



**UNION GEODESIQUE ET GEOPHYSIQUE INTERNATIONALE  
INTERNATIONAL UNION OF GEODESY AND GEOPHYSICS**

## **The IUGG Electronic Journal**

**Volume 10 No. 3 (1 March 2010)**

This informal newsletter is intended to keep IUGG Member National Committees informed about the activities of the IUGG Associations, and actions of the IUGG Secretariat. Past issues are posted on the IUGG Web site (<http://www.iugg.org/publications/ejournals/>). Please forward this message to those who will benefit from the information. Your comments are welcome.

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### **1. IUGG Statutes and By-Laws Committee**

IUGG President T. Beer appointed the members of the Committee that will accept proposed changes to the IUGG Statutes and By-laws:

**Chair:** David Kerridge (UK).

**Members:**

Jean-Pierre Barriot, alternate Michel Menvielle (both France),

Priscilla Grew, alternate Robert Engdahl (both USA),

Ronald Stewart (Canada).

All Adhering Bodies of IUGG Member Countries, through their National Committees, may submit proposals for modifications. Proposals must reach the Secretary General by 25 December 2010, so that they can be included in the Agenda Book for the Council Meetings. To permit the Committee to prepare a summary of the proposed changes and their consequences, please send proposals before 1 November 2010 to David Kerridge at the following addresses:

Dr. David Kerridge  
British Geological Survey  
Murchison House, West Mains Road  
Edinburgh EH9 3LA

Scotland, UK  
E-mail: [djk@bgs.ac.uk](mailto:djk@bgs.ac.uk)  
Fax: +44 131 667 1877

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## 2. IUGG Resolutions Committee

IUGG President T. Beer appointed the members of the Committee that will accept proposals for Resolutions to be considered by the IUGG Council at the 2011 General Assembly in Melbourne, Australia.

**Chair**: Uri Shamir (Israel).

**Members**: József Ádám (Hungary), Pierre Hubert (France), Georg Kaser (Austria).

Resolutions from past IUGG General Assemblies are posted, as available, on the IUGG web-site (<http://www.iugg.org/resolutions/>).

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## 3. News from the International Council for Science

### *Discussion Paper by ICSU and WFEO*

ICSU and the World Federation of Engineering Organizations ([www.wfeo.org](http://www.wfeo.org)) have prepared a Discussion Paper ([http://www.icsu.org/1\\_icsuinscience/PDF/S&T\\_Discussion\\_Paper\\_CSD-18.pdf](http://www.icsu.org/1_icsuinscience/PDF/S&T_Discussion_Paper_CSD-18.pdf)) on sustainable consumption and production, transport, chemicals, waste management and mining as formal input from the S&T Community to the 18th session of the United Nations Commission on Sustainable Development (CSD-18). The document presents the progress and obstacles in implementing sustainability policies in the five areas, and outlines major challenges and opportunities in harnessing science and technology for a more sustainable development path in the future. ICSU and WFEO are co-organisers for the participation of the Scientific & Technological Community as one of nine Major Groups (<http://www.un.org/esa/sustdev/mgroups/mgroups.htm>) in the work of the CSD. In preparing the paper, ICSU and WFEO consulted their Members and partners worldwide, which include expertise across the relevant scientific and engineering disciplines. The International Social Science Council (ISSC) also provided valuable input. CSD-18 will focus on the state of implementation of goals and targets for transport, chemicals, waste management, mining and the proposed 10-Year Framework of Programmes on Sustainable Consumption and Production Patterns. This is the review session for the fourth implementation cycle and will take place in New York, 3–14 May 2010. The policy session (CSD-19) will take place in 2011. More information, including the discussion papers from all Major Groups, is available on the CSD-18 ([http://www.un.org/esa/dsd/csd/csd\\_csd18.shtml](http://www.un.org/esa/dsd/csd/csd_csd18.shtml)).

### *ICSU on science of natural hazards and environmental disasters*

On 3 February, ICSU highlighted again the importance of science on natural hazards and environmental disasters and placed two resolutions issued by IUGG and the International Union of Geological Sciences (IUGS) on the IUSU website. The statements can be found at: [http://www.icsu.org/2\\_resourcecentre/RESOURCE\\_list\\_base.php4?rub=19#naturalhazardsanddisasters](http://www.icsu.org/2_resourcecentre/RESOURCE_list_base.php4?rub=19#naturalhazardsanddisasters)

### ***ICSU Statement on the controversy around the 4th IPCC Assessment***

The International Council for Science (ICSU) has released a statement on the controversy around the 4th IPCC Assessment. Important issues have been raised in relation to both the interpretation of scientific knowledge, especially in making predictions of future developments, and the procedures used by the IPCC in its assessment.

The statement is available on the ICSU website at:

[http://www.icsu.org/Gestion/img/ICSU\\_DOC\\_DOWNLOAD/3031\\_DD\\_FILE\\_IPCCstatementICSUfin.pdf](http://www.icsu.org/Gestion/img/ICSU_DOC_DOWNLOAD/3031_DD_FILE_IPCCstatementICSUfin.pdf)

Source: ICSU web-page

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### **4. Report on International Workshop “Geodynamical Phenomena” (Suzdal, Russia)**

The IUGG-sponsored Workshop “Geodynamical Phenomena: from Field, Observational, Computational, Seismological and Rheological Perspectives” was held in Suzdal (Russia) on 18-23 August 2009 and attracted about 70 participants including representatives from Australia, Belarus, China, Denmark, France, Germany, Israel, Japan, Norway, Sweden, Switzerland, Taiwan, Ukraine, and USA. Scientific topics of the workshop covered lithospheric and crustal dynamics, mantle convection, seismic wave propagation, core dynamics, theoretical and experimental mineral physics, field observations, planetary science and geological field constraints from faulting. Two publications have been planned for: one will consist of short papers to be submitted to *Physics of the Earth*, a Russian journal, and to be translated later into English by Springer. The second publication project will be concerned with longer articles: about 12 of them will appear in the *Lecture Series in Earth Sciences* with Springer.

An important outcome from this workshop at Suzdal was the very clear recognition by the Russian expatriate community in geophysics and other branches of geosciences that it is indeed possible to have a large international geophysical meeting in Russia and that this will provide an interesting opportunity for Russian scientists to engage their “overseas brothers” once again. As a consequence of the Suzdal conference, a recent organizing meeting was just held in Kiev, Ukraine, on 30 October 2009 in preparation for the second workshop, to be called “Geodynamical Phenomena: From Observations and Experiments to Theory and Experiments”. And this meeting will be held next year in Kiev, Ukraine, 20-24 September 2010. Representatives from the USA, Russia and Ukraine participated in this planning session.

The website connected with the conference is <http://marina.geo.umn.edu/suzdal>, which includes the schedule of presentations, abstracts, and the list of participants. Over 100 photographs of the meeting including the contents of the talks and social events can be found on <http://marina.geo.umn.edu/suzdal/photos.html>.

Received from David A. Yuen, co-organizer of the symposium

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## **5. Report on the Symposium “Geodesy in Latin America” (Buenos Aires, Argentina)**

The IUGG-sponsored Symposium on “Geodesy in Latin America” was held at the IAG Scientific Assembly on 4 September 2009 in Buenos Aires, Argentina. It was divided in three oral and one poster sessions. A total of 25 talks and 16 posters were presented covering the following themes: geometric reference systems, analysis of the gravity field, and real time positioning. The session on geometric reference systems was opened by the overview of the project “Sistema de Referencia Geocéntrico para las Américas” (SIRGAS). The SIRGAS Continuously Operating Network (SIRGAS-CON) includes presently 208 stations. Their data are analysed by four Processing Centres in Argentina, Brazil, Colombia, and Germany. The weekly solutions of station coordinates are integrated in two Combination Centres in Germany and Brazil, and provided every week to the users. Several presentations discussed the practical use of the SIRGAS reference frame in the Latin American countries. According to the reports, 14 of 18 member countries have introduced this reference frame by law. The corresponding activities include densification of the SIRGAS station network, determination of transformation parameters from the old to the new geodetic datum, transformation of all geo-information from the old to the new reference system, transfer of the cartographic projections and coordinate systems to SIRGAS, and capacity building and outreach activities to promote the use of SIRGAS.

Detailed oral and poster presentations were given from Argentina, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Mexico, and Uruguay. The progress in the determination of a unified geoid model of South America was presented in two talks. A contribution of the US National Geospatial-Intelligence Agency (NGA), responsible for the global model EGM2008, demonstrated the status of gravity data in South America and the regions where observation campaigns are urgently needed in order to improve the density and precision of gravimetric information. The main regions are the Amazon jungle and the central Andes in Bolivia and Peru. The IAG Sub-commission on Gravity and Geoid in South America computed a new quasi-geoid model using 950,000 gravity data. In addition to the quasigeoid for South America, there were also presentations of local geoid models in Argentina and Venezuela. Several presentations dealt with real time positioning activities.

Received from Hermann Drewes, IAG Secretary General

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## **6. Report on the Business Meeting of the German National Committee for IUGG**

The business meeting of the German National Committee for IUGG (NKGG) was held on 27 November 2009 at the Bundesanstalt für Geowissenschaften und Rohstoffe, BGR (the IUGG Adhering Organization), in Hanover. Prof. H.-J. Kümpel, President of BGR, presented the Adhering Organization and spoke about the history, the structure, and the scientific activities of the BGR. Furthermore, Prof. Kümpel informed about the IYPE closing event in Lisbon in November 2009. In this context, a new initiative called “The Planet Earth Institute”, which was proposed in Lisbon, was discussed. The IUGG Secretary General Alik Ismail-Zadeh attended the business meeting and informed the NKGG members about the current and planned IUGG activities. Members of the Committee reported on their activities in the IUGG associations, commissions, and working groups. Prof. R. Kind, NKGG President, was re-elected as President for the upcoming time period 2010 – 2014. The minutes of the meeting will be placed on the web page of the Committee ([www.bgr.de/nkgg/](http://www.bgr.de/nkgg/); in German).

Received from Thomas Plenefisch, NKGG Secretary

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## 7. Jubilee: 80<sup>th</sup> Birthday of Seiya Uyeda

Seiya Uyeda celebrated his 80th birthday in November 2009. He served the University of Tokyo (Japan) as professor of geophysics until his retirement in 1990, and then served the University of Tokai as a distinguished professor until 2008. During this period, he was a visiting scientist or professor at Cambridge, Oxford, Stanford, California (UCSD), Columbia (LDGO), Pierre et Marie Curie and Texas A&M universities, and Massachusetts (MIT) and California (Caltech) Institutes of Technology.

In his long and distinguished scientific career, Professor Seiya Uyeda made outstanding contributions to research in many fields of geophysics including rock magnetism, plate tectonics, geodynamics, heat flow, and earthquakes generation processes. In this last complex domain of geosciences, Seiya Uyeda has been working step by step, without respite, to become a pioneer in seismo-electromagnetic methods applied to active faulting. Seiya Uyeda continues to be an extremely clever high level and open-minded scientist who always takes time to listen carefully to each new hypothesis and to identify its most promising strengths and weaknesses.

Thanks to his untiring efforts in gathering together the international electromagnetic community working on magnetic and electric methods applied to earthquakes and volcanic eruptions, the IUGG founded in 2001 the Inter-Association Working Group for Electromagnetic Studies of Earthquakes and Volcanoes (EMSEV). Seiya Uyeda, as the EMSEV President then, stimulated positive and open discussion among the various scientists working on electromagnetic effects related to earthquake and volcanic processes. He promoted magnetic and electric studies of earthquakes, tsunamis and volcanoes from the source to the ionosphere. He strongly encouraged the use of multi-disciplinary techniques through national and international cooperation. He developed electromagnetic studies in developing countries, as on the Taal volcano in the Philippines in 2003. He promoted numerous EMSEV workshops and international meetings to provide forums for scientific discussion of electromagnetic processes related to crustal activity. Seiya Uyeda has continued to serve the broader scientific community, providing input to many panels, groups and organizations while, at the same time, nurturing EMSEV. EMSEV is now composed of more than 250 corresponding members from 14 countries. Within EMSEV, he always brings to light new scientific novelties in earthquake prediction research, in spite of the fact that reliable earthquake prediction has not been achieved. His scientific optimism is readily apparent in his favourite piece of advice for young scientists: At the end of the 19<sup>th</sup> century, it was commonly said that “a flying machine heavier than air is impossible” (Kelvin, 1895), but a decade later, air-planes flew.

Uyeda-san has served for several international organizations and projects, such as IUGG, IUGS, International Geodynamics (GDP) and Ocean Drilling (IODP) Projects. He has been conferred an Honorary Doctor of Philosophy from the University of Athens (Greece). He is a member of the Japanese Academy of Sciences, and a foreign member of the American Academy of Arts and Sciences, the Russian Academy of Sciences, and the U.S. National Academy of Sciences.

Received from Jacques Zlotnicki, Chair, IUGG EMSEV Commission, and  
Malcolm Johnston, Vice Chair of EMSEV

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## 8. Awards and Honours

The Royal Swedish Academy of Sciences has decided to award the Crafoord Prize in Geosciences 2010 to **Walter Munk**, Scripps Institution of Oceanography, University of California, San Diego, La Jolla, USA “for his pioneering and fundamental contributions to our understanding of ocean circulation, tides and waves, and their role in the Earth’s dynamics”. Professor Munk was the keynote speaker at the 1997 IAMAS/IAPSO Scientific Assembly in Melbourne (Australia).

In 2010, the American Geophysical Union (AGU) elected new Union’s Fellows. To be elected a Fellow of AGU is a special tribute for those who have made exceptional scientific contributions. This honour may be bestowed on only 0.1% of the membership in any given year. Among this year’s elected Fellows are the following IUGG experts: **Harry Bryden** (University of Southampton, UK), IAPSO Correspondent of the UK National Committee for IUGG; **Ed Garnero** (Arizona State University, USA) and **Louise Kellogg** (University of California, USA), Members of the Advisory Committee of the IUGG Union Commission on the Study of the Earth’s Deep Interior (SEDI); **Kenji Satake** (University of Tokyo, Japan), Member of the IASPEI Executive Committee and Chair of the IUGG Inter-Association Tsunami Commission; **James Syvitski** (University of Colorado, USA), Chair of the SCOR/IAPSO Working Group on Mechanisms of Sediment Retention in Estuaries.

The American Institute of Aeronautics and Astronautics bestowed the James A. Van Allen Space Environments Award for excellence and leadership in space research on **Daniel N. Baker** (University of Colorado at Boulder, USA). Baker is the director of the Laboratory for Atmospheric and Space Physics (LASP) and a Member of the IAGA Executive Committee.

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## 9. IUGG-related meetings occurring during March – May 2010

A calendar of meetings of interest to IUGG disciplines (especially those organized by IUGG Associations) is posted on the IUGG web site [[www.IUGG.org/calendar](http://www.IUGG.org/calendar)]. Specific information about these meetings can be found there. Individual Associations also list more meetings on their web sites according to their disciplines.

- March 2-5, IAG, IUGG, Havana, Cuba V Congreso Agrimensura.
- March 14-18, AGU, Baltimore, USA, Chapman Conference on the Exploration and Study of Antarctic Subglacial Aquatic Environments.
- March 24-26, IAHS, Agadir, Maroc, Integrated Water Resources Management and Challenges of the Sustainable Development (GIRE3D).
- May 2-7, EGU, Vienna, Austria, General Assembly of the European Geosciences Union.
- May 8-16, AGU, Agros, Cyprus, AGU Chapman Conference “Detachments in Oceanic Lithosphere: Deformation, Magmatism, Fluid Flow and Ecosystems”.
- May 17-21, IAHS, Taormina, Italy, Advances in statistical hydrology.
- May 17-24, AGU, Valparaiso-Vina del Mar & Valdivia, Chile, AGU Chapman Conference “Giant Earthquakes and Their Tsunamis”.
- May 24-28, IASPEI, IUGG, Zelenogorsk Town, Russia, VIII international workshop “Physics of forecasting of rock destruction”.
- May 25-29, IAHS, IUGG, Ohrid, Republic of Macedonia, BALWOIS 2010.

- May 27-28, UN-SPIDER, Bishkek, Kyrgyz Republic, Fourth Central Asia GIS Conference - GISCA 2010: Water: Life, Risk, Energy and Land Use.
  - May 31 - June 4, CGU, Ottawa, Ontario, Canada, Congress of the Canadian Meteorological and Oceanographic Society (CMOS) and the Canadian Geophysical Union (CGU): "Our Earth, Our Air, Our Water: Our Future"
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End of IUGG Electronic Journal Volume 10 Number 3 (1 March 2010)

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**Note: Contributions to IUGG E-Journal are welcome from members of the IUGG family. Please send your contributions to Alik Ismail-Zadeh by e-mail (insert in Subject line: *contribution to E-Journal*). The contributions will be reviewed and may be shortened by the Editor.**