



INTERNATIONAL UNION OF GEODESY AND GEOPHYSICS
UNION GEODESIQUE ET GEOPHYSIQUE INTERNATIONALE

The IUGG Electronic Journal

Volume 15 No. 6 (1 June 2015)

IMPORTANT NOTE:

Number 7, Volume 15 of the Electronic Journal will be issued on 15 June 2015 and will be devoted to the 26th General Assembly of the IUGG in Prague, Czech Republic (22 June – 2 July 2015)

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.

Contents

1. IUGG Annual Report 2014
2. News from the 26th IUGG General Assembly
3. Report on the project Deform2015
4. Report on the 2nd meeting of the GFCS partner Advisory Committee
5. Report on 36th session of the WCRP Joint Scientific Committee
6. Awards and Honors
7. Meeting calendar

1. IUGG Annual Report 2014

The IUGG Annual Report provides an impressive summary of the last year's activities of the Union, the Union Associations, the Union Commissions, and the Inter-Unions Commission on Lithosphere and can be downloaded from: <http://www.iugg.org/publications/reports/report2014.pdf>. Thanks go to all who contributed to the report! The report is now in print together with the 2015 IUGG Yearbook and will be mailed to the Adhering Organizations, National Committees, international partners, and major libraries in June 2015.

2. News from the 26th IUGG General Assembly

There are only 22 days left before the opening of the 26th IUGG General Assembly. Over 3900 people have registered so far. More than 3200 oral and 2280 poster presentations, 11 Union and more than 700 scientific sessions make the IUGG General Assembly one of the most attractive international Earth and space sciences events in central Europe for many decades.

The Scientific Program of the 26th General Assembly of the IUGG is now available on the website: <http://www.iugg2015prague.com/complete-programme.htm>. Union Lecturers (plenary speakers) are

listed at <http://www.iugg2015prague.com/union-lectures.htm> together with the abstracts of their talks, and CVs.

Those who have not yet registered still have time until 8 June to register at a lower rate (full registration fee is EUR 610, retired people pay EUR 500, students EUR 430, and accompanying people EUR 120). Please see <http://www.iugg2015prague.com/registration.htm> for registration details.

3. Report on the project Deform2015

The project “Active Deformation, Faults and Earthquakes: from Measurements to Models” aimed to link researchers at the forefront of their fields together with PhD students, post-doctoral fellows and other early career scientists to address questions related to earthquake physics and crustal deformation. This was a project of the International Association of Geodesy (IAG) supported by the International Association of Seismology and Physics of the Earth’s Interior (IASPEI) and the IUGG Union Commission on Geophysical Risk and Sustainability (IUGG-GRC), and co-sponsored by IUGG.

The project’s main event was Deform2015 thematic school, which was held on 7-13 February 2015 in Barcelonnette, France. The school attracted 65 attendees from various institutions across the world. Most of the attendees were PhD students, with a few master students and more advanced people, either post-doctoral fellows or researchers. The demand was high and more than 30 people were registered on the waiting list when we reached our maximum capacity, showing the real need of the community for this kind of short focus course. Deform2015 focused on various aspects related to deformation of the crust of the Earth due to earthquake activity. The days were organized with three sessions per day (9:00-13:00, 16:00-19:00, and 20:30-22:30). The topics addressed during the school covered:

- Space geodesy with a full session on GPS, from theory to know-how. A lecture was given about InSAR, its theoretical background and its applications. A session was devoted to the emerging techniques of optical images correlation and all its potential applications in Earth sciences. Finally, a full session was devoted to the specific problems of inversion of geodetic data.
- Source seismology and fracture mechanics were introduced in one day, covering some basics of source seismology and fracture mechanics and some of their applications in Earth sciences. An evening seminar was organized to present rock-mechanic experiments geared toward understanding of earthquake processes.
- A full day was dedicated to the introduction of field observation techniques, basic concepts of neotectonics and paleoseismology, and dating techniques, to see how one could expand the time window of observations to improve understanding of the earthquake cycles. An evening session presented analogue experiments dedicated to landscape evolution studies related to tectonic deformation.
- A one-day field-trip was organized to show students the real observations in the local geologic environment that would relate to Quaternary deformation, pertinent to the core topic of the school.
- One and half days were devoted to various approaches in modeling of tectonic deformation, to the introduction of theoretical concepts and to the limitations of each approach (e.g., visco-elasticity, rate-and-state, etc.)
- The last session concerned the implementation of all this knowledge into seismic hazard and risk assessment.



Deform2015 group photo

Every day (except the two days with evening sessions) the time after dinner was used for 5-min flash talks and for a poster session. These short presentations were very successful and allowed everyone to share and discuss their research results. Also they have facilitated communication between the attendees; a research network was created during the school. The feedback forms collected at the end of the school underlined that the attendees have learnt a lot in different fields and would like to join similar event, maybe with a slightly lighter daily schedule, in future.

Yann Klinger, a Deform2015 organizer

4. Report on the 2nd meeting of the GFCS partner Advisory Committee

The Partner Advisory Committee (PAC) of the Global Framework for Climate Services (GFCS) held its second meeting in Geneva, Switzerland, from 30 to 31 March 2015 and was hosted by the World Business Council for Sustainable Development. The meeting was attended by representatives of organizations which have committed themselves to support the aims of the GFCS. The Global Water Partnership has now joined and the World Bank will do so very soon. The Chair of the PAC, Francesco Pisano of UNITAR, oversaw the business. The Deputy Secretary General of WMO attended for practically the whole period. The meeting concentrated on three topics:

- An update of the implementation of the GFCS which focussed on relevant activities of GFCS Partners since the first meeting of PAC, some of whom have very active programmes related to the Framework. A Panel Discussion on Science in Support of Climate Services will be held on 24 June 2015 during the IUGG General Assembly in Prague, Czech Republic.
- A choice of six developing countries that will be given preference in efforts to initiate or improve their access to climate services. This proved to be a long and difficult process as it is never easy to select one country in preference to another. IUGG was concerned to stress that the GFCS is a global programme and not just a means of offering support to developing

countries and so recognition should also be given to the successes and needs of the more developed countries.

- The compilation of a GFCS workplan that brings together the current and planned activities of the Partners in such a way that they can be co-ordinated and checked for progress from time to time.

IUGG had little to report to the PAC. Hopefully this will change after the discussions to be held during an open forum at the General Assembly of the Union in Prague. Despite this, we were made very welcome and in general the PAC is a very relaxed and open group within which to make contact with representatives of important actors in the international community. For example, the representative of European Commission described the European Research and Innovation Roadmap for Climate Services which is funded to the tune of tens of millions of Euros and can be downloaded from <http://bookshop.europa.eu/en/a-european-research-and-innovation-roadmap-for-climate-services-pbKI0614177/>. The World Bank for its part has billions of US Dollars committed to relevant projects and has recently set up a GFDRR Challenge Fund which is designed to allocate a few tens of thousands of US Dollars to small projects for which applications are now being sought – see <https://www.gfdr.org/>

Arthur Askew, IUGG Liaison Officer to PAC/GFCS

5. Report on 36th session of the WCRP Joint Scientific Committee

The World Climate Research Programme (WCRP) was established in 1980 under the joint sponsorship of the International Council for Science (ICSU) and the World Meteorological Organization (WMO) as a follow-up to the Global Atmospheric Research Programme. Since 1993, it has also been sponsored by the Intergovernmental Oceanographic Commission (IOC) of UNESCO. Its main objectives are to determine the predictability of climate and to determine the effect of human activities on climate.

Scientific guidance of the WCRP is provided by its Joint Scientific Committee (JSC), which is composed of 18 individual scientists. It meets annually, but very rarely if ever has it met in Geneva, Switzerland, even though its Planning Office is hosted by the WMO Secretariat. JCS-36 was held on 8-10 April 2015 and attended by most of the 18 members plus some 50 individuals: representatives of the component activities of the WCRP, sponsors and secretariat members. The session was chaired by Guy Brasseur of the Max-Planck Institute in Hamburg, Germany, who has only recently become the Chair of JSC. IUGG was represented by Tom Beer, the IUGG liaison to WCRP. However, as he was able to attend only for the first day, and because the meeting was being held at WMO, Arthur Askew kindly also volunteered to attend.

WCRP embraces five Core Project: CliC (cryosphere), CLIVAR (atmosphere-ocean interface), GEWEX (energy-water exchange), SPARC (stratosphere-troposphere) and CORDEX (regional downscaling), plus a number of other activities. Each of these projects operates through an extensive network of panels and working groups. Each has its own project office, staff and systems of funding. In recent years, WCRP has also established six “Grand Challenges”. Each component of this extensive and complex programme was given an opportunity to report on the status of its work and its plans for the future. This made for a very tight agenda, especially because it had been decided to limit the session to just three days. As a result, there was little opportunity to discuss anything in detail.

No reference to either IUGG or any of its Associations was made while we were present, even though many scientists who work within the WCRP community are also involved in IUGG activities. There exists some overlap and even duplication between the various Core Projects and between these and the Grand Challenges, especially as they are all competing for the same limited funds and for the limited time of the same personnel. Nevertheless, there appears to be a good sense of common interest and personal relations are excellent.

The WCRP is concerned at a drop in funding in recent years and discussed how to improve its public image and communications. As an example of the problems they face, it was noted that members of the WCRP community rarely mention the WCRP in their published papers and yet CMIP (Coupled Model Intercomparison Project) is widely known and quoted without any mention of the fact that it is a WCRP activity.

Half of all comments after the presentations called for links to be established between various entities within the WCRP. When mention was also made of potential links to activities outside the WCRP, the number increased exponentially. When the speakers were pushed on the matter, it became clear that a host of formal and informal links do exist that were not mentioned through lack of time. Nevertheless, this is an increasingly serious problem because if all the potential links that were mentioned were in fact established, the communities would be occupied full-time in maintaining links and have no time to do real science.

The CliC presentation stressed the problems faced because of the poor measurement of snowfall and also mentioned the importance of records of glacial mass balance studies. This led us to intervene and mention the work on these topics of IAHS and IACS respectively. The GEWEX presentation was of considerable interest, not the least because it referred to many challenges in hydrology, most of which are also of interest to IAHS. When queried on the subject, GEWEX Co-Chair, Sonia Seneviratne, stated that they had no contact with IAHS. This problem has persisted from the very start of GEWEX, which was launched without any contact being made with the hydrological community because the Director of the Joint Planning Office at the time was of the opinion that hydrologists knew very little about hydrology. This unfortunate history is well behind us and Sonia explained that they had made no contact with IAHS because they believed that IAHS works only at the basin level. This is not altogether true and, with their work on downscaling, GEWEX is now also working at the basin level. Sonia invited IAHS to nominate experts who might be interested to work with GEWEX in future. Discussion of activities on climate and urbanization made frequent references to water and so Arthur recommended that WCRP make contact with those undertaking the many large projects on water in urban areas before launching into any specific new activities.

WCRP has an existing Model Development Prize, shared with World Weather Research Programme. The idea of a parallel prize for data emerged from this JSC meeting and requires more thought, including a scan to learn what already exists. A recommendation is expected to be put to the next JSC meeting.

A young student from the Netherlands, who is working with the Joint Planning Staff for four months, presented an interesting paper comparing the carbon footprints of holding the next meeting of the JSC in Geneva, New Zealand, Abu-Dhabi and as a teleconference linking four regional centres.

Tom Beer, IUGG Liaison to WCRP, and Arthur Askew, IUGG Liaison to WMO

6. Awards and Honors

The International Association of Hydrological Sciences (IAHS) is pleased to announce the recipients of the International Hydrology Prize (Dooge medal and Volker medal) and the Tison award for 2015.

Mary Hill (USA) received the Dooge medal for her fundamental contributions to the science of hydrology. **Pierre Hubert** (France) received the Volker medal for outstanding applications of hydrological science for the benefit of society at large.

The Tison award is shared by **Antonino Maltese** and **Fulvio Capodici** (both Italy) for their paper published in *Hydrological Sciences Journal* in 2013. The Tison award promotes excellence in research by young hydrologists and is granted for an outstanding paper published by IAHS in a period of two years previous to the deadline for nominations. A US\$1,000 prize is to be shared by the awardees, sponsored by Taylor and Francis, the publisher of the Hydrological Sciences Journal.

7. Meeting calendar

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.

June

- 1-4, IUSS, Madison, WI, USA, IUSS Global Workshop on Digital Soil Morphometrics. Web: <http://digitalsoilmorphometrics.org/inaugural-global-workshop-2015/>
- 2-4, IUSS, Keszthely, Hungary, Land Quality and Landscape Processes Conference and Workshops. Web: <http://lq2015.georgikon.hu>
- 3-5, IAG, Leipzig, Germany, European Reference Frame (EUREF) Symposium 2015. Web: http://www.euref.eu/euref_symposia.html
- 8-10, IAMAS, Bangkok, Thailand, Second Workshop on Atmospheric Composition and the Asian Monsoon (ACAM). Web: <https://www2.acd.ucar.edu/acam>
- 14-19, AGU, Hong Kong, China, AGU Chapman Conference on Evolution of the Asian Monsoon and its Impact on Landscape, Environment and Society: Using the Past as the Key to the Future. Web: <http://chapman.agu.org/monsoon/>
- 15-21, IAGA, Prague, Czech Republic, 2nd IAGA Summer School. Web: http://www.iugg.org/IAGA/iaga_pages/assemblies/iaga_assemblies.htm
- **June 22 - July 2, IUGG, Prague, Czech Republic, IUGG General Assembly 2015, Earth and Environmental Sciences for Future Generations.**
Web: <http://www.iugg2015prague.com/>

July

- 5-10, IUSS, AQSSS, CSSS, Montreal, Canada, ISMOM 2015 (Interactions of Soil Minerals with Organic Components and Microorganisms). Web: <http://ismom2015.conference.mcgill.ca/indexOf50.html>
- 7-10, ICSU, UNESCO, Future Earth, Paris, France, Our Common Future Under Climate Change. Web: <http://www.commonfuture-paris2015.org/>
- 13-17, SCAR, Goa, India, SCAR International Symposium on Antarctic Earth Sciences (XII ISAES 2015). Web: <http://www.isaes2015goa.in>

- 13-17, IACS, Columbia, Maryland, USA, MicroSnow2 and SnowEx workshop. Contact Edward J. Kim (ed.kim@nasa.gov)
- July 26 - August 2, INQUA, Nagoya, Japan, XIX INQUA Congress - Quaternary Perspectives on Climate Change, Natural Hazards and Civilization. Web: <http://inqua2015.jp>

August

- 2-7, AOGS, Singapore, Singapore, AOGS 12th Annual Meeting. Web: <http://www.asiaoceania.org/aogs2015>
- 3-14, IAU, Honolulu, HI, USA, XXIX General Assembly of the International Astronomical Union (IAU). Web: <http://astronomy2015.org>
- 17-21, IGU, Moscow, Russia, IGU Regional Conference. Web: <http://www.igu2015.ru/>
- 23-29, University of Innsbruck, Innsbruck, Austria, Innsbruck Summer School of Alpine Research on Surface-Atmosphere Exchange over Mountainous Terrain. Web: <http://www.uibk.ac.at/congress/innsar/>

End of IUGG Electronic Journal Volume 15 Number 6 (1 June 2015)

Editor: Alik Ismail-Zadeh, Secretary General (Alik.Ismail-Zadeh@kit.edu)

Associate Editor: Franz Kuglitsch, Executive Secretary / Assistant Secretary General (fgkugl@gfz-potsdam.de)

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.