# Summer School on Collective Behaviour in Quantum Matter

# 27 August - 14 September 2018 Trieste, Italy

This School, aimed at graduate students and junior researchers, aims to teach a modern course in condensed matter and statistical physics. It combines basic concepts with recent structural and interdisciplinary developments. It features a combination of theory and computational courses, and seminars on experimental progress in the field. The program will cover a broad variety of topics within condensed matter physics, emphasizing connections with related fields such as quantum information, atomic, optical and high-energy physics.

#### **Topics:**

- Statistical Mechanics: from foundations to quantum information;
- Numerical methods: high-level programming and advanced numerical methods;
- Coherent dynamics: entanglement, decoherence, phase transitions, driven systems;
- Topological quantum matter: phases and diagnostics;

Further information: http://indico.ictp.it/event/8331/ smr3235@ictp.it

## **Directors:**

C. CASTELNOVO (University of Cambridge, UK) M. DALMONTE (ICTP) P. FENDLEY (University of Oxford, UK) R. MOESSNER (MPIPKS Dresden, Germany)

# **ICTP Scientific Contact:**

A. SCARDICCHIO (ICTP)

# **Speakers:**

- F. ALET (CNRS, Toulouse, France)
  E. ANDREI (Rutgers University, US)
  B. BERI (University of Cambridge, UK)
  I. BLOCH (MPQ, Garching, Germany)
  P. CALABRESE (SISSA, Trieste, Italy)
  J. CHALKER (University of Oxford, UK)
  X. CHEN (CALTECH, US)
  J. DALIBARD (Collège de France, Paris, France)
  M. DEVORET (Yale University, US)
  D. DHAR (Tata Institute For Theoretical Physics, India)
  M. HEYL (MPIPKS Dresden, Germany)
  D. HUSE (Princeton, US)\*
  V. KHEMANI (Harvard University, US)
- W. KRAUTH (Ecole Normale Superieure, Paris, France)
- B. LAKE (Berlin Technical University, Germany)
- C. LAUMANN (Boston University, US)
- A. LAZARIDES (MPIPKS Dresden, Germany)
- A. MACKENZIE (MPI-CPFS Dresden, Germany)
- MADTINEZ (University of Operant gran Departure

 Physical implementations: cold atoms, trapped ions, nanophysics, materials. E. MARTINEZ (University of Copenhagen, Denmark) U. SCHOLLWOECK (LMU Munich, Germany) M. ZNIDARIC (University of Ljubljana, Slovenia)

\*to be confirmed

# How to apply:

Online application: http://indico.ictp.it/event/8331/

Female 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:**

for applicants requesting financial support

## 9 April 2018

for applicants NOT requesting financial support **14 May 2018** 







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