

Summer College and Conference on "Physics and Chemistry of Rare Earth Manganites"

1 - 18 June 2003

Miramare - Trieste, Italy

The Abdus Salam International Centre for Theoretical Physics (ICTP) will organize a **Summer College and Conference on "Physics and Chemistry of Rare Earth Manganites"**, to take place from **1 to 18 June 2003**. The College will consist of a two week course of lectures by leading researchers in the area, interspersed with introductory talks and tutorials. It will conclude with a three day Conference during which new results will be presented and discussed.

Directors: Tiruppattur V. Ramakrishnan and Arup K. Raychaudhuri
(Indian Institute of Science, Bangalore, India)

Manganites have emerged (after high T_c cuprates) as the most unusual family of oxides, exhibiting a bewildering variety of strongly interconnected, novel and poorly understood structural, electronic and magnetic phenomena. The Summer College will provide a broad, critical perspective of the field. It is planned to have three to four lectures, each on ten or more themes mentioned below as facets of a cohesive picture of our state of knowledge and pointers to directions for future research. Discussion and interaction will be a crucial part of the College, mainly aimed at postdoctoral researchers and graduate students working in this area, as well as those who would like to.

Some of the areas expected to be covered are the following:

1. *Background solid state chemistry and condensed matter physics*
2. *Structure, systematics and phases*
3. *Undoped and underdoped manganites: order and collective modes*
4. *Transport including metal insulator transitions and colossal magnetoresistance*
5. *Static and dynamic local structure: probes and their stories*
6. *Charge/orbital order*
7. *Two 'phase' coexistence and mesoscale structure*
8. *Electron doped manganites*
9. *Related systems, eg bilayer manganites*
10. *Applications: novel effects and engineered structures*
11. *Theories: ingredients and models*

Scientists and students from all countries that are members of the United Nations, UNESCO or IAEA may attend the College. Although the main purpose of the ICTP is to help researchers from developing nations through a programme of training activities within a framework of international cooperation, students and post-doctoral scientists from developed countries are also welcome to attend. The College will be conducted in English.

As a rule, travel and subsistence expenses of the participants are borne by the home institution. However, limited funds are available for applicants from, and working in, developing countries only, to be selected by the Organizers. As scarcity of funds allows travel to be granted only in a few exceptional cases, every effort should be made by candidates to secure support for their fare (or at least partial fare) from their home country. Scientists from developed countries are welcome to attend but cannot be offered a subsidy. There is no registration fee to attend the College.

Those interested in participating should complete and return the "Request for Participation" form, (also obtainable from the ICTP WWW server: <http://agenda.ictp.trieste.it/smr.php?1505> (which will be constantly up-dated) or from the activity Secretariat, before **31 March 2003** to:

smr1505@ictp.trieste.it (please save and send file attachments in RTF format)

or

the Abdus Salam International Centre for Theoretical Physics
Summer College & Conference on "Physics and Chemistry of Rare Earth Manganites"
SMR:1505 (c/o Ms. Valerie Shaw), Strada Costiera 11, I-34014 Trieste, Italy

Telephone: +39-040-2240541

Telefax: +39-040-224531

E-mail: smr1505@ictp.trieste.it

Invited Speakers

P.J. Attfield
(Cambridge)

S.C. Cheong
(Piscataway)

E. Dagotto
(Tallahassee)

T. Egami
(Pennsylvania)

G. Gehring
(Sheffield)

J. Hill
(Upton)

H.R. Krishnamurthy
(Bangalore)

P.B. Littlewood
(Cambridge)

N.D. Mathur
(Cambridge)

A.J. Millis
(Columbia)

A. Moreno
(Tallahassee)

D. McK. Paul
(Warwick)

M. Salamon
(Illinois)

P. Schiffer
(Penn State)

H. Takagi
(Tokyo)

Y. Tomioka
(Tsukuba)

Deadline:

31 March 2003

