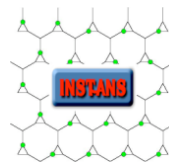




The Abdus Salam  
International Centre for Theoretical Physics



**Summer College on  
Non-equilibrium Physics  
from Classical to Quantum Low  
Dimensional Systems  
6 - 24 July 2009**



Miramare-Trieste, Italy  
Co-sponsored by INSTANS - ESF

This Summer College will review the state-of-the-art experiments and theories of quantum and classical non-equilibrium phenomena in low dimensional systems. Lectures will be complemented with seminars, discussions, tutorials and poster sessions. The lecture course consists of 11 sessions, 2 to 4 lectures each, on general topics that will encompass:

- **Non-equilibrium physics in nanostructures and quantum gases**
- **Critical phenomena in classical and quantum non-equilibrium systems**
- **Dynamics of quantum and classical glasses**
- **Dissipative quantum and classical systems**
- **Noise in non-equilibrium quantum systems**
- **Boundary field theory and non-equilibrium states**
- **Keldysh formalism**
- **Numerical approaches to non-equilibrium problems**
- **Renormalization Group methods for non-equilibrium quantum systems**

**INVITED SPEAKERS**

A. Altland (Cologne, Germany)  
E. Altman (Weizmann, Israel)  
N. Andrei (Rutgers, USA)  
L. Arrachea (Buenos Aires, Argentina)  
G. Biroli (Saclay, France)  
P. Brouwer (Cornell, USA) \*)  
J. Chalker (Oxford, UK)  
R. Egger (Dusseldorf, Germany)  
F.H.L. Essler (Oxford, UK)  
R. Fazio (Pisa, Italy)  
Yu. Galperin (Oslo, Norway)  
A. Gambassi (Stuttgart, Germany)  
J. Garrahan (Nottingham, UK)  
F. Hekking (Grenoble, France)  
M. Houzet (Grenoble, France)

M. Inguscio (Firenze, Italy)  
N. Israeloff (Northeastern, USA)  
A. Lamacraft (Virginia, USA)  
I. Lerner (Birmingham, UK)  
L. Levitov (MIT, USA)  
S. Majumdar (Orsay, France)  
F. Marquardt (Munich, Germany)  
K. Matveev (Argonne, USA) \*)  
M. Olshanii (Boston, USA)  
S. Puri (New Delhi, India)  
M. Pustilnik (Georgia Tech, USA)  
S. Ruffo (Firenze, Italy)  
H. Saleur (Paris, France)  
R. Shekhter (Goteborg, Sweden)  
A. Tsvelik (Brookhaven, USA)  
\*) to be confirmed

The goal of the College is to bring together active researchers working in the field of quantum and classical non-equilibrium phenomena to deliver both educational lectures on non-equilibrium physics and give seminars on the topics of their recent research in the field. The College aims at attracting the interest of young researchers (graduate students, PhD students, post-docs) from developing and developed countries, which are members of the UN, UNESCO or IAEA, working or planning to study physical phenomena out of equilibrium and its applications in classical/quantum systems.

The main purpose of the Centre is to help researchers from developing countries, within a framework of international cooperation; however, scientists from developed countries are also welcome to attend. Since ICTP activities are conducted in English, participants should have an adequate knowledge.

As a rule, travel and subsistence expenses of participants should be borne by their home institution. However, limited funds are available for some participants who are nationals of, and working in, a developing country. **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?2046>

Once in the website, comprehensive instructions will guide you step-by-step, on how to fill out and submit the application form, before **15 March 2009**.

**SECRETARIAT:**

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<http://www.ictp.it/>

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**Alessandro SILVA**  
(ICTP -Trieste - Italy)

**LECTURERS:**

**Boris Altshuler**  
(Columbia, USA)  
**Norman Birge**  
(Michigan, USA)  
**Pasquale Calabrese**  
(Pisa, Italy)  
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**DEADLINE**

**15 March 2009**