



Zanjan, Islamic Republic of Iran

The Institute for Advanced Studies in Basic Sciences (IASBS) and the Abdus Salam International Centre for Theoretical Physics (ICTP) are organizing a spring School on Active Matter and Chemotaxis from 14 to 25 May 2016. The School is intended for graduate students, post-doctoral fellows, faculty members, and others who would like to gain an understanding of the fundamentals of nonequilibrium cooperative phenomena for application to research in their respective fields.

The school is centred on **Active Matter** and **Chemotaxis**. Active matter deals with self-moving units, their interactions, and their collective dynamics, both in living and synthetic systems, such as catalytic self-propelled colloidal particles, swimming bacteria, muscles, and flocking birds. Chemotaxis is movement of an organism in response to a chemical stimulus. Somatic cells, bacteria, and other single-cell or multicellular organisms direct their movements according to certain chemicals in their environment. Topics will cover both experiment and theory. In addition to about 50 hours of invited lectures and seminars, there will be tutorials and discussions.

PARTICIPATION

Scientists and students from all countries which are members of the United Nations, UNESCO or IAEA may attend the School. Participants should have an adequate working knowledge of English. Although the main purpose of ICTP 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 to be selected by the Organizers, 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.

ORGANIZERS

Institute for Advanced Studies in Basic Sciences, IASBS

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IAEA

A. Celani (ICTP) R. Golestanian (University of Oxford) H. Fazli (IASBS) M. Maleki (IASBS) F. Mohammad-Rafiee (IASBS)

LECTURERS

Arezoo Ardekani (Purdue University) **Carsten Beta** (University of Potsdam) Eberhard Bodenschatz (MPIDS, Göttingen) Andrea Cavagna (CNR, Rome) **Pietro Cicuta** (University of Cambridge) Seth Fraden (Brandeis University) Frank Jülicher (MPIPKS, Dresden) **Tom Lubensky** (University of Pennsylvania) **Cristina Marchetti** (Syracuse University) Fernando Peruani (University of Nice) **Jacques Prost** (Institut Curie) **Sriram Ramaswamy** (TIFR, Hyderabad) Wouter-Jan Rappel (UC San Diego) Masaki Sano (Tokyo University) **Tom Shimizu** (FOM Institute AMOLF) Holger Stark (TU Berlin) **Julia Yeomans** (University of Oxford)

HOW TO APPLY FOR PARTICIPATION

The online application form can be accessed at the activity website: http://indico.ictp.it/event/7662/

Comprehensive instructions will guide you step by step to fill out and submit the application form. You may address general requests for information to:

ACTIVITIY SECRETARIAT

E-mail: <u>smr2880@ictp.it</u> and <u>amc2016@iasbs.ac.ir</u> Telephone: +39-040-2240623 (ICTP) and +98-24-33414747 (IASBS) Telefax: +39-040-22409623 (ICTP) and +98-24-33414949 (IASBS)

Activity web page at ICTP: <u>http://indico.ictp.it/event/7662/</u> Activity web page at IASBS: <u>www.iasbs.ac.ir/seminar/amc2016/</u>

DEADLINE

for requesting participation

15 January 2016

