

The Abdus Salam **International Centre for Theoretical Physics** 



# Advanced Conference on "Seismic Risk Mitigation & Sustainable Development"

10 - 14 May 2010 (Miramare - Trieste, Italy)

The Abdus Salam International Centre for Theoretical Physics (ICTP), in the framework of the PCFVG-ICTP Agreement, funded by the Civil Defence of the Friuli Venezia Giulia Region, and the ASI-SISMA Project, funded by the Italian Space Agency, is organizing under the auspices of the Italian Ministry for Environment and Land and Sea (Ministero dell'Ambiente e della Tutela del Mare e del Territorio) an Advanced Conference on "Seismic Risk Mitigation and Sustainable Development". The Conference, co-sponsored by UNESCO-IPRED, GLIS (Working Group on Seismic Isolation), ASSISi (Anti-Seismic Systems International Society) and ENEA, will take place from 10 to 14 May 2010.

The Conference will span from theoretical issues to practical engineering and decision-making problems, recognizing the societal need for a critical and realistic view to earthquake hazard assessment, which should be attained by advanced independent approaches and exploiting of available seismological, geological and geophysical knowledge, to the maximum possible extent.

Top scientists/experts in the field and participants from developing countries (seismologists, engineers, decision makers) are foreseen to attend the Conference. The Conference will facilitate and accelerate interaction of science practice and exploitation of scientific achievements in the decision-making process. Lectures will cover the following topics:

- The concept of sustainable development related to Earthquake Preparedness. Hazard and Risk mitigation;
- General issues of Seismic Hazard Assessment (SHA). Classical (deterministic and probabilistic) and innovative (neo-deterministic and scenario-based) SHA approaches: advantages and disadvantages. SHA concerns related to seismic regulations;
- Advanced SHA tools. Definition of scenario earthquakes. Earthquake lesson and preparedness experience with respect to recent strong earthquakes;
- Seismic wave propagation modeling and modeling validation. Strong ground motion data bases and strong motion processing related to the necessity of seismic input modeling;
- Seismic zonation at regional, national and metropolitan scale: case studies in Europe, Asia and North Africa;
- Educational aspects and problems concerning SHA.

An open panel discussion will be promoted to debate the limits of current methodologies and available advanced alternatives, taking into account comments and specific requirements from end-users (engineers and stakeholders). The latter will have the possibility of exposure with the most advanced techniques (especially useful in countries which need to start from the very beginning) and will be able to discuss their own situation/problems. The Conference will thus provide a unique opportunity to establish contacts and receive hints for future implementation of the most advanced techniques in developing countries.

Participants are encouraged to make poster presentations illustrating their own recent research and practical problems, related to the Conference issues.

#### PARTICIPATION

Scientists and students from all countries that are members of the United Nations, UNESCO or IAEA may attend the Conference that will be conducted in English, therefore participants should have an adequate working knowledge of that language.



### DIRECTORS

Antonella Peresan (University of Trieste/ ICTP, Italy)

Mihaela Kouteva (CLSMEE-BAS, Bulgaria)

Renata Dmowska (Harvard University, USA)

Badaoui Rouhban (UNESCO)

LOCAL ORGANIZER

Giuliano F. Panza (University of Trieste/ ICTP, Italy)

## **INVITED LECTURERS**

Guglielmo Berlasso (Civil Defence FVG, Italy) Julian Bommer (Imperial College, London, UK) Luis D. Decanini (La Sapienza U., Rome, Italy) Rodolfo Guzzi (ASI, Italy) Jens-Uwe Klügel (NPP Goesgen, Switzerland) Vladimir Kossobokov (IIEPT-RAS, Russia) Takashi Imamura (UNESCO-IPRED) Kojiro Irikura (Kyoto Univ., Japan) Efraim Laor (Haifa Univ., Israel) Arthur Lerner-Lam (Columbia Univ., USA) Norio Okada (DPRI, Kyoto Univ., Japan) Alessandro Martelli (ENEA and GLIS, Italy) Michael Melkumyan (ERC, Armenia) Lalliana Mualchin (Cal.Transp.D. - ret., USA) James R. Rice (Harvard Univ., USA) Fabio Romanelli (Trieste Univ., Italy) Horea Sandi (Acad. Tech. Sci., Romania) Rodolfo Saragoni (Chile Univ., Chile) Leonello Serva (ISPRA, Italy) Dario Slejko (OGS, Italy) Koji Uenishi (Kobe Univ., Japan) Franco Vaccari (Trieste Univ., Italy) Peter Varga (CEI and GGRI, Hungary) Zhenming Wang (Kentucky Univ., USA) Zhongliang Wu (CEA, China)

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 who are nationals of, and working in, a developing country, and who are not more than 45 years old. Such support is available only for those who attend the entire activity. There is no registration fee.

#### **REQUEST FOR PARTICIPATION**

The application form can be accessed at the activity website http://agenda.ictp.it/smr.php?2142 Once in the website, comprehensive instructions will guide you step-by-step, on how to fill out and submit the application form.

ACTIVITY SECRETARIAT: Telephone: +39-040-2240-355 Telefax: +39-040-2240-585

E-mail: smr2142@ictp.it ICTP Home Page: http://www.ictp.it/ Deadline for: requesting participation:

**10 January 2010** 

October 2009