# NCMIP 2014

## 4th International Workshop on New Computational Methods for Inverse Problems

**Institut Farman**

**Ecole Normale Supérieure de Cachan, FRANCE**

**May 23, 2014**

PROGRAM

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| 9:00 | **Welcome Coffee** |
| 9:30 - 10:20 | ***Low complexity regularization of inverse problems.*** **Invited Talk**<br>**Gabriel Peyré**<br>CNRS and Université Paris-Dauphine, France. |
| 10:20 - 10:40 | ***Stochastic diffusion equation with singular diffusivity and gradient-dependent noise in binary tomography.***<br>**Bruno Sixou***, Lin Wang*, Françoise Peyrin**<br>*CREATIS, INSA-Lyon; Inserm, U1044; CNRS UMR 5220; Université Lyon 1; Université de Lyon, Lyon, France **ESRF, Imaging Group, Grenoble, France |
| 10:40 - 11:00 | ***Inversion without Explicit Jacobian Calculations in Electrical Impedance Tomography.***<br>**Alexandre Fouchard***,**, Stéphane Bonnet*, Lionel Hervé*, Olivier David**<br>*CEA, Leti, MINATEC, Grenoble, France **Université Joseph Fourier, Grenoble Institute of Neuroscience, La Tronche, France |
| 11:00 - 11:30 | **Coffee Break** |
| 11:30 - 11h50 | ***Three-dimensional transient elastodynamic inversion using the modified error in constitutive relation.***<br>**Marc Bonnet***, Wilkins Aquino**<br>*POems (UMR 7231 CNRS-INRIA-ENSTA), ENSTA, Palaiseau, France **Department of Civil and Environmental Engineering, Duke University, Durham, USA |
| 11:20 - 12:10 | ***Goal-oriented updating of mechanical models.***<br>**Ludovic Chamoin***, Pierre Ladevèze* and Julien Waeytens**<br>*LMT ENS Cachan/CNRS, Cachan, France **Paris-Est University, IFSTTAR, Marne-La-Vallée Cedex, France |
| ***12:10 - 12:30*** | ***Physical Modeling of Microtubules Network.***<br>**Pierre Allain**, Charles Kervrann<br>Inria, Centre Rennes-Bretagne Atlantique, Rennes, France |
| 12:30 - 14: 30 | **Lunch** |
| 14:30 - 15:20 | ***Innovative Compressive Sensing Approaches for Inverse Problems.*** **Invited Talk**<br>**Andrea Massa**, Giacomo Oliveri, Nicola Anselmi, Pingping Ding, and Lorenzo Poli<br>ELEDIA Research Center, DISI @ University of Trento |
| 15:20 – 15:40 | ***An alternating minimization method for blind deconvolution from Poisson data.***<br>**Marco Prato***, Andrea La Camera** and Silvia Bonettini***<br>*Dipartimento di Scienze Fisiche, Informatiche e Matematiche, Universita di Modena, Italy **Dipartimento di Informatica, Bioingegneria, Robotica e Ingegneria dei Sistemi, Universita di Genova, Italy ***Dipartimento di Matematica e Informatica, Universita di Ferrara, Italy |
| 15:40 - 16:00 | **Coffee Break** |
| 16:00 - 16:50 | ***Fusion of hyperspectral and panchromatic images.*** **Invited Talk**<br>**Jean-Yves Tourneret**<br>Institut de Recherche en Informatique de Toulouse, France |
| 16:50 - 17:10 | ***Particle MCMC for bayesian microwave control.***<br>**Pierre Minvielle***, Adrien Todeschini**, François Caron***, Pierre Del Moral****<br>*CEA-CESTA, Le Barp, France **INRIA Bordeaux Sud-Ouest, Talence, France ***University of Oxford, UK ****UNSW, Sidney, Australia |
| 17:10 - 17:30 | ***Optical imaging in a variational Bayesian framework.***<br>**Slimane Arhab***, Hacheme Ayasso**, Bernard Duchêne* and Ali Mohammad-Djafari*<br>* L2S, UMR8506: CNRS - SUPELEC - Univ Paris Sud, France **GIPSA-lab, UMR5216: CNRS - Grenoble-INP, Univ. Joseph Fourier – Univ. Stendhal, Grenoble, France |
| 17:30 - 17:50 | ***Influence of partial known paramaters on flaw characterization in Eddy Current Testing by using a ramdon walk MCMC method based on metamodeling.***<br>**Caifang Cai***, Thomas Rodet**, Dominique Lesselier* and Marc Lambert*<br>*L2S-SUPELEC, Gif sur Yvette, France ** SATIE, ENS-Cachan, Cachan, France |

The workshop is endorsed by the following research networks: