

Winter School on Quantitative Systems Biology

26 November - 7 December 2012

Miramare, Trieste, Italy

The Abdus Salam International Centre for Theoretical Physics, is organizing a *Winter School on Quantitative Systems Biology* from 26 November to 7 December 2012. It will be directed by **V. Balasubramanian** (Univ. of Pennsylvania, USA), **A. Sengupta** (Rutgers State Univ. of New Jersey, USA) and **M. Vendruscolo** (University of Cambridge, UK).

Local Organizer: **M. Marsili** (ICTP, Italy)

New experimental techniques are opening windows on biological mechanisms inside the cell and in the brain, making these systems accessible to quantitative investigation. These advances have shown the importance of the concerted interaction of many agents in producing overall behaviors, and call for an understanding of biological functions at the systemic level. The present school responds to the need to provide physicists with a broad exposure to quantitative problems in the study of living systems. The school is particularly targeted to young researchers, especially at the Ph.D and postdoc level who either work in this area or hope to do so.

Lectures offering a broad overview of topics in Systems Biology are planned by an array of distinguished lecturers. Research seminars associated with the school will also provide a venue for scientific exchange at the cutting edge.

The Main Topics will include :

- Systems Neuroscience
- Biochemical Networks
- Population and Evolution Biology
- Structural Biology
- Epigenetics
- Bioinformatics

PARTICIPATION:

Scientists and students from all countries which are members of the United Nations, UNESCO or IAEA may attend the School. As it will be conducted in English, participants should have an adequate working knowledge of that language. Although the main purpose of the Centre is to help research workers from developing countries, through a programme of training activities within a framework of international cooperation, a limited number of students and post-doctoral scientists from developed countries are also welcome to attend.

As a rule, travel and subsistence expenses of the participants should be borne by the home institution. 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 for those who attend the entire activity. **There is no registration fee.**

HOW TO APPLY FOR PARTICIPATION

The application form can be accessed at the activity website
<http://agenda.ictp.it/smr.php?2415>

Once in the website, comprehensive instructions will guide you step-by-step, on how to fill out and submit the application form.

Deadline for requesting participation: **31 July 2012**

ACTIVITY SECRETARIAT: Telephone: +39-040-2240576 Telefax: +39-040-2240585
E-mail: smr2415@ictp.it ICTP Home Page: <http://www.ictp.it/>

Directors

V. BALASUBRAMANIAN
Univ. of Pennsylvania, USA
M. MARSILI (local organizer)
ICTP, Trieste, Italy
A. SENGUPTA
Rutgers State Univ., USA
M. VENDRUSCOLO
Univ. of Cambridge, UK

Invited Lecturers

Srinivas Aluru (Iowa State, USA)
Vijay Balasubramanian (Penn, USA)
William Bialek (Princeton, USA)
Mitya Chklovskii (HHMI, USA)
Sebastian Doniach (Stanford, USA)
Daniel Fisher (Stanford, USA)
Remi Monasson (LPTENS, France)
Rob Russell (Heidelberg, Germany)
Ravi Sachidanandam (MSSM, USA)
Anirvan Sengupta (Rutgers, USA)
Jun Song (UC San Francisco, USA)

Invited Speakers include:

Luca Peliti (Univ. Napoli, Italy)
Daniel Segre (Boston U., USA)
Mukund Thattai (NCBS, India)
Gasper Tkacik (IST, Austria)
Aleksandra Walczak
(LPTENS, France)
Sunney Xie (Harvard, USA)

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31 July 2012