



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



School on Earthquake and Tsunami Hazard and Risk

Algiers - Algeria, 09 - 20 December 2013

Preliminary Programme

Monday, 9 December 2013

9 December 2013

- 09:00 - 10:30** **Opening Ceremony and Introduction**
- 10:30 - 11:00** --- Coffee Break ---
- 11:00 - 12:30** **F. Romanelli / *University of Trieste, Italy***
What is a wave? Elasticity and Navier equations
- 12:30 - 14:00** --- Lunch Break ---
- 14:00 - 15:30** **F. Romanelli**
Body waves and travel times
- 15:30 - 16:00** --- Coffee Break ---
- 16:00 - 17:30** **F. Romanelli**
Seismic Green's function for body waves

Tuesday, 10 December 2013

10 December 2013

- 09:00 - 10:30** **A. Aoudia / *ESP, ICTP, Trieste, Italy***
From plate tectonics to continental deformation to active faults

- 10:30 - 11:00 --- Coffee Break ---
- 11:00 - 12:30 **A. Sarao / OGS, Trieste, Italy**
Seismic sources: faults and equivalent body forces
- 12:30 - 14:00 --- Lunch Break ---
- 14:00 - 15:30 **A. Sarao**
Faulting: from first arrivals to waveform inversion
- 15:30 - 16:00 --- Coffee Break ---
- 16:00 - 17:30 **A. Aoudia**
Lithosphere and faults have rules, simple mechanics

Wednesday, 11 December 2013

11 December 2013

- 09:00 - 10:30 **A. Sarao**
Seismic scaling relationships and earthquake rupture
- 10:30 - 11:00 --- Coffee Break ---
- 11:00 - 12:30 **A. Aoudia**
Coseismic Deformation: Basic principles, modeling strategies, case studies
- 12:30 - 14:00 --- Lunch Break ---
- 14:00 - 15:30 **A. Aoudia**
Interseismic Deformation and Earthquake cycle models
- 15:30 - 16:00 --- Coffee Break ---
- 16:00 - 17:30 **A. Aoudia**
Postseismic Deformation: Earth and fault relaxation length and time scales

Thursday, 12 December 2013

12 December 2013

- 09:00 - 10:30 **F. Romanelli**
Surface waves and dispersion
- 10:30 - 11:00 --- Coffee Break ---
- 11:00 - 12:30 **A. Sarao**
Building disaster resilience in the community: how to broaden awareness and understanding of earthquake hazard at school
- 12:30 - 14:00 --- Lunch Break ---
- 14:00 - 15:30 **G. Costa / University of Trieste, Italy**
Seismometry: from theory to the field

15:30 - 16:00 --- Coffee Break ---

16:00 - 17:30 **G. Costa**
Acquisition and processing of seismic signal

Saturday, 14 December 2013 (Saturday)

14 December 2013

09:00 - 10:30 **F. Romanelli**
Tsunami physics: from seismic to gravity waves

10:30 - 11:00 --- Coffee Break ---

11:00 - 12:30 **G. Soldati**
Imaging the Earth Interior

12:30 - 14:00 --- Lunch Break ---

14:00 - 15:30 **F. Romanelli**
Tsunami physics and tsunami Hazard

15:30 - 16:00 --- Coffee Break ---

16:00 - 17:30 **G. Costa**
Real time Seismic monitoring

Sunday, 15 December 2013 (Sunday)

15 December 2013

09:00 - 10:30 **G. Soldati / *Ist. Nazionale di Geofisica e Vulcanologia, Rome, Italy***
Seismic Tomography: Theory and methods

10:30 - 11:00 --- Coffee Break ---

11:00 - 12:30 **G. Soldati**
Seismic Tomography: Theory and methods contd.

12:30 - 14:00 --- Lunch Break ---

14:00 - 15:30 **G. Soldati**
Seismic Tomography: Theory and methods contd.

15:30 - 16:00 --- Coffee Break ---

16:00 - 17:30 **S. Maouche / *CRAAG, Algiers, Algeria***
Tsunami Geology

Monday, 16 December 2013

16 December 2013

- 09:00 - 10:30** **A. Aoudia**
Regional Deformation as inferred from GPS geodesy, seismic tomography, and numerical modeling
- 10:30 - 11:00** --- Coffee Break ---
- 11:00 - 12:30** **A. Aoudia**
Chasing transients using GPS geodesy and InSAR
- 12:30 - 14:00** --- Lunch Break ---
- 14:00 - 15:30** **A. Aoudia**
Tectonics and earthquake Hazard
- 15:30 - 16:00** --- Coffee Break ---
- 16:00 - 17:30** **M. Hamdache / CRAAG, Algiers, Algeria**
Earthquake Hazard: Method and application in Algeria

Tuesday, 17 December 2013

17 December 2013

- 09:00 - 10:30** **M. Mucciarelli / OGS, Trieste, Italy**
Standard PSHA estimate, Alternative PSHA estimate and validation
- 10:30 - 11:00** --- Coffee Break ---
- 11:00 - 12:30** **M. Mucciarelli**
Site effects and microzonation studies
- 12:30 - 14:00** --- Lunch Break ---
- 14:00 - 15:30** **M. Mucciarelli**
Seismic input, from seismologists to engineers
- 15:30 - 16:00** --- Coffee Break ---
- 16:00 - 17:30** **M. Mucciarelli**
Lesson learned from recent Earthquakes

Wednesday, 18 December 2013

18 December 2013

- 09:00 - 10:30** **S. Grimaz / University of Udine, Italy**
Seismic Risk Assessment*
 * SEISMIC RISK ASSESSMENT: the components of Risk: hazard, vulnerability and exposure. Holistic approach for risk mitigation. Vulnerability and Damageability assessment. Strategies of risk mitigation. Case studies.
- 10:30 - 11:00** --- Coffee Break ---
- 11:00 - 12:30** **S. Grimaz**
Seismic Risk Assessment contd.

- 12:30 - 14:00** --- Lunch Break ---
- 14:00 - 15:30** **S. Grimez**
Seismic Risk Assessment contd.
- 15:30 - 16:00** --- Coffee Break ---
- 16:00 - 17:30** **Students contributions/Panel Discussion**

Thursday, 19 December 2013

19 December 2013

- 09:00 - 10:30** **S. Grimaz**
Disaster Management
*DISASTER MANAGEMENT. The cycle of disaster management. Prevention, protection and emergency management. Damage assessment and short term countermeasures. Cases studies
- 10:30 - 11:00** --- Coffee Break ---
- 11:00 - 12:30** **S. Grimaz**
Disaster Management contd.
- 12:30 - 14:00** --- Lunch Break ---
- 14:00 - 15:30** **S. Grimaz**
Disaster Management contd.
- 15:30 - 16:00** --- Coffee Break ---
- 16:00 - 17:30** **D. Benouar / USTHB, Algiers, Algeria**
Algerian experience in mainstreaming DRR into schools

Friday, 20 December 2013

20 December 2013

- 09:00 - 10:30** **D. Benouar**
Forensic Investigation of Disasters: A new multidisciplinary approach to learn lessons from disasters: researching multiple disaster causes.
- 10:30 - 11:00** --- Coffee Break ---
- 11:00 - 12:30** **Concluding Remarks - Closure of School**