

## CONFERENCE ANNOUNCEMENT:

# 'AB-INITIO MANY-BODY THEORY FOR CORRELATED ELECTRON SYSTEMS'

25 - 29 August 2003  
Miramare, Trieste, Italy

We would like to announce and encourage participation in the **Conference on 'Ab-initio many-body theory for correlated electron systems'** to be held at the Abdus Salam International Centre for Theoretical Physics (ICTP) in Trieste, Italy from **25 to 29 August 2003**.

This conference is supported by the ICTP and Psi-k. Its overall aim is to communicate the latest technical developments in ab-initio many body calculations and to illustrate this on a few selected applications.

The *technical topics* which will be stressed at this conference are:

- Dynamical mean field theory (DMFT) and electronic structure calculations, with applications to d- and f-electron materials;
- Recent developments on the GW approximation. This includes in particular issues related to self-consistency, and recent efforts to combine GW with DMFT towards a first-principles electronic structure method for strongly correlated electron systems;
- Latest developments and applications of Quantum Monte Carlo methods;
- Developments in Density Functional Theory and its implementation: time-dependent DFT, "downfolding" on a few-orbital hamiltonian, etc...

*Applications* of these methods to materials-specific calculations will include:

- transition metals and their oxides;
- f-electron materials;
- fullerenes.

In addition, *topical sessions* on experimentally active field will be organized on:

- Spectroscopies;
- high pressure studies;
- ferromagnetic superconductors;
- magnetic semiconductors and nanoelectronics, including transport.

### **CONFIRMED SPEAKERS include:**

O.K. Andersen, V. Anisimov, F. Aryasetiawan, T. Dietl, S. Erwin, C. Filippi, R. Godby, H. Gross, K. Held, T. Kotani, C. Lambert, T. Le Bihan, I. Mertig, R. Needs, M. Rozenberg, A. Rubio, S. Savrasov, A. Schindlmayr, T. Schultess, K. Syassen, A. Svane, A. Lichtenstein, W. Pickett, D. van der Marel, G. Zarand, S. Zhang.

### **PARTICIPATION**

Scientists and students from all countries which are members of the United Nations, UNESCO or IAEA may attend the course. As it 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 the home institution. Every effort should be made by candidates to secure support for their fare (or at least half-fare). However, limited funds are available for 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 activity. *There is no registration fee.*

Additional information: **Application Form, Preliminary Programme and Registration Information**, is obtainable from the ICTP WWW server:

**Activity Home Page** <http://www.ictp.trieste.it/~smr1512/>

and

<http://agenda.ictp.trieste.it/agenda/current/fullAgenda.php?email=0&ida=a0277> (which will be constantly up-dated) or from the activity Secretariat. The Application form should be completed and returned before **30 May 2003** to:

*Ab-initio Many-Body Theory....  
smr1512 (c/o Lisa Iannitti)*

*the Abdus Salam International Centre for Theoretical Physics  
Strada Costiera 11, 34014 Trieste, Italy.*

or

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*(please save and send file attachments in RTF format)*

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