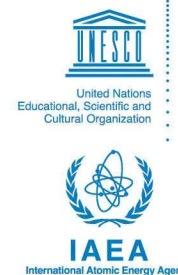




**The Abdus Salam
International Centre for Theoretical Physics**



**Workshop on
Principles and Design of
Strongly Correlated Electronic Systems**

2 - 13 August 2010

Miramare - Trieste, Italy

The Abdus Salam International Centre for Theoretical Physics (ICTP, Trieste, Italy) is organizing a **Workshop on Principles and Design of Strongly Correlated Electronic Systems** to be held at the ICTP, from **2 - 13 August 2010**. This Workshop is co-sponsored by the Institute for Complex Adaptive Matter (ICAM-I2CAM), Interdisciplinary Approaches to Functional Electronic and Biological Materials (INTEL-BIOMAT) funded by the European Science Foundation (ESF) and RIKEN Advanced Science Institute.

CO-ORDINATORS:

Andrey CHUBUKOV (University of Wisconsin, Madison, USA)
Piers COLEMAN (Rutgers University, Piscataway, USA)
Andy SCHOFIELD (University of Birmingham, UK)
Hide TAKAGI (University of Tokyo, Japan)

LOCAL ORGANIZER:

Erio TOSATTI (ICTP-SISSA-Democritos, Trieste, Italy)

DESCRIPTION: Strongly correlated electron systems remain at the center of experimental and theoretical activities in condensed-matter physics. These are complex systems, which exhibit self-organized behavior driven by unifying principles. The search for these principles is fueled by a continuing stream of discoveries of new materials, particularly new superconductors, by new insights into the interplay of solid-state chemistry and correlated electron behavior, by new findings from high-precision experiments, and the profound connections between theoretical methods in high energy physics and those of the many-body problems. This is a field that continues to re-invent itself through a stream of new discoveries.

The aim of this Workshop is to explore, understand, and exploit the interconnections and clarify distinctions across the breadth of strongly correlated quantum systems with a particular focus on correlated electrons, superconductivity, Mott physics and quantum magnetism.

The Workshop will bring together cutting edge researchers- theoretical and experimental condensed matter physicists and chemists active in the area of emergent quantum materials: heavy fermions, frustrated spin systems, oxide metals and high temperature superconductors - both cuprates and pnictides.

TOPICS:

Materials design;
New perspectives on electron localization;
New developments in quantum magnetism;
Interplay between magnetism and superconductivity.

PARTICIPATION: Scientists and students from all countries that are members of the United Nations, UNESCO or IAEA may attend. As the Workshop will be conducted in English, participants should have an adequate working knowledge of this language. Although, the main purpose of the Centre is to help research workers from developing countries, through a programme of training activities within a framework of international cooperation, a limited number of students and post-doctoral scientists from developed countries are also welcome to attend.

As a rule, travel and subsistence expenses of the participants should be borne by their home institution. Every effort should be made by candidates to secure support for their fare. However, very limited funds are available for partial support of some participants who are nationals of, and working in, a developing country, and who are not more than 45 years old. Such support is available only for those who attend the entire Workshop. **There is no registration fee for attending this activity.**

HOW TO APPLY FOR PARTICIPATION

An Online Application Form can be accessed through the Workshop website
<http://agenda.ictp.it/smr.php?2157>

Once in the website, comprehensive instructions will guide you step-by-step on how to fill out and submit the Application Form.

WORKSHOP SECRETARIAT:

Telephone: +39-040-2240346
E-mail: smr2157@ictp.it

Fax: +39-040-224163
ICTP Home page: <http://www.ictp.it/>





ICAM-I2CAM
Institute for Complex Adaptive Matter

**Institute for Complex
Adaptive Matter**

INTEL-BIOMAT

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**EUROPEAN
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SETTING SCIENCE AGENDAS FOR EUROPE



RIKEN

INVITED SPEAKERS:

H. Alloul (France)
M. Aronson (USA)
E. Bauer (USA)
L. Benfatto (Italy)
B. Buechner (Germany)
S. Buehler-Paschen (Austria)
K. Burch (Canada)
P. Canfield (USA)
S.-W. Cheong (USA)
A. Dai (France)
I. Eremin (Germany)
R. Flint (USA)
Z. Fisk (USA)
A. Furusaki (Japan)
M. Garst (Germany)
R. Greene (USA)
J. Grin (Germany)
T. Hanaguri (Japan)
P. Hirschfeld (USA)
K. Ishida (Japan)
Y. Iwasa (Japan)
A. Kaminski (USA)
A. Kapitulnik (USA)
B. Keimer (Germany)
A. MacKenzie (UK)
Y. Matsuda (Japan)
R. Moessner (Germany)
S. Nakatsuji (Japan)
P. Pagliuso (Brazil)
F. Schuppe (Germany)
J.C. Seamus Davis (USA)
S.E. Sebastian (UK)
S. Shin (Japan)
Z. Tesanovic (USA)
M. Vojta (Germany)
S. Wirth (Germany)
L. Yu (China)
M. Zahid Hasan (USA)

Deadline for Application
15 APRIL 2010