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

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If possible, please do not wait until the very last minute to submit your abstract!

IASPEI STATEMENT ON THE L'AQUILA SENTENCE

The International Association of Seismology and Physics of the Earth Interior (IASPEI)¹, on behalf of the world community of seismologists, expresses its deepest concern for the L'Aquila verdict and prison sentence, that condemns for involuntary manslaughter seven prominent Italian scientists and members of the Great Risks Commission of the Italian Civil Defense, due to negligence and errors in the evaluation and communication of the seismic crisis preceding the

¹ <http://www.iaspei.org>

Foreword



Dear readers,

The L'Aquila sentence has come as a shock to most seismologists and scientists in the world. IASPEI has issued a statement, published on our website. For those who might not

have seen it, I publish it in this issue, also.

Among the highlights of this issue are short reports on the 2012 ESC and 2012 ASC General Assemblies in Moscow and Ulaan Baatar, and the 150th Anniversary of Kövesligethy's birth.

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. 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.

L'Aquila earthquake of April 6, 2009, resulting in the regretful death of 309 people.

The mission of IASPEI is to advance global seismological knowledge to mitigate the effects and minimize the victims of earthquakes. The trial in L'Aquila condemns some of IASPEI's most brilliant scientists, who dedicated their lives to the reduction of seismic risk and to whom go our sympathy and support.

We do not express here opinions on the Italian judiciary system nor on the details of the sentence, but the trial in L'Aquila sets a disturbing and unprecedented case in linking the free expression of scientific opinions to casualties resulting from the collapse of poorly built or maintained buildings during earthquakes, with issues and ramifications relevant to the whole seismological community:

- IASPEI adheres to the statement on Freedom to Conduct Science and Responsibilities of Scientists² of the International Union of Geophysics and Geodesy³ and to the principles of the Universality of Science³ of the International Council for Science: the free thinking and conduct of scientific development is a principle of modern society and cannot be hindered or limited by threats of personal retaliation.
- IASPEI supports the development, testing and presentation of new evidence on earthquake forecasting and prediction; however, IASPEI is of the opinion that reliable short-term prediction of earthquakes is not possible at present; claims to the contrary may induce false expectations and incorrect behavior in the population and authorities, and are not supported by IASPEI.
- When serving on high-level advisory panels for governments and authorities, scientists have the duty to provide the state of knowledge in a comprehensive and unbiased fashion, to enable authorities to take the required mitigation actions. This cannot be achieved under the threat of public prosecution. A negative impact of this trial and sentence will be to make scientists reluctant to serve on risk advisory commissions or express expert opinions.
- Communication in a language understandable to public and authorities is of crucial importance, including the communication of uncertainties associated to all evaluations and projections.
- Scientists cannot be held responsible for effects that are not under their responsibility. Governments and authorities are responsible to ensure that appropriate strategies and measures for risk

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http://www.iugg.org/resolutions/IUGG_for_freedom_to_conduct_science.pdf

³ <http://www.icsu.org/about-icsu/structure/committees/freedom-responsibility/statute-5>

mitigation are in place and applied. Roles and responsibilities in the earthquake mitigation chain need to be clearly defined, understood and adhered to.

IASPEI is confident that the L'Aquila case will provide the opportunity to develop a proper link between science, policy makers and society in order to avoid any type of miscommunication of information and scientific knowledge in the future.

RADO KÖVESLIGETHY (1862–1934), 150th Anniversary

By P. Varga

Radó Kövesligethy secretary general of the International Seismological Association - ISA (the official name in German and French was International Seismologische Assoziation; Association Internationale de Sismologie) born 150 years ago in Verona (September 1, 1862).



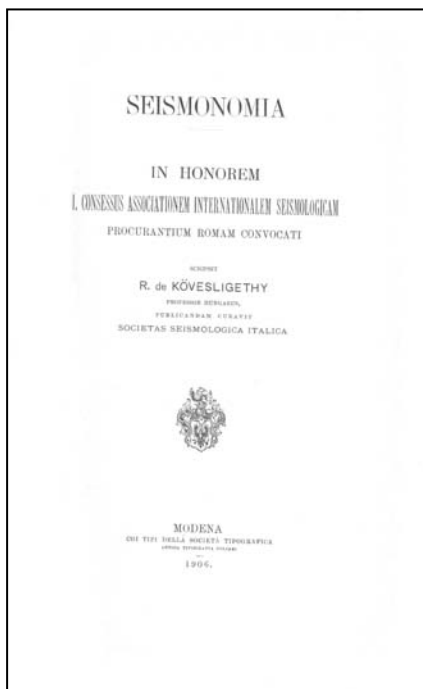
*Radó Kövesligethy
(Verona, 1 September 1862
Budapest 11 October 1934)*

In the mid-1880s he was already an internationally renowned astronomer when his interest – under the influence of Loránd Eötvös and Lajos Lóczy – turned to earth sciences. As astronomer he investigated the

spectrum of light emitted by celestial bodies and using them he successfully determined the surface temperature of the stars. (Eötvös's name is familiar to geophysicists; Lóczy was a worldwide known scholar in geology and geography due to his studies in the Carpathian Basin, Balkan Peninsula, and Inner Asia).

In September 1888 Kövesligethy became assistant professor of Eötvös's Institute at the Hungarian Royal University, Budapest. At this time, Eötvös already since years have been involved into his gravity studies. It is a little known fact that in May 1891 Kövesligethy was the first who made field observations with Eötvös's torsion balance.

In November 1889 he got the university title "private lecturer of cosmography and geophysics". Probably he was one of the first (possible that the first) worldwide who had official (fixed in diploma) authorization to teach geophysics. In April 1894 he became "public ordinary professor" at the Geographical Seminar of Lóczy where he gave lectures whose content are in our days related to geodynamics and geophysics.



Kövesligethy: Seismonomia, Modena 1906. Early manual on problems of mathematical seismology. Book published with the support of Italian Seismological Society, written in Latin.

According to his memoirs Kövesligethy's decision to study seismology was born on the Ischia Island thanks to a meeting with Italian scientists. During this event Giulio Grablovitz (the head of the local seismological observatory) told him that for the research in seismology a scientist familiar with astronomical problems is needed. Kövesligethy published his first study on a seismological subject at the end of 1895 under the title "New geometrical theory of the seismological phenomenon" (Kövesligethy, 1895) and was related to

problem of propagation of seismic effects within the Earth. This issue was new, practically not addressed earlier. In the next years (up to 1914) his research focused also on the problems of earthquake wave spreading.

In his theory he used point sources, the Earth interior was completed from homogeneous spherical layers. The orbit of the seismic ray inside the Earth's was determined by the Newtonian law of refraction and the density distribution was of Roche type. Kövesligethy's microseismic theory was widely used during first years of the twentieth century despite the fact that it was rather difficult to use. Mainly therefore later on in the seismological practice Kövesligethy's method was displaced by procedures established by the Göttingen school. With the use of his theory Kövesligethy and his students have determined the focal depths of many earthquakes and on this basis he has concluded that the average depth of the globally felt earthquakes is 36 km what is in an excellent agreement with the results of recent observations (see for example Varga et al, 2010).

It should be mentioned that his student Jenő Egerváry (who became later on a famous mathematician and internationally recognized expert in the theory of algebraic equations, geometry and differential equations) mathematically proved that Kövesligethy's theory provides results which agree with data obtained from the works of Gustav Herglotz and Emil Wiechert (Egerváry, 1918). We should also mention here Károly Jordán, another member of Kövesligethy's staff Károly Jordán who became after the first WW became one of the founders of modern probabilistic theory and mathematical statistics.

Further developments of Kövesligethy's approach allowed the theoretical calculation of the emerging angle of seismic waves, important at that time to determine the focal depth (Kövesligethy, 1906a and 1906b). For this purpose a reliable vertical seismometer was necessary. According to Kövesligethy's reminiscences his lecture on this problem during the second ISA conference (Hague, 1907) impressed Boris Borisovich Galitzin, who then started to create his famous vertical seismometer.

On the basis of examination of aftershocks Kövesligethy found that the temporal variation of this phenomenon travel times are connected with changes in elastic properties of the rocks. "The decrease in propagation speed is a sign of increasing stress that may indicate the increasing probability of a new earthquake" wrote in 1910 (Kövesligethy, 1910). This idea was novel at the beginning of the twentieth century. Projects based on similar ideas were conducted around the world in the second half of the twentieth century.

Kövesligethy often willingly dealt with practical issues related to earthquakes. He prepared expert opinions for the Hungarian railway company, the Ministry of Finance. Together with his colleagues he prepared a study on the seismic stability of different districts of Budapest. In 1912, again with co-workers, he proved

that an explosion of a natural gas reservoir was due to an earthquake and not due to illegal mining activities. Among his scientific results his, in our days not relevant anymore, ingenious earthquake location method based on Polster projection should be mentioned. He found also that the energy of "globally observed" earthquakes is of the order 10^{18} J. This value is still correct, but the method he used is no longer valid (Kövesligethy, 1903-1904).

In Hungary the first seismological observations took place during the last decade of the 19th century, with regular seismometer recordings running since 1902. The seismological activity received its central headquarters when in 1905 Kövesligethy founded the still-operating Budapest Seismological Observatory. Before the First World War ten seismological stations were operating in the country.

As a recognition of Kövesligethy's scientific activity - according to tradition, based on a recommendation of Wiechert - in 1905 in Berlin he was elected Secretary-General of the ISA established in 1904. He organized the ISA meetings and conferences in Rome (August 1906), The Hague (September 1907), Zermatt (September 1909) and Manchester (July 1911) and published the related proceedings. Perhaps the most important result of the unfortunately too short IAS activity was that for the first time it created a global forum for seismologists and established the essentially still valid forms of international seismological cooperation. In these activities Kövesligethy role was of great importance. Unfortunately, the St Petersburg conference scheduled for August-September 1914, that he was organizing together with the President, prince Galitzin, was cancelled due to the outbreak of World War I.

The International Seismological Association was dissolved at the conference held in Strasbourg (April 1922). This event meant the end of Kövesligethy's participation in international scientific activities. The reason for this was that before the end of World War I, the meetings of scientific organizations of Allied Nations (in October 1917 and in 1918 just before the end of the War) emotionally decided that they would not cooperate with scientists of enemy countries after the war. Therefore, scientists of defeated countries were not invited to the first IUGG General Assembly in Rome, which took place just after the Strasbourg conference and where the new Seismology Section of the IUGG was established. The decision to exclude scientists of defeated countries was not changed during Kövesligethy's lifetime.

Kövesligethy's own life in Hungary was also tragic from autumn 1919. He was accused of collaboration during the post-war rebellions with the revolutionaries. Although the persecution ended in 1924, his creativity was broken and he never recovered.

Kövesligethy's seismological research greatly influenced not only the international, but also the contemporary Hungarian scientific life. The names of his two co-workers, mathematicians, were mentioned above (Egerváry and Jordan). Eötvös already in 1903 stated that his gravitational research is linked to

earthquake research (his lectures on this subject were read by Kövesligethy at the Second International Seismological Conference, Strasbourg 1903, and at the ISA conference in Rome in 1906). Under his influence and support the meteorologist Antal Réthly prepared his famous macroseismic catalogue and seismological map of the Carpathian Basin (1918). Many scientists made research in seismology before 1914: Győző Zemplén (physicist, Eötvös's favorite student, although only for a short time), György Hevesy (Nobel Prize in Chemistry), Konkoly Thege Miklós (astronomer, head of the Royal Institute of Meteorology and Geomagnetism). In his institute 40 PhD students performed their studies and all became excellent seismologists, geophysicists, meteorologists, geographers.

Peter Varga

References.

- Egerváry J.: *Über seismischen Trajektorien und über das Bertrandsche Problem in der Seismologie, Gerlands Beiträge zur Geophysik* 14 (1918) 284–299
- Kövesligethy R.: *A sismikus tünemények új geometriai elmélete, Matematikai és Természettudományi Értesítő, 1895, XIII, 363-407. This contribution has been published also in German:*
- Kövesligethy R.: „*Neue theorie seismischen Erschwingungen*” *Mathematische und Naturwissenschaftlichen Berichte aus Ungarn, Bd. VI., 493-501, 1895*
- Kövesligethy R.: *Über die energiegroßen Erdbeben, Die Erdbebenwarte, III, 196-202, 1903/1904*
- Kövesligethy R.: *Seismonomia in honorem I Consensus Associationem Internationalem Procurantium Roman convocati. Publicandam curavit Societas Seismologica Italica, Modena, 1906a*
- Kövesligethy R.: *Über die Iflexionspunkt der Laufkurve und das Bertrandsche Problem, Gerlands Beiträge zur Geophysik, XII., 164-185, 1906b*
- Kövesligethy R.: *Sur l'hystérésis sismique. Mathematische und Naturwissenschaftlichen Berichte aus Ungarn, Bd. XXVI. 1910*
- Varga P., Krumm F., Riguzzi F., Doglioni C., Süle B., Wang K., Panza G.F.: *Earthquake energy distribution along the Earth surface and radius, Publication of the Abdus Salam International Centre for Thoretical Physics (United Nations Educational, Scientific and Cultural Organization and International Atomic Energy Agency), 2010, 055, 1-18*

BORIS BORISOVICH GALITZIN (1862–1916), THE FOUNDER OF MODERN SEISMOLOGY

Correction

In the last issue I made a wrong translation of the nobility title of B.B. Galitzin: he was a Prince (Князь), and not Count (Граф) . Apologies.



European Seismological Commission The 33rd General Assembly Russia, Moscow, 19-24 August 2012

ESC General Assemblies are held biennially on a regular basis. The decision on holding the 33rd ESC General Assembly in Moscow was taken by the Council of the European Seismological Commission in September 2010. Before this, the ESC General Assemblies were twice held in the USSR, in 1968 in Leningrad and in 1984 in Moscow. Twenty-eight years have passed since the last one. During this time, Russia has undergone drastic political, social and economic changes. In spite of the hardships of the post-Soviet period, Russian seismologists managed to make a considerable contribution to the maintaining and development of the system of seismic observations in the country, to the understanding of physics of the seismic process and strong earthquake prediction. A new generation of young Russian seismologists has formed upon this background, to pick up the baton of comprehending the laws of natural development from the elder generation. In this respect, the 33rd ESC General Assembly proved to be a good launch platform for the innovative development of seismology in Russia.

The first plenary meeting, dedicated to the Opening of the 33rd ESC General Assembly, took place in the morning on 20 August, 2012, in the Great Hall of the Russian Academy of Sciences (Moscow, Leninsky prospekt, 32). In the evening of the same day in this Hall was given a concert, "Music Without Borders, or In Tchaikovsky's Circle", prepared specifically for the participants of the Assembly by the "Amadei" Moscow Music Theatre.

The unique geographical position of Russia gave an opportunity to participate in the General Assembly not only to scientists from Europe but also from Asia, which significantly increased its representativeness. 983 people from over 80 countries showed interest in the event and completed preliminary registration on the Assembly website (<http://www.esc2012-moscow.org>). In practice 548 people from 51 countries representing all the five

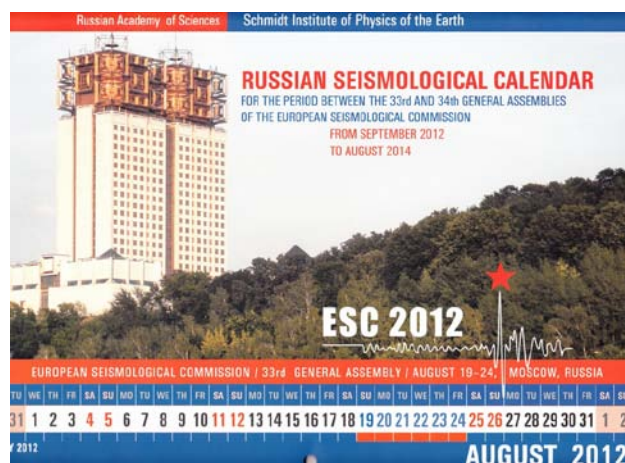
inhabited continents of our planet participated in the Assembly: 28 European states, 14 Asian countries, 3 and 2 countries of the North and South America, respectively, 3 African states and 1 from Australia and Oceania. This demonstrated that the Assembly motto "Seismology without Boundaries" proved its value to the full.

In the framework of the ten topics from which the scientific program of the Assembly was built, there were 39 scientific symposia with 845 scientific presentations – 490 oral and 355 poster presentations. Some symposia were organized in cooperation with the Seismological Society of America («Seismic Tomography and the Earth Structure»), the Asian Seismological Commission («Damaging Earthquakes in Recent Times – Significant Findings and Future Directions»), with which ESC joins forces on coordinating seismological research.

Four leading scientists gave plenary lectures on some seismological issues that most interest the geophysical community:

1. Prof. Koshun Yamaoka (Japan) «Impacts of 2011 Great Tohoku Earthquake on the Seismology and Hazard Assessments»;
2. Prof. Ezio Faccioli (Italy) «Recent evolution and challenges in the SHA of the Po Plain region, Northern Italy»;
3. Prof. Tatiyana Yanovskaya (Russia) «Surface wave tomography for upper mantle studies: methods and results»;
4. Dr. Rajender K. Chadha (India) «Triggered Earthquakes – micro to macro scales».

The year 2012 can be called a jubilee year: it is the 60th anniversary of the ESC; it is also the 150th anniversary of the birth of academician Boris B. Galitzin, one of the founders of Russian and world seismology, theoretician and inventor of the electrodynamic seismograph. On this memorable occasion, the Organizing Committee prepared for the participants of the Assembly a booklet in English which shows unique photos from the Galitzin family archive that were never published before.



Another memorable event of the Assembly was the 2012-2014 Russian seismological calendar in English.

The Russian seismological calendar is an encyclopedic publication of a new kind, which displays in a brief, compact way the history of Russian seismology. It contains unique maps and documents, brief biographies of Imperial Russian, Soviet, and modern Russian seismologists who placed themselves on record in the history of seismology.

The new ESC officers for the period of 2012-2014 are:

Alexey Zavyalov, Russia – President
Steinunn Jakobsdottir, Iceland – Past President
Murat Nurlu, Turkey – Vice President
Mariano Garcia Fernandez, Spain – General Secretary
Stefano Parolai, Germany – Assistant Secretary
Pierre-Yves Bard, France – Exec. Comm. member
Constantin Ionescu, Romania – Exec. Comm. member
Stefano Solarino, Italy – Exec. Comm. member

The list of ESC working groups for the next administrative period of 2012-2014 is:

1. The history of the ESC. Responsible: Alice Walker (UK);
2. Seismic phenomena associated with volcanic activity. Responsible: Jurgen Neuberg (UK);
3. Archive of historical earthquake data for the European-Mediterranean area. Responsible: Andrea Rovida;
4. Macroseismic field work practices. Responsible: Ina Cecic (Slovenia);
5. Methods and data for the study of earthquakes recorded on pre-WWSSN seismograms. Responsible Graciano Ferrari (Italy);
6. Internet macroseismology. Responsible: Vicki Kouskouna (Greece);
7. Theory of seismic wave propagation. Responsible: Peter Malishewsky (Germany);
8. Earthquake physics: Field observations, experimental and numerical modeling and comprehensive analysis. Responsible: Alexey Lyubushin (Russia);
9. Algorithms and models of earthquake prediction. Responsible: George Purcaru (Germany).

In the week following the ESC GA, the 9th International Young Seismologists Training Course “Modern Methods of Seismological Data Processing and Interpretation” was held in Obninsk. Ten lecturers presented a series of lectures to 19 female and 17 male participants from 15 countries. All of them were very satisfied with the course and received personal certificates of attendance.

The next 34th General Assembly of the European Seismological Commission will be held in Istanbul (Turkey) on 24-29 August, 2014. This Assembly will come the second to be held jointly with the General Assembly of the European Association of Earthquake Engineering.

Alexey Zavyalov



Asian Seismological Commission The 9th General Assembly Mongolia, Ulaanbaatar 17-20 September 2012

The 2012 9th Asian Seismological Commission General Assembly was organized by The Permanent Council on Seismic Risk Mitigation of the Government of Mongolia, the Mongolian Academy of Sciences and its Research Centre of Astronomy and Geophysics, and the National Emergency Management Agency. It took place in the Mongolian capital city, Ulaanbaatar, under the motto “International Scientific Cooperation for Prevention and Mitigation of Seismic Disaster”. The LOC was managed in an excellent way by prof. S. Demberel and his team.

About 300 scientists (115 foreign) from 20 countries participated to the conference and made 87 oral and 50 poster presentations. The excellent premises were kindly provided by the Mongolian Government. In particular, the opening session was held in the Mongolian Parliament.

The Young Scientist Training Course which took place in the days before the conference, was sponsored by the Young Scientist grant of Deputy Prime Minister of Mongolia and IASPEI. Eight foreign and eleven Mongolian participants took part to the course.

The new ASC Bureau for the 2012-2016 and venue of the 10th Gen. Assembly in 2014.

1. **Dr. Gary Gibson** - President (Australia)
2. **Dr. Chen Yun Tai** - Vice President (China)
3. **Dr. Bartolome C. Bautista** - Vice President (Philippines)
4. **Dr. R. K. Chadha**, Secretary General (India)
5. **Dr. Alexander Ponamerev** - Member (Russia)
6. **Dr. Toshiaki Yokoi** - Member (Japan)
7. **Dr. S. Demberel** - Member (Mongolia)

The venue of the next ASC will be held in Manilla, The Philippines, in 2014.

The following Resolution has been adopted by the ASC General Assembly:

RESOLUTION

The ASC, RECOGNIZING the enormous efforts required to organize the General Assembly including the Scientific and training program and the field trip, APPRECIATING the contributions of the Mongolian Government, in particular its Deputy Prime Minister Mr. D. Terbishdagva, Chief of NEMA Mr. Ts.

Amgalanbayar, President of MAS Academician B. Enkhuvshin and the RCAG, APPRECIATING further the provision of excellent facilities for the General Assembly, THANKS AND CONGRATULATES the members of the Local Organizing Committee, in particular Prof.S.Demberel, for the successful and most memorable meeting.

The ASC

RECOGNIZING that earthquakes pose a severe threat to sustainable development, and the mitigation of earthquake risk requires cooperative endeavor of the whole society, ENCOURAGES communication among seismologists, earthquake engineers, policy makers, emergency services and the public to enhance preparedness and the development of measures for the mitigation and management of earthquake risk and its consequences, RECOGNIZING further the considerable progress achieved within Mongolia in the field of seismology, including identification of active faults and hazard zonation of Ulaanbaatar, RECOMMENDS that consideration be given to additional research and implementation towards seismic risk mitigation, including:

- a) Computation of ground shaking scenarios for its most important cities, that will allow better understanding of earthquake impact,
- b) Establishment of an integrated Warning and Alarm system to facilitate rapid and appropriate response following a major earthquake,
- c) Revision of the risk for important structures, infrastructure and lifelines that will be needed during time of emergency.

R. K. Chadha

The Million Death Quake The Science of Predicting Earth's Deadliest Natural Disaster by **Roger Musson**

Receive 20% off the RRP of *The Million Death Quake* by visiting www.palgrave.com and entering discount code XP356ED for USA and Canada orders and WIASPEI20* for UK and rest of the world at the checkout.

- Valid until 31st December 2012.

Disclaimer

The content of a book advertised in the Newsletters does not necessarily reflect IASPEI stands. IASPEI Executive Committee maintains the right to refuse without explanations the advertising of a given book in its Newsletters.

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

Conference and Advanced School on QUANTIFICATION OF EARTHQUAKE HAZARDS IN THE CARIBBEAN: THE GONAVE MICROPLATE

November 26 to December 7, 2012

Santiago de Cuba, Cuba

Submit applications online through the activity webpage

<http://agenda.ictp.it/smr.php?2380>

Contact: smr2380@ictp.it

Website: <http://www.ictp.it/>

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

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

Website:

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

Fall Meeting of the American Geophysical Union

December 3-7, 2012, San Francisco, CA, USA

Website:

<http://fallmeeting.agu.org/2012/>

2013

EUG General Assembly 2013

April 07–12, 2013, Vienna, Austria

Website: <http://www.egu2013.eu/>

2013 Seismological Society of America Annual Meeting

17–19 April 2013, Salt Lake City, Utah, USA

Website: <http://www.seismosoc.org/meetings/>

AGU Meeting of the Americas

14–17 May 2013, Cancun, Mexico

Website: <http://moa.agu.org/2013/>

Joint Scientific Assembly of IAHS-IAPSO-IASPEI

July 22 – 26, Gothenburg, Sweden

Contact: iahs.iapso.iaspei2013@congreg.com

Website: www.iahs-iapso-iaspei2013.com

8th International Symposium on Rockbursts and Seismicity in Mines

September 2013, St.-Petersburg and Moscow, Russia
Website: <http://pts.mi-perm.ru/rasim>.

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:

Int'l Association of Cryospheric Sciences [\(IACS\)](#)

Int'l Association of Geodesy [\[IAG\]](#)

Int'l Association of Hydrological Sciences [\[IAHS\]](#)

Int'l Association of Meteorology and Atmospheric Sciences [\[IAMAS\]](#)

Int'l Association for the Physical Sciences of the Oceans [\[IAPSO\]](#)

Int'l Association of Geomagnetism and Aeronomy [\(IAGA\)](#)

Int'l 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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