Advanced Workshop and School: Correlations in Electron Systems – from Quantum Criticality to Topology

6 -17 August, 2018 Trieste, Italy

The Abdus Salam International Centre for Theoretical Physics (ICTP, Trieste, Italy) in collaboration with the Gordon and Betty Moore Foundation, the Institute for Complex Adaptive Matter (ICAM-I2CAM), the National High Magnetic Field Laboratory, and the Department of Physics - University of Florida is organizing the School and Workshop on Correlations in Electron Systems - from Quantum Criticality to Topology.

Description:

Topics:

- This School and Workshop will bring graduate and postdoctoral students in condensed matter physics together with experts in the field to discuss the existing challenges and the latest theoretical and experimental developments in correlated electron systems and topological materials. The research talks will be held mostly during the first week (Aug. 6-10). On Friday, August 10, we will hold a mini-workshop "Fermions: heavy, topological, and critical". The tutorial lectures on various aspects of strongly correlated and topological electron systems will be given during the second week (Aug. 13-17).
- Novel theories of quantum criticality in metals and Mott insulators
- Superconductivity and competing orders
- Novel approaches to spin liquids
- Correlated systems with strong spin-orbit coupling
- Coulomb interaction in topological systems
- Topological superconductors

Further information: http://indico.ictp.it/event/8330/ smr3232@ictp.it

Directors:

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Speakers:

G. AEPPLI, Swiss Light Source, Switzerland N. ANDREI, Rutgers University, U.S.A. M. ARONSON, Texas A&M University, U.S.A. C. BATISTA, University of Tennessee, U.S.A. K. BEHNIA, ESPCI, France L. BENFATTO, La Sapienza University, Italy G. BLUMBERG, Rutgers University, U.S.A. S. BORISENKO, IFW, Dresden, Germany P. CHANDRA, Rutgers University, U.S.A. V. CHEIANOV, University of Leiden, Netherlands R. FERNANDES, University of Minnesota, U.S.A. R. FLINT, Iowa State University, U.S.A. Y. GALLAIS, Université Paris Diderot, France E. GULL, University of Michigan, U.S.A. S. HARTNOLL, Stanford University, U.S.A. N. HUSSEY, University of Bristol, U.K. L. IOFFE, University of Wisconsin-Madison, U.S.A. A. KAMENEV, University of Minnesota, U.S.A. A. KAPITULNIK, Stanford University, U.S.A. Y-B. KIM, University of Toronto, Canada A. MACKENZIE*, Max Planck Institute for Chemical Physics of Solids, Germany Y. MATSUDA, Kyoto University, Japan E. MIRANDA, Universidade Estadual de Campinas, Brazil J. MORENO, Louisiana State University, U.S.A. A. PARAMEKANTI, University of Toronto, Canada I. PAUL, Université Paris Diderot, France C. PEPIN, CEA, France J. PIXLEY, University of Maryland, U.S.A. A. POSAZHENNIKOVA, Royal Holloway College, University of London, U.K. N. PROKOFIEV, University of Massachusetts, U.S.A.

- C. PROUST, LNCMI, Toulouse, France S. RAGHU, Stanford University, U.S.A.
- S. RAGHU, Stanford University, U.S.A. S. RYU, University of Chicago, U.S.A.

How to apply:

Online application: http://indico.ictp.it/event/8330/

Women are particularly 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. T. SHIBAUCHI, University of Tokyo, Japan

Q. SI, Rice University, U.S.A.

F. STEGLICH, Max Planck Institute for Chemical Physics of Solids, Germany

- A. TSVELIK, Brookhaven National Laboratory, U.S.A.
- A. VISHWANATH*, Harvard University, U.S.A.

L. YU, Institute of Physics, P.R. China

E. YUZBASHAN, Rutgers University, U.S.A.

(* to be confirmed)

Deadline:

15 May 2018





