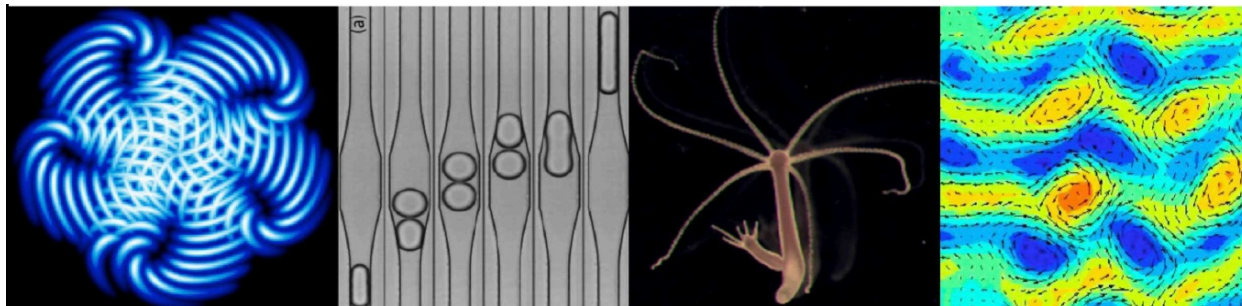




The Abdus Salam
**International Centre
for Theoretical Physics**
www.ictp.it



Hands-On School: Research in Complex Systems

Training in experimental methods and research skills, aimed at early stage researchers
18 – 29 July 2016
(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 **18 – 29 July 2016**. This is the 8th edition of a school to provide interactive experiences with hands-on research involving table-top experiments with computer data acquisition and computational modeling. An intensive programme of laboratory experiences, mathematical modeling, and lectures will focus on complex systems in the physical and life sciences. This will be integrated by development of professional skills. The faculty are eminent scientists who have conducted frontier table-top research published in leading international scientific journals. Participants will take part in most of the experimental stations, rotating daily. For the first time, in this edition we will propose conducting research projects beyond the duration of the school. *The School will be co-sponsored by the American Physical Society (APS), the Institute of Physics (IOP) and the European Physical Society (EPS).*

TOPICS AND FACULTY

Dynamics of self-propelled particles at air-water interfaces (M.M.Bandi, OIST, Japan)
Nonlinear dynamics - Optoelectronic systems (Y. K. Chembo, CNRS, Besançon, France)
Brownian motion and low Re phenomena - Optical analysis (P. Cicuta, University of Cambridge, UK)
Bio and neuromechanics of movement (D. Goldman, Georgia Tech, USA)
MATLAB for image analysis, chaotic dynamics, data assimilation (B.Hunt, University of Maryland, USA)
Molecular biology: Bacterial flagellar motor and random walks (T.Pilizota, University of Edinburgh, UK)
Turbulence - Flow analysis by imaging particles (M. Schatz, Georgia Tech, USA)
Directed and spontaneous assemblies of magnetic colloids and lipids (P.Sharma, IIS Bangalore, India)
Modeling in MATLAB - Molecular Dynamics; granular media (M. Shattuck, City College New York, USA)
Fluid Instabilities - Digital movies to determine dynamics (H. Swinney, University of Texas, USA)

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 some 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://indico.ictp.it/event/7654/>. 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 February 2016.**

ACTIVITY SECRETARIAT: Telephone: +39-040-2240-355 Telefax: +39-040-2240-585

E-mail: smr2872@ictp.it ICTP Home Page: <http://www.ictp.it/>



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DEADLINE

For requesting participation:

15 February 2016

