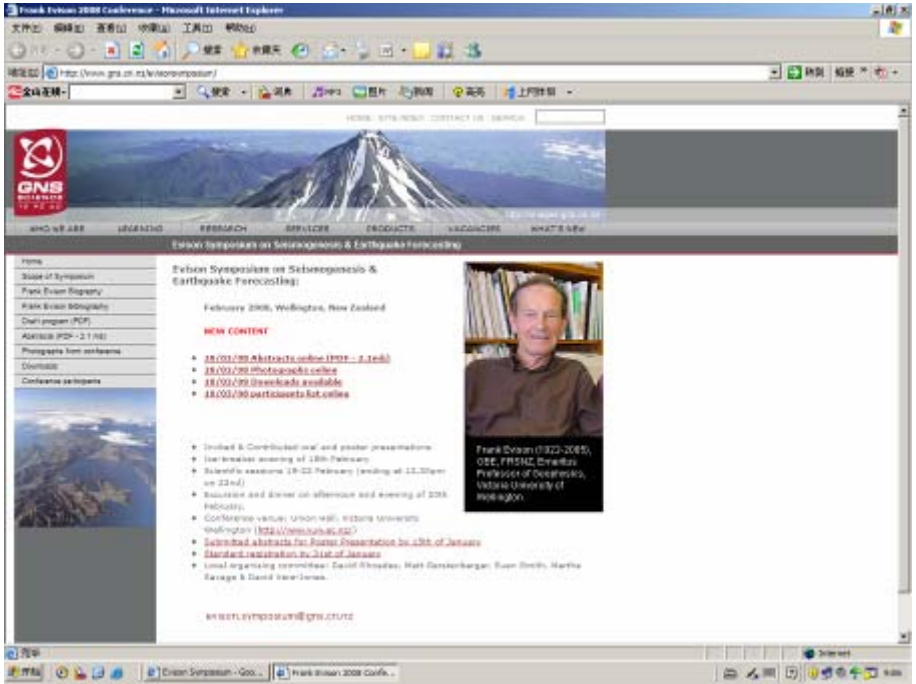
IASPEI 2008

and

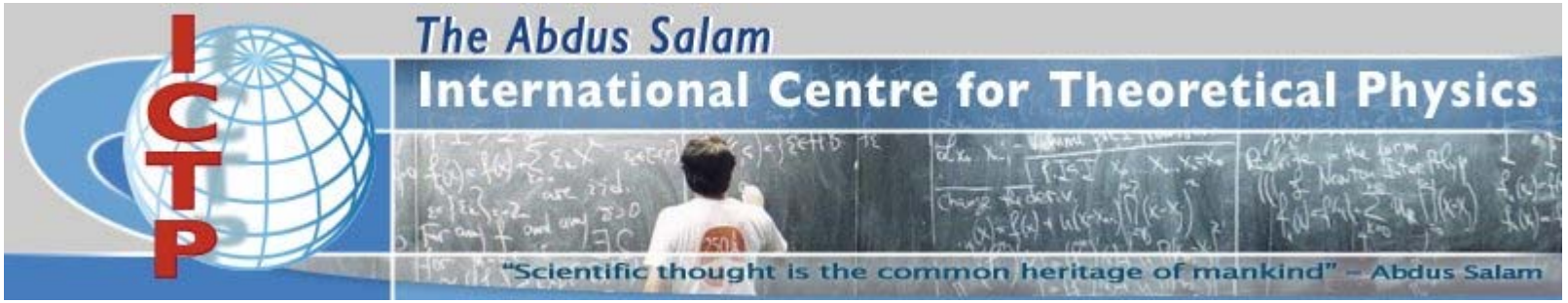
IASPEI 2009 Scientific Assembly

- **In February, Evison Symposium on Seismogenesis and Earthquake Forecasting, Wellington, explored new possibilities for the collaborative study of earthquake forecast. Now IASPEI has an active Working Group promoting the Collaboratory for the Study of Earthquake Predictability – this year there will be several meetings related to this topic.**



- **In March, Marked by the Planning Meeting of the International Scientific Studies of the Implementation of the CTBT Verification System (called ISS project by the CTBTO PrepComm PTS), Vienna, cooperation between IASPEI and IMS started a new period – and the most important event in this year will be the ISS 09 conference in June.**

- **In May, after the devastating Wenchuan earthquake, sympathy, aids, and helps from international seismological community to Chinese seismologists indicated our radical notion to collaborate internationally for the reduction of earthquake disasters.**
- **This year there will be an international symposium related to this earthquake to be held in China.**



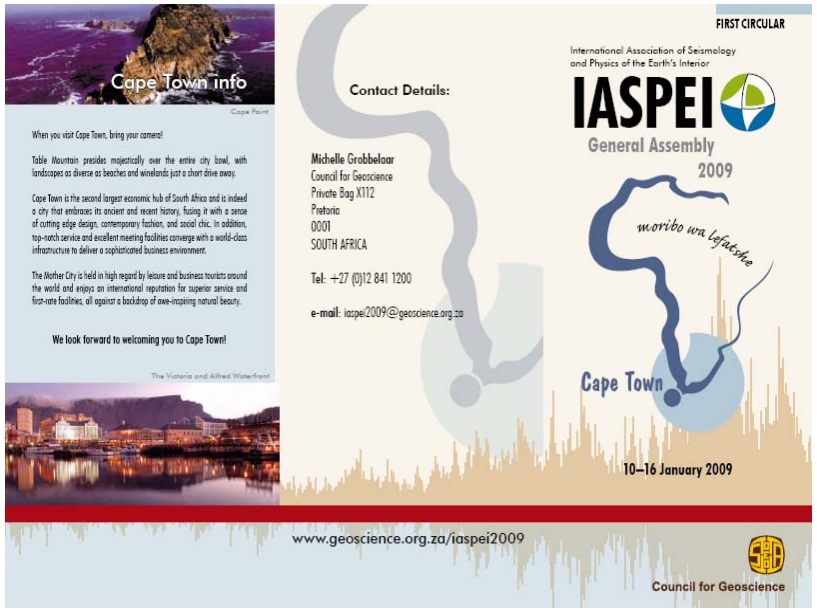
- **In September, the** 9th Workshop on 3D Modelling of Seismic Waves Generation **was held at ICTP, one of the many activities involving IASPEI scientists – and this year there will be the two IASPEI-sponsored ICTP workshops:** From Core to Crust: Towards an Integrated Vision of Earth's Interior **in July and** Evaluating, Monitoring and Communicating Volcanic and Seismic Hazards in East Africa **in August.**

- **In October, during the 14th World Conference on Earthquake Engineering (WCEE), Beijing, the IAEE-IASPEI Dialogue mechanism was formulated – this mechanism will be kept in the next WCEE meeting in Portugal.**

IASPEI

Co-operate internationally to better understand our Earth

http://www.iaspei.org



- **Throughout the year 2008, organization of the IASPEI Assembly was the highlight of the year. This Assembly is the first IASPEI Assembly in Africa, and will mark the beginning of the more fruitful 2009 – and now it's time for us to think where should be the next place for the IASPEI Assembly in 2013.**

IASPEI 2008 an informal and incomplete memory

IASPEI

Co-operate internationally to better understand our Earth

http://www.iaspei.org

- **Through our commissions and working groups, international cooperation for education and outreach, seismological observation and interpretation, studies on tectonophysics and crustal structure, earthquake sources, Earth structure and geodynamics, earthquake hazard, risk and strong ground motion, and digital broadband seismograph networks, kept getting continuous progress.**

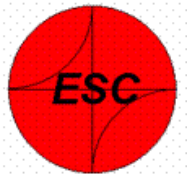
IASPEI 2008 an informal and incomplete memory

- **Cooperating with our sister associations, IASPEI also contributed to the studies on the physics and chemistry of Earth materials, volcano geophysics, heat flow, electromagnetic studies of earthquakes and volcanoes, and tsunami warning, as well as the international cooperation in various aspects such as international ocean network, Earth sciences in Africa, studies on subduction zones located in developing countries, and re-use of submarine telephone cables, as well as non-rigid Earth nutations, mathematical geophysics, lithosphere study, and geophysical risk and sustainability.**

IASPEI

Co-operate internationally to better understand our Earth

http://www.iaspei.org



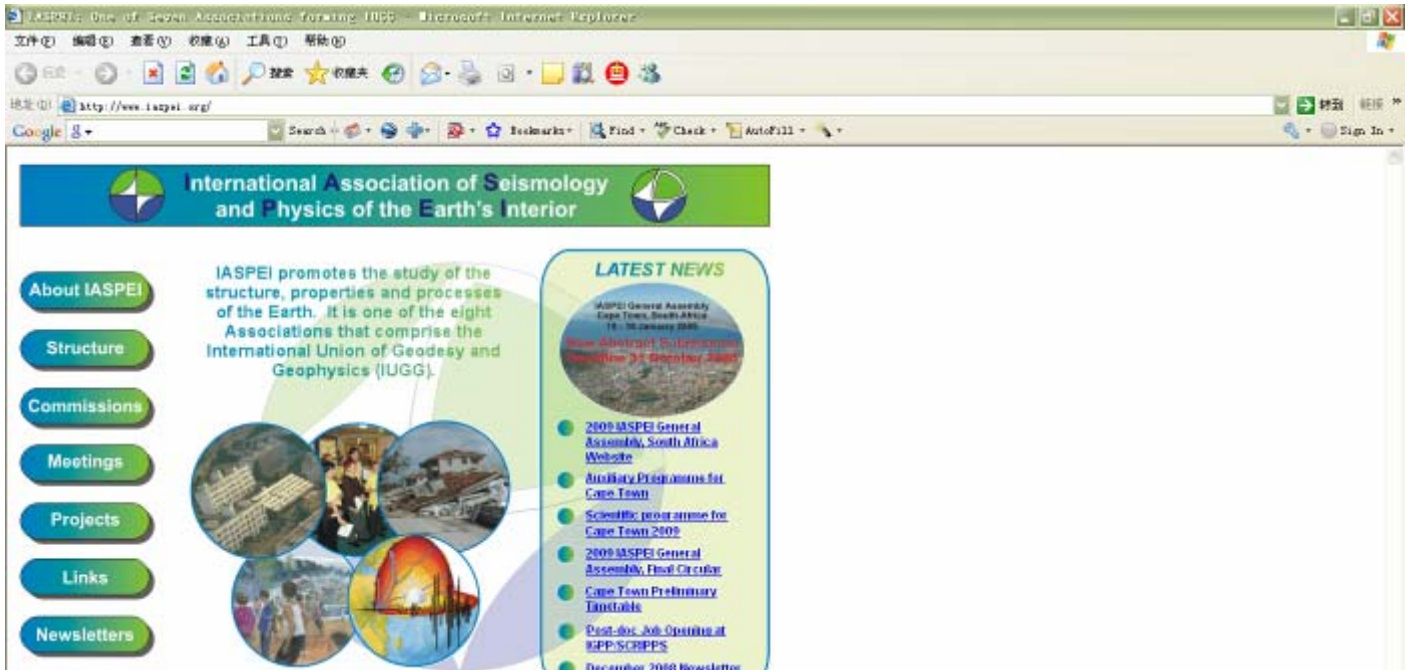
- **IASPEI has two active regional commissions.**
- **In September 2008, the European Seismological Commission (ESC) held its 31st General Assembly in Hersonissos, Crete island, Greece.**
- **In November, the 7th General Assembly of Asian Seismological Commission (ASC) and Seismological Society of Japan (SSJ) 2008 Fall Meeting was held in Tsukuba, Japan, being the first joint meeting of ASC with national seismological society.**

IASPEI 2008 an informal and incomplete memory

- **Among the IASPEI-sponsored projects let's just mention the working group on rotational seismology and the SeismoArchives project.**
- **Through the efforts of our experts, we have so many projects on-going, contributing to the innovation of earthquake science and the reduction of earthquake disasters.**

- **The year 2008 was decisive for the Global Earthquake Model (GEM) project, with IASPEI and IASPEI-people playing an active role – in 2009 this project will be formally launched.**

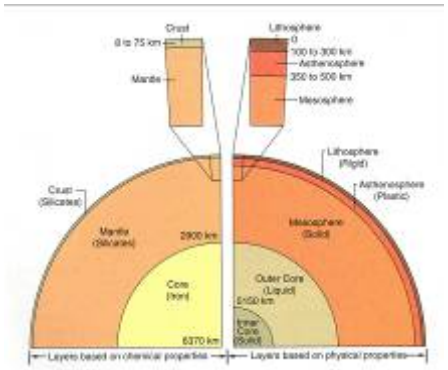
- In 2009, we are expecting many new events and advancements, as can be seen from our website.
- Also taking this opportunity we would like to thank Alice Walker, our website manager, for her contributions to make our website and newsletters more and more beautiful – also we urge our commissioners and national representatives to contribute to our website which is an interface between our community and the public.



- **Currently seismology and physics of the Earth's interior are facing to a historic time…**

Physics and mathematics applied to Earth science

1910s~1930s



Seismology
Gravity
Geomagnetism

Global survey and interdisciplinary study

1950s~1970s

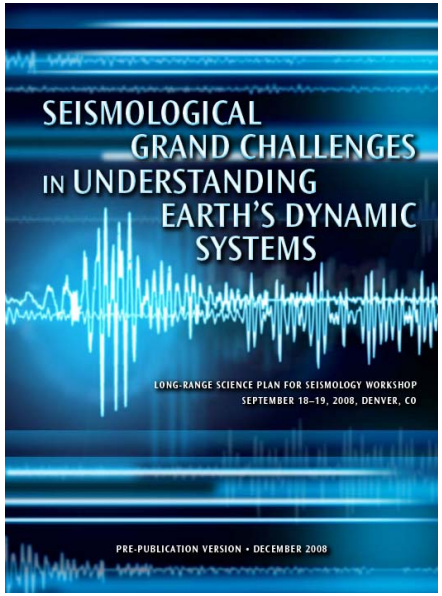
Ocean survey
Paleo-geomagnetism
Global seismology
Seismo-tectonics
Geomagnetic survey
MT sounding

Earth system and its dynamics

1990s~2010s

?

Active source
Broadband seismology
Seismic tomography
GPS
InSAR
Remote sensing
NCF



- **Grand Challenge 1. How Do Faults Slip?**
- **Grand Challenge 2. How Does the Near-Surface Environment Affect Natural Hazards and Resources?**
- **Grand Challenge 3. What is the Relationship Between Stress and Strain in the Lithosphere?**
- **Grand Challenge 4. How Do Processes in the Ocean and Atmosphere Interact With the Solid Earth?**
- **Grand Challenge 5. Where Are Water and Hydrocarbons Hidden Beneath the Surface?**
- **Grand Challenge 6. How Do Magmas Ascend and Erupt?**
- **Grand Challenge 7. What Is the Lithosphere-Asthenosphere Boundary?**
- **Grand Challenge 8. How Do Plate Boundary Systems Evolve?**
- **Grand Challenge 9. How Do Temperature and Composition Variations Control Mantle and Core Convection?**
- **Grand Challenge 10. How Are Earth's Internal Boundaries Affected by Dynamics?**

- **IASPEI 2009: *Rhythm of the Earth***

- **Keynote lectures:**
- **T. Jordan, Earthquake Forecasting and Prediction: Progress in Model Development and Evaluation**
- **R. Madariaga, Earthquake Dynamics: From Source to Radiation**
- **G. Nolet, Seismic Tomography and the Dilemma of the Earth's Heat Budget**

Assembly Statistics

- **Number of sessions: 32**
- **Number of oral talks: 335**
- **Number of posters: 106**

- **Number of countries: 60**
- **Number of participants: 347**
- **Summer school students: 27**

Assembly Statistics

Participation (⩾10) by Country

South Africa	51
USA	34
Japan	28
China	20
UK	20
Russian Fed.	18
Germany	17
Italy	17
Austria	10
Algeria	10

Sessions

Co-operate internationally to better understand our Earth

http://www.iaspei.org

- S1 - Symposium on seismological observation and interpretation
- S2 - Large historical earthquakes in Africa, historical seismology, paleoseismicity
- S3 - Seismicity, seismic hazard and regional co-operation in North Africa
- S4 - Induced seismicity
- S5 - Intraplate seismicity
- S6 - Recent large earthquakes
- S7 - Volcano seismology
- S8 - Arrays, networks, instrumentation and stations in Africa
- S9 - Extending land networks into the sea and oceans
- S10 - Scientific and technical advances in seismology and their relevance to the CTBT

Sessions

Co-operate internationally to better understand our Earth

http://www.iaspei.org

- L1 - Structure and dynamics of the lithosphere: observations, modelling and laboratory constraints
- L2 - East Africa Rift System
- L3 - Illuminating the crust and upper mantle structure with large-scale seismic deployments
- T1 - Tsunamis in Africa - Indian, Atlantic, Mediterranean Oceans
- T2 - Leveraging ODP boreholes and submarine cables
- E1 - Symposium on earthquake sources: modelling and monitoring for prediction
- E2 - Geophysical anomalies and earthquake prediction
- E3 - Prospective test of earthquake and faulting probability models
- G1 - Earth structure and geodynamics

Sessions

Co-operate internationally to better understand our Earth

http://www.iaspei.org

- H1 - From heat flow to geothermal energy
- H2 - Workshop: Geothermal studies: instruments, measurements, and interpretation
- R1 - Earthquake hazard
- R2 - Earthquake risk
- R3 - workshop: Effects of surface geology
- R4 - Seismic source modelling and ground motion prediction
- R5 - Earthquake risk reduction and preparedness: socio-economic aspects, particularly in developing countries
- A1 - Electromagnetic prospecting and crustal structures
- A2 - Geochemical and geophysical signatures of diamond fields

Sessions

Co-operate internationally to better understand our Earth

- **O1 - Capacity building and attracting undergraduate students to geophysics/seismology**
- **O2 - Discussion panels**
- **Panel discussion 1 – Seismic hazard: living with uncertainty**
- **Panel discussion 2 – Earthquake prediction: what the future holds**

FUTURE IASPEI ACTIVITIES

- **2010 ASC in Hanoi (Vietnam) November 8-11**
- **2010 ESC in Montpellier (France) September 5-10**
- **2011 IUGG/IASPEI in Melbourne (Australia) June 27 - July 8**

2013 IASPEI ASSEMBLY

INVITATIONS OPEN

IASPEI 2009 RESOLUTIONS

Resolution 1: Global Earthquake Model

IASPEI

RECOGNIZING the continuing growth of earthquake vulnerability and risk, associated in particular with the development of megacities and urban areas in developing countries, and

the important value of the information and knowledge assembled by the seismological community for the assessment of seismic hazard, the need to apply the seismological knowledge in programs aiming at a comprehensive and effective assessment, and mitigation of the seismic risk,

SUPPORTS the establishment of the Global Earthquake Model (GEM) – the program initiated by the OECD to develop a new open standard for the assessment of seismic hazard and risk at regional and global scales,

COMMITS to cooperate actively with GEM, and

ENCOURAGES all IASPEI members to actively participate in the GEM program and related activities.

Resolution 2: Reference Events for Improved Location

IASPEI

RECOGNIZING that the International Seismological Centre (ISC) has recently established a website database of reference earthquakes and explosions for which hypocenter information is known with high confidence and which is associated with seismic signals recorded at regional and / or teleseismic distances, and

ACKNOWLEDGING that the ISC website also includes a capability to submit reference event information,

ENCOURAGES the scientific community to submit to ISC reference event information using guidelines that have been developed by IASPEI for identifying candidate events.

Resolution 3: International Registry of Seismic Stations

IASPEI

RECOGNIZING that the International Registry of Seismic Stations no longer meets the needs of the seismological community,

RECOMMENDS adoption of newly developed seismic network and station coding standards developed by IASPEI to promote compatibility between waveform and parameter data exchange, attribution of parameter data, and flexibility for seismic network operators to better support earthquake monitoring and hazard assessments.

Resolution 4: Earthquake Forecasting and Predictability Studies

IASPEI

RECOGNIZING the opportunities provided by recent developments in earthquake science and technology

RECOMMENDS that research on forecasting and predictability of earthquakes, and the validation and comparative testing of prediction methods be supported.

Resolution 5: Real-time Data Access

IASPEI

RECOGNIZING the barriers to progress caused by restrictive seismic data release policies in force in parts of the world, and

RECOGNIZING the scientific and societal benefits of rapid data access for the purpose of monitoring, notification and response to damaging earthquake and tsunami events,

RECOMMENDS the adoption of an open real-time data release policy by all national and international seismic networks.

IASPEI: Projects, Products, Platforms, Perspectives, People

Co-operate internationally to better understand our Earth

http://www.iaspei.org