International Workshop and Seminar on

Modern Aspects of Quantum Impurity Systems

March 31 - April 18, 2003

Scientific coordinators:

R. Bulla
Universität Augsburg
Augsburg, Germany

D. E. Logan
Oxford University
Oxford, UK

A. Schiller
The Hebrew University
Jerusalem, Israel

Organisation: **K. Lantsch** MPIPKS Dresden

The investigation of quantum impurity problems has led over many years to a considerable increase in the understanding of correlated electron systems. The field has recently witnessed a strong resurgence of experimental interest, stimulated in part by important advances in preparing and interrogating quantum impurity systems. Notable examples include the observation of Kondo-like features in systems of magnetic adatoms on metallic surfaces, probed by scanning tunneling microscopy, and dramatic experimental confirmation that suitably fabricated mesoscopic quantum dots constitute directly tunable Anderson impurities. Coupled with experimental advances, recent years have also seen significant progress in theoretical methods for handling quantum impurity models. This Seminar should therefore bring together both theorists and experimentalists working actively in the area of quantum impurity problems.
The topics covered in the Seminar will include

- General issues in the physics of quantum impurity and related systems.
- Quantum dots and Kondo physics.
- The Kondo effect on surfaces.
- Theoretical approaches to quantum impurity and related models.
- From impurity to lattice systems.
- Magnetic impurities in correlated hosts and unconventional superconductors.

Preliminary list of invited participants:

F.B. Anders (Darmstadt, Germany)
R. Berndt (Kiel, Germany)
T.A. Costi (Karlsruhe, Germany)
D.L. Cox (Davis, USA)
M.F. Crommie (Berkeley, USA)
J.C. Davis (Berkeley, USA)
J. von Delft (München, Germany)
S. de Franceschi (Delft, The Netherlands)
P. Fulde (Dresden, Germany)
L.I. Glazman (Minnesota, USA)
M.T. Glossop (Oxford, UK)
D. Goldhaber-Gordon (Harvard, USA)
A.C. Hewson (London, UK)
W. Hofstetter (Harvard, USA)
K. Ingersent (Gainesville, USA)
M. Jarrell (Cincinnati, USA)
H.R. Krishnamurthy (Bangalore, India)
J. Kroha (Karlsruhe, Germany)
H.-A. Krug von Nidda (Augsburg, Germany)
D.C. Langreth (Rutgers, USA)
H. Manoharan (Stanford, USA)
P. Nordlander (Rice, USA)
J. Nygard (Copenhagen, Denmark)
L.N. Oliveira (Sao Paulo, Brazil)
Th. Pruschke (Augsburg, Germany)
F. Reinert (Saarbrücken, Germany)
S. Sachdev (Yale, USA)
A. Schneider (Stuttgart, Germany)
K. Schönhammer (Göttingen, Germany)
F. Steglich (Dresden, Germany)
M. Vojta (Augsburg, Germany)
D. Vollhardt (Augsburg, Germany)
A. Zawadowski (Budapest, Hungary)
V. Zlatič (Zagreb, Croatia)

Application forms can be filled in online. The deadline for applications is December 15, 2002. The workshop registration fee is 100 €. Costs for accommodation and meals will be covered by the Max Planck Institute for the Physics of Complex Systems. In exceptional cases, limited funding is available for partial support of travel expenses.

For further information and application forms please contact:

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