

# Hands-On Research in Complex Systems School



**16 Jul 2018 - 27 Jul 2018**  
**Trieste, Italy**

Further information:

Activity URL: <http://indico.ictp.it/event/8323/smr3224@ictp.it>

The School provides early stage researchers with interactive experiences of hands-on research involving table-top experiments with computer data acquisition and modeling. Participants will also take part in professional development of improved scientific communication in English.

## Description:

An intensive programme of laboratory experiments, mathematical modeling, and lectures give participants immersive experiences with complex systems in the physical and life sciences. Additionally, participants will present their own research in talks and posters with extensive faculty feedback to enhance the presentation quality. The faculty are eminent scientists who have conducted frontier table-top research published in leading international scientific journals.

## Topics:

- Biological Physics
- Modeling of Epidemics
- Soft Matter Physics-Dynamic light scattering
- Interfacial fracture of particle rafts
- Turbulence - Flow analysis by imaging particles
- Fluid Instabilities-Digital movies to determine dynamics
- Machine learning in table-top experiments
- Microfluidics
- Granular Materials
- Modeling in MATLAB - Molecular Dynamics
- Chemical patterns
- Cardiac dynamics
- Computational Modeling

## Directors:

M. F. SCHATZ, Georgia Institute of Technology, USA  
M. SHATTUCK, The City College of New York, USA  
H. L. SWINNEY, University of Texas, Austin USA  
M.L. CRESPO, ICTP  
J. NIEMELA, ICTP

## Local Organizers:

M.L. CRESPO, ICTP MLab

## Speakers:

M.M. BANDI, Okinawa Institute of Science and Technology, JAPAN  
L. CRISTOFOLINI, University of Parma, ITALY  
F. FENTON, Georgia Institute of Technology, USA  
V. GORDON, University of Texas, Austin, USA  
A. JUEL, University of Manchester, UK (tentative)  
E. KOSTELICH, Arizona State University, USA  
D. LATHROP, University of Maryland, College Park, USA (tentative)  
B. RODENBORN, Centre College, USA  
M. TINSLEY, West Virginia University, USA

## How to apply:

Online application:  
<http://indico.ictp.it/event/8323/>

Female students and scientists are encouraged to apply.

## Grants:

A limited number of grants are available to support the attendance of selected participants, with priority given to participants from developing countries. There is no registration fee.

## Deadline:

**4 March 2018**

