



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

## **The IUGG Electronic Journal**

**Volume 14 No. 5 (1 May 2014)**

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 website (<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. The IUGG Gold Medal: Call for nominations**

The Gold Medal is the highest honor of the International Union of Geodesy and Geophysics, established in 2013 to award Earth and space scientists for outstanding contributions to geodesy and geophysics and for unselfish international cooperation in research. Submission of nominations for the IUGG Gold Medal opens on **22 May 2014** and closes on **22 October 2014**. The Gold Medal Recipient will be bestowed the Medal, Medal certificate, and conferred Honorary Membership of IUGG. The Medal will be presented at the Opening Ceremony of the XXVI IUGG General Assembly in Prague, Czech Republic, June 2015, following the announcement of the awards on 5 February 2015. The IUGG Gold Medal Committee was appointed by the Union President Harsh Gupta. The Committee consists of the chair and eight members:

<i>Chair:</i>	Robert Engdahl (IASPEI)	USA
<i>Members:</i>	Claudio Brunini (IAG)	ARGENTINA
	Laura Gallardo (IAMAS)	CHILE
	Demetris Koutsoyiannis (IAHS)	GREECE
	Joan Marti (IAVCEI)	SPAIN
	Lawrence Mysak (IAPSO)	CANADA
	Olga Solomina (IACS)	RUSSIA
	Mamoru Yamamoto (IAGA)	JAPAN
	Alik Ismail-Zadeh (ex-officio)	GERMANY

Details on the IUGG Gold Medal, including the procedure for nomination, eligibility criteria, and technical requirements, can be found at the web: [http://www.iugg.org/honors/Gold\\_Medal.pdf](http://www.iugg.org/honors/Gold_Medal.pdf)

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## **2. ICSU Grant Award 2014**

The International Council for Science (ICSU) awarded EUR 30,000 to the IUGG project proposal “**Uniting and networking the magnetic community in the northern Indian Ocean region (MAGNIO)**”. The project is supported by the ICSU Regional Office for Asia and the Pacific (ROAP), the Indian National Science Academy (INSA), the Council of Scientific and Industrial Research - National Geophysical Research Institute (CSIR-NGRI), WDC-Edinburgh and the Geomagnetism Team (both the British Geological Survey). The region of the northern Indian Ocean (NIO) is straddled by the magnetic Dip Equator, where magnetic and ionospheric phenomena have been poorly constrained in present global models. The MAGNIO project seeks to enhance the geomagnetic data quality and the network at the margins of NIO where data are sparse, by implementing relevant techniques for data acquisition and processing at all observatories in this region. It will serve as a nucleus for pooling and archiving the available data to analyze the region-specific aspects of the geomagnetic field. It also aims to bring together the different communities who work with different aspects of the geomagnetic field and germinate a nodal body who continues to reframe the standards and benchmarks in the region of NIO in future. A series of meetings and an international workshop will be organized to put in place the new standards and also to train scientists in requisite aspects of science and technology. This will be achieved by establishing collaboration between observatories in the countries of the region. MAGNIO will provide (i) opportunities for novice and experienced observers to interact and define techniques of measurement and (ii) the impetus to create a nucleus of measurement and research in geomagnetic variation studies across south and south-east Asia. The high precision data generated will contribute significantly to refined global models of geomagnetic field variations. This is of special importance at present in view of the successful launch of the Swarm satellite mission dedicated to the observation of the Earth’s magnetic field from space. Charters for interlinking the different user communities of the participating countries for proper dissemination of near real time data will be initiated. Implementation schedules and methods will be mapped out to ensure the generation of uniformly high quality data for the region. Improvements in the end products through the use of high quality data will be documented and can lead to specific applied research in future.

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## **3. Report on the First Workshop of the IUGG Union Commission on Climatic and Environmental Change (CCEC)**

The first workshop of CCEC brought together scientists from Australia, China, Denmark, France, Japan, Kenya, Luxembourg, Turkey, and the United States gathered at the Institute for Atmospheric Physics of the Chinese Academy of Sciences in Beijing from 11-12 April 2014 to discuss and examine the ways to strengthen multi-disciplinary research on climatic and environmental changes and to establish a strong link to Future Earth – a new interdisciplinary research program that is being established as a successor to the Earth System Science Partnership (<http://www.futureearth.info/>). Tom Beer and Jianping Li were the Co-chairs of the Science Program Committee, and Keith Alverson was the Secretary General.

The first day of the workshop concentrated on inter-disciplinary geophysical research activities. Presentations were made by Pingfan Rao, President of the International Union of Food Science and

Technology (IUFoST), Jun Chen, the International Society of Photogrammetry and Remote Sensing (ISPRS) and a Skype presentation by Frans Berkhout, the Executive Director of Future Earth. These global perspectives were complemented by regional perspectives from Guoxiong Wu, Chair of the Chinese Committee of IUGG, and from Tetsuzo Yasunari, a member of the Future Earth Science Committee both of whom focused on Asian perspectives of Future Earth. Serhat Sensoy, a WMO representative, and Keith Alverson, a UNEP representative, pointed out a recent international research Programme of Research on Climate Change Vulnerability, Impacts and Adaptation - PROVIA (<http://www.unep.org/provia/>), also sponsored by UNESCO.



From left to right: J. Li, T. Beer and K. Alverson



During the workshop (photos: T. Jin)



Workshop participants (Photo: T. Jin)

The second day of the workshop concentrated on scientific activities that could be used to foster internal linkages between and within the geodetic and geophysical communities. These linkages are relatively straightforward and obvious in relation to meteorology and atmospheric sciences (through climate change) and in relation to the hydrological sciences (through Panta Rhei). It was noted that geodesy is linked to hydrology through satellite missions (such as GRACE) providing data on gravity field, the total radial mass at a given point on the earth's surface, and the hydrological cycle. Changes in the total liquid water content can thus be accurately deduced – though its partition into surface and ground water remains as a field of enquiry. The participants identified six areas of possible linkages: (i) Climate Extremes and Food (IAMAS/IAVCEI), (ii) East Asia and the Monsoon (IAMAS/IAHS), (iii) Sea Level Rise (IAPSO/IACS), (iv) Space Weather and Sustainability (IAGA / IAMAS), (v) Urban Risks, and (vi) Water Resources (IAHS/IAG).

The workshop was hosted by the State Key Laboratory of Numerical Modelling for Atmospheric Sciences and Geophysical Fluid Dynamics (LASG) of the Institute of Atmospheric Physics (IAP). It was proposed and generously co-sponsored by the International Union of Geodesy and Geophysics (IUGG) via CCEC, the China Association for Science and Technology (CAST), the National Natural-Science Foundation of China (NSFC), the Chinese Academy of Sciences (CAS), the Chinese National Committee for IUGG (CNC-IUGG), the International Association of Meteorology and Atmospheric Sciences (IAMAS), the IAMAS International Commission on Climate (ICCL), and the National Basic research Program of China (973 Program): “Air-Land-Sea interactions in Asia and their role in the global change (ALS)” (2010CB950400). More information is available at: <http://www.ccec-iugg.org/>.

Received from Jianping Li, CCEC Vice Chair

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#### **4. News from the International Council for Science (ICSU)**

##### ***Future Earth website launched***

The new website of Future Earth is now located at <http://www.futureearth.info/>. Future Earth is the global research platform providing the knowledge and support to accelerate our transformations to a sustainable world. Bringing together existing programmes on global environmental change, Future Earth will be an international hub to coordinate new, interdisciplinary approaches to research on three themes: Dynamic Planet, Global Development and Transformations towards Sustainability. It will also be a platform for international engagement to ensure that knowledge is generated in partnership with society and users of science. It is open to scientists of all disciplines, natural and social, as well as engineering, the humanities and law.

##### ***Future Earth launches online consultation on research priorities***

Future Earth is undertaking a community consultation to identify the most important and most critical challenges for global change science to address in the next 5 years. The aim is to develop the Future Earth Strategic Research Agenda 2014 – a set of research priorities that will be co-designed with stakeholders from the funding, business and policy communities to help funders focus their resources. This will be an iterative process, revisited and reviewed in subsequent years as needs and opportunities change. Following an initial solicitation of research questions from within international science communities, Future Earth has now launched an open consultation process to seek feedback on the priorities that have been identified so far, and to gain new ideas from global societal stakeholders. The consultation is accessible via [https://www.surveymonkey.com/s/Future\\_earth\\_consultation](https://www.surveymonkey.com/s/Future_earth_consultation). It will remain open until 13 May 2014. In parallel to these activities, Future Earth is also undertaking an assessment of similar priority-setting processes related to global change and sustainability, and this assessment will feed into the development of the final research agenda. After the close of the online consultation, a priority-setting workshop will be held in order to evaluate and synthesize the inputs from the first rounds of consultation. This will involve participants from the scientific and stakeholder communities and a final review will be undertaken by Future Earth’s Science and Engagement committees. The Strategic Research Agenda will be published in late September 2014.

### ***IRDR DATA Project Publishes Peril Classification and Hazard Glossary***

The Integrated Research on Disaster Risk (IRDR) programme has recently published its Peril Classification and Hazard Glossary, which summarises the agreement on peril classifications and hazard definitions by members of the IRDR Disaster Loss Data (DATA) Project Working Group. This new and revised framework is implementable by loss databases with either a high level of hazard aggregation (only includes categories such as meteorological or geophysical) that do not distinguish specific perils, as well as databases that use perils (hurricane, tsunami, earthquake) rather than the more general categories. In this way, the classification serves the needs of multiple types of loss databases often managed for very different purposes. Understanding and documenting impacts from natural hazards is the foundation for decision-making and policy-setting in disaster risk reduction. The impacts range from human effects such as displacement, homelessness and fatalities, to environmental (wetland loss, desertification) and economic (damage to property and crops) losses. Documenting impacts in a standardised and comprehensive way is challenging largely due to the lack of common terminologies for perils, measurement methodologies, and human loss indicators. The inability to compare losses across hazards, space and time hampers the assessment of the burden of disasters at global to local levels. To overcome these challenges, the IRDR Scientific Committee established the DATA project to study issues related to the collection, storage, and dissemination of disaster loss data. The peril glossary offered in this document provides guidelines on event classification and a unified terminology for operating loss databases only. It is not intended as a comprehensive list of perils or as a conclusive definitional standard of hazards. This harmonised peril classification system and definitions serves the international disaster risk reduction community and contributes to the Hyogo Framework for Action (HFA) in regard to improving information on key hazards and their impacts.

Source: ICSU webpage

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### **5. Report on the IGBP Steering Group meeting**

The International Geosphere-Biosphere Program (IGBP) held its annual Steering Group meeting in Bangalore, India, 8-10 April 2014. The ICSU GeoUnions were invited to send a representative to the meeting to discuss involvements of the unions in the existing and new programs of IGBP and Future Earth. Professor Paul S. Monks of the University of Leicester, UK, who is a current member of IAMAS-iCACGP (International Commission on Atmospheric Chemistry and Global Pollution), was asked to represent the GeoUnions at the meeting.

The primary focus of the meeting was to review the progress of the IGBP core projects, which are global environmental change projects in research areas throughout the earth system. IUGG through in particular its commission IAMAS is a co-sponsor of two of the IGBP projects, the IGAC (International Global Atmospheric Chemistry) and SOLAS (Surface Ocean Lower Atmospheric Science). The other main elements of the meeting were to look at the transition to the new ICSU Programme, Future Earth which is a ten year international research initiative to develop the knowledge for responding effectively to the risk and opportunities of global environmental change and for supporting transformation towards global sustainability in the coming decades. The final element explored was the development of a final IGBP event in December 2015 at the AGU to overview the successes of 25 year + of IGBP global environmental change efforts.

IUGG has made clear its support for Future Earth whilst noting there are many elements from the IUGG International Scientific Associations and their associated programmes that could have a major contribution to Future Earth. Particular projects of relevance to a Future Earth coming out of

the International Association Hydrological Sciences as well as the Commission on Climate and Environmental Change were highlighted, in particular the new Panta Rhei project, as well as the Weatclifs (Weather, Climate and Food security). Some time was spent detailing the resolution in recognition of the establishment of Future Earth from the International Association of Meteorological and Atmospheric Sciences. This recognises the scientific challenges facing the community but notes that observations remain a core part of gaining insight to change in the earth system, particularly in conjunction with the supporting modelling. IAMAS welcomed Future Earth and has urged its community and its components to fully engage with the activity, but also to sustain and draw upon the wider community from the unions. The recommendations that have been made in relationship to the continuation, evolution and expansion of the research encompassing IGBP were welcomed by the Steering Group and seemed to be key messages to Future Earth about the Unions continuing requirements and support for long term data sets, field campaigns and the requisite analysis. The initiation development and sustenance of the co-operative programmes between the IUGG and its Associations and Future Earth are seen to have the potential to strengthen the diverse needs of Future Earth. Finally, special attention was paid to education and training and mentoring in the natural social sciences that were felt to be key underpinning activities that are important to the Unions and would bring substantial benefit to Future Earth.

Received from Paul Monks

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## **6. Awards and Honors**

The European Science Foundation's (ESF) Governing Council elected *Athena Coustenis* (IAMAS President) as the upcoming Chairperson of the European Space Sciences Committee (ESSC), effective November 2014. Congratulations to Athena!

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## **7. SciDataCon2014: Call for papers and sessions**

CODATA (the ICSU Committee on Data for Science and Technology) and WDS (the ICSU World Data System) are delighted to invite submissions for Oral Presentations and Sessions at the International Conference on Data Sharing and Integration for Global Sustainability (SciDataCon 2014) to be held in New Delhi, India, 2-5 November 2014 and hosted by the Indian National Science Academy. The deadline for submissions is 25 May 2014. Please help make SciDataCon 2014 a landmark conference in global data issues. Abstract Submission is available at <http://www.scidatacon2014.org/submissions>. Conference Registration is also now open at <http://www.scidatacon2014.org/registration>.

Received from Simon Hodson, Executive Director, CODATA

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## **8. IUGG-related meetings occurring during May – July**

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

## May

- 5-9, IUGG, IAGA, IAMAS, WCRP, Baden-Baden, Germany, 5th International High Energy Particle Precipitation in the Atmosphere (HEPPA) Workshop.  
Web: <http://www.imk-asf.kit.edu/english/1486.php>
- 12-21, SCAR, Brasilia, Brazil, ATCM XXXVII - CEP XVII.  
Web: [http://www.ats.aq/index\\_e.htm](http://www.ats.aq/index_e.htm)
- 12-23, ICTP, IUGG, Trieste, Italy, Seventh ICTP Workshop on the Theory and Use of Regional Climate Models.  
Web: [http://cdsagenda5.ictp.trieste.it/full\\_display.php?smr=0&ida=a13197](http://cdsagenda5.ictp.trieste.it/full_display.php?smr=0&ida=a13197)
- 22-24, IUGG, IACS, SCAR, Grenoble, France, Joint model-data workshop for the Late Pleistocene evolution of the Greenland and Antarctic ice sheets.  
Web: <http://www.physics.mun.ca/MOCA/IceSheetModelandData2014.html>
- 26-30, IGS, Chamonix, France, International Symposium on Contribution of Glaciers and Ice Sheets to Sea Level Change.  
Web: <http://www.igsoc.org/symposia/2014/chamonix/>

## June

- 1-2, IACS, Grenoble, France, International Workshop on Calving.  
Web: <http://www-igge.obs.ujf-grenoble.fr/calving2014/index.html>
- 2-6, IUGG, Merida, Yucatan, Mexico, 30th Conference on Mathematical Geophysics.  
Web: <http://eventos.iingen.unam.mx/IUGG2014/>
- 3-6, CODATA, Toronto, Canada, IASSIST 40th Anniversary Conference: "Aligning Data and Research Infrastructure". Web: <http://www.library.yorku.ca/cms/iassist/>
- 3-6, UNESCO-IOC, Oostende, Belgium, SG-GTSP-4: 2013 (Fourth) Meeting of the Joint IODE-JCOMM Steering Group for the Global Temperature-Salinity Profile Programme.  
Web: [http://ioc-unesco.org/index.php?option=com\\_oe&task=viewEventRecord&eventID=1388](http://ioc-unesco.org/index.php?option=com_oe&task=viewEventRecord&eventID=1388)
- 4-6, IAG, Vilnius, Lithuania, IAG Sub-commission 1.3a "European Reference Frame" (EUREF) Symposium. Web: <http://www.nzt.lt/euref2014/>
- 4-6, IUGG, IAHS, EGU, Bologna, Italy, Evolving Water Resources Systems - Understanding, Predicting and Managing Water - Society Interactions.  
Web: <http://distart19.ing.unibo.it/bo2014>
- 4-7, IUGG, EGU, Bacau, Romania, 2nd International Conference on Natural and Anthropogenic Risks - ICNAR2014. Web: <http://icnar.ub.ro>
- 7-9, IRDR, ICSU, Beijing, China. IRDR Conference 2014.  
Web: <http://www.irdrinternational.org/2013/07/29/news-irdr-conference-2014--call-for-abstracts/>
- 8-13, IUSS, Jeju, Korea, 20th World Congress of Soil Science.  
Web: <http://www.20wcss.org/>
- 9-12, IUGG, Baku Azerbaijan, IUGG Bureau Meeting.
- 9-12, UNESCO-IOC, Oostende, Belgium. Ocean Teacher Global Academy: GTSP Training Course. Web: [http://ioc-unesco.org/index.php?option=com\\_oe&task=viewEventRecord&eventID=1389](http://ioc-unesco.org/index.php?option=com_oe&task=viewEventRecord&eventID=1389)
- 16-17, IAHS, UNESCO-IHP, Paris, France, 11th Kovacs Colloquium - Hydrological Sciences and Water Security: Past, Present and Future.  
Web: [http://iahs.info/news.do?news\\_id=79#.UzAjPIKs98H](http://iahs.info/news.do?news_id=79#.UzAjPIKs98H)
- 16-20, SCOR, Israel, SOLAS Scientific Steering Committee Meeting.
- 18-21, SCAR, Evora, Portugal, 4th European Conference on Permafrost (EUCOP4).  
Web: <http://www.eucop4.org/>
- 22-25, SCAR, Cologne, Germany, 28th International Forum for Research into Ice Shelf Processes (FRISP). Web: <http://folk.uib.no/ngfso/FRISP/index.html>

- 22 - July 5, ICTP, IUGG, Arusha, Tanzania. Workshop on Geophysical Monitoring and Modeling for Sustainable Energy and Geohazard Solutions.  
Web: [http://cdsagenda5.ictp.it/full\\_display.php?ida=a13244](http://cdsagenda5.ictp.it/full_display.php?ida=a13244)
- 23-27, IAG, Pasadena, California, USA, IGS 20th Anniversary Workshop 2014.  
Web: <http://www.igs.org/workshop>
- 23-27, SCAR, SCOR, Bergen, Norway. Integrated Marine Biogeochemistry and Ecosystem Research (IMBER) Open Science Conference.  
Web: <http://www.imber.info/index.php/Meetings/IMBER-OSC-2014>
- 23-29, EMSEV, Bishkek, Kyrgyzstan, 6th International Symposium on Problems of Geodynamics and Geo-Ecology of Intercontinental Orogens. Web: <http://www.gdirc.ru/en/>
- 30 - July 3, UNESCO-IOC, Paris, France. IOC/EC-XLVII: 47th Session of IOC Executive Council. Web: [http://ioc-unesco.org/index.php?option=com\\_oe&task=viewEventRecord&eventID=1393](http://ioc-unesco.org/index.php?option=com_oe&task=viewEventRecord&eventID=1393)
- 30 - July 7, IAG, Shanghai, China, 3rd International Gravity Field Service (IGFS) General Assembly. Web: <http://202.127.29.4/meetings/igfs2014/index.html>

### July

- July 1-12, ICTP, IUGG, Kigali, Rwanda, African School on the Impact of the Sun on Ionosphere: Physics and Applications.  
Web: [http://cdsagenda5.ictp.trieste.it/full\\_display.php?smr=0&ida=a13251](http://cdsagenda5.ictp.trieste.it/full_display.php?smr=0&ida=a13251)
- 7-11, IAVCEI, Madeira, Portugal, 1st International Workshop on Volcano Geology.  
Web: [http://www.iavcei.org/IAVCEI\\_meetings/MADEIRA/Workshop\\_Volcano\\_Geology/Welcome.html](http://www.iavcei.org/IAVCEI_meetings/MADEIRA/Workshop_Volcano_Geology/Welcome.html)
- 21-23, GCOS, GOOS, WCRP, Barcelona, Spain, OOPC-17: Seventeenth Session of the GCOS/GOOS/WCRP Ocean Observations Panel For Climate.  
Web: [http://ioc-unesco.org/index.php?option=com\\_oe&task=viewEventRecord&eventID=1402](http://ioc-unesco.org/index.php?option=com_oe&task=viewEventRecord&eventID=1402)
- July 21 - August 1, ICTP, IUGG, WCRP, Trieste, Italy. Summer School on Attribution and Prediction of Extreme Events.  
Web: [http://cdsagenda5.ictp.trieste.it/full\\_display.php?smr=0&ida=a13211](http://cdsagenda5.ictp.trieste.it/full_display.php?smr=0&ida=a13211)
- 22-25, IAG, Matsushima, Miyagi, Japan, International Symposium on Geodesy for Earthquake and Natural Hazards (GENAH 2014).  
Web: <http://genah2014.jpn.org/index.html>
- 23-25, IUGG, IASPEI, Bogota, Colombia, Latin American and Caribbean Seismological Commission (LACSC) – Regional Assembly 2014. Web: <http://geoslac.org/english/>
- July 28 - August 1, AOGS, Sapporo, Japan, 11th Annual Meeting.  
Web: <http://www.asiaoceania.org/aogs2014/public.asp?page=home.htm>

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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.**