

# *Seventh Workshop on Three-Dimensional Modelling of Seismic Waves Generation, Propagation and their Inversion*

*25 October - 5 November 2004  
(Miramare - Trieste, Italy)*

The Abdus Salam International Centre for Theoretical Physics (ICTP), in collaboration with the Department of Earth Sciences of the University of Trieste, will organize the Seventh Workshop on studies of seismic wave propagation in realistic three-dimensional earth models and on methods for inversion of seismic data. The Workshop will take place from **25 October - 5 November 2004**. It is also endorsed by the Commission on Earthquake Hazard, Risk and Strong Motion of the International Association for Seismology and Physics of the Earth Interior (Chair, Wu Zhongliang, Beijing), which will be represented by one of its members.

The Workshop will provide training in advanced methodologies of R&D in fundamental studies of the Earth's evolution and dynamics, and in numerous applied problems, such as prospecting for mineral resources, estimation and mitigation of possible seismic hazard, etc. These methodologies are based on a deep understanding of physics of seismic wave generation by natural and artificial sources and the propagation of these waves through complicated Earth structures.

The Workshop will cover practically all aspects of the above mentioned problems, focusing both on the methodology and results of interpretation of seismic observations. A set of lectures will be delivered by a winner of the Beno Gutenberg medal, established by the European Geosciences Union in recognition of the scientific achievements of Beno Gutenberg. The medal is reserved for individuals who have made outstanding contributions to Seismology.

Students will be able to get a close acquaintance with the newest developments in all these directions, not only by listening to the intensive lecture courses, but also by active participation in computer demonstrations and exercises. Students are encouraged to make presentations of their recent results related to the school programme.

Topics of the exercises will be:

- *Frequency-time analysis;*
- *Modelling of seismic responses of layered media;*
- *Source mechanism interpretation using seismic wave data;*
- *2D and 3D seismic tomography;*
- *Earth's seismicity;*
- *Wave propagation across the Earth;*
- *Seismological databases.*

Scientists and students from all countries that are members of the UN, UNESCO, or IAEA may attend the Workshop. The main purpose of the ICTP is to help researchers from developing countries through a programme of training activities within a framework of international co-operation. However, students and post-doctoral scientists from developed countries are also welcome to attend. As the Workshop will be conducted in English, participants should have an adequate working knowledge of that language. A degree in Physics, Mathematics, Geophysics (theoretical or computational), Computer Science and/or similar disciplines is required.

As a rule, travel and subsistence expenses of the participants should be covered by the home institutions. However, limited funds are available for some research workers who are nationals of, and working in a developing country, and who are not more than 45 years old. 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 fares (or at least half fare) from their home country. Such support is available only for those who attend the entire activity. Over the past years the European Commission's *generous* contribution has enabled the participation of a number of scientists from developed countries. For this Workshop, financial support has been requested from the European Commission to cover the expenses of *eligible* scientists of any nationality, and will be subject to the outcome of their *decision evaluation, which should take place in the middle of 2004*. For logistic reasons, connected with the number of Personal Computers available, the total number of participants in the Workshop is limited. There is no registration fee for attending the Workshop.

The Application Form is obtainable from the ICTP WWW server: <http://agenda.ictp.trieste.it/smr.php?1586> (which will be constantly up-dated) or from the activity Secretariat. It should be completed and returned before **28 May 2004**, to the below address. **If sending an application by e-mail, please save and send file attachments in RTF format.**

Seventh Workshop on Three-Dimensional Modelling of Seismic Waves  
(c/o Ms. Gabriella De Meo: [De\\_meo@ictp.trieste.it](mailto:De_meo@ictp.trieste.it))  
the Abdus Salam International Centre for Theoretical Physics  
Strada Costiera 11, I-34014 Trieste, Italy  
or  
<mailto:smr1586@ictp.trieste.it>

## *Seismic Waves*

### **DIRECTORS**

#### **B.G. Bukchin**

*(International Institute of  
Earthquake Prediction Theory  
and Mathematical Geophysics,  
Russian Academy of Sciences,  
Moscow, Russia)*

#### **G.F. Panza**

*(Dept. of Earth Sciences,  
University of Trieste/ICTP, Italy)*

### **Co-Sponsor:**

*European Commission*

*(Training and Mobility  
Researchers Programme)*

*subject to outcome of  
decision evaluation  
mid 2004*

### **Deadline:**

**28 May 2004**

