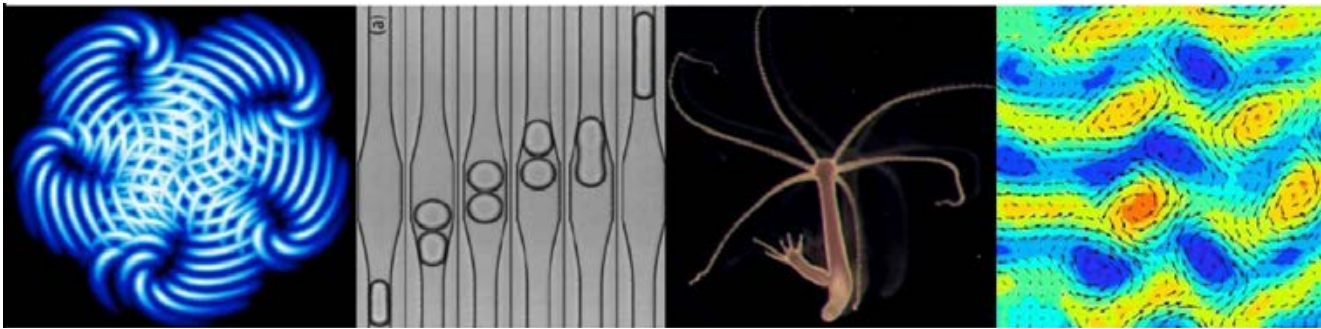




The Abdus Salam
International Centre
for Theoretical Physics
www.ictp.it



School on Hands-On Research in Complex Systems

28 June – 10 July 2015
(Miramare – Trieste, Italy)

The Abdus Salam International Centre for Theoretical Physics (ICTP), Trieste, Italy, will organize a School on Hands-On Research in Complex Systems from **28 June – 10 July 2015**.

This school will provide interactive experiences with hands-on research involving table-top experiments with computer data acquisition and computational modeling. The laboratory experiences, mathematical modeling, and lectures will focus on complex systems in the physical and life sciences. The faculty will be eminent scientists who have conducted frontier table-top research published in leading international scientific journals.

TOPICS AND FACULTY:

- Dynamics of Biological Swimmers** – Optical motion analysis of Brownian motion and other low Reynolds number phenomena (*P. Cicutta, Cambridge University*)
- Interplay of Mechanics and Probability** – Analyze trajectories in the coin toss (*E. Kanso, University of Southern California*)
- Nonlinear Optics** - Dynamics and instabilities (*R. Roy, University of Maryland*)
- Turbulence** – Flow analysis by imaging particles (*M. Schatz, Georgia Tech*)
- Modeling with MATLAB** - Introduction to MATLAB; Molecular Dynamics; granular media (*M. Shattuck, City College of New York*)
- Synchronization** – Analyze dynamics of coupled chemical oscillators (*K. Showalter, West Virginia University*)
- Fluid Instabilities** – Analyze digital movies to determine dynamics (*H. Swinney, University of Texas*)
- Modeling with MATLAB** – Introduction to MATLAB; fluid dynamics modeling (*B. Storey, Olin College*)
- Flow of Complex Fluids** – Microfluidics and video microscopy of flowing emulsions (*E. Weeks, Emory University*)

PARTICIPATION

Scientists and students from all countries, which are members of the United Nations, UNESCO or IAEA, may attend the School subject to approval by the activity Directors. The School is intended mainly for early career scientists and advanced Ph.D students from developing countries, working in areas such as chemistry, physics, biology, mathematics, and engineering. As the School will be conducted in English, participants should have an adequate working knowledge of that language. Although the ICTP main purpose is to help researchers 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.

There is no workshop registration fee. As a rule, travel and subsistence expenses of the participants should be borne by the home institutions. However, participants who are nationals of and working in a developing country and who are not more than 45 years old, will be considered, upon request, for subsistence support and for travel support up to one-half the cost of international airfare. Such support is available only for those who attend the entire activity.

More information about the Hands-On Schools is at www.handsonresearch.org

HOW TO APPLY FOR PARTICIPATION

The application form can be accessed at the activity website <http://agenda.ictp.it/smr.php?2752>

Once in the website, comprehensive instructions will guide you step-by-step, on how to fill out and submit the application form. Closing date for receipt of the applications is: **1 March 2015**.

ACTIVITY SECRETARIAT: Telephone: +39-040-2240-355 Telefax: +39-040-2240-585
E-mail: smr2752@ictp.it ICTP Home Page: <http://www.ictp.it/>

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DEADLINE
For requesting participation:

1 March 2015