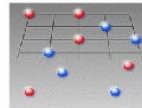


Student Seminar Winter Term 20 Cologne, October 7-9, 2015



SFB/Transregio 49

Frankfurt – Kaiserslautern - Mainz
Condensed matter systems with variable
many-body interactions

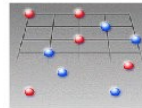
Wednesday, October 7

- Until 12:30 Arrival at venue
- 12:30-14:00 *Lunch*
- 14:00-14:45 Tobias Lausch (Kaiserslautern):
Optimization of cooling and generation of quantum gases
- 14:45-15:00 Discussion
- 15:00-15:45 Bodhaditya Santra (Kaiserslautern):
Scanning electron microscopy of cold gases
- 15:45-16:00 Discussion
- 16:00-16:30 Coffee Break
- 16:30-17:15 Andreas Rückriegel (Frankfurt):
Rayleigh-Jeans condensation of pumped magnons
- 17:15-17:30 Discussion
- 17:30-18:15 Alisa Chernenkaya (Mainz):
General introduction in photoemission and Near Edge X-Ray
Absorption Fine Structure (NEXAFS) as measurement techniques
- 18:15-18:30 Discussion
- 18:30-20:00 *Dinner*
- 20:00-22:00 **Poster Session (see Appendix)**

Thursday, October 8

- 08:00-09:00 *Breakfast*
- 09:00-11:00 Hans-Peter Eckle (Ulm):
Good Scientific Practice – Part 1
- 11:00-11:30 *Coffee Break*
- 11:30-12:30 Hans-Peter Eckle (Ulm):
Good Scientific Practice – Part 2

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12:30-14:00 *Lunch*

14:00-18:30 **Excursion**

18:30-20:00 *Dinner*

Friday, October 9

08:00-09:00 *Breakfast*

09:00-09:45 Alisa Chernenkaya (Mainz):

Using the photoemission methods and NEXAFS

*for investigating the low-temperature phase transition in
high-correlated organic conductors*

09:45-10:00 Discussion

10:00-10:45 Lars Postulka (Frankfurt):

Experiments below 1K: Measurements and techniques - Part 1

10:45-11:00 Discussion

11:00-11:30 *Coffee Break*

11:30-12:15 Ulrich Tutsch (Frankfurt):

Experiments below 1K: Measurements and techniques - Part 2

12:15-12:30 Discussion

12:30-14:00 *Lunch*

14:00-14:45 Kira Riedl and Vladislav Borisov (Frankfurt):

Dzyaloshinskii-Moriya interactions: the example of pyrochlores

14:45-15:00 Discussion

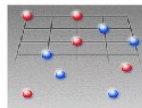
15:00-15:45 Anand Sharma (Frankfurt):

Electronic properties of graphene using non-perturbative method

15:45-16:00 *Discussion*

16:00-16:30 Departure

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Condensed matter systems with variable
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Poster Session:

Michaela Altmeyer (Frankfurt): *Gap symmetry of organic superconductors from spin-fluctuation theory*

Andrey Bardin (Mainz): *Intrinsic glassiness as an invaluable tool for estimation of crucial parameters governing normal and superconductive states of BEDT-TTF κ -salts*

Dmytro Bozhko (Kaiserslautern): *Formation of Bose-Einstein magnon condensate via dipolar and exchange thermalization channels*

Benjamin Gänger (Kaiserslautern): *Towards impurities in an ultracold Fermi gas*

Elena Gati (Frankfurt): *Dilatometric studies and magnetic characterization of single-crystalline Barlowite - a structurally perfect spin-1/2 kagome system*

Benedikt Hartmann (Frankfurt): *Mott metal-insulator transition induced by utilizing a glass-like structural ordering in low-dimensional molecular conductors*

Kevin Jägering (Kaiserslautern): *The density-matrix renormalization group method*

Ryui Kaneko (Frankfurt): *Charge disproportionation in two-band extended Hubbard model*

Kubandiran Kolanji (Mainz): *Phenyl and thiophene, bridge nitronyl nitroxides biradicals with different fashion*

Matthias Moos (Kaiserslautern): *Weakly bound states of Rydberg polaritons*

Denis Morath (Kaiserslautern): *1D phenomena in a 3D world*

Antonia Morherr (Frankfurt): *New charge-transfer salts based on π -conjugated donor molecules*

Rajbir Nirwan (Frankfurt): *Superfluid phases in the presence of artificial gauge fields*

Axel Pelster (Kaiserslautern): *Ground state and Floquet realization of anyons in a one-dimensional optical lattice*

Pascal Puphal (Frankfurt): *Single crystal growth of tunable quantum spin systems*

Dominik Straßel (Kaiserslautern): *Magnetocaloric effects, quantum critical points, and the BKT-transition in 2D coupled spin-dimer systems*

David Zielke (Frankfurt): *Resistivity and dielectric studies on κ -(BEDT TTF) $\text{Hg}(\text{SCN})_2 \text{Cl}_2$ under He-gas pressure*