-Gaussian SST Variability

April 20, 2007, Friday Morning

Informal event to be determined.

12.00 noon: Check-out