



WORKSHOP ON DYNAMICS OF STRONGLY CORRELATED QUANTUM SYSTEMS

21 - 25 June 2010

Miramare, Trieste, Italy

The aim of this workshop is to bring together researchers working actively on the dynamics of strongly correlated quantum systems. Recent theoretical and experimental progress in the characterization of nonequilibrium processes in the presence of strong correlations will be reviewed, with a special focus on ground breaking experiments with cold atoms, quantum optical systems and nanostructures as well as on the theoretical characterization of nonequilibrium dynamics using a variety of interdisciplinary ideas and tools, ranging from quantum information to statistical field theory.

TOPICS

- Nonequilibrium dynamics in quantum systems

Quench dynamics in cold atoms, spinor condensates, spin chains
Coherent dynamics in correlated quantum systems
Thermalization and Integrability

- Adiabatic dynamics in strongly correlated systems

Adiabatic quench dynamics and defect formation in quantum critical systems
Adiabatic quantum computation

- Nonequilibrium steady states in driven quantum systems

Quantum transport
Out of equilibrium quantum phase transitions
Out of equilibrium steady states in strongly correlated systems

PARTICIPATION

Scientists and students from all countries which are members of the United Nations, UNESCO or IAEA may attend the Workshop. 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, 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 from developing countries, to be selected by the organizers. There is no registration fee.

HOW TO APPLY FOR PARTICIPATION

The application form can be accessed at the activity website:

<http://agenda.ictp.it/smr.php?2151>

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

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DIRECTORS

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Invited Speakers

B. Altshuler (New York)
N. Andrei (Piscataway)
I. Bloch (München)
B. Blakie (Dunedin)
H-P. Buchler (Stuttgart)
E. Demler (Cambridge)
Y. Gefen (Rehovot)
L. Glazman (New Haven)
V. Gritsev (Fribourg)
V. Gurarie (Boulder)
D. Huse (Princeton) (to be confirmed)
A. Imamoglu (Zürich)
Y. Kafri (Haifa)
J. Keeling (Cambridge)
C. Kollath (Palaiseau)
L. Levitov (Cambridge)
A. Millis (New York) (to be confirmed)
G. Mussardo (Trieste)
G. Ortiz (Bloomington)
M. Plenio (London)
G. Refael (Pasadena)
M. Rigol (Washington)
D. Rossini (Trieste)
K. Sengupta (Kolkata)
M. Vengalattore (Ithaca)
D. Weiss (University Park)

APPLICATION DEADLINE

15 March 2010