International Max Planck Research School for Condensed Matter Science

# International School

# Superconductivity and Magnetism at the Nanoscale

## June 30 – July 3, 2014 in Stuttgart, Germany

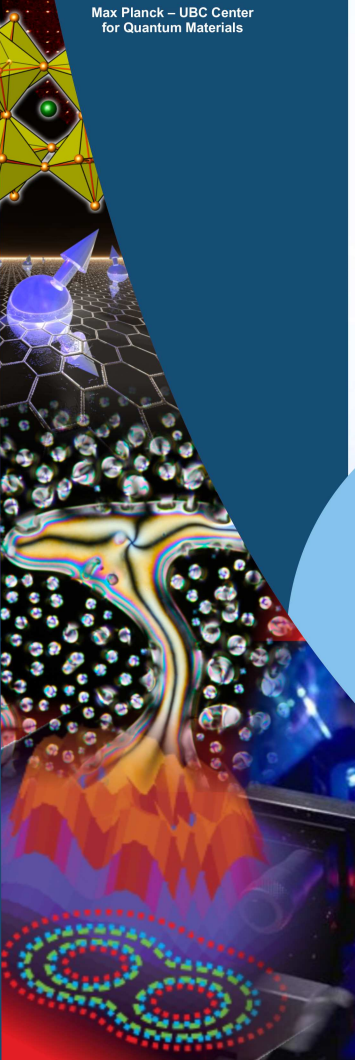
IMPRS Condensed Matter Science

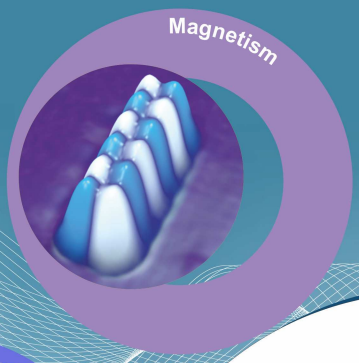
**Speaker:**

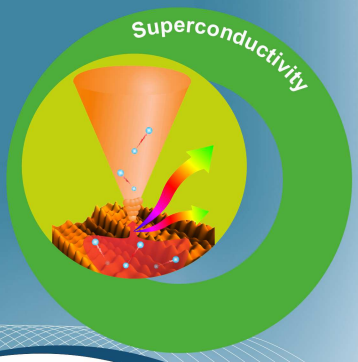
**Prof. Dr. B. Keimer**
Max Planck Institute for
Solid State Research

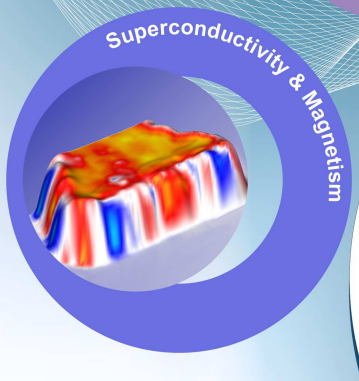
Max Planck – EPFL Center for
Molecular Nanoscience and Technology

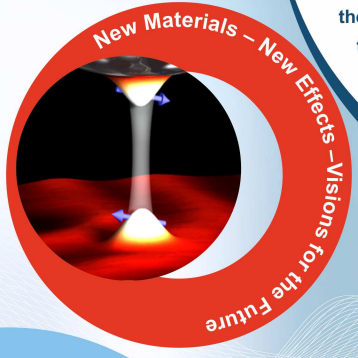
Max Planck – UBC Center
for Quantum Materials






### Scope

Superconductivity and magnetism are often seen as incompatible phenomena as magnetism easily destroys superconductivity. However, in some instances a coexistence with intriguing properties may ensue when, for example, the dimensions of the superconductor are reduced or the magnetic moments are very localized. Both superconductivity and magnetism are fascinating subjects on their own and they are far from being understood. In combination, they have revealed an even stranger world of effects, of which it seems that we have only scratched the surface so far. This summer school will cover the topics superconductivity and magnetism as well as the combination of the two, how they can coexist in materials and how they interact to produce new particles, such as the Majorana fermion.

### Confirmed Speakers

Mona Berciu (UBC Vancouver), Kirsten v. Bergmann (University of Hamburg), Stefan Blügel (FZ Jülich), Harald Brune (EPFL Lausanne), Andrey Chubukov (UW Madison), Hugo Dil (EPFL Lausanne), Katharina Franke (FU-Berlin), Marcel Franz (UBC Vancouver), Jenny Hoffman (Harvard University / UBC Vancouver), Stefan Kaiser (MPI-SD Hamburg), Mathieu LeTacon (MPI-FKF Stuttgart), Pavel Ostrovsky (MPI-FKF Stuttgart), Abhay Pasupathy (Columbia University), Stuart Parkin (IBM Almaden), Andreas Rost (MPI-FKF Stuttgart), George Sawatzky (UBC Vancouver), Andreas Schnyder (MPI-FKF Stuttgart), Ilya Sochnikov (Stanford), Hermann Suderow (Universidad Autónoma de Madrid), Markus Ternes (MPI-FKF Stuttgart), Peter Wahl (University of St. Andrews), Wolfgang Wernsdorfer (CNRS Grenoble)

### Registration only via

www.imprs-cms.mpg.de

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### Scientific Organizers

Christian Ast • Sebastian Loth
Max Planck Institute for Solid State Research

### Participation

The school is intended for PhD students in Chemistry, Physics and Materials Science. All members of the IMPRS-CMS and everyone interested in participating are cordially invited to come to Stuttgart. The participation is free of charge.

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