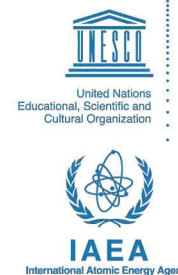




The Abdus Salam International Centre for Theoretical Physics



Workshop on Integrability and its Breaking in Strongly Correlated and Disordered Systems

23 - 27 May 2011
Miramare, Trieste, Italy

The Abdus Salam International Centre for Theoretical Physics (ICTP), Trieste, Italy, is organizing a **Workshop on Integrability and its Breaking in Strongly Correlated and Disordered Systems**, to be held in Trieste from 23 to 27 May 2011.

The physical consequences of integrability and its (weak) breaking in many body systems manifest themselves in systems such as cold atoms and conductor-insulator transitions in one dimension, as well as in specific spectral properties. It may also entail the absence of ergodicity, which in turn has deep implications on the dynamics.

The concept of integrability and its breaking is closely related to localization and diffusion in the Fock space of strongly disordered, interacting systems.

Finally, breaking of integrability may lead to highly non-perturbative phenomena such as the confinement of quasi-particle of topological type and decays of those with higher masses.

This workshop aims at exploring the various incarnations and effects of integrability and its breaking in many-body, strongly interacting and disordered systems, stimulating cross fertilization and discussions between researchers in the various subfields.

TOPICS

- Quantum Integrable systems in low dimensionality and effects of integrability breaking
- Non-ergodicity, non-thermalization and transport in quantum integrable systems and many-body localized disordered systems
- Nonequilibrium dynamics and integrability in phenomena such as quantum quenches, many body localization in cold atoms, conductor-insulator transitions etc.
- Excitation spectra, quantum phase transitions and level statistics

PARTICIPATION

Scientists from all countries that are members of the UN, UNESCO or IAEA can attend the Workshop. The Organizers will select participants upon evaluation of the application forms. The main purpose of the Centre is to help researchers from developing countries within the framework of international cooperation. However, scientists from developed countries are most welcome to attend. As the Workshop will be conducted in English, participants must have an adequate working knowledge of that language.

As a rule, travel and subsistence expenses of the participants are borne by their home institutions. Limited funds are available for a limited number of applicants who are nationals of, and working in, developing countries. 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 from their home country. Such financial support is available only to those attending the entire Workshop. There is no registration fee to attend this activity.

How to apply for participation: candidates can access the **Online Application Form** through the activity webpage: <http://agenda.ictp.it/smr.php?2239>. Once in the website, comprehensive instructions will guide you step-by-step, on how to fill out and **submit online the application not later than 4 February 2011**.

WORKSHOP SECRETARIAT

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Workshop webpage: <http://agenda.ictp.it/smr.php?2239>

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

ORGANIZERS

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SPEAKERS

G. Aeppli (LCN London)
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B. Altshuler (Columbia)
J.-S. Caux (Amsterdam)
M. Cazalilla (DIPC)
G. Delfino (SISSA Trieste)
E. Demler (Harvard)
F. Essler (Oxford)
R. Fazio (Pisa)
D. Huse (Princeton)
A. Imambekov (Rice)
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U. Schollwöck (Munich)
D.A. Tennant (Berlin)
D. Weiss (Penn State)
M.B. Zvonarev (Harvard)

DEADLINE

4 February 2011