5th MaNEP Winter School

13-18 January 2013 in Saas-Fee

Understanding electronic and magnetic correlations



The school combines introductory courses with more specialized lectures in the field of correlated quantum matter.



The school offers long courses for a broad introduction to subjects of general interest in condensed-matter research—quantum phase transitions, strongly-correlated electrons in oxides, and in heavy-fermion materials. These basic courses are enriched by five shorter lectures. Two of them introduce fields at the forefront of contemporary research—topological matter and interfaces of transition metal oxides—and three describe important experimental techniques for the exploration of condensed-matter systems—local probes (NMR, μ SR), surface probes (ARPES, STM), and neutron and resonant inelastic light scattering.

The audience targeted is at the doctoral and post-doctoral level. A background in general condensed-matter physics should be sufficient. All courses are given in English.

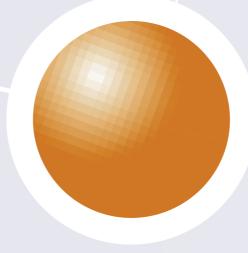
Program committee

Frederic Mila (chair), Christian Bernhard, Dirk van der Marel, Christian Rüegg, Manfred Sigrist

Organization

Christophe Berthod, Elizabeth Gueniat, Gregory Manfrini

Applications should be made via the MaNEP web site (http://www.manep.ch/en/events/saasfee13) where further information can be obtained. Closing date for applications is October 31, 2012.



Program

Basic courses

Quantum phase transitions Christian Pfleiderer Technische Universität München

Correlated electrons in oxides Andrew Millis Columbia University

Heavy fermions
Piers Coleman
Rutgers University

Specialized lectures

Topological matter Carlo Beenakker Leiden University

Interfaces of transition metal oxides Jean-Marc Triscone University of Geneva

Local probes: NMR and µSR Philippe Mendels LPS, Paris-Sud 11 University

Surface probes: ARPES and STM Felix Baumberger University of Geneva

Neutron and resonant inelastic light scattering Henrik Rønnow EPF Lausanne