

Recent Progress in Thermal Transport Theory and Experiments



30 May - 3 June 2022
An ICTP Virtual Meeting
Trieste, Italy

Further information:
<http://indico.ictp.it/event/9794/>
smr3711@ictp.it

Thermal management is becoming more relevant nowadays in ever decreasing-size electronic and optical devices generating more heat per unit volume, and in materials used in jet engines. We have witnessed many advances in the theories of thermal transport in the past decade: discovery of new excitations, a better understanding beyond the Fourier regime, description of highly anharmonic systems are but a few examples.

Topics:

- Anharmonic transport at high-temperatures
- Solid-solid phase change materials
- Systematic methods for high-throughput calculations
- Machine-learned potentials, their speed and success in predicting thermal properties
- Phonon hydrodynamics, relevant excitations
- Electron-phonon coupling
- Advances in solving Boltzmann Transport Equation
- Amorphous and disordered systems
- Phonon coherence in superlattices
- Phonon metamaterials, phonon engineering and novel phononic devices
- Excitations in strongly anharmonic systems

Directors:

K. ESFARJANI, University of Virginia, USA
R. GEBAUER, ICTP, Italy
L.F.C. PEREIRA, Universidade Federal de Pernambuco, Brazil

Local Organiser:

M. KISELEV, ICTP, Italy

Speakers:

J. ALARIA, University of Liverpool, UK
S.M.V. ALLAEI, University of Tehran, Iran
X. ALVAREZ, UAB, Spain
A.A. BALANDIN, UC Riverside, USA
M. BERNARDI, CALTECH, USA
G. CASATI, University of Insubria, Italy
A. CEPLOTTI, Harvard University, USA
G. CHEN, MIT, USA
O. DELAIRE, Duke University, USA
A. DHAR, ICTS-TIFR, India
K. ESFARJANI, University of Virginia, USA
Z. FAN, Varian and Aalto University, Finland
A. FIORENTINO, SISSA, Italy
G. FUGALLO, CNRS, France
M. HILKE, McGill University, Canada
M. HU, University of South Carolina, USA
C. HUA, ORNL, USA
F. KNOOP, Linköping University, Sweden
S. LEE, University of Pittsburgh, USA
C. LEWENKOPF, Fluminense Federal University, Brazil
B. LIAO, UC Santa Barbara, USA
T. LUO, University of Notre Dame, USA
I.J. MAASILTA, University of Jyväskylä, Finland
F. MAURI, University of Rome La Sapienza, Italy
A. MCGAUGHEY, Carnegie-Mellon University, USA
C. MELIS, University of Cagliari, Italy
N. MINGO, CEA, France
A.J. MINNICH, CALTECH, USA
B. MORTAZAVI, Leibniz University Hannover, Germany
L. PAULATTO, CNRS & Sorbonne University, France
A. RAJABPOUR, IKU, Iran
N. RAVICHANDRAN, IISc, India
G. ROMANO, MIT, USA
I. SAVIC, Tyndall National Institute, Ireland
A. SHAKOURI, Purdue University, USA
J. SHIOMI, University of Tokyo, Japan
T. TADANO, NIMS, Japan
Z. TIAN, Cornell University, USA
S. VOLZ, CNRS, University of Tokyo, Japan
J.S. WANG, National University of Singapore, Singapore

How to apply:

Online application:
<http://indico.ictp.it/event/9794/>

Female scientists are encouraged to apply.

Registration:

There is no registration fee.

Deadline:

7 May 2022



The Abdus Salam
**International Centre
for Theoretical Physics**
www.ictp.it
Trieste, Italy

