



Statistical physics methods in biology and computer science

July 11 - July 16, 2016 In École Normale Supérieure in Paris

A satellite event of STATPHYS26

Local organisers

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This satellite will cover recent progress on the use of methods from statistical mechanics of disordered systems for problems concerning high dimensional problems related to biology and computer science. The satellite intends to assemble researchers working on various application with methodologically strongly overlapping tools.

The specific topics where the use of statistical physics turned out as fruitful include:
 Statistical-mechanics inspired modeling of high-dimensional biological data:

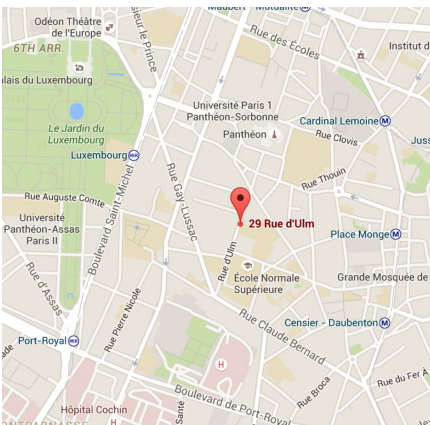
- Sequences and evolution
- Biomolecular interactions and regulatory networks
- Cellular communication
- Neuroscience, ecological networks.

Statistical-mechanics applications in computer science:

- Information Theory
- Machine Learning
- Signal Processing
- Sparsity
- Artificial Neural Networks.

Eminent scientists in the field will animate this workshop school. These include:

- Bill Bialek (Princeton University, USA)**
- Joachim Buhmann (ETH Zurich, Switzerland)**
- Eytan Domany (Weizmann Institute of Science, Israel)**
- Irene Giardina (University La Sapienza, Italy)**
- Yoshiyuki Kabashima (Tokyo Tech, Japan)**
- Bert Kappen (Nijmegen, The Netherlands)**
- Mehran Kardar (MIT, USA)**
- Michael Laessig (University Cologne, Germany)**
- Nicolas Macris (EPFL, Switzerland)**
- Andrea Montanari (Stanford University, USA)**
- Cris Moore (Santa Fe Institute, USA)**
- Richard Neher (MPI for Developmental Biology, Germany)**
- Manfred Opper (TU Berlin, Germany)**
- Greg Ver Steeg (USC, USA)**
- Antonia Maria Tulino (Bell Labs, USA)**
- Riccardo Zecchina (Politecnico Torino, Italy)**



The conference will take place in salle Jean Jaurès, situated at 29 rue d'Ulm in Ecole Normale Supérieure (level -1), in Paris, 75005

The workshop will start with a one-day tutorial event on monday 11, on the topic of statistical physics, inference, computer science and computational biology.

Application, information and registration <http://statphys.krzakala.org>

Deadline Registration : April 30, 2016 (March 31 for contributed talks/posters)