



Workshop on Inverse Problems

PASCAL core event

“Econometry, Numerical Analysis and Optimization, Statistics”

Toulouse, October 3-7, 2005

PROGRAMME

Site :

Institut D'Economie Industrielle
Université Toulouse 1 Sciences Sociales
Manufacture des Tabacs - Aile Jean-Jacques Laffont
Room MF 323 – Building F
21, allée de Brienne – 31000 Toulouse – France

Organizers :

Jean-Pierre Florens, IDEI and University of Toulouse 1
Jean-Michel Loubes, CNRS and University of Montpellier 2

Secretariat :

Marie-Hélène Dufour – Tel : 33(0)5 61 12 85 90

MONDAY, 3 OCTOBER 2005

- 9.30 - 10.30 **Registration and coffee**
Room MF 322 (Building F)
- 10.30 - 11.30 **Convergence Rate in the Prokhorov Metric for Ill-posed Problems**
Stefan Kindermann (Linz University, Austria)
- 11.30 - 12.30 **Regularization: Quadratic Versus Sparsity-enforcing and Deterministic Versus Stochastic Methods**
Christine de Mol (Université Libre de Bruxelles, Belgium)
- 12.30 - 14.00 *Lunch – ME 001 (Building E)*
- 14.30 - 15.30 **Multiresolution Methods for Inverse Problems**
Dominique Picard (University Paris VII, France)
- 15.30 - 16.30 **Principal Component and the Long Run**
Xiaohong Chen (New-York University, USA)
- 16.30 – 16.45 *Break*
- 16.45 - 17.45 **Nonparametric Additive Models for Panels of Time Series**
Enno Mammen (University of Mannheim, Germany)

TUESDAY, 4 OCTOBER 2005

- 9.30 - 10.00 **An Introduction to Instrumental Variables**
Jean-Pierre Florens (IDEI, University of Toulouse 1, France)
- 10.00 - 11.00 **Asymptotic Normality of a Nonparametric Instrumental Variables Estimator**
Joel Horowitz (Northwestern University, USA)
- 11.00 - 11.30 *Coffee break – Room MF 322 (Building E)*
- 11.30 - 12.30 **Testing Parametric Models in Statistical Inverse Problems**
Hajo Holzmann (University of Goettingen, Germany)
- 12.30 - 14.00 *Lunch – Room ME 001 (Building E)*
- 14.30 - 15.30 **Nonparametric Estimation of the Regression Function in an Errors-in-variables Models**
Marie-Luce Taupin (University of Paris Sud, France)
- 15.30 - 16.30 **Estimation of the Solution of a Differential Equation : an Inverse Problem**
Anne Vanhems (Toulouse Business School, France)
- 16.30 - 16.45 *Break*
- 16.45 - 17.45 **Statistical Analysis of Non Injective Inverse Problems**
Jan Johannes (University of Heidelberg, Germany)

WEDNESDAY, 5 OCTOBER 2005

- 9.00 - 9.30 **Introduction to Complexity Regularization and Iterative Methods**
Jean-Michel Loubes (University of Montpellier 2, France)
- 9.30 - 10.30 **Learning Theory and Inverse Problems**
Michele Sebag (University of Paris Sud, France)
- 10.30 - 11.00 *Coffee break – Room MF 322 (Building F)*
- 11.00 - 12.00 **Iterative Regularization Scheme and Early Stopping in Learning from Examples**
Lorenzo Rosasco (University of Genova, Italy)
- 12.00 – 13.00 **Nonparametric Transformation to White Noise**
Oliver Linton (London School of Economics, England)
- 13.00 - 14.30 *Lunch – Room ME 001 (Building E)*

Afternoon Free

THURSDAY, 6 OCTOBER 2005

- 10.00 - 11.00 **A Statistical View of Some Regularization Methods for Ill-posed Problem**
Carenne Ludena (University of Caracas, Venezuela)
- 11.00 - 11.30 *Coffee break – Room MF 322 (Building F)*
- 11.30 - 12.30 **Methods and Convergence Results for Non Linear Inverse Problems**
Thorsten Hohage (University of Goettingen, Germany)
- 12.30 - 14.00 *Lunch – Room ME 001 (Building E)*
- 14.30 - 15.30 **On Regularization Theory for Linear and Nonlinear Statistical Inverse Problems**
Nicolai Bissantz (University of Goettingen, Germany)
- 15.30 - 16.30 **Inverse Problems with Error in the Operator**
Markus Reiss (University of Heidelberg, Germany)
- 16.30 - 16.45 *Break*
- 16.45 - 17.45 **Risk Hull Method for Inverse Problems**
Laurent Cavalier (University of Aix-Marseille 1, France)
- 20.00 *Dinner - Restaurant «L'Assiette à l'Oie»,
28, rue Peyrolières – Toulouse*

FRIDAY, 7 OCTOBER 2005

- 9.30 - 10.30 **Bayesian Methods for Inverse Problems**
Fabrice Gamboa (University of Toulouse 3, France)
- 10.30 - 11.00 *Coffee break – Room MF 322 (Building F)*
- 11.00 - 12.00 **Inverse Problems in Biology**
Djelil Chafai (University of Toulouse 3, France)
- 12.00 - 12.30 **Application of Semiparametric Methods to Random Warping Estimation**
Ismael Castillo (University of Paris Sud, France)
- 12.30 - 14.00 *Lunch – Room ME 001 (Building E)*