Nonparametric and High-dimensional Statistics

CIRM, December 17 – December 21, 2012

Monday, December, 17:

Session 1

- 09:00–09:10 Welcome
- 09:10–9:55 Pierre Alquier (University College Dublin)
  Fast rates in learning with dependent observations
- 9:55–10:40 Victor Chernozhukov (Massachusetts Institute of Technology)
  Confidence intervals for parameters in high-dimensional sparse quantile regression
- 10:40–11:10 Break
- 11:10–11:55 Axel Munk (Georg-August-Universität, Göttingen)
  Multiscale change-point inference

Session 2

- 16:30–17:15 Dominique Picard (Université Paris 7)
  Grouping sparsity and thresholding procedures
- 17:15–18:00 Karim Lounici (Georgia Institute of Technology)
  Estimation and Variable Selection with Exponential Weights
- 18:00–18:30 Break
- 18:30–19:15 Yohann de Castro (Université Paris Sud)
  LASSO and Dantzig selector using Expander Designs

Tuesday, December, 18:

Session 1

- 09:00–09:45 Mihail Belkin (The Ohio State University)
  Algebraic geometry for learning high-dimensional mixtures of Gaussians and other distributions
- 09:45–10:30 Vladimir Koltchinskii (Georgia Institute of Technology)
  Estimation of low rank smooth kernels
- 10:30–11:00 Break

- 11:00–11:45 Harrison Zhou (Yale University)
  Large Toeplitz covariance matrices estimation

Session 2

- 16:30–17:15 Alexander Rakhlin (University of Pennsylvania)
  Oracle inequalities for aggregates of Empirical Risk Minimizers
- 17:15–18:00 Taiji Suzuki (University of Tokyo)
  Some convergence results on multiple kernel additive models
- 18:00–18:30 Break
- 18:30–19:15 Marianna Pensky (University of Central Florida)
  Non-asymptotic approach to varying coefficient model

Wednesday, December, 19:
Special session to honor the memory of Yurii Ingster

- 9:00–9:30 Ildar Ibragimov (Steklov Institute of Mathematics)
  Appreciation of Yurii Ingster
- 9:30–10:00 Ery Arias Castro (University of California, San Diego)
  Detection of Correlations
- 10:00–10:30 Cristina Butucea (Univeristé Paris Est)
  Sharp detection of a sparse submatrix in a matrix-valued Gaussian sequence model
- 10:30-11:00 Break
- 11:00–11:30 Arnak Dalalyan (CREST -ENSAE)
  Minimax testing of a composite null hypothesis defined via a quadratic functional
- 11:30–12:00 Vladimir Spokoiny (Weierstrass Institute)
  Critical dimension in the Bernstein - von Mises Theorem

Thursday, December, 20:
Session 1

- 9:00–9:45 Oleg Lepski (Université de Provence)
  Adaptive density estimation on $\mathbb{R}^d$
- 9:45–10:30 Yannick Baraud (Université de Nice)
  A new adaptive estimator for the regression setting

- 10:30–11:00 Break
- 11:00–11:45 Mark Low (Wharton School, University of Pennsylvania)
  Estimating nonsmooth functionals

Session 2

- 16:30–17:15 Eduard Belitser (University of Eindhoven)
  Optimal two-stage procedures for estimating location and size of maximum of multivariate regression functions
- 17:15–18:00 Joseph Salmon (Duke University)
  Oracle inequalities and minimax rates for non-local means and related adaptive kernel-based methods
- 18:00–18:30 Break
- 18:30–19:15 Peter Mathé (Weierstrass Institute)
  An oracle-type bound for a statistical RG-rule

Friday, December, 21:

- 09:00–09:30 Quentin Berthet (Princeton University)
  Optimal detection of a sparse principal component
- 09:30–10:00 Victor-Emmanuel Brunel (CREST–ENSAE)
  Adaptive estimation of convex polytopes from noisy data
- 10:00–10:30 Adam Bull (University of Cambridge)
  Spatially adaptive sensing and nonparametric regression
- 10:30–11:00 Break
- 11:00–11:45 Yuri Golubev (Université de Provence)
  Ordered smoothers with exponential weighting