



The Abdus Salam  
International Centre  
for Theoretical Physics



# Workshop on Twistronics and Moiré Materials: Bridging Theory and Experiments

## Description:

The aim of the workshop is to gather world-leading theorists and experimentalists in the field of moiré materials and to create a fertile environment for fostering ideas, promoting cross-talk between communities, and exposing researchers worldwide to the great variety of exotic phenomena in these materials.

## MORE DETAILS:

One of the most exciting developments in condensed matter physics in recent years is the emergence of moiré materials as a versatile platform to study quantum phases of matter. These materials exhibit a plethora of exotic quantum phenomena, including unconventional superconductivity, correlated insulating states, orbital magnetism, quantum anomalous Hall states, cascades of phase transitions, Chern insulators, unconventional ferroelectricity and superlubricity.

As a result, moiré physics touches many aspects of condensed matter physics, from blue sky research to cutting-edge technological applications.

## TOPICS:

- Flat band physics
- Unconventional superconductivity
- Strong correlation and correlated insulating phases
- Orbital magnetism
- Quantum anomalous Hall effect
- Chern insulators
- Moiré excitons

## SPEAKERS:

E. BASCONES, ICMM-CSIC Madrid, Spain  
B.A. BERNEVIG, Princeton University, USA  
G. CANTELE, CNR, Italy  
S. DE LA BARRERA, University of Toronto, Canada  
M. FABRIZIO, SISSA, Italy  
V. FALKO, University of Manchester, UK  
D. GUERCI, Flatiron Institute, USA  
F. GUINEA LOPEZ, IMDEA Nanociencia, Spain  
A. IMAMOGLU, ETH Zurich, Switzerland  
E. KAXIRAS, Harvard University, USA

D. KENNES, Max Planck Institute for the Structure and Dynamics of Matter, Germany  
F. KOPPENS, ICFO, Barcelona, Spain  
J. LADO, Aalto University, Finland  
A. LUICAN-MAYER, University of Ottawa, Canada  
S. NADJ-PERGE, California Institute of Technology, USA  
A. ROSSI, IIT Pisa, Italy  
O. VAPEK, Florida State University, USA  
F. WANG, University of California Berkeley, USA  
A. YAZDANI, Princeton University, USA



**16 - 19 January 2024**



**Trieste, Italy**



## Application and Deadlines:

**15 October 2023**

For applicants requesting financial and/or visa support

**15 November 2023**

For all other applicants

## DIRECTORS:

V. VITALE, University of Trieste, Italy  
M. STELLA, ICTP, Italy  
A. RUBIO, Max Planck Institute, Germany and Center for Computational Quantum Physics, Flatiron, Simons Foundation  
J. LISCHNER, Imperial College London, UK  
M. JAIN, Indian Institute of Science, Bangalore, India

## LOCAL ORGANISER:

N. SERIANI, ICTP, Italy

## FURTHER INFORMATION:



E-mail: [smr3918@ictp.it](mailto:smr3918@ictp.it)

Web: <http://indico.ictp.it/event/10456/>

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.

