Workshop on Sparsity in Applied Mathematics and Statistics

June 1-2, 2017, Brussels, Belgium

ULB UNIVERSITÉ LIBRE DE BRUXELLES

Workshop Announcement

In recent years the acquisition of big data sets on one hand and the increasing popularity of high-dimensional models on the other hand have intensified the interdisciplinary contacts between data sciences, machine learning, statistics, applied mathematics, computer science and signal processing. The learning or estimation of patterns and structures from massive observations in complex models is closely related to the solution of possibly large, ill posed or ill conditioned inverse problems. The understanding of graphical and structured models involves expertise in the algorithmic, numerical and statistical aspects. Regularisation of ill posed or ill conditioned problems is often based on an explicit or implicit assumption of sparsity, which can be imposed already at the recovery of the data, as in compressed sensing. The goal of this workshop is to bring together several experts in the various fields of expertise.

Venue: Royal Belgian Institute of Natural Sciences

Topics include:

- Sparsity (theory, algorithms, applications, ...)
- High-dimensional models
- Inverse problems
- Compressed sensing
- Statistical modelling of high-dimensional data
- Networks and graphical models
- (Medical) Imaging
- Model and variable selection; structured or group selection
- Statistical learning
- Optimization (in sparse/inverse problems or high-dimensional data)
- Algorithms for the above mentioned problems

Invited Speakers:

- Laure Blanc-Feraud, Université de Nice-Sophia Antipolis, France
- Ivan Markovsky, Vrije Universiteit Brussel, Belgium
- Richard Samworth, Cambridge University, UK
- Goeran Kauermann, Ludwig-Maximilians-Universität München, Germany
- Francesco Stingo, Università degli Studi di Firenze, Italy

Organizers:

- Maarten Jansen, Université libre de Bruxelles, departments of Mathematics and Computer Science
- Ignace Loris, Université libre de Bruxelles, department of Mathematics
- Caroline Verhoeven, Université libre de Bruxelles, faculty of Medicine

Registration and abstract submission

- Registration is **free**, but mandatory.
- Registration and abstract submission **deadline is April 15, 2017**
- `http://homepages.ulb.ac.be/~majansen/workshopSAMS2017/index.html`