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## Bids open for 2013 IASPEI Scientific Assembly

The bidding for the IASPEI 2013 Scientific Assembly is open and we invite all IASPEI National Correspondents and officers to send suggestions and expressions of interest to the IASPEI Secretary General ([suhadolc@units.it](mailto:suhadolc@units.it)). The last 3 meetings were held in Vietnam, Chile and South Africa. Is it time to have one again in Europe or North America?

Perhaps we could have a joint meeting with another IUGG Association?



### FOREWORD

The Global Earthquake Model (GEM) has posted Requests for Proposals that are of wide interest to the seismological community; details on the right.

I am still sending out the Newsletter as an attachment to an e-mail, trying to limit its size. It can also be downloaded from the IASPEI website:

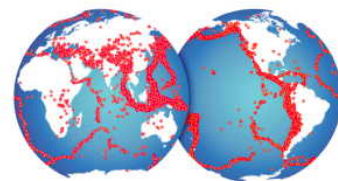
<http://www.iaspei.org/newsletters/newsletters.html>

The website also has special pages on our last Cape Town Scientific Assembly including abstracts, Plenary and Keynote lectures, Resolutions and a photo-gallery ([www.iaspei.org/cape\\_town\\_2009/cape\\_town\\_2009.html](http://www.iaspei.org/cape_town_2009/cape_town_2009.html)).

The IASPEI Newsletter is distributed to National Correspondents and other national representatives we know of, to all IASPEI officers, to IASPEI scientists who attended recent IASPEI Assemblies, and to various research organisations in countries around the world.

**Peter Suhadolc**  
Secretary General

### GEM: THE GLOBAL EARTHQUAKE MODEL



A PUBLIC-PRIVATE PARTNERSHIP

## Request for Proposals: Global Earthquake Model (GEM)

GEM seeks to build an authoritative standard for calculating and communicating earthquake hazard and risk. GEM will be the first global, open source model for seismic risk assessment at a national and regional scale, and aims at achieving broad scientific participation and independence. GEM aims to achieve its goals by developing state-of-the-art open source software and global databases necessary for reliably mapping earthquake risk. To this end, GEM has posted these requests for proposals, due **15 July 2009**, with these target budgets and durations:

- Global Active Fault and Seismic Source Database, 450,000€, 24 months. Seismic hazard assessments should incorporate an inventory of active faults. GEM seeks to build a uniform global active fault and seismic source database with a common set of strategies, standards and formats.

It should include both observational (active faults and folds) and interpretative (inferred seismic sources) elements.

- Global Instrumental Seismic Catalog, 450,000€, 24 months. As basis for its global reference hazard model, GEM seeks the stable quantification of seismicity for as long a time period as possible and in all regions, as the primary tool to be used to characterize the spatial distribution of seismicity, the magnitude-frequency relation and the maximum magnitude.
- Global Historical Earthquake Catalog and Database, 400,000€, 24 months. The record of past earthquakes is among the most important means to evaluate earthquake hazard, and the distribution of damage associated with past earthquakes is a key to assessment of seismic risk. Extending the record of large damaging earthquakes by several hundred of years longer than the instrumental record is thus extremely valuable.
- Global Ground Motion Prediction Equations, 400,000€, 24 months. With the goal of compiling a global reference hazard assessment model, GEM seeks to develop a harmonized suite of ground motion prediction equations (GMPE), built on the most recent advances in the field.
- Global Geodetic Strain Rate Model, 250,000€, 18 months. The geodetically measured secular strain rate provides an independent benchmark for crustal deformation and thus the recurrence of large earthquakes that can be compared with the seismic catalog and active faults.

We anticipate that proposals will be prepared and submitted by international consortia. Proposals will be subject to peer review, and will be selected by the GEM Scientific Board, with awards expected in mid-September 2009. To learn more about GEM and to download the requests and guidelines for the preparation of the proposals, visit [www.globalquakemodel.org](http://www.globalquakemodel.org).

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## Announcements

### Rotational Seismology and Engineering Applications BSSA Special Issue

Rotational seismology covers all aspects of the rotations induced by earthquakes, explosions and ambient vibrations. Its emergence as a research frontier is indicated by two recent monographs and a Bulletin of Seismological Society of America (BSSA) special issue, *Rotational Seismology and Engineering Applications*. Rotational seismology is of interest to workers in several disciplines, including various

branches of seismology, earthquake engineering and geodesy, and to physicists using Earth-based observatories for detecting gravitational waves from astronomical sources as predicted by Albert Einstein in 1916.

Seismology and earthquake engineering use observations and modeling of translational ground and structural motion. Although rotational effects from earthquakes have been observed for centuries, rotational ground motion has been largely ignored. Two reasons are (1) a widespread belief that rotation is insignificant, and (2) practical difficulties in measuring rotation at the micro-radian level. Theoretical work in modern rotational seismology began in the 1970s, and attempts to deduce rotational motion from accelerometer arrays began in the 1980s. However, modern direct measurements of rotational ground motion began only about a decade ago when affordable angular sensors became sensitive enough (capable of measuring an angle of less than ten thousandth of a degree) to detect rotations from small earthquakes, while large ring laser gyros (intended for studying the Earth's rotation) became capable of detecting even smaller rotations from distant earthquakes.

Ring laser gyro observations at Wettzell, Germany, and at Piñon Flat, California, have demonstrated consistent measurements of rotational ground motion in the far field. The cost of high-precision ring laser gyros (US\$1 million or more) makes widespread deployment unlikely. Less expensive or less sensitive alternatives are now being pursued by five academic groups. At present, Taiwan has a modest program to monitor both translational and rotational ground motion from regional earthquakes at several free-field sites, as well as by two 32-channel arrays. The U.S. Geological Survey just started an exploratory program of monitoring rotational ground motions at 12 existing seismic stations in the San Francisco Bay area, California.

The Seismological Society of America has published a special issue, *Rotational Seismology and Engineering Applications*, of its Bulletin, as Volume 99 (No. 2B), in May, 2009. It contains an introduction, 27 research articles, 11 short notes, four review articles, and six tutorials, as well as suggested notation conventions, a glossary, and suggested readings.

Please visit:

<http://bssa.geoscienceworld.org/cgi/content/full/99/2B/945>

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## Job Opportunities

### SEISMOLOGIST / ANALYST AT ISC

The International Seismological Centre (ISC) is planning to fill a full-time position of **Seismologist / Analyst** from Aug 1, 2009. Initially this post is for 2 years with a 6 month probation period and the possibility of extension. The ISC values its experienced personnel and always happy to retain qualified and dedicated staff.

The successful candidate will be expected to continue on a daily basis with one of the most important ISC duties – analysing the contents of the ISC Bulletin. Fulfilling these duties would involve review of automatic hypocentre solutions, reported source parameters and station picks for approximately 40,000 earthquakes and explosions per year recorded by a network of more than 4,000 seismic stations worldwide. Occasional communication with seismologists from about 120 institutions contributing data to the ISC is also part of the job. This is clearly **not a research position** although occasionally the ISC analysts are involved in investigating ways to improve the ISC operations and services to global seismological community.

A suitable candidate should have

- a degree in Geophysics or related fields
- experience in regional and global observational seismology, including waveform analysis
- dedicated meticulous attitude to data
- working knowledge of English and
- the ability to work as part of a friendly international team

Familiarity with LINUX and knowledge of other widely spoken languages would be an advantage. A successful candidate will be given appropriate training and guidance that often lasts in excess of 6 months.

The starting salary will be approximately £25K per annum, consistent with UK Academic scales, with 6 weeks paid holiday. Overseas employees will be provided with assistance in initial travelling, establishing accommodation and obtaining a UK Work Permit (Certificate of Sponsorship) if required.

To apply, please send your CV with an accent on the above requirements and the names and e-mail addresses of two referees to the ISC Administration Officer, Mrs Maureen Aspinwall, at [admin@isc.ac.uk](mailto:admin@isc.ac.uk) before June 8, 2009.

## New Book

### Earthquake Engineering: New Research

**Editors:** Takumi Miura and Yuuki Ikeda  
[www.novapublishers.com](http://www.novapublishers.com)

This new book deals with earthquake engineering including seismology, tsunamis, ground motion characteristics, soil and foundation dynamics, wave propagation, probabilistic and deterministic methods of dynamic analysis, experimental behaviour of structures, and methods for earthquake resistant design and retrofit of structures that are germane to practicing engineers. It includes seismic code requirements and system identification, as well as supplemental energy dissipation, base isolation, and structural control emphasizing earthquake engineering.

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## Meetings Calendar

A calendar of scientific meetings relevant to the interests of IASPEI scientists is maintained at:

<http://www.iaspei.org/meetings/forthcoming.html>

where more details can be found. We report below just the titles, dates, places and websites of the forthcoming meetings.

### INTERNATIONAL SCIENTIFIC STUDIES PROJECT

To evaluate the capability and readiness of the Comprehensive Nuclear-Test-Ban Treaty's verification regime, Hofburg Imperial Palace, Vienna, Austria

**10 to 12 June 2009, Vienna, Austria**

Conference webpage: [www.ctbto.org](http://www.ctbto.org)

Contact address: [iss@ctbto.org](mailto:iss@ctbto.org)

### SEISM CARE Assembly: Seismic Prevention and Strategies

2009 June 22-24, in Fort-de-France, Martinique (FWI)

The SEISM CARE (SEISMic Mitigation in the CARibbean REgion) assembly has been created by the French Directorate for the Environment (DIREN) to gather officials experts involved in the seismic prevention, mitigation and remediation within the Caribbean region.

It aims to share experiences and knowledge in such topics and to initiate technical exchanges or projects between Caribbean nations.

This SEISM CARE assembly is an UNESCO 'International Year of Planet Earth' project (ref. Unesco-CNF-IYPE 416).

The official language will be English, but lectures may be given in native language as simultaneous translation in French, English and Spanish will be provided.

Posters can be proposed in English only.

More details and existing sessions can be found :

- in English at

[www.martinique.ecologie.gouv.fr/seismcare/us/index.html](http://www.martinique.ecologie.gouv.fr/seismcare/us/index.html)

- in Spanish at

[www.martinique.ecologie.gouv.fr/seismcare/esp/index.html](http://www.martinique.ecologie.gouv.fr/seismcare/esp/index.html)

- in French at

[www.martinique.ecologie.gouv.fr/seismcare/fr/index.html](http://www.martinique.ecologie.gouv.fr/seismcare/fr/index.html)

Contact: [jean-christophe.audru@developpement-durable.gouv.fr](mailto:jean-christophe.audru@developpement-durable.gouv.fr)

### Seismic Tomography

A NERIES-ORFEUS workshop

July 2-3, 2009, University of Utrecht, The Netherlands

Scientific organisation: Jeannot Trampert and Andrea Morelli

Registration deadline: June 1, 2009

Abstract submission deadline: June 1, 2009

More information can be found on:

[www.neries-eu.org](http://www.neries-eu.org) or

[www.orfeus-eu.org/Announcements/workshop\\_utrecht\\_2009/workshop\\_utrecht.htm](http://www.orfeus-eu.org/Announcements/workshop_utrecht_2009/workshop_utrecht.htm)

### AfricaArray 5<sup>th</sup> Annual Workshop

July 6-7, 2009, Johannesburg, South Africa

Contact person: Prof. Ray Durrheim

<RDurrhei@csir.co.za>

### International Symposium on Earthquake Seismology and Earthquake Predictability

July 5-9, 2009, Beijing, China

The Symposium also includes two special sessions:

Special Session I : Wenchuan Earthquake: One Year After;

Special Session II: Keiiti Aki Workshop on Earthquake Physics and Earthquake Predictability.

More information can be found at the website:

<http://www.cea-gp.ac.cn/English/Symposium/index.htm>

Contact person: Prof. Xiang-chu YIN

<xcyin@public.bta.net.cn>

### From Core to Crust: Towards an Integrated Vision of Earth's Interior

July 20 – 24, 2009, Trieste, Italy

The Abdus Salam International Center for Theoretical Physics Organizer(s): Directors: K. Aoudia, S.

Scandolo, J. Niemela

Contact E-mail: [smr2048@ictp.it](mailto:smr2048@ictp.it)

Web-Page: <http://www.ictp.it>

### AOGS2009 – 6-th Annual General Meeting

11-15 August 2009, SUNTEC Singapore

Abstract Submission - Opens 15 Jan 2009

Enquiries & Assistance - Please Email

[info@asiaoceania.org](mailto:info@asiaoceania.org)

Website:

<http://www.asiaoceania.org/aogs2009/index.asp>

### The 5th International Symposium on Tibetan Plateau / The 24th Himalaya-Karakorum-Tibet Workshop

11 – 14 August, 2009, Beijing, China

Website: [http://www.itpcas.ac.cn/5istp\\_24hkt](http://www.itpcas.ac.cn/5istp_24hkt)

Contact persons: Prof. Zhu, Liping

<lpzhu@itpcas.ac.cn>, Prof. Fang, Xiaomin

<fangxm@itpcas.ac.cn>

### Advanced Workshop on Evaluating, Monitoring and Communicating Volcanic and Seismic Hazards in East Africa

August 17 - 28, 2009, Trieste, Italy.

The Abdus Salam International Center for Theoretical Physics.

Organizer(s): Directors: K. Aoudia, E. Calais, C.

Ebinger, T. Wright, G. Yirgu

Contact E-mail: [smr2053@ictp](mailto:smr2053@ictp)

Web-Page: <http://www.ictp.it>

### 1st International Workshop on Earthquake Archaeology and Palaeoseismology

September 7-13, 2009, ancient Roman city of Baelo Claudia, Cádiz, Southern Spain

**Deadline for regular registration, payment and abstract submission: June, 15th**

For more information on the Workshop, please visit the website: <http://baelo2009.org/>

Contact person: **Christoph Grützner**

[c.gruetzner@nug.rwth-aachen.de](mailto:c.gruetzner@nug.rwth-aachen.de)

### Climate Forcing of Geological and Geomorphological Hazards?

15 - 17 September 2009, University College London, UK

The Third Johnston-Lavis Colloquium, on the theme of *Climate Forcing of Geological and Geomorphological Hazards*, will address relationships between past and contemporary climate change and the triggering of hazardous geological and geomorphological phenomena. The meeting is supported by the UK Met Office, the British Geological Survey, the British Antarctic Survey and UCL and Oxford universities.

#### SESSIONS

S1. Past climate change and geological and geomorphological hazards

S2. Feedback effects and climate modification

S3. Short time-scale drivers of geological and geomorphological hazards

S4. Climate change forcing of geological and geomorphological hazards

**Early-bird registration and abstract deadline:**

6 July 2009

Contact email: [w.mcquiere@ucl.ac.uk](mailto:w.mcquiere@ucl.ac.uk)

For further information go to: <http://www.abuhrc.org>

### International Tsunami Symposium

July 14-17, 2009, Novosibirsk, Russia

The 24th symposium in the row of research symposia organized by the IUGG Tsunami Commission since

1961. The symposium will cover all the basic tsunami science including theoretical, observational, instrumental and operational aspects of this essentially multi-disciplinary problem.

Web-site: <http://tsun.sccc.ru/tsunami2009/>

Deadline for abstracts: April 30, 2009.

### **IRIS/ORFEUS Metadata Workshop - Managing Waveform Data and Related Metadata for Seismic Networks**

November 8-17, 2009, Helwan, Cairo, Egypt

More Information can be obtained at:

[www.iris.edu/workshops/2009/metadata/](http://www.iris.edu/workshops/2009/metadata/)

## **2010**

### **2010 AGU Joint Assembly in Brazil**

August 8-13, 2010, Iguassu Falls, Brazil

Call for session proposals:

[www.geophysics2010.org](http://www.geophysics2010.org)

Enquiries: Marcelo S. Assumpcao

<[marcelo@iag.usp.br](mailto:marcelo@iag.usp.br)>

### **ESC2010 (European Seismological Commission 2010)**

September 5-9, 2010, Montpellier, France

Venue: Corum Conference Centre

Contact: Rémy Bossu ([bossu@emsc-csem.org](mailto:bossu@emsc-csem.org))

### **XIX Congress of the Carpathian Balkan Geological Association**

23-26 September 2010, Thessaloniki, Greece

Web: [www.cbga2010.org](http://www.cbga2010.org)

Email: [info@cbga2010.org](mailto:info@cbga2010.org)

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## **General Information about IASPEI**

The International Association of Seismology and Physics of the Earth's Interior is one of the eight Associations of the International Union of Geodesy and Geophysics [[IUGG](#)].

The other IUGG Associations are:

International Association of Cryospheric Sciences ([IACS](#))

International Association of Geodesy [[IAG](#)]

International Association of Hydrological Sciences [[IAHS](#)]

International Association of Meteorology and Atmospheric Sciences [[IAMAS](#)]

International Association for the Physical Sciences of the Oceans [[IAPSO](#)]

International Association of Geomagnetism and Aeronomy ([IAGA](#))

International Association of Volcanology and Chemistry of the Earth's Interior [[IAVCEI](#)]

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## **Scientific Assemblies**

IASPEI holds an Ordinary General Assembly every four years in conjunction with each Ordinary General Assembly of IUGG. Between the General Assemblies, IASPEI holds a Scientific Assembly, sometimes meeting with one of the other Associations of IUGG.

## **Participation in IASPEI Activities**

IASPEI welcomes all scientists throughout the world to join in research into Seismology. IASPEI is subdivided into a number of Commissions, many of which have working groups for the study of particular subjects in their general areas of interest. On occasion, these internal IASPEI groups issue their own newsletters or circulars and many maintain their own web sites. At the IASPEI Assemblies, the groups organize specialist symposia, invite scholarly reviews and receive contributed papers that present up-to-the-minute results of current research. The IASPEI web site gives, or provides links to, information on the range of IASPEI activities.

## **The IASPEI Web site**

Information on IASPEI can be found at: <http://www.iaspei.org/>

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## **Contacting IASPEI**

The Secretary-General is the main point of contact for all matters concerning IASPEI.

### ***Prof Peter Suhadolc***

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