



The Abdus Salam  
**International Centre  
for Theoretical Physics**  
50th Anniversary 1964 - 2014



## **Spring College on the Physics of Complex Systems**

**26 May – 20 June 2014**

**(Miramare - Trieste, Italy)**

The Abdus Salam ICTP and SISSA, in collaboration with the partner institutions of the Master in the Physics of Complex Systems (<http://www.polito.it/pcs>) will organize the *Spring College on the Physics of Complex Systems* from 26 May to 20 June 2014.

Many complex systems in physics, biology, engineering and economics are characterized by a large number of interacting degrees of freedom giving rise to a non-trivial collective behavior. The theoretical and computational tools for a quantitative analysis of complex systems are often rooted in modern (statistical, quantum) physics. The Spring College on the Physics of Complex Systems aims to give students the opportunity to get in touch with a selection of topics at the forefront of research, during an intensive 4-week program. It consists of 5 courses of 9 lectures each, followed by final written tests.

### **Courses and Lecturers:**

- + Andrea Gambassi (SISSA, Italy)  
*Stochastic processes and applications*
- + Leticia Cugliandolo (Univ. Paris VI, France)  
*Advanced methods in non-equilibrium statistical mechanics*
- + Sara A Solla (Northwestern University, USA)  
*Theoretical neuroscience*
- + Marco Cosentino Lagomarsino & Martin Weigt (Univ. Pierre et Marie Curie, Paris)  
*Elements of Statistical Biological Physics*
- + Stefano Allesina (University of Chicago, USA)  
*A practical guide to scientific computing*

### **Participation**

The Spring College is part of the Master program in the Physics of Complex Systems, but it is open to a limited participation of well-qualified students at the Master and PhD level. Applicants from all countries that are members of the United Nations, UNESCO or IAEA may attend. As the College will be conducted in English, participants should have an adequate working knowledge of this language. Candidates are warmly advised to solicit recommendation letters to be sent by their supervisors in support of their application.

As a rule, travel and subsistence expenses of the participants should be borne by their home institutions. Every effort should be made by candidates to secure support for their fare (or at least half-fare). However, limited funds are available for some participants, who are nationals of, and working in, a developing country, and who are not more than 45 years old. Such support is available only to those attending the entire activity and taking the final test.

*There is no registration fee.*

### **HOW TO APPLY FOR PARTICIPATION**

The Online Application can be accessed at the activity website:  
[http://cdsagenda5.ictp.trieste.it/full\\_display.php?ida=a13200](http://cdsagenda5.ictp.trieste.it/full_display.php?ida=a13200).

Comprehensive instructions will guide you step-by-step on how to fill out and submit the application form. Kindly send all file attachments in Word or Acrobat format.

### **Organizing Committee**

**S. Franz**  
(LPTMS Orsay, France)

**J.-B. Fournier**  
(Paris VII, France)

**M. Ben Amar**  
(ENS Paris, France)

**A. Gambassi**  
**G. Martinelli**  
(SISSA, Trieste, Italy)

**M. Marsili**  
(ICTP, Trieste, Italy)

**R. Zecchina**  
**A. Pelizzola**  
(Politecnico di Torino, Italy)

### **Local organizer**

**M. Marsili**  
(ICTP, Trieste, Italy)

# **DEADLINE**

## **28 February 2014**

### **Secretariat:**

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