



# Banff International Research Station

for Mathematical Innovation and Discovery

## Understanding the New Statistics: Expanding Core Statistical Theory (08w5071, September 14-19, 2008)

### MONDAY, September 15, 2008

- 7:00–8:45** *Breakfast (Sally Borden Building)*
- 8:45–9:00** *(Max Bell 159) Introduction and welcome to BIRS by BIRS station manager*
- (Max Bell 159)*
- 9:00–9:45** Iain Johnstone: Null Distributions for Largest Eigenvalues in Multivariate Analysis
- 9:45–10:15** Nouredine El Karoui: On Kernel Random Matrices
- 10:15–10:45** *Coffee Break (2nd floor lounge, Corbett Hall)*
- (Max Bell 159)*
- 10:45–11:30** Steve Marron: High Dimension Low Sample Size Mathematical Statistics
- 11:30–11:45** *Meeting: bus transportation for the Wednesday trip*
- 11:45–13:00** *Lunch (Sally Borden Building)*
- 13:00–14:00** *Guided tour of the Banff Centre (meet in the lobby of Corbett Hall)*
- (Max Bell 159)*
- 14:00–14:45** Sara van de Geer: High-Dimensional Additive Modeling
- 14:45–15:15** Marten Wegkamp: Generalized Support Vector Machines in Sparse Settings
- 15:15–15:45** *Coffee Break (2nd floor lounge, Corbett Hall)*
- (Max Bell 159)*
- 15:45–16:30** Benedikt Pötscher: Confidence Sets Based on Sparse Estimators Are Necessarily Large
- 16:30–17:00** Florentina Bunea: Honest Inference In Sparse High-Dimensional Models
- 17:00–17:30** Martin Bilodeau: Discovering Dependencies in Multivariate Data and in Stationary Sequences
- 17:30–19:30** *Dinner (Sally Borden Building)*



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### TUESDAY, September 16, 2008

- 7:00–8:45** *Breakfast (Sally Borden Building)*  
*(Max Bell 159)*
- 8:45–9:15** Peter Kim: Geometric and Topological methods for High-Dimensional Data Analysis
- 9:15–9:45** Mikhail Belkin: Spectral and Geometric Methods in Learning
- 9:45–10:15** Marloes Maathuis: Variable Importance Based on Intervention Calculus
- 10:15–10:45** *Coffee Break (2nd floor lounge, Corbett Hall)*  
*(Max Bell 159)*
- 10:45–11:15** Saharon Rosset:  $\ell_1$  Regularization in Infinite Dimensional Feature Spaces
- 11:15–11:45** Roger Koenker: Computational Pathways for Regularized Quantile Regression
- 11:45–14:00** *Lunch (Sally Borden Building)*  
*(Max Bell 159)*
- 14:00–14:30** Peter McCullagh: Random Effects and Estimating Equation
- 14:30–15:00** Debashis Paul: Statistical Modeling Through Nonlinear Mixed Effects Dynamics
- 15:00–15:30** *Coffee Break (2nd floor lounge, Corbett Hall)*  
*(Max Bell 159)*
- 15:30–16:00** Kjell Doksum: On Nonparametric Variable Selection
- 16:00–16:30** Hannes Leeb: Evaluating and Selecting Models for Prediction Out-Of-Sample
- 16:30–17:00** Art Owen: Cross-Validation for the Truncated SVD and the Non-Negative Matrix Factorization
- 17:00–17:30** Marc Hallin: The General Dynamic Factor Model
- 17:30–18:00** Christopher Genovese: Finding Filaments
- 18:00–19:30** *Dinner (Sally Borden Building)*  
*(Max Bell 159)*
- 20:00** Open discussion forum



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### WEDNESDAY, September 17, 2008

- 7:00–9:00**     *Breakfast (Sally Borden Building)*  
*(Max Bell 159)*
- 9:00–9:30**     Jim Ramsay: Parameter Cascading for High Dimensional Models
- 9:30–10:00**    Larry Brown: Non-Parametric Empirical Bayes and Compound Bayes Estimation of Independent Normal Means
- 10:00–10:30**   *Coffee Break (2nd floor lounge, Corbett Hall)*  
*(Max Bell 159)*
- 10:30–11:00**   Bertrand Clarke: Coordinating Theory
- 11:00–11:30**   Laurie Davies: A View From a Limited Perspective
- 11:30**           *Group Photo – taken at the stairs in front of Corbett Hall*
- 11:35–13:00**   *Lunch (Sally Borden Building)*
- 13:00–18:00**   *Free afternoon (The bus to Lake Louise departs from the Professional Development Centre – reception)*
- 18:00–19:30**   *Dinner (Sally Borden Building)*



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### THURSDAY, September 18, 2008

- 7:00–9:00**    *Breakfast (Sally Borden Building)*  
  
*(Max Bell 159)*
- 9:00–9:30**    Michael Jordan: On Surrogate Loss Functions and f-Divergences
- 9:30–10:00**    Ivan Mizera: Quasi-Concave Density Estimation: Duality in Action
- 10:00–10:30**    Kenji Fukumizu: Independence and Conditional Independence with Reproducing  
Kernels
- 10:30–11:00**    *Coffee Break (2nd floor lounge, Corbett Hall)*  
  
*(Max Bell 159)*
- 11:00–11:30**    Giles Hooker: Inference from Black Boxes
- 11:30–12:00**    Vladimir Vovk: Predictive Regression: In Defence of the Old Statistics
- 12:00–12:30**    Aurore Delaigle: Design-Adaptive Local Polynomial Estimator for the  
Errors-in-Variables Problem
- 12:30–13:30**    *Lunch (Sally Borden Building)*  
  
*Free afternoon (TBA)*
- 17:30–19:30**    *Dinner (Sally Borden Building)*



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### FRIDAY, September 19, 2008

**7:00–8:45** *Breakfast (Sally Borden Building)*

*(Max Bell 159)*

**8:45–9:15** Wolfgang Polonik: Asymptotic Normality of Plug-In Level Set Estimates

**9:15–9:45** David Mason: Recent Results on Uniform in Bandwidth Consistency of Kernel-Type Function Estimators

**9:45–10:15** Rudolf Beran: Penalized Fits of Multivariate Responses to Covariates

**10:15–10:45** *Coffee Break (2nd floor lounge, Corbett Hall)*

*(Max Bell 159)*

**10:45–11:30** Andrey Feuerverger: The Joy of Text

**11:30–13:30** *Lunch (Sally Borden Building)*

You are kindly asked to check out in the reception  
*(Professional Development Centre) by 12:00*