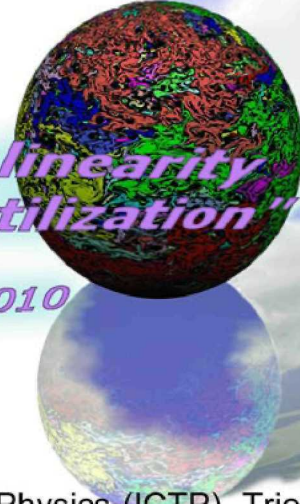




## Advanced Workshop on "Anderson Localization, Nonlinearity and Turbulence: A Cross-Fertilization"

23 August - 3 September 2010

(ICTP, Miramare, Trieste, Italy)



The Abdus Salam International Centre for Theoretical Physics (ICTP), Trieste is organizing an **Advanced Workshop on "Anderson Localization, Nonlinearity and Turbulence: A Cross-Fertilization"**, to take place from 23 August to 3 September 2010.

This Workshop aims at discussing the latest experimental and theoretical results in the field of disorder and interactions, which uncover the complexity of the joint action of these two main ingredients. Either of them alone may lead to the formation of localized or bound states. However, both together may foster delocalization. It is known for quite some time that there is some yet poorly understood analogy between the statistics of eigenstates of random Hamiltonians that leads to fluctuations of physical observables in mesoscopic systems, and the velocity statistics in turbulence. One of the goals of this Workshop is to develop a common language and common phenomenology (such as multifractality) in order to be able to transfer knowledge from one field to the other, producing their cross-fertilization in this way.

### TOPICS

- Interacting fermions and bosons in the presence of disorder
- Wave propagation in disordered nonlinear systems
- Statistics of wavefunctions
- KAM, Arnold diffusion, and equipartition in finite systems
- Multidimensional systems
- Turbulence

The Workshop will consist of comprehensive pedagogical lectures given by key experts in each of the fields and will allow ample time for discussions.

### PARTICIPATION

Scientists and students from all countries that are members of the United Nations, UNESCO or IAEA may attend the activity. As it will be conducted in English, participants must have an adequate working knowledge of this language. Although the main purpose of the Centre is to help researchers from developing countries through a programme of training activities within a framework of international cooperation, a limited number of students and post-doctoral scientists from developed countries are also welcome to attend.

**As a rule, travel and subsistence expenses of the participants are borne by their home institutions.** However, limited funds are available for some participants, who are nationals of, and working in, a developing country, and who are not more than 45 years of age. Such support is available only to those attending the entire activity. Every effort should be made by candidates to secure support for their fare (or at least half-fare). There is no registration fee for attending the activity.

### HOW TO APPLY FOR PARTICIPATION

The Application Form can be accessed at the activity website: <http://agenda.ictp.it/smr.php?2162>. Once in the website, comprehensive instructions will guide you step-by-step, on how to fill out and submit the application form. Deadline for receipt of applications: **15 APRIL 2010**

Activity Secretariat:

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(Trieste, January 2010)

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\* to confirm

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