



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

## **The IUGG Electronic Journal**

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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. Union Commission on Planetary Sciences formed**

In the last half-century, with the advances in space exploration and ground based studies, planetary science has become a major interdisciplinary field of research that requires broad international collaboration and attracts Earth and space scientists from around the world. Several Associations of IUGG deal with planetary issues, but mostly independently. IACS has a division on Planetary and other Ices of the Solar System. IAG had an Inter-Commission Committee on Planetary Geodesy and a Joint Project on Geodetic Planetology. IAGA welcomes scientists to join in research in magnetism and aeronomy of other bodies of the solar system. IAMAS has a commission devoted to planetary atmospheres – the International Commission on Planetary Atmospheres and Evolution (ICPAE). IASPEI and IAVCEI have been working on planetary interior structure and evolution, planetary seismology and volcanology. With lakes and oceans being explored on outer planet moons such as Titan, Europa, Enceladus, and missions such as MESSENGER and BepiColombo, Lunar Reconnaissance Orbiter investigating the interior structure of rocky bodies like Mercury and the Moon, there is a need for a comprehensive home for planetary sciences within IUGG.

The IUGG Union Commission on Planetary Sciences (UCPS) was set up by a decision of the IUGG Executive Committee in June 2015 to promote and coordinate scientific (physical, chemical, and mathematical) studies of planets in the solar system and around other stars. UCPS intends to promote the advancement of scientific understanding of planetary science and exploration of the solar system origin, formation and evolution including a search for life beyond Earth. The UCPS together with the IUGG associations will share knowledge of and insights into planetary formation and origin through scientific research and comparative studies between planetary objects and the Earth in the fields of atmosphere, surface and interiors research. The UCPS objectives are:

- to promote the study of all scientific problems in planetary science and to encourage planetary research;
- to promote and coordinate international cooperation in planetary science, and to promote planetary science activities in developing countries;
- to provide, on an international basis, for discussion and publication of the results of the studies, research and work indicated above;
- to contribute to coordinating activity for possible future space missions.

The Executive Committee of the Commission is comprised of Chair Shuanggen Jin (IAG, China), two Vice Chairs Athena Coustenis (IAMAS, France) and Jörn Helbert (IASPEI, Germany), Secretary Scot Rafkin (IAMAS, USA), and 5 Members Christine Schøtt Hvidberg (IACS, Denmark), Michael Purucker (IAGA, USA), Fabrizio Capaccioni (IAHS, Italy), Philippe Lognonné (IASPEI, France), and José Luis Macias-Vasquez (IAVCEI, Mexico).

More information about the Commission: <http://www.iugg.org/about/commissions/ucps.php>

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## **2. 31<sup>st</sup> IUGG Conference on Mathematical Geophysics “Geophysics, from Mathematics to Experiments”**

The 31st IUGG Conference on Mathematical Geophysics (CMG) will be held at the Institut Henri Poincaré, Paris, France, 6-10 June 2016. CMG takes place every two years and covers a wide spectrum of current research topics in geophysics. The conference aims to draw together key contemporary issues in mathematical geophysics, including solid Earth, ocean, atmosphere, climate, hydrosphere, cryosphere; modeling of the Earth system and its components; model validation and quantitative solving of Earth science problems. In addition to the traditional focus on theoretical and modeling works, the CMG 2016 will also emphasize experimental works – in particular conceptual experiments that address physical mechanisms and scaling laws.

Funding to support students and early career scientists may be available. Please note the dates and visit the website for more detail: <http://cmg2016.sciencesconf.org>. For questions, please send an e-mail to [cmg2016@sciencesconf.org](mailto:cmg2016@sciencesconf.org)

Ilya Zaliapin, Secretary, IUGG Commission on Mathematical Geophysics

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

### ***New IPCC Chair***

Hoesung Lee, a professor in economics of climate change, energy and sustainable development at Korea University, Seoul, South Korea, was elected the new Chair of the Intergovernmental Panel on Climate Change (IPCC) at a meeting in the Croatian city of Dubrovnik. ICSU President Gordon McBean said: “The International Council for Science was one of the key actors which advocated for the creation of the IPCC, and since 1988 has supported all of its assessments. We look forward greatly to continuing that collaboration under the chairmanship of Hoesung Lee, and supporting the dynamic evolution of the IPCC as the cornerstone of climate policy making in the 21st century.”

In 1978, ICSU, WMO and the UN Environment Programme (UNEP) organized a workshop in Vienna that led to the first World Climate Conference in Geneva in 1979. Some 300 scientists from 50 countries looked at the evidence and confirmed the long-term significance of atmospheric CO<sub>2</sub> levels for global climate. This ultimately led to the establishment in 1980 of the joint World Climate Research Programme (WCRP).

The ICSU-initiated Scientific Committee on Problems of the Environment (SCOPE) – which complemented WCRP’s work with more of a science for policy focus – published a seminal report in 1986: “The greenhouse effect, climatic change and ecosystems”. It was the first international comprehensive assessment of the environmental impact of atmospheric greenhouse gases, and coincided with an important conference in Villach, Austria jointly organized by ICSU, WMO and UNEP. After Villach, an advisory group was appointed which produced several reports on the policy implications of the emerging science and ultimately led to the establishment of the IPCC in 1988.

Source: ICSU website

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#### 4. Awards and Honors

**Mioara Manda**, IAGA Secretary General, was elected Member of the Academia Europaea, a European Academy of Humanities, Letters and Sciences.

**Valérie Masson-Delmotte**, Chair of the IACS Division on Cryosphere, Atmosphere and Climate, was elected Co-Chair of the Working Group I of the Intergovernmental Panel on Climate Change (IPCC).

IUGG Fellow **John P. Burrows**, Chair of the IAMAS Commission on Atmospheric Chemistry and Global Pollution (ICACGP), was bestowed the Alfred Wegener Medal and Honorary Membership of the European Geosciences Union (EGU). **Jeffrey M. Forbes**, IAGA Executive Committee Member (2011-2015), was awarded the EGU Julius Bartels Medal. **Thierry Fichefet**, Member of the Belgian National Committee for IUGG, was awarded the EGU Louis Agassiz Medal. **Srinivas Bettadpur**, Vice President of the IAG Commission 2: Gravity Field, was awarded the EGU Vening Meinesz Medal.

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#### 5. 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.php>). Individual Associations also list more meetings on their websites according to their disciplines.

##### **November**

- 1-4, UNESCO, IUGS, IGCP, Wellington, New Zealand, 7th international symposium on Submarine Mass Movements and Their Consequences. Web: <http://submarinemassmovements2015.co.nz>
- 2-6, IUGG, The Abdus Salam International Centre for Theoretical Physics, Trieste, Italy, Conference “Future Earth and Space Science and Education (Future ESSE)”. Web: <http://indico.ictp.it/event/7723>
- 9-13, COSPAR, Foz do Iguaçu, Brazil, 2nd COSPAR Symposium. Water and Life in the Universe. Web: <http://cosparbrazil2015.org/>

- 11-13, GEO, Mexico City, Mexico. GEO-XII Plenary and Ministerial Summit. Web: <http://www.earthobservations.org/geo12.php>
- 16-20, IAG, Symposium SIRGAS 2015 and VII SIRGAS School on Reference Systems, Santo Domingo, Dominican Republic, Web: <http://www.sirgas.org/index.php?id=193>
- 18-20, IAHS, EGU, Addis Ababa, Ethiopia. Water-Food-Energy River and Society in the Tropics. Web: <http://meetings.copernicus.org/avh10>
- 23-25, ISPRS, UNESCO, GFZ, Kish Island, Iran. SMPR 2015. The 3<sup>rd</sup> International Conference on Geoinformation Modeling & Environmental Monitoring. Web: <https://smpr.ut.ac.ir>

### ***December***

- 9-11, IAG, 9th International Symposium on Mobile Mapping Technology (MMT2015), Sydney, Australia, Web: <http://www.mmt2015.org/>
- 14-18, AGU, San Francisco, CA, USA, AGU Fall Meeting. Web: <http://fallmeeting.agu.org/2015>
- 14-18, UN OOSA, Vienna, Austria, ICG Experts Meeting: Global Navigation Satellite Systems Services. Web: <http://www.unoosa.org/oosa/en/ourwork/icg/activities.html>

### ***January 2016***

- 27-29, UNISDR, Geneva, Switzerland, Science and Technology Conference on the implementation of the Sendai Framework for Disaster Risk Reduction 2015-2030. Web: <http://www.unisdr.org/partners/academia-research/conference/2016/>

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