The Abdus Salam International Centre for Theoretical Physics

8th Workshop on Three-Dimensional Modelling of Seismic Waves Generation, Propagation and their Inversion

Organizer(s): Directors: B. Bukchin, G.F. Panza
Trieste - Italy, 25 September 2006 - 7 October 2006

Final programme

Registration (Lower Level) (Room:Adriatico Guest House Kastler Lecture Hall)

25 September 2006

08:30 - 10:00	**Registration**
10:00 - 10:45	**Prof. K.R. Sreenivasan, G.F. Panza, B. Bukchin** **Opening Session**
10:45 - 12:00	**Formalities**
12:00 - 13:30	--- Lunch ---
13:30 - 14:15	**T. Yanovskaya (St. Petersburg State University, Russia)** **Introduction to the Theory of Seismic Wave Propagation**
14:15 - 14:30	--- Coffee Break ---
14:30 - 15:15	**T. Yanovskaya (St. Petersburg State University, Russia)** **Introduction to the Theory of Seismic Wave Propagation**
15:15 - 15:30	--- Break ---
15:30 - 16:15	**T. Yanovskaya (St. Petersburg State University, Russia)** **Introduction to the Theory of Seismic Wave Propagation**
16:15 - 16:30	--- Break ---

16:30 - 19:00	**B. Bukchin, A. Egorkin, A. Levshin, A. Mostinskiy, A. Peresan, M. Guidarelli, T. Yanovskaya** **Laboratory Exercises**
19:00 - 21:00	**Small Reception**

Tuesday, 26 September 2006

09:00 - 09:45	**J. Woodhouse (University of Oxford, UK)** **Ray Methods. Normal Modes of the Earth**
09:45 - 10:00	--- Break ---
10:00 - 10:45	**J. Woodhouse (University of Oxford, UK)** **Ray Methods. Normal Modes of the Earth**
10:45 - 11:15	--- Coffee Break ---
11:15 - 12:00	**J. Woodhouse (University of Oxford, UK)** **Ray Methods. Normal Modes of the Earth**
12:00 - 13:30	--- Lunch Break ---
13:30 - 14:15	**S. Das (University of Oxford, UK)** **Introduction to the Earthquake Source Mechanics**
14:15 - 14:30	--- Coffee Break ---
14:30 - 15:15	**S. Das (University of Oxford, UK)** **Introduction to the Earthquake Source Mechanics**
15:15 - 15:30	--- Break ---
15:30 - 16:15	**S. Das (University of Oxford, UK)** **The Inverse Problem of Earthquake Source Mechanics**
16:15 - 16:45	--- Break ---
16:45 - 19:30	**B. Bukchin, A. Egorkin, A. Levshin, A. Mostinskiy, A. Peresan, M. Guidarelli, T. Yanovskaya** **Laboratory Exercises**
19:30 - 20:30	--- Dinner ---
20:30 - 21:30	**B. Bukchin, A. Egorkin, A. Levshin, A. Mostinskiy, A. Peresan, M. Guidarelli, T. Yanovskaya** **Laboratory Exercises**

Wednesday, 27 September 2006

09:00 - 09:45	**A. Levshin (University of Colorado, USA)** **Surface Waves in Laterally Inhomogeneous Media**
09:45 - 10:00	--- Break ---

10:00 - 10:45	**A. Levshin (University of Colorado, USA)** **Surface Waves in Laterally Inhomogeneous Media**
10:45 - 11:15	**Coffee Break**
11:15 - 12:00	**A. Levshin (University of Colorado, USA)** **Surface Wave Tomography**
12:00 - 13:30	--- Lunch ---
13:30 - 14:15	**J.P Montagner (Institut du Physique du Globe, Paris)** **Upper Mantle Anisotropy from Surface Wave Studies**
14:15 - 14:30	--- Coffee Break ---
14:30 - 15:15	**J.P Montagner (Institut du Physique du Globe, Paris)** **Upper Mantle Anisotropy from Surface Wave Studies**
15:15 - 15:30	--- Break ---
15:30 - 16:15	**J.P Montagner (Institut du Physique du Globe, Paris)** **Upper Mantle Anisotropy from Surface Wave Studies**
16:15 - 16:45	--- Break ---
16:45 - 19:30	**B. Bukchin, A. Egorkin, A. Levshin, A. Mostinskiy, A. Peresan, M. Guidarelli, T. Yanovskaya** **Laboratory Exercises**
19:30 - 20:30	**Dinner**
20:30 - 21:30	**B. Bukchin, A. Egorkin, A. Levshin, A. Mostinskiy, A. Peresan, M. Guidarelli, T. Yanovskaya** **Laboratory Exercises**

Thursday, 28 September 2006

09:00 - 09:45	**D. Komatitsch (Universite de Pau et des Pays de l** **Spectral-Element Method and Three-Dimensional Seismology**
09:45 - 10:00	**Break**
10:00 - 10:45	**D. Komatitsch (Universite de Pau et des Pays de l'Adour, France)** **Spectral-Element Method and Three-Dimensional Seismology**
10:45 - 11:15	--- Coffee Break ---
11:15 - 12:00	**D. Komatitsch (Universite de Pau et des Pays de l'Adour, France)** **Spectral-Element Method and Three-Dimensional Seismology**
12:00 - 13:30	**Lunch**
13:30 - 14:15	**N. Shapiro (Institut du Physique du Globe, Paris)** **Seismic Imaging from Ambient Seismic Noise**
14:15 - 14:30	--- Coffee Break ---

14:30 - 15:15	**N. Shapiro (Institut du Physique du Globe, Paris)** **Seismic Imaging from Ambient Seismic Noise**
15:15 - 15:30	--- Break ---
15:30 - 16:15	**N. Shapiro (Institut du Physique du Globe, Paris)** **Seismic Imaging from Ambient Seismic Noise**
16:15 - 16:45	**Break**
16:45 - 19:30	**B. Bukchin, A. Egorkin, A. Levshin, A. Mostinskiy, A. Peresan, M. Guidarelli, T. Yanovskaya** **Laboratory Exercises**
19:30 - 20:30	**Dinner**
20:30 - 21:30	**B. Bukchin, A. Egorkin, A. Levshin, A. Mostinskiy, A. Peresan, M. Guidarelli, T. Yanovskaya** **Laboratory Exercises**

Friday, 29 September 2006

09:00 - 09:45	**F. Cornet (Institut du Physique du Globe, Paris)** **Inversion of Focal Mechanisms for Regional Stress Field Determination**
09:45 - 10:00	--- Break ---
10:00 - 10:45	**F. Cornet (Institut du Physique du Globe, Paris)** **Inversion of Focal Mechanisms for Regional Stress Field Determination**
10:45 - 11:15	**Coffee Break**
11:15 - 12:00	**F. Cornet (Institut du Physique du Globe, Paris)** **Inversion of Focal Mechanisms for Regional Stress Field Determination**
12:00 - 13:30	--- Lunch ---
13:30 - 14:15	**T. Dahm (Universitat Hamburg, Germany** **Study of Seismic Swarms Associated with Fluid Instrusions**
14:15 - 14:30	--- Coffee Break ---
14:30 - 15:15	**T. Dahm (Universitat Hamburg, Germany)** **Study of Seismic Swarms Associated with Fluid Instrusions**
15:15 - 15:30	--- Break ---
15:30 - 16:15	**T. Dahm (Universitat Hamburg, Germany)** **Study of Seismic Swarms Associated with Fluid Instrusions**
16:15 - 16:45	--- Break ---
16:45 - 19:30	**B. Bukchin, A. Egorkin, A. Levshin, A. Mostinskiy, A. Peresan, M. Guidarelli, T. Yanovskaya** **Laboratory Exercises**
19:30 - 20:30	**Dinner**

20:30 - 21:30	**B. Bukchin, A. Egorkin, A. Levshin, A. Mostinskiy, A. Peresan, M. Guidarelli, T. Yanovskaya** **Laboratory Exercises**

Saturday, 30 September 2006 (Saturday)

09:00 - 09:45	**G. Nolet (Princeton University, USA)** **GUTENBERG LECTURE Mantle Plumes and the Energy Budget of the Earth**
09:45 - 10:00	--- Coffee Break ---
10:00 - 10:45	**G. Nolet (Princeton University, USA)** **Seismology beyond Ray Theory**
10:45 - 11:00	--- Break ---
11:00 - 11:45	**G. Nolet (Princeton University, USA)** **Seismology beyond Ray Theory**
11:45 - 13:30	--- Lunch ---
13:30 - 14:15	**R. Sabadini (University of Milano, Italy)** **Plate Deformation in Europe and Mediterranean Regions, from Modelling and GPS Analyses**
14:15 - 14:30	--- Coffee Break ---
14:30 - 15:15	**R. Sabadini (University of Milano, Italy)** **Plate Deformation in Europe and Mediterranean Regions, from Modelling and GPS Analyses**
15:15 - 15:30	--- Break ---
15:30 - 16:15	**R. Sabadini (University of Milano, Italy)** **Plate Deformation in Europe and Mediterranean Regions, from Modelling and GPS Analyses**
16:15 - 16:30	--- Break ---
16:30 - 18:00	**Software Demonstration**
18:00 - 19:30	**Student Presentations**

Monday, 2 October 2006

09:00 - 09:45	**A. Aoudia (ICTP, Trieste)** **Continental Deformation and Earthquakes** Only to be viewed internally at ICTP
09:45 - 10:00	--- Break ---
10:00 - 10:45	**A. Aoudia (ICTP, Trieste)** **Continental Deformation and Earthquakes**
10:45 - 11:15	--- Coffee Break ---

11:15 - 12:00	**A. Aoudia (ICTP, Trieste)** **Continental Deformation and Earthquakes**
12:00 - 13:30	--- Lunch ---
13:30 - 14:15	**B. Bukchin (IIEP, Moscow)** **Surface Wave Inversion for Earthquake Source Study**
14:15 - 14:30	--- Coffee Break ---
14:30 - 15:15	**B. Bukchin (IIEP, Moscow)** **Surface Wave Inversion for Earthquake Source Study**
15:15 - 15:45	--- Break ---
15:30 - 16:15	**B. Bukchin (IIEP, Moscow)** **Uncertainty of Shallow Source Inversion from Surface Waves**
16:15 - 16:45	--- Break ---
16:45 - 19:30	**B. Bukchin, A. Egorkin, A. Levshin, A. Mostinskiy, A. Peresan, M. Guidarelli, T. Yanovskaya** **Laboratory Exercises**
19:30 - 20:30	**Dinner**
20:30 - 21:15	**B. Bukchin, A. Egorkin, A. Levshin, A. Mostinskiy, A. Peresan, M. Guidarelli, T. Yanovskaya** **Laboratory Exercises**

Tuesday, 3 October 2006

09:00 - 09:45	**K. Irikura (Kyoto University, Japan)** **Achievments of Strong Motion Seismology and its Future Directions**
09:45 - 10:00	--- Break ---
10:00 - 10:45	**K. Irikura (Kyoto University, Japan)** **Achievments of Strong Motion Seismology and its Future Directions**
10:45 - 11:15	--- Coffee Break ---
11:15 - 12:00	**K. Irikura (Kyoto University, Japan)** **Achievments of Strong Motion Seismology and its Future Directions**
12:00 - 13:30	--- Lunch ---
13:30 - 14:15	**B. Mitchell (Saint Luis University, USA)** **Regional Studies of Anelasticity Based on Body and Surface Waves and LG Coda**
14:15 - 14:30	--- Coffee Break ---
14:30 - 15:15	**B. Mitchell (Saint Luis University, USA)** **Regional Studies of Anelasticity Based on Body and Surface Waves and LG Coda**
15:15 - 15:30	--- Break ---

15:30 - 16:15	**B. Mitchell (Saint Louis University, USA)** **Regional Studies of Anelasticity Based on Body and Surface Waves and LG Coda**
16:15 - 16:45	--- Break ---
16:45 - 19:30	**B. Bukchin, A. Egorkin, A. Mostinskiy, A. Peresan, M. Guidarelli, T. Yanovskaya** **Laboratory Exercises**
19:30 - 20:30	**Dinner**
20:30 - 21:15	**B. Bukchin, A. Egorkin, A. Mostinskiy, A. Peresan, M. Guidarelli, T. Yanovskaya** **Laboratory Exercises**

Wednesday, 4 October 2006

09:00 - 09:45	**L. Vinnik (Institute of Physics of the Earth, Moscow)** **Receiver Function Analysis and SV/SH Splitting**
09:45 - 10:00	--- Break ---
10:00 - 10:45	**L. Vinnik (Institute of Physics of the Earth, Moscow)** **Receiver Function Analysis and SV/SH Splitting**
10:45 - 11:15	--- Coffee Break ---
11:15 - 12:00	**L. Vinnik (Institute of Physics of the Earth, Moscow)** **Receiver Function Analysis and SV/SH Splitting**
12:00 - 13:30	--- Lunch ---
13:30 - 14:15	**A. Gusev (Institute of Volcanology & Seismology, Russia)** **Theoretical & Observed Envelopes of Scattered High-Frequency Seismic Waves at Local to Regional Distances**
14:15 - 14:30	--- Coffee Break ---
14:30 - 15:15	**A. Gusev (Institute of Vulcanology & Seismology, Russia)** **Theoretical & Observed Envelopes of Scattered High-Frequency Seismic Waves at Local to Regional Distances**
15:15 - 15:30	--- Break ---
15:30 - 16:15	**A. Gusev (Institute of Volcanology & Seismology, Russia)** **Theoretical & Observed Envelopes of Scattered High-Frequency Seismic Waves at Local to Regional Distances**
16:15 - 16:45	--- Break ---
16:45 - 19:30	**B. Bukchin, A. Egorkin, A. Mostinskiy, A. Peresan, M. Guidarelli, T. Yanovskaya** **Laboratory Exercises**
19:30 - 20:30	**Dinner**
20:30 - 21:15	**B. Bukchin, A. Egorkin, A. Mostinskiy, A. Peresan, M. Guidarelli, T. Yanovskaya** **Laboratory Exercises**

Thursday, 5 October 2006

09:00 - 09:45	**G. F. Panza (DST/ICTP, Trieste)** **Structural Models of the Lithosphere-Astenosphere System in the Mediterranean & Volcanic Activity**
09:45 - 10:00	--- Break ---
10:00 - 10:45	**G.F. Panza (DST/ICTP, Trieste)** **Structural Models of the Lithosphere-Astenosphere System in the Mediterranean & Volcanic Activity**
10:45 - 11:15	--- Coffee Break ---
11:15 - 12:00	**G.F. Panza (DST/ICTP, Trieste)** **Structural Models of the Lithosphere-Astenosphere System in the Mediterranean & Volcanic Activity**
12:00 - 13:30	--- Lunch ---
13:30 - 14:15	**C. Doglioni (Universita degli Studi di Roma, Italy)** **Geodynamics of Mediterranean**
14:15 - 14:30	--- Coffee Break ---
14:30 - 15:15	**C. Doglioni (Universita degli Studi di Roma, Italy)** **Geodynamics of Mediterranean**
15:15 - 15:30	--- Break ---
15:30 - 16:15	**C. Doglioni (Universita degli Studi di Roma, Italy)** **Geodynamics of Mediterranean**
16:15 - 16:45	--- Break ---
16:45 - 19:30	**B. Bukchin, A. Egorkin, A. Mostinskiy, A. Peresan, M. Guidarelli, T. Yanovskaya** **Laboratory Exercises**
19:30 - 20:30	**Dinner**
20:30 - 21:15	**B. Bukchin, A. Egorkin, A. Mostinskiy, A. Peresan, M. Guidarelli, T. Yanovskaya** **Laboratory Exercises**

Friday, 6 October 2006

09:00 - 09:45	**F. Romanelli (DST/ICTP, Trieste)** **Ground Motion Modelling for Complex Media**
09:45 - 10:00	--- Break ---
10:00 - 10:45	**F. Romanelli (DST/ICTP, Trieste)** **Ground Motion Modelling for Complex Media**
10:45 - 11:15	--- Coffee Break ---

11:15 - 12:00	**F. Romanelli (DST/ICTP, Trieste)** **Ground Motion Modelling for Complex Media**
12:00 - 13:30	--- Lunch ---
13:30 - 14:15	**M. Guidarelli (DST, Trieste)** **Waveform Inversion for Structure and Sources at Regional and Local Scales**
14:15 - 14:30	--- Coffee Break ---
14:30 - 15:15	**M. Guidarelli (DST, Trieste)** **Waveform Inversion for structure and Sources at Regional and Local Scales**
15:15 - 15:30	--- Break ---
15:30 - 16:15	**M. Guidarelli (DST, Trieste)** **Waveform Inversion for Structure and Sources at Regional and Local Scales**
16:15 - 16:45	--- Break ---
16:45 - 19:30	**B. Bukchin, A. Egorkin, A. Mostinskiy, A. Peresan, M. Guidarelli, T. Yanovskaya** **Laboratory Exercises**
19:30 - 20:30	**Dinner**
20:30 - 21:15	**B. Bukchin, A. Egorkin, A. Mostinskiy, A. Peresan, M. Guidarelli, T. Yanovskaya** **Laboratory Exercises**