



IASPEI Newsletter



February-March 2012

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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.



Foreword



Dear readers,

The IUGG2011 General Assembly in Melbourne is well over and IASPEI is already preparing to hold its next Scientific Assembly in Gothenburg, Sweden, in July 2013. This will be a joint assembly held with another two of our sister Associations: IAHS and IAPSO. I expect a strong focus on the fluids in the Earth.

IASPEI is active also this year; our two regional Commissions will have their Scientific Assemblies in nearby countries. ESC will hold it in Moscow, Russia, and ASC in Ulaan Bataar, Mongolia. In this Newsletter we print the ESC invitation to the Conference.

Preparations are also underway for the establishment of two other regional seismological Commissions: the Latin American one and the African one. Preliminary talks about the LASC will be in Lima, Peru.

Enjoy reading the Newsletter and do contribute to it with short papers and announcements!

Peter Suhadolc
Secretary General

Please note:

I am sending out the Newsletter as an attachment to an e-mail, trying to limit its size.

The 37th IASPEI Scientific Assembly Göteborg, Sweden July 22-26, 2013

Knowledge for the future

The severe effects of earthquakes, tsunamis, inundations and droughts have in a devastating way indicated the need for better knowledge of geophysical processes in order to predict and minimise the consequences for mankind. This knowledge also contributes to a better understanding of human impact on the environment.

This Scientific Assembly to be held in Gothenburg on 22-26 July 2013 will be a forum, where experts from various disciplines of hydrology, oceanography, seismology and physics of the Earth's interior can meet and exchange knowledge and ideas with colleagues from all over the world. The Assembly also gives the scientists the opportunity to inform the general public and policy makers.

IAHS - IAPSO - IASPEI Joint Assembly

[CONFERENCE WEBSITE NOW ON-LINE!](http://iahs-iapso-iaspei2013.com/index.asp)

<http://iahs-iapso-iaspei2013.com/index.asp>



European Seismological Commission

**33-rd General Assembly
19-24 August 2012, Moscow, Russia**

Dear colleagues,

On behalf of the Organizing Committee of the 33rd General Assembly of the European Seismological Commission, I have the honor to invite you to participate in the activities of the Assembly, which is to take place 19-24 August 2012 in Moscow, Russia.

The year 2012 is the 60th anniversary of ESC. It is also the 150th anniversary of the birth of one of the founders of Russian seismology Boris Golitsyn, known for his theoretical works and the invention of the electrodynamic seismograph. The unique geographical location of Russia gives an opportunity to representatives from over the world to participate in its work. We hope that the diversity of countries-participants will bring out our motto - "**Seismology without boundaries**".

Russia has a rich history in seismology, and it is not for the first time that it is hosting the ESC General Assembly. The previous such event was over 26 years ago. Our country has undergone drastic political, social and economic changes over this period of time.

The 33rd General Assembly of the European Seismological Commission will take place in Moscow, a city where a lot of global scientific and cultural values are accumulated.

The Assembly program will include plenary and breakout meetings, symposia, a poster session and an exhibition of seismological equipment. The participants are welcome to join various sightseeing activities in Moscow as well as trips to the northern capital of Russia, Saint-Petersburg, and the range of ancient cities known as the Golden Ring of Russia whose museums contain vast collections of historic treasures.

Thematic Areas for 33rd General Assembly of ESC include:

- Structure of Earth's Interior
- Physics of Earthquakes and Related Fields
- Earthquake Forecasting and Prediction
- Seismicity Patterns: Natural and Induced
- Data Acquisition and Processing
- Artificial Intelligence in Geophysical Data Studies

- Non-instrumental Seismology
- Seismic Hazard, Time Dependent Hazard and Risk
- Recent Significant Earthquakes
- Seismology, Social Sciences, Education and Outreach

ON-LINE REGISTRATION is available on the official website www.esc2012-moscow.org

We shall do our best to ensure productive scientific activities of the General Assembly and exciting insights into Russian history and culture.

We look forward to seeing you among the participants of the Assembly in Moscow.

With kind regards,
Alexey Zavyalov
Organizing Committee Chairman

Congress Secretariat:
Ms. Anastasia Devochkina
Tel./Fax:: +7 (495) 726-5135
E-mail: esc2012@onlinereg.ru

Latin American Seismology Symposium

**In the Framework of LIMA2012: the XVI Peruvian
Geological Congress and SEG 2012 Conference,
Organized by The Geological Society of Peru,
23 - 26 September 2012**

We invite all Latin American seismologists to attend this important Symposium, sponsored also by the Instituto Geofísico del Perú, that will serve as a basis for the possible establishment of the IASPEI Latin American Seismological Commission.

For more information, please contact IASPEI Executive member Marcelo Assumpcao, (Sao Paulo, Brasil): marcelo@iag.usp.br or Hernando Tavera (IGP, Lima, Peru): hernando.tavera@igp.gob.pe. See also <http://www.lass2012.org/>

The 1st Workshop of Asia-Pacific Region Global Earthquake and Volcanic Eruption Risk Management (G-EVER1)

As shown by the 2011 off the Pacific coast of Tohoku Earthquake, Asia-Pacific Region is an area with high risk of catastrophic natural disasters such as earthquakes and volcanic eruptions. Once a disaster occurs, in today's highly globalized economy, it can

create unpredictable turmoil all over the world, not just in the affected area. Countermeasures against these large-scale disasters are crucial for the sustainable development of the global economy and to ensure human security. Now is the time to establish an effective international framework where we collaborate and develop a system to gather information on disaster mitigation in the Asia-Pacific Region, including Japan.

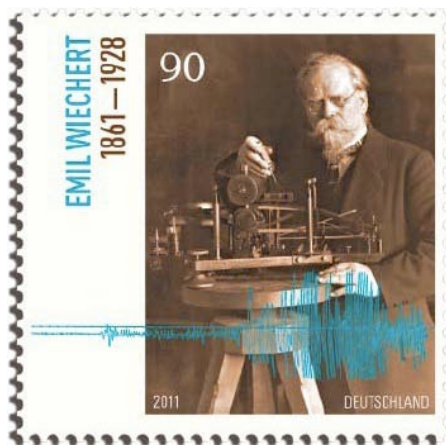
Date: Feb. 22–25, 2012

Venue: Tsukuba Central, AIST Tsukuba Headquarters

Hosted by: Geological Survey of Japan, AIST

Web-site: <http://www.gsj.jp/Event/AsiaPacific/>

Contact: Dr. Yutaka Takahashi, Phone: +81-29-861-3933, E-mail: G-EVER1@m.aist.go.jp



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Foundation of Instrumental Seismology

(contributions of Ernst von Rebeur-Paschwitz and Emil Wiechert)

In 2011 seismologists celebrated the 150th birthday of two of the founders of instrumental seismology: Ernst von Rebeur-Paschwitz and Emil Wiechert. Wiechert is well-known because his seismometers were standard instruments until the middle of the last century. Rebeur-Paschwitz is less known, although in 1889 he recorded the first teleseismic earthquake and initiated a global network of seismographs to monitor the seismicity of the Earth. Early death ended the seismological career of Rebeur-Paschwitz even before that of Wiechert began. Both of them were involved in founding the International Seismological Association (ISA), the predecessor of the International Association of Seismology and Physics of the Earth's Interior (IASPEI).

Ernst von Rebeur-Paschwitz was born on 9 August 1861 in Frankfurt/Oder and died from tuberculosis on 1 October 1895 in Merseburg at the age of only 34 years. He studied mathematics and astronomy at the universities of Leipzig, Geneva and Berlin, where he obtained a PhD in 1883 and became Assistant at the astronomical observatory. In 1884 he moved to the

astronomical observatory in Karlsruhe, where he worked on improving Zöllner's horizontal pendulum for measuring variations of the plumb line due to the influence of celestial bodies. He added continuous photographic recording to a pendulum, and was aware that his instrument could record distant earthquakes (e.g., Frechet and Rivera, 2012).

He continued his work in 1888 at the Astrophysical Observatory in Potsdam. With financial support from the Royal Prussian Academy of Sciences, two copies of his instruments (manufactured by the firm Rapsold & Söhne in Hamburg) were installed at the Astrophysical Observatory in Potsdam and at the Imperial Navy Observatory in Wilhelmshaven (about 350 km away from Potsdam). Both instruments recorded a significant disturbance on 17 April 1889. Rebeur-Paschwitz identified this disturbance as the record of an earthquake in Japan. This observation was the start of global seismology, which is today one of the major fields in Earth sciences. Rebeur-Paschwitz was also the first to record solid Earth tides (e.g., Varga, 2009). In his last papers (Rebeur-Paschwitz, 1895a b) he identified body and surface waves in his records and proposed to install a global network of seismic stations to monitor the seismicity of the Earth and to study the internal structure of the Earth. John Milne (1895a) made a similar proposal for a seismic network. In addition, Rebeur-Paschwitz suggested an international institute that should collect earthquake data and publish reports. Rebeur-Paschwitz's ideas were presented at the Sixth International Geographical Congress in London in July 1895, where they were accepted in a resolution (Schweitzer, 2003). Rebeur-Paschwitz was not able to attend this congress and died on 1 October. Milne (1895b) wrote in an obituary: "Von Rebeur's last work was an endeavor to obtain co-operation for the observation of these instruments throughout the world, a scheme which, although he has not lived to realize it, will, in all probability, be accomplished in the near future". A documentary film about Rebeur-Paschwitz and his scientific achievements was recently released (Kind et al., 2011).

Emil Wiechert (painting by Georg Kötschau, Jena) was born on 26 December 1861 in Tilsit/East Prussia and died on 19 March 1928 in Göttingen. He studied mathematics and physics in Königsberg/East Prussia and obtained a PhD in 1889. He performed research in fundamental physics until 1897 in Königsberg. During that time he contributed essentially to the discovery of the electron, and he remained an active physicist his whole life (e.g., Mulligan, 2001). In 1897 Wiechert moved to Göttingen and became the head of the geomagnetic observatory, which was founded by Carl Friedrich Gauß.

He developed the theoretical base of mechanically recording seismometers including air damping. About hundred of his instruments were installed globally in the following decades. His instruments recorded on

smoked paper and, to overcome friction, their masses were several tons. Wiechert and his colleagues and students started systematic analyses of seismic records (e.g., Schweitzer, 2003). They (i) found the relation between angle of incidence and epicentral distance; (ii) digitized seismic traces and determined ground displacement by integration; (iii) identified reflected and converted phases; (iv) developed the Latin based nomenclature of seismic phases; (v) developed traveltimes curves including their inversion and methods for the location of earthquakes; and (vi) started with controlled source seismology. Perhaps the best-known student of Wiechert was Beno Gutenberg, who derived in Göttingen a velocity model of the Earth with a very accurate depth determination of the core-mantle boundary. In December 2011 the German Finance Ministry issued a postal stamp in memory of Emil Wiechert (see above).

Emil Wiechert participated in the foundation of the International Seismological Association (ISA). In 1922 the ISA was dissolved and the Seismology Section of the IUGG was established, unfortunately without German membership. As the result, the German Seismological Society was founded in 1922 with Wiechert as the first President. The Society later changed its name to the German Geophysical Society (DGG). It instituted the Emil-Wiechert and Rebeur-Paschwitz Medals.

Acknowledgment. I thank Johannes Schweitzer for his review of the initial version of the manuscript.

Rainer Kind (kind@gfz-potsdam.de), Deutsches GeoForschungsZentrum Potsdam, Germany
Past President, German National Committee of Geodesy and Geophysics (NKG)

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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.

2012

The 1st Workshop of Asia-Pacific Region Global Earthquake and Volcanic Eruption Risk Management (G-EVER1)

Feb. 22-25, 2012, Tsukuba, Japan

Contact: G-EVER1@m.aist.go.jp

Website: <http://www.gsj.jp/Event/AsiaPacific/>

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>

Global challenges for seismological data analysis

General Assembly of the European Geosciences Union (EGU)

April 22-27, Vienna, Austria

Website: <http://www.egu2012.eu/>

38th Workshop of the International School of Geophysics, 1st EPOS-ORFEUS Coordination Meeting

May 25 - 30, 2012, Erice, Sicily

Contact: Program - alberto.michelini@ingv.it

Logistics - silvia.nardi@ingv.it

Website: <http://erice2012may.rm.ingv.it/>

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

Contact: info@34igc.org

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: Anastasia Devochkina -

esc2012@onlinereg.ru

Website: www.esc2012-moscow.org

4th International Disaster and Risk Conference

August 26–30, 2012, Davos, Switzerland

Contact: Walter J. Amman grf-presidency@grforum.org

Website: http://idrc.info/pages_new.php/IDRC-Davos-2012/831/1/

9th General Assembly of Asian Seismological Commission 2012

September 17-20, 2012, Ulaanbaatar, Mongolia

Contact: demberel@rcag.ac.mn

Website: www.asc2012.mn

Latin American Seismology Symposium

September 23-26, 2012, Lima, Peru

Contact: hernando.tavera@igp.gob.pe or

marcelo@iag.usp.br

Website: <http://www.lass2012.org/>

ECGS Workshop on:

Earthquake source physics on various scales

October 3-5, 2012, Luxembourg

Contact: source2012@ecgs.lu

Website: <http://www.ecgs.lu/source2012>

1st International Conference on Frontiers in Computational Physics: Modeling the Earth System

December 16 – 20, 2012, Boulder, CO, USA

Website:

<http://www.frontiersincomputationalphysics.com/>

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.

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