# Foundations and Applications of Nanomechanics

**25 - 29 September 2017**
**Trieste, Italy**

**Further information:**
**Activity URL: http://indico.ictp.it/event/8169/**
**E-mail: smr3147@ictp.it**

This workshop will highlight recent experimental and theoretical breakthroughs at the forefront of international research, and bring together international experts from the various fields of nanomechancs.

## Description:

The study of nanomechanical systems has evolved into a substantial and growing field of research. The interest in nanomechanical systems is fueled by their applicability to a wide range of problems: In addition to the ability to use these solid-state systems to investigate fundamental quantum physics and to target the frontiers of quantum mechanics, these systems also have applications in classical and quantum information technology and as ultrasensitive detectors of mass, displacement, acceleration, force or spin. As a result, research directions such as cavity optomechanics and nanoelectromechanics today attract a significant number of researchers from around the world. By their nature, nanomechanical systems are interdisciplinary, since they can couple to electrical circuits or optical cavities, and have potential applications in nano- and optomechanical technologies.

For the 1st week
Advanced School on Foundations and Applications of Nanomechanics
18 - 22 September 2017, go to link:
http://indico.ictp.it/event/7991/

## Topics:

- Optomechanics;
- Nanoelectromechanics;
- Nanomechanical arrays;
- Sensing;
- Photonic crystals for optomechanics;
- Diamond nanomechanics;
- Nanotubes and graphene for nanomechanics; surface-acoustic waves;
- Coupling to superconducting circuits;
- Microwave-to-optics conversion;
- Quantum effects;
- Foundational questions;
- Entanglement;
- and others.

## How to apply:

**Online application:**
**http://indico.ictp.it/event/8169/**

**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.**

## Directors:

**Andrew Cleland (University of Chicago)**
**Ivan Favero (Université Paris Diderot)**
**Mikhail Kiselev (ICTP)**
**Florian Marquardt (University of Erlangen-Nürnberg)**
**Fabio Pistolesi (Université de Bordeaux)**
**Eva Weig (University of Konstanz)**

## Local Organizer:

**Mikhail Kiselev (ICTP)**

## Speakers:

**Adrian Bachtold, ICFO Barcelona**
**Miles Blencowe, Dartmouth University**
**Warwick Bowen, University of Queensland**
**Tal Carmon, Technion**
**Aashish Clerk, McGill University**
**Eddy Collin, Institut NÉEL CNRS**
**Per Delsing, Chalmers**
**Rosario Fazio, ICTP Trieste**
**Simon Gröblacher, TU Delft**
**Shahal Ilani, Weizmann Institute**
**Ania Jayich, UC Santa Barbara**
**Hubert Krenner, University of Augsburg**
**Peter Leek, Oxford University**
**Francesco Marin, University of Florence**
**Andreas Nunnenkamp, Cambridge University**
**Vittorio Peano, University of Malta**
**Martino Poggio, Basel University**
**Cindy Regal, JILA Boulder**
**Amir Safavi-Naeini, Stanford University**
**Albert Schliesser, Niels Bohr Institute Copenhagen**
**Signe Seidelin, University of Grenoble**
**Gary Steele, TU Delft**
**Philipp Treutlein, University of Basel**
**Mukund Vengalattore, Cornell University**
**David Vitali, University of Camerino**
**Wolfgang Wernsdorfer, Karlsruhe Institute of Technology**
**Andre Xuereb, University of Malta**
**Yun-Feng Xiao, Peking University**

## Deadline:

**1 June 2017**

FRIEDRICH-ALEXANDER UNIVERSITÄT ERLANGEN-NÜRNBERG
European Research Council
Established by the European Commission
SFB 767
université PARIS DIDEROT

The Abdus Salam International Centre for Theoretical Physics
www.ictp.it
Strada Costiera 11, 34151 Trieste, Italy