

# 6th MaNEP Winter School

18–23 January 2015 in Saas-Fee

## Shedding light on correlated electrons



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

The school aims at a broad introduction to topics of current interest in condensed-matter physics. This year, a special focus is devoted to spectroscopies of materials with strong electron correlations, especially time-resolved techniques. Three long lectures will provide an introduction to these materials and their electronic structure, to the fundamental aspects of optics and non-linear optics in solids, and to superconductivity and topological superconductors. Five shorter lectures will cover: neutron scattering, recent advances on cuprate superconductors using photoemission and resonant spectroscopies, introductions to time-resolved spectroscopies and to the theory of non-equilibrium dynamics of strongly-correlated systems.

The school targets an audience at the doctoral and post-doctoral levels. A background in general condensed-matter physics should be sufficient. All lectures are given in English.

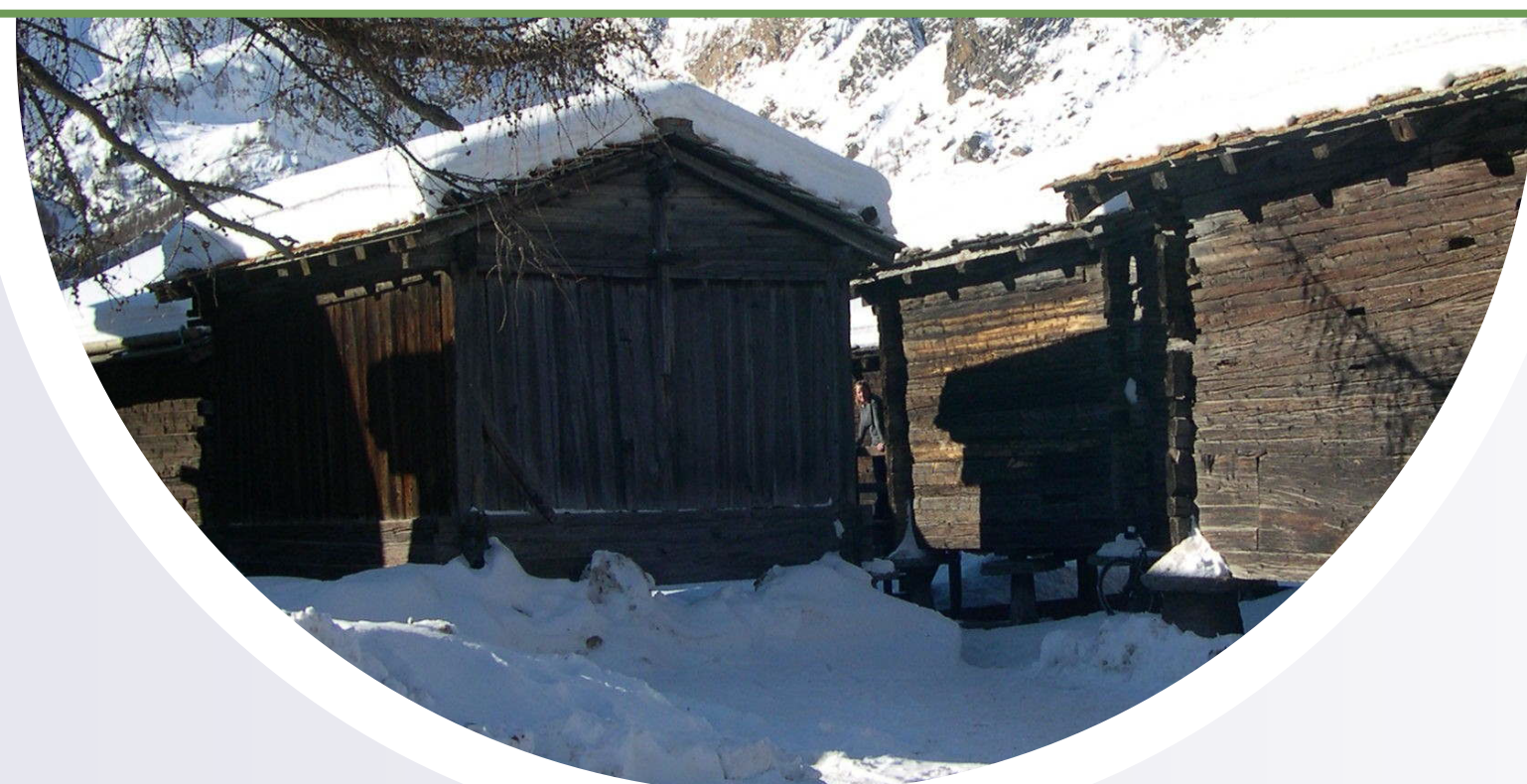
### Program committee

Antoine Georges (chair), Felix Baumberger, Fabrizio Carbone, Michel Kenzelmann, Nicola Spaldin, Philipp Werner

### Organization

Christophe Berthod, Pascal Cugni, Gregory Manfrini, Christophe Schwarz, Natacha Triscone

For registrations and further information, please browse the MaNEP Network site <http://www.manep.ch/saasfee15>. Deadline for registrations is October 31, 2014.



## Program

### Basic courses

Topological superconductivity  
Annica Black-Schaffer  
*Uppsala University*

Photon-matter interactions  
Roberto Merlin  
*University of Michigan*

Correlated materials and spectroscopies  
George Sawatzky  
*University of British Columbia*

### Specialized lectures

Time-resolved spectroscopy  
Gabriel Aeppli  
*PSI and ETH Zürich*

Spectroscopic probes of cuprates  
Johan Chang  
*EPF Lausanne*

THz control of crystal structures  
Steven Johnson  
*ETH Zürich*

Neutron scattering  
Christian Rüegg  
*PSI and University of Geneva*

Out-of-equilibrium dynamics: theory  
Philipp Werner  
*University of Fribourg*