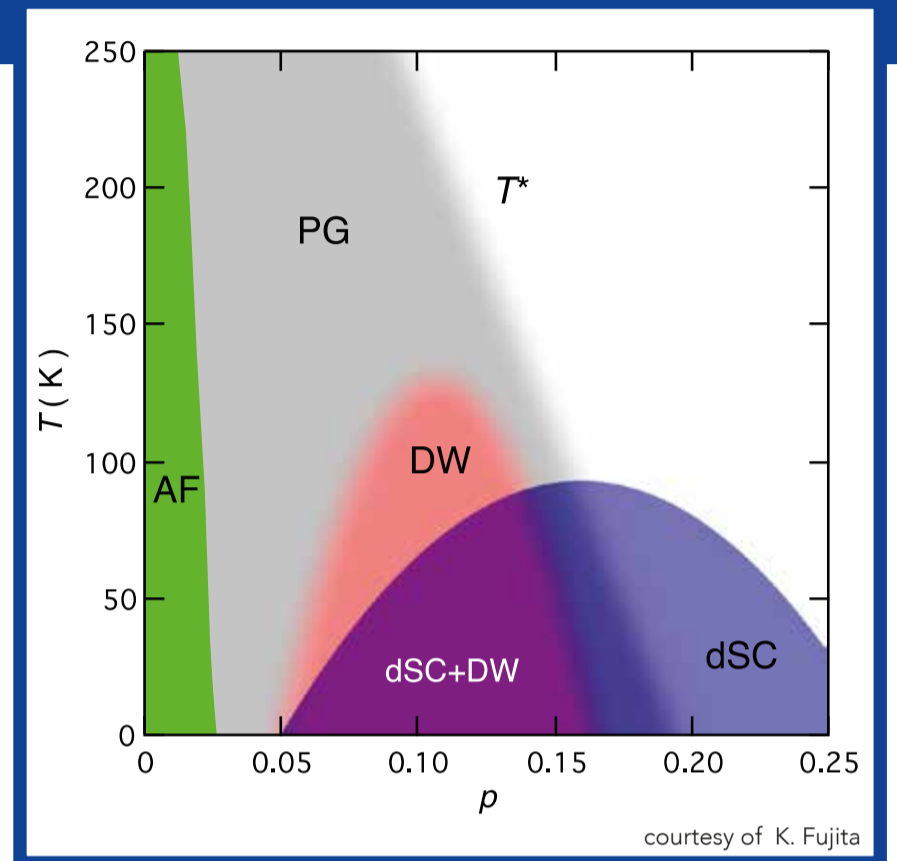




Strong Correlations and the Normal State of the High Temperature Superconductors

International Seminar & Workshop 17 - 27 May 2016

To understand high-temperature superconductivity one needs to understand first the normal state of high- T_c materials. This is a challenging task given the involvement of multiple contributing factors. The workshop will focus on in-depth discussion of the normal states of various high- T_c materials, in particular on the origin of the pseudogap in the cuprates and of the nematic phase in Fe-based superconductors.



Topics

- Is the pseudogap in the cuprates below T^* a phase with a broken symmetry or a crossover region? If the symmetry is broken, what is the, order parameter?
- Is the Fermi liquid concept applicable to high- T_c superconductors?
- What is the origin of linear in T resistivity?
- Is the concept of quantum critical behavior useful for the description of the normal state of high- T_c materials?
- Does the Fermi arc represent a nodal quasi-particle density of states or reflect a strong incoherence of excitations?
- What is the origin of the nematic phase in iron pnictides? Is it a spontaneous orbital order or vestigial magnetic order?
- Is the concept of „orbital selective Mott transition“ relevant for Fe-pnictides?

Invited speakers

(* to be confirmed)

James Analytis (US)
 Elena Bascones (ES)
 Sergey Borisenko (DE)
 Bernd Büchner (DE)
 Amalia Coldea (UK)
 Luca de' Medici (FR)
 Rafael Fernandes (US)
 Neil Harrison (US)
 Nigel E. Hussey (NL)
 Marc-Henri Julien (FR)
 Aharon Kapitulnik (US)
 Hiroshi Kontani (JP)
 Gabriel Kotliar (US)
 Alessandra Lanzara (US)
 Dung-Hai Lee (US)
 Mathieu Le Tacon (DE)
 Andrew Mackenzie (DE)
 Dmitrii Maslov (US)
 Yuji Matsuda (JP)
 Walter Metzner (DE)
 Andrew Millis (US)

Catherine Pépin (FR)
 Srinivas Raghu (US)
 Subir Sachdev* (US)
 Jörg Schmalian (DE)
 Louis Taillefer (CA)
 Oskar Vafek (US)
 Chandra Varma (US)
 Matthias Vojta (DE)
 Xingjian Zhou (CN)

Scientific coordinators

Andrey Chubukov
 Minneapolis, USA
 Bernhard Keimer
 Stuttgart, Germany
 Mohit Randeria
 Columbus, USA
 Suchitra Sebastian
 Cambridge, UK

Organisation

Katrin Lantsch
 MPIPKS Dresden

Applications received before 29 February 2016 are considered preferentially.

Applications are welcome and should be made by using the application form on the event's web page. The number of attendees is limited. The registration fee for the international seminar and workshop is 120 Euro and should be paid by all participants. Costs for accommodation and meals will be covered by the Max Planck Institute. Limited funding is available to partially cover travel expenses. Please note that childcare is available upon request.

For further information please contact:

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