

Program of the
WORKSHOP ON
Quantum Matter

in Cologne, 10th – 12th Oktober 2007

Wednesday, 10th Oktober

- 9:00 Conference desk opens
9:30-10:30 **P. Gegenwart**
University of Goettingen, Germany
Overview: Quantum criticality in heavy-fermion systems
Coffee 30 min.
11:00-11:40 **M. Garst**
University of Cologne, Germany
Thermal expansion near field-driven quantum phase transitions
11:40-12:30 **C. Pfleiderer**
Technical University of Munich, Germany
Quantum Order of Chiral Magnets

Lunch & Coffee 2h.
14:30-15:20 **J. Schmalian**
Iowa State University & Ames National Laboratory, USA
Superconductivity and bond order in a doped Mott insulator
Coffee 20 min.
15:40-16:20 **M. Vojta**
University of Cologne, Germany
Dimensional reduction and quantum criticality in frustrated antiferromagnets
16:20-17:00 **A. V. Sologubenko**
University of Cologne, Germany
Magnetothermal transport in spin chain materials

Poster session – with food

Thursday, 11th Oktober

- 9:00 Conference desk opens
9:30-10:30 **M. Sawicki**
Polish Academy of Science, Warszawa, Poland
Overview: Diluted ferromagnetic semiconductors
Coffee 30 min.
11:00-11:50 **L. W. Molenkamp**
University of Wuerzburg, Germany
Spin Hall effects in HgTe Quantum Well Structures
11:50-12:30 **M. W. Haverkort**
University of Cologne, Germany
Magnetic properties and spin-state transitions in the Cobaltates: The importance of intra-atomic orbital-orbital, spin-spin and spin-orbital correlations

Lunch & Coffee 2 h
14:30-15:20 **C. Renner**
University of Geneva, Switzerland
Polarons and charge confinement in manganites
15:20-16:00 **T. Lottermoser**
Bonn University, Germany
Multiferroics: Modern magnetoelectric materials
Coffee 20 min.
16:20-17:00 **M. Braden**
University of Cologne, Germany
Magnetic Excitations in Multiferroic TbMnO₃
17:00-17:50 **J. Saunders**
Royal Holloway London, Great Britain
Quantum phase transitions in two dimensional helium

Dinner

Friday, 12th Oktober

- 9:00 Conference desk opens
9:30-10:20 **K. Kanoda**
University of Tokyo and CREST-JST, Japan
Correlated electrons on triangular lattice near Mott transition -- from spin liquid to superconductivity --
Coffee 30 min.
10:50-11:40 **O. Tchernyshyov**
Johns Hopkins University, USA
Lattice distortion and magnetic helix in the antiferromagnetic spinel CdCr₂O₄
11:40-12:20 **J. Hemberger**
University of Cologne, Germany
Frustration of coupled microscopic degrees of freedom in spinel compounds

End of Workshop