



Workshop on Localization Phenomena in Novel Phases of Condensed Matter

17 - 23 May 2010
(Miramare - Trieste, Italy)

The Abdus Salam International Centre for Theoretical Physics (ICTP) is organizing a Workshop on "Localization Phenomena in Novel Phases of Condensed Matter", to be held at the ICTP, Trieste, Italy from **17 - 23 May 2010**.

DESCRIPTION:

The phenomena of localization - delocalization transitions (LDT) have been a central topic in condensed matter physics for the last 50 years. Recently, very interesting phenomena related to the LDT were predicted and discovered in various systems. Examples of new systems include topological insulators in electron gases with spin-orbit scattering; cold atoms localization in one-dimensional optical lattices, multifractal systems in the vicinity of the superconductor - insulator transition and many others.

The goal of the Workshop is to bring together active researchers in the field as well as several experts in related fields, to discuss the current status of the localization problem, address existing controversies, both experimental and theoretical and propose new strategies for their resolution. In a broader context, the Workshop will look at the perspectives for identifying new localization physics in novel phases of matter and will foster closer collaboration between the theoretical and experimental groups working in this and related fields.

TOPICS:

Localization/delocalization physics in systems of cold matter and atomic matter
(including dynamical localization in atomic matter, localization in 1d-systems of cold atoms etc);

Localization/delocalization in superconducting and (strongly) correlated systems
(including localization in Luttinger liquids, 2d-metal-insulator transition and interaction);

New topological phases of disordered electron systems
(including topological insulators, graphene etc);

Effects of disorder in systems with special symmetries
(e.g. comprising disorder and Griffiths effects).

PARTICIPATION:

The Workshop is open to scientists and PhD students from all countries that are members of the United Nations, UNESCO or IAEA. The young scientists from developing countries are especially welcome to apply. All the applicants interested in presenting a poster contribution are invited to submit a one-page abstract (size A4) and attach it (in pdf format) to the Online Application Form.

As a rule, travel and subsistence expenses of the participants should be borne by their home institutions. 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 activity. **There is no registration fee for attending this activity.**

HOW TO APPLY FOR PARTICIPATION:

The Application Form can be accessed at the activity website on

<http://agenda.ictp.it/smr.php?2144>

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

ACTIVITY SECRETARIAT:

Telephone: +39-040-2240346

Fax: +39-040-224163

E-mail: smr2144@ictp.it

ICTP Home page: <http://www.ictp.it/>

ORGANIZERS:

Ferdinand EVERS
(INT & TKM, Karlsruhe, Germany)

Victor KAGALOVSKY
(SCE, Beer-Sheva, Israel)

Igor LERNER
(University of Birmingham, U.K.)

LOCAL ORGANIZER:

Vladimir E. KRAVTSOV
(ICTP, Trieste, Italy)

TENTATIVE LIST OF INVITED SPEAKERS: (as of January 2010)

- A. Altland (Cologne, Germany)
- A. Aspect (Palaiseau, France)
- I. Burmistrov (Moscow, Russia)
- P. Brouwer (Berlin, Germany)
- J. Chalker (Oxford, UK)
- A. Chudnovskiy (Hamburg, Germany)
- D. Delande (Paris, France)
- K. Efetov (Bochum, Germany)
- A. Furusaki (RIKEN, Japan)
- D.M. Gangardt (Birmingham, U.K.)
- Y. Gefen (Rehovot, Israel)
- * L. Glazman (Yale, USA)
- I. Gornyi (Karlsruhe, Germany)
- I. Gruzberg (Chicago, USA)
- M.Z. Hasan (Princeton & KITP, USA)
- Y. Hatsugai (Ibaraki, Japan)
- A. Kamenev (Minnesota, USA)
- * A. Ludwig (Santa Barbara, USA)
- C. Marcus (Cambridge, USA)
- A. Mirlin (Karlsruhe, Germany)
- L. Molenkamp (Würzburg, Germany)
- J. Moore (Berkeley, USA)
- * K.A. Muttalib (Gainesville, USA)
- F. von Oppen (Berlin, Germany)
- * P. Wölfle (Karlsruhe, Germany)
- O. Yevtushenko (Munich, Germany)
- V. Yudson (Moscow, Russia)
- * M. Zirnbauer (Cologne, Germany)

* to be confirmed

*Deadline for Requesting
Participation:*

29 JANUARY 2010