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### IN THIS ISSUE

Foreword	1
Presidential Address	1
XXV IUGG2011 General Assembly in Melbourne	2
Open call for Symposia proposals for IASPEI2013.	3
From IASPEI History: How IASPEI logo was born	3
Obituaries	4
Meetings Calendar	6
General Information about IASPEI	6

### **Foreword**

Dear readers.

The IUGG2011 General Assembly in Melbourne was well attended and achieved its goals. Both IUGG and IASPEI have a new President: congratulations Harsh Gupta and

Domenico Giardini!

This issue contains our new President's address, a few highlights about the IUGG 2011 General Assembly, the open call for symposia proposals for IASPEI 2013 Scientific Assembly, a historical note on how the IASPEI logo was born, and obituaries of two prominent seismologists who have left us in the past month.

### Peter Suhadolc

Secretary General

### Please note:

I am 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 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.

### **Presidential address**

Dear IASPEI friends and colleagues,

It is for me an honor to be elected President of IASPEI. When I look at the names and achievements of the past Presidents, I feel strengthened by the contributions and engagement they brought to IASPEI. In the same way as they did before me, I also engaged for the success of IASPEI in many roles — in the International Federation of Digital Seismic Networks, the European Seismological Commission, as Vice-President and member of various commissions, and with the Global Seismic Hazard Assessment Programbecause I believe that a strong IASPEI is needed today.

The earthquakes of the past years confirm that our science has done much, but much remains to be done: in Haiti, an earthquake expected by scientists brought the whole society to collapse; in Japan, the best science failed to understand how large a subduction earthquake could become but also to apply its latest understanding to mitigate the risk for critical infrastructures: in New Zealand, a previously unmapped fault produced extreme ground-motions and damage; in Italy, the vulnerability of our historical patrimony was tragically confirmed; in China, newly built cities crumbled and had to be abandoned. And yet, as tragic as these earthquakes have been, in these and many other cases, the increasing scientific knowledge on past earthquakes, active faults and ground shaking and its application in improved engineering practice, saved countless lives.

In planning the role and activities of IASPEI, we see five main challenges facing us in the coming years:

- We want to keep promoting the drive to scientific discovery, attacking the key questions of our science; at a time of recession and decreasing funding in many countries of the world, we defend the value of fundamental research in providing the basis for all future improvements.
- At the same time, we also need to focus our efforts on those areas where the development

of new scientific knowledge and its rapid implementation can bring important progress for our society, from the understanding and mitigation of earthquake and tsunami risk, to the protection of our critical infrastructures, to the search and safe utilization of underground resources.

- As young, bright students are becoming increasingly disaffected with university training in science and with diminishing prospects for scientific careers in many countries, IASPEI must strive to reverse this trend and increase the participation of young scientists in its assemblies and activities.
- We will continue to expand the global reach of our association, and looking at the successes of our seismological commissions in Europe and Asia, we will foster the establishment of such commissions also in Latin America and Africa.
- Exciting discoveries are taking place at the borders of seismology and physics of the Earth's interior with other sciences - among them glaciology, planetary sciences, material physics, exploration and engineering geophysics - and IASPEI will increase its role in promoting inter-disciplinary research and initiatives with other associations in the IUGG and ICSU frameworks.

IASPEI is fortunate to have excellent and dedicated scientists in all its key functions: Secretary General, Vice-Presidents, Bureau and Commission Chairs. I will work with them and with all of you for the success of IASPEI in the next four years.

**Domenico Giardini** IASPEI President



## The XXVth General Assembly of the IUGG Melbourne, Australia, 2011

### Some Highlights

The XXVth General Assembly of the IUGG held from 27 June to 8 July 2011 in Melbourne (Australia) was a great success with more than 3,500 participants attending from 92 countries. Thanks are due to the Australian Academy of Sciences and the Royal Society

of New Zealand who hosted the event and to the Melbourne Local Organizing Committee for the management and hospitality provided.

There were 758 sessions with more than 2,300 orals and more than 1,200 posters presented. Participants affiliated to IASPEI numbered about 450 and 78 of them were financially supported.

More information about the IASPEI plenary presentations, keynote lectures, together with photographs taken during the conference, can be found at:

http://www.iaspei.org/melbourne\_2011/IASPEI\_melbourne\_2011.html

#### **IUGG Bureau members for 2011-2015**

President: Harsh Gupta (India)

Vice President: Michael Sideris (Canada) Secretary General: Alik Ismail-Zadeh

(Germany/Russia)

Treasurer: Aksel W. Hansen (Denmark)

Bureau Members: Isabelle J. Ansorge (South Africa),

Pierre Hubert (France), Kenji Satake (Japan)

### **Location of the 2015 IUGG General Assembly**

The IUGG Council selected *Prague* (*Czech Republic*) as the venue in 2015; the dates of the XXVIth IUGG General Assembly will be announced as soon as possible, but June-July is most likely.

### IASPEI at IUGG2011 Executive Committee 2011-2015 (new entries in red)

Domenico Giardini, President (Switzerland)
lan Jackson, First Vice President (Australia)
Thorne Lay, Second Vice President (USA)
Peter Suhadolc, IASPEI Secretary General (Italy)
Marcelo Assumpcao, Member (Brazil)
Kenji Satake, Member (Japan)
Michelle Grobbelaar, Member (South Africa)
Alexey Zavyalov, Member (Russia)
Wu, Zhongliang, Past President (China)

### **IASPEI Resolutions**

Five resolutions have been adopted:

Resolution 1: Latin American Seismological Commission

Resolution 2: African Seismological Commission

**Resolution 3: IASPEI MEDAL** 

Resolution 4: Earthquake Forecasting Resolution 5: SeismoArchives Project

**Resolution 6: Appreciation** 

The full texts of these resolutions can be downloaded from the IASPEI website at:

http://www.iaspei.org/resolutions.html

### **Updated IASPEI Statutes and Bylaws**

During the IASPEI Closing Plenary, an updated version of the IASPEI Statutes and Bylaws has been voted. The changes were needed to conform with changes in practice since the last revision by the General Assembly in 1981. Since 1981, we now have the internet: e-mail, web etc. and the General and Scientific Assemblies are now completed within one week, rather than two. The aim of revisions was also to clarify language and avoid ambiguity.

The IASPEI governance stays the same as before. Let me enumerate only a few important adopted changes:

- Bureau meetings using Web-based technology are authorised.
- The Bureau may if needed conduct an extraordinary meeting of the National Delegates using e-mail or web-based tools
- The term "posted" will be taken to indicate an email sent to the list of the Association National Correspondents
- Period of notice for resolutions/nominations reduced to fit in the 1-week assembly format.

The full text of the new Statutes and Bylaws can be found on the IASPEI website at <a href="http://www.iaspei.org/statutes.html">http://www.iaspei.org/statutes.html</a>

I would like to thank Greg Houseman, IASPEI First Vice-President 2007-2011, for his careful drafting of all the changes as proposed during the IASPEI Bureau meeting in Shanghai, March 2010, and for his excellent management of this issue.

# The 37<sup>th</sup> IASPEI Scientific Assembly Göteborg, Sweden July 22-26, 2013

### Open call for symposia proposals: win a free registration

During the IUGG2013 General Assembly in Melbourne the IASPEI Executive met with the Commission Chairs to draft a tentative program for the IASPEI2013 Scientific Assembly in Gothenburg, Sweden. A first series of Symposia and Workshops has been proposed, but it was unanimously felt that new ideas, especially from young scientists at large, should be welcome. We remind everybody that this will be a joint assembly with IAPSO and IAHS and that inter-disciplinary symposia proposals are particularly welcome.

It was thus decided to issue through the IASPEI Newsletter a general call for interesting symposia or

workshops to be convened in Gothenburg, July 2013. We hereby invite all the seismological community, and in particular young scientists (age less than 35), to send their proposals to the Secretary General, prof. Peter Suhadolc, by 31 January 2012.

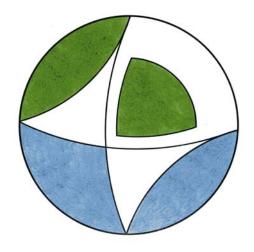
In appreciation of such efforts, IASPEI will grant a free registration to all those young scientists, willing to be conveners, whose symposia proposals will be regarded as interesting and accepted by the Scientific Program Committee.

## From IASPEI History How the IASPEI logo was born

The need for a IASPEI symbol, or logo, was first brought to our attention when the Association entered into an agreement with Elsevier in the late 1980s, that they would publish proceedings of our meetings, in exchange for the payment of royalties.

Up to then Elsevier had made use of the IUGG logo for Union publications, and they proposed also using this on our IASPEI volumes. This prompted us to look for a suitable logo quickly. At this time there were many depictions of cut-away earth models being published by earth modellers, and it occurred to me that this could be modified to give an impression of earth structure, and also be similar to the symbol of our parent organisation. We also wanted a design that was relatively simple, so that it could be reduced in size, say for letterheads, without loosing too much detail.

Following the basic design of the IUGG logo, I therefore experimented with various orientations and proportions (in those days there was no computer graphic modelling to help) to produce a model that was aesthetically pleasing — the proportions bear little relation to the real Earth, as a core shown on the correct scale would look quite insignificant. The final version was drawn with help of the draftsman in the Department of Geology at the University of Reading, to which I was attached at the time. The upper part was to be green and the lower blue, following IUGG.



The logo was first shown publicly at Copenhagen in May 1988, where President Stephan Müller and I had to give an account of IASPEI to a special meting of the IUGG Bureau called by the newly-elected President, Prof V Keilis-Borok, to examine Union structure and activities. The design met with approval, and was first presented to the Association in IASPEI Newsletter No.22, issued in August 1988.

Since then, the logo has been used widely, particularly on the special publications with proceedings of IASPEI meetings and symposia, and it was incorporated into the IASPEI letterhead after the 1991 General Assembly. I trust it will continue to be used to identify the Association and its activities.

Robin Adams, IASPEI Secretary-General 1979-1991

### Obituaries Sławomir Jerzy (George) Gibowicz, 1933 - 2011



George Gibowicz, an illustrious seismologist, whose contribution to the world mining seismology was invaluable, died at his home in Warsaw, on 11<sup>th</sup> October.

He graduated as an M.Sc. in physics, with major in geophysics, at the Department of Mathematics, Physic and Chemistry of Warsaw University in 1955. In 1962, he obtained his doctorate in geophysics at AGH University of Science and Technology in Krakow, and in 1970, the Council of The Geology and Exploration Department at AGH University of Science and Technology granted him a postdoctoral degree. He began his professional career in 1956, being first employed at the then Unit, and currently the Institute of Geophysics, Polish Academy of Sciences. Through

most of his professional life he was attached to the Institute. In the years 1966-1968, he worked at the International Seismological Centre in Edinburgh, where, shortly after the beginning of work, he was assigned the position of the Centre deputy director. Shortly after his return to Warsaw, in 1970, he went abroad, assuming the position of a Senior Research Scientist in Geophysics Division of the Department of Scientific and Industrial Research, in Wellington, New Zealand. Despite excellent professional the opportunities and personal relations - George's wife, Jadwiga, had her medical diploma recognised in New Zealand and began an independent career, and their daughter went to a local school - for reasons that he later admitted to be purely patriotic, he decided to return to Poland in 1974. Before his return, George was aware that due to the fact that his stay in New Zealand was prolonged without consent of the Communist authorities, he would face reprisals in Poland. And so it happened. Despite his outstanding, world-wide known scientific record, the granting of his professorial title was delayed for several years, he was not allowed to leave the country for a similar period and had great difficulties with the publishing of his works in Western countries.

Eventually, he obtained his professorial title in 1980, and in 1989 he had a full professorship at the Institute of Geophysics. Between 1979 and 2006 he was the head of the Institute Seismology Department, with only short breaks. He retired in 2008, at the age of 75.

In the early 1970's, the estimation of source parameters from spectra was a new method. Already in New Zealand, George became acquainted with it, and actively participated in research works that applied this method. For a paper published in BSSA, correlation concerning the between parameters of seismic sources and medium properties, in 1974, he was awarded New Zealand Geophysics Prize of the Royal Society of New Zealand. Bringing this spectral approach to source parameters estimation to Poland had a tremendously positive impact on the works of IG PAS Seismology Department. George could rise interest in this topic in virtually anyone. Very quickly, he gathered a group of young people fascinated with the possibility to calculate the size of a seismic source and the stress drop. At the same time, he began to pay more attention to issues associated with mining seismology. George highly valued works on tectonic seismicity. He thought, however, that the role of Polish seismologists is to work on seismic phenomena occurring in Poland, and since the majority of these is associated with mining exploitation. mining data should be used. Soon, pioneering works saw daylight, determining parameters of weak, yet numerous seismic sources in underground coal and copper ore mines, magnitude-frequency relations, and a number of other parameters concerning seismic processes induced by mining. George became an internationally known expert in mining seismology. His

trips as a visiting professor to Ruhr University, Bochum, Germany (1988), Queen's University, Kingston, Canada (1989-1990) and as a Consultant to Integrated Seismic System International Ltd., Welkom, South Africa (1993) were concentrated on this particular area of seismology. A summary of his works on mining seismology were three review papers, published in Advances in Geophysics (1990, 2001, 2009), the organisation of the 4<sup>th</sup> Symposium on Rockbursts and Seismicity in Mines in Krakow (1997), and first of all a book, published in 1994, under the title "An Introduction to Mining Seismology" (authors: S.J. Gibowicz & A. Kijko, Academic Press, San Diego). The book already became an international classic, used by young researchers and geophysical mining personnel to fathom their knowledge on mining seismology. George was also interested in seismicity induced by other, nonmining technological processes. After M5.7, 14 November 1981 earthquake in Aswan, he paid numerous visits to Egypt with his colleagues, to analyse seismicity induced by Lake Nasser.

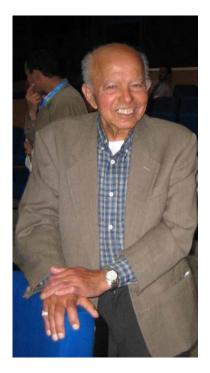
Seismology was George's passion successfully competing with his non-professional hobby: English literature from the Victorian period. I remember his admiration when he saw a cross-section through a rupture plane in the museum of 1995 Kobe earthquake on Awaji island; admiration for the might of dynamics of the Earth's interior. In his work, George combined brilliant intelligence with laboriousness and regularity. At the same time, he was a modest man, not seeking fame, appreciation, recognition or privileges. And – first of all - he was a good, friendly and magnanimous person. Being self-critical, he avoided excessive criticism towards others, often explaining and justifying their mistakes. He thought that a mild incentive will bear better fruit than pointing out at imperfections. With his demise, we lost a great scientist, friend and master, but first of all - a great man.

Stanislaw Lasocki, Andrzej Kijko

### Hadj Benhallou, 1937 - 2011

The seismology in Algeria lost recently its pioneer and founder of the Research Centre in Astronomy, Astrophysics and Geophysics (CRAAG). Prof. Hadj Benhallou passed away (at 74 years) on Sunday 16 October 2012 morning after a long period of illness and all the Earth Sciences community from the Maghreb region is mourning.

After a bachelor degree in Mathematics, Physics and Astronomy in 1960, he was lecturer at the University of Algiers in 1961 and obtained a "Doctorat in Geophysics" in 1970 on the "Physical characteristics of terrestrial tides in the Algerian Sahara" under the supervision of Professor Jean Coulomb.



In charge of the Seismological Survey of Algeria at the "Institut de Méteorologie et Physique du Globe d'Alger" from July 1962, he conducted the seismicity studies of Algeria in collaboration with Ferrer and Roussel. After several trials, he succeeded in July 1980 to group the few Algerian astrophysicists and geophysicists within the same National Centre of Astronomy, Astrophysics and Geophysics (CNAAG) that became CRAAG in 1986. The prominent recent seismicity of Algeria and in particular the occurrence of the M 7.3 earthquake at El Asnam in 1980 induced a major impulse in the earthquake research in Algeria. Several worldwide seismologists and earthquake geologists remember well the decisive actions of Prof. Benhallou to allow the field study of the 1980 major seismic event. Prof. Benhallou played a major role in providing a constant support for the training of students and young researchers. He supervised numerous Masters and PhDs in geophysics and seismology. At the international and regional level, Hadi Benhallou was among the founders in 1970s of the Ibero-Maghrebian Working Group for the study of the Western Mediterranean seismicity, seismotectonics and seismic hazards.

Website for condolences: <a href="http://hadj-benhallou.blog4ever.com/blog/index-544026.html">http://hadj-benhallou.blog4ever.com/blog/index-544026.html</a>

Mustapha Meghraoui

### JOB OPPORTUNITIES

### Postdoctoral Research Position in Computational Seismology

San Diego State University (SDSU) has an active program in Computational Seismology and conducts research on the dynamics of the earthquake source, the physical basis of strong ground motion excitation, and development of computational methods for seismic wave propagation and source simulation. We invite applications for postdoctoral research positions for work on high-performance computational simulations of earthquake ruptures, earthquake ground motion, and crustal deformation. Starting date is flexible, but one or more positions will be available beginning January, 2012. The initial appointment will be for one year, with renewal for subsequent years contingent upon funding. The successful candidate(s) will develop and implement constitutive models for earthquake rupture and nearfault material failure, perform numerical simulations of past and prospective earthquakes, and conduct seismological assessments of the predictive capability of such simulations. The position requires a PhD in Geophysics, Applied Mechanics, or a closely related field (to be received prior to appointment start date), as well as research experience involving numerical solution of continuum mechanics problems. Previous experience using finite elements, or similar methods, for the dynamic simulation of earthquake ruptures is desirable.

To be considered for this position, please apply directly at <a href="www.foundation.sdsu.edu">www.foundation.sdsu.edu</a>, Job #110185, by <a href="December 15">December 15</a>, 2011. Enquiries about the position may be sent to Kim Olsen (kbolsen@geology.sdsu.edu), Shuo Ma (sma@geology.sdsu.edu) or Steven Day (day@moho.sdsu.edu).

### **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.

### <u>2011</u>

**UGI2011 – Regional Geographic Conference** 

November 14-18, 2011, Santiago, Chile

Contact: <a href="mailto:kbecker@fisa.cl">kbecker@fisa.cl</a>
Website: <a href="mailto:www.ugi2011.cl">www.ugi2011.cl</a>

### **AGU Fall Meeting**

December 5-9, 2011, San Francisco, CA, USA Website: www.aqu.org/fallmeeting/

### 2012

### 8th International Symposium on Andean Geodynamics

April 11-13, 2012, Antofagasta, Chile

Contact: isag2012@ucn.cl Website: www.isag2012.cl

#### **SSA Annual Meeting**

April 17-19, 2012, San Diego, CA, USA

Website:

http://www.seismosoc.org/meetings/2012/index.php

### **IUGG Conference on Mathematical Geophysics**

June 18-22, 2012, National Museum of Scotland, Edinburgh, United Kingdom

Website: http://www.cmgedinburgh2012.org.uk/

### 34TH International Geological Congress (IGC)

August 5-10, 2012, Brisbane, Australia

Website: http://www.34igc.org/

### **AOGS-AGU (WPGM) Joint Assembly**

August 13-17, 2012, Sentosa Island, Singapore

Contact: info@asiaoceania.org

Website: http://www.asiaoceania.org/aogs2012/

### **33rd General Assembly of the European Seismological Commission**

August 19-24, 2012, Moscow, Russia

Contact: Devochkina Anastasia -

esc2012@onlinereg.ru

Website: www.esc2012-moscow.org

### 9<sup>th</sup> General Assembly of Asian Seismological Commission 2012

September 17-20, 2012, Ulaanbaatar, Mongolia

Contact: demberel@rcag.ac.mn Website: www.asc2012.mn

### **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]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/

### Contacting IASPEI

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

### **Prof Peter Suhadolc**

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