



INTERNATIONAL UNION OF GEODESY AND GEOPHYSICS
UNION GEODESIQUE ET GEOPHYSIQUE INTERNATIONALE

The IUGG Electronic Journal

Volume 18 No. 10 (1 October 2018)

This monthly newsletter is intended to keep IUGG Members and individual scientists informed about the activities of the Union, its Associations and interdisciplinary bodies and about the actions of the IUGG Secretariat, Bureau, and Executive Committee. Past issues are posted on the IUGG website (<http://www.iugg.org/publications/ejournals/>). E-Journals may be forwarded to those who will benefit from the information. Your comments are welcome.

Contents

1. Nominations for IUGG Officers (2019-2023)
2. Nominations for the 2019 IUGG Gold Medal
3. 27th IUGG General Assembly: News
4. Report on the IUGG Centennial Celebration Activities in China
5. Report on the 8th GEWEX Open Science Conference
6. Awards and Honors
7. Obituary: Eigil Friis-Christensen (1944-2018)
8. Meeting calendar

1. Nominations for IUGG Officers (2019-2023)

Nominations for members of the IUGG Bureau and Finance Committee are now being accepted. The first deadline for nominations is on **8 October 2018**. The Adhering Bodies of the Member Countries, the Officers of the Union, and the Officers of the Associations are eligible to nominate candidates. Guidelines for nominations were sent to Adhering Organizations and IUGG/Association officers. For further information, please contact the IUGG Secretariat (secretariat@iugg.org).

2. Nominations for the 2019 IUGG Gold Medal

The Gold Medal is the highest honor of the International Union of Geodesy and Geophysics to award Earth and space scientists for outstanding contributions to geodesy and geophysics and for unselfish international cooperation in research. Nominations for the 2019 IUGG Gold Medal can be submitted by IUGG Adhering Bodies / National Committees or Union Associations. They should be addressed to Uri Shamir, Chair of the Gold Medal Committee, and submitted before **20 October 2018** to the IUGG Executive Secretary Franz Kuglitsch with a copy to the IUGG Secretary General. For more information: http://www.iugg.org/honors/Gold_Medal.pdf

3. 27th IUGG General Assembly: News



Join likeminded individuals for the **27th IUGG General Assembly**, taking place from **July 8 – 18, 2019** at the Palais des Congrès in Montreal, Québec, Canada. Scientists, industry experts and academics will gather from across Canada and around the world to share knowledge, ideas and discussions through a variety of scientific activities surrounding Earth and space science research. We look forward to seeing you at the centennial edition, *Beyond 100: The next century in Earth and Space Science*. **The registration and abstract submission will be open in October!** For more information: <http://iugg2019montreal.com>.

4. Report on the IUGG Centennial Celebration Activities in China

The Year 2019 is the 100th anniversary of IUGG. The Chinese National Committee for IUGG, in collaboration with IUGG and its Associations, the China Association for Science and Technology (CAST), the Chinese Academy of Sciences (CAS), the National Natural Science Foundation of China (NSFC), Lanzhou University and others, organized a series of activities to promote this centennial event. A high-level ***International Earth Sciences Summit***, entitled *Earth Sciences and Sustainable Development* was held on 21 August 2018 in Beijing, China. More than 20 international scientists and 100 delegates from China and around the world (e.g., Iran, Nigeria, Pakistan) attended this summit, including *Alik Ismail-Zadeh*, Secretary General of IUGG and Secretary General of International Science Council (ISC); *Yuntai Chen*, Academician of CAS, IUGG Fellow, and former Member of the IUGG Bureau (2003-2011); *Guoxiong Wu*, Academician of CAS and IUGG Fellow; *Keith Alverson*, Secretary-Treasurer of the IUGG Union Commission on Climatic and Environmental Change (CCEC); *Teruyuki Nakajima*, Secretary General of IAMAS; *Deliang Chen*, Foreign Member of CAS and former Executive Director of ICSU (2008-2011); *Yuanxi Yang*, President of the Chinese National Committee for IUGG (CNC-IUGG) and Academician of CAS; *Jun Xia*, Vice President of the CNC-IUGG and the member of CAS; *Xiaofei Chen*, Vice President of the CNC-IUGG, IUGG Fellow, and Academician of CAS, *Jianping Li*, Secretary General of the CNC-IUGG, IUGG Fellow, and Vice Chair of CCEC; and other distinguished participants.



Representatives of CAST, CAS, NSFC and CNC-IUGG welcomed the participants at the Opening Ceremony and delivered effusive speeches. The summit consisted of two parts: keynote presentations and panel discussion. Presentations at the summit included Developing Cryosphere Science under

Climate Change (by Dahe Qin, China), the Past Achievements and Future Prospects of the Atmospheric Sciences (by Terry Nakajima, Japan), Sustainable Water Management in a Changing Climate: Challenges in the Application of Hydro-climatological Forecasting for Decision Making (by Soroosh Sorooshian, USA); Tibetan-Iranian Plateau and the Asian Monsoon (by Guoxiong Wu, China); Resilience: The science of adaptation to climate change (by Keith Alverson, Japan, UN Environment Programme); Proving Ground for Global Sustainability (by Deliang Chen, Sweden); Applications of Computational Seismology on Hazard Mitigation (by Xiaofei Chen, China), and Centennial of International Cooperation in Earth & Space Sciences (by Alik Ismail-Zadeh, Germany/Russia).

In the panel discussion, eight panelists presented their views on Earth Sciences and Sustainable Development, new challenges and opportunities in the future, particularly about interdisciplinary and transdisciplinary research related to U.N. Sustainable Development Goals, about younger scientists and geoscience research in developing countries. All participants agreed that this was a successful Earth Sciences Summit dedicated to the IUGG Centennial celebration activities. This summit not only promoted high-level academic forums of Earth Sciences and presented new prospects for sustainable development strategies, but also provided a very good platform for advanced research strategic consultation, education and talent cultivation in the Earth Sciences. Through this summit, scientists and managers for sustainable development together reviewed IUGG contributions globally and regionally such as in China, the world's biggest developing country, summarized the advantages of Earth Sciences and their important role in serving society in a sustainable way, and summed up major challenges for the future.



The meeting attracted the attention of the Chinese media, such as Xinhua News Agency, the official state-run press agency of China, and Science & Technology Daily. A report on the meeting was published by Xinhua at http://m.xinhuanet.com/2018-08/23/c_129938937.htm.

From 22 to 24 August, CNC-IUGG organized the *Third Congress of China Geodesy and Geophysics* at Lanzhou University, China. More than 1,000 scientists and students attended the event. At the Opening Ceremony, *Chun-Hua Yan*, President of the Lanzhou University, *Yuanxi Yang*, President of CNC-IUGG, and *Alik Ismail-Zadeh*, IUGG Secretary General, addressed the participants in the Ceremonial Hall of the University. The following keynote speeches were delivered at the congress: Atmospheric Heating Source over the Tibetan Plateau and its Climate Impact by *Guoxiong Wu*;

Paradigm Shift in Disaster Science – Transdisciplinary System Analysis with Action-Oriented Research by *Alik Ismail-Zadeh*; Water Resources and Water Security by *Jun Xia*.

Jianping Li, Secretary General of CNC-IUGG
(source and photos by CNC-IUGG)

5. Report on the 8th GEWEX Open Science Conference

GEWEX, the Global Energy and Water Exchanges project of the World Climate Research Programme (WCRP), held its 8th Open Science Conference: Extremes and Water on the Edge from 6 to 11 May 2018 in Canmore, Alberta, Canada. More than 380 attendees hailing from 40 countries discussed and presented issues ranging from mountain and high latitude hydrology to atmospheric and land modeling research and observations. The Conference covered both long-standing and emerging topics and featured the work of more than 200 Early Career Researchers (ECRs). Approximately 1/3 of the attendees were female. Themes of the Conference mirrored the diverse research of the GEWEX community. The program was designed to reflect the science represented by the four core Panels of GEWEX and the two WCRP Grand Challenges on “Weather and Climate Extremes” and “Water for the Food Baskets of the World” for which GEWEX takes a leading role.



The conference, which had 7 themes and 26 sessions, was designed to cover as wide a gamut as possible of topics on water and energy climate and weather- related research. The GEWEX Global Atmospheric System Studies Panel’s focus on atmospheric models was shown through contributions in, for example, the session on “Energy and Water Budget Closure and Advances in Assessment Techniques”. The Global Land/Atmosphere System Study Panel’s concentration on land surface model development and evaluation was show cased in, for example, the session on “Satellite Observations for Climate Extremes, Water Cycle Processes, and Land-Atmosphere Interactions”. The GEWEX Hydro-climatology Panel’s emphasis on regional hydroclimates was shown in particular in the session on “Regional Hydroclimate Projects”. The GEWEX Data and Analysis Panel’s guidance on the production and evaluation of *global* data products as well as its newer direction of analyses were well-represented in the session on “Global Energy and Water Cycles, Clouds, and Radiation”. Weather and climate extremes and the food-water-energy nexus, the topics of the two WCRP Grand Challenges, were explored in detail in various sessions. Clearly, research on extremes in weather and climate was well represented and its session well attended.

Given the location of the conference in the Canadian Rockies in the beautiful town of Canmore, research on mountainous regions and their hydrology and climate was given particular attention. Both in the conference main events as well as our excursions led by both John Pomeroy and the excellent story teller and scientist in his own right of Bob Sandford. High mountainous terrain, which is critical for regional water supply and access, is still a research frontier due to the lack of *research* infrastructure and many unanswered questions on weather and climate-related processes in these regions persist. In this conference significant steps were made that may lead to a new GEWEX Mountain Initiative to bring together the latest scientific knowledge and models – such as convection-permitting models – and the relevant communities.

The ECRs from the Young Earth System Scientists (YESS) group (<http://www.yess-community.org>) and the Young Hydrologic Society (YHS) (<https://younghs.com>) came together to hold the 2018 Joint YESS-YHS ECR Workshop over three days before the Conference. Participants discussed creating and disseminating regional information on different spatial and temporal scales. A good portion of the students and ECRs attending the Conference also entered in the ECR and Student Presentation Competition, and five outstanding researchers came away with prizes. The conference was co-sponsored by IUGG, IAMAS, the World Meteorological Organization (WMO) and several other organizations. A detailed overview of the conference can be found at: <https://www.gewexevents.org/events/2018conference>.

Peter van Oevelen, IGPO Director

6. Awards and Honors

The American Geophysical Union (AGU) announced its medalists, awardees, Fellows, and named lecturers, who will be honored at the 2018 AGU Fall Meeting in Washington, DC, USA. Among the honorees are the following scientists, who have been active in IUGG:

Olivier Bachmann (Switzerland), former Chair of the IAVCEI Commission on Arc Magnetism, was awarded the Joanne Simpson Medal for Mid-Career Scientists;

Daniel N. Baker (USA), former Member of the IAGA Executive Committee, was awarded the William Bowie Medal.

Timothy Druitt (France), former Editor, IAVCEI Bulletin of Volcanology, was awarded the Norman L. Bowen Award and will deliver the Norman L. Bowen Lecture (Volcanology, Geochemistry, and Petrology Section).

Richard S. Gross (USA), Chair of the IAG Global Geodetic Observing System (GGOS), was awarded the Ivan I. Mueller Award for Distinguished Service and Leadership (Geodesy Section).

Bruce Houghton (USA), former Member of the IAVCEI Executive Committee, was elected AGU Fellow.

Kimitaka Kawamura (Japan), former Vice-President of the IAMAS Commission on Atmospheric Chemistry and Global Pollution (ICACGP), was elected AGU Fellow.

Philippe Lognonné (France), Executive Committee Member of UCPS, was elected AGU Fellow.

Trevor McDougall (Australia), Vice-President of IAPSO, was elected AGU Fellow.

Alberto Montanari (Italy), Italian National Correspondent for IAHS, was awarded the William Kaula Award.

Paul A. Newman (USA), Vice-President of the IAMAS International Ozone Commission (IO3C), will deliver the Jules Gregory Charney Lecture (Atmospheric Sciences Section).

Giuliano F. Panza (Italy), President of the Italian National Committee for IUGG, was bestowed the International Award.

Stephen E. Schwartz (USA), former Chair of IAGA Division IV on Solar Wind and Interplanetary Field, will deliver the Stephen Schneider Lecture (Global Environmental Change Section).

Lisa Tauxe (USA), U.S. National Correspondent for IAGA, will deliver the Edward Bullard Lecture (Geomagnetism, Paleomagnetism, and Electromagnetism Section).

Donald J. Wuebbles (USA), Former Director of Information of the IAMAS International Ozone Commission (IO3C), was awarded the Bert Bolin Global Environmental Change Award and will deliver the Bert Bolin Global Environmental Change Lecture (Global Environmental Change Section).

Congratulations to all awardees and honorees!

7. Obituary - Eigil Friis-Christensen (1944-2018)



IUGG Fellow Eigil Friis-Christensen passed away on 21st September 2018 after severe illness. Friis-Christensen received a Magister-konferens (Ph.D. equivalent) in Geophysics from University of Copenhagen in 1971, and was appointed a geophysicist at the Danish Meteorological Institute in 1972. Between 1976 and 1997, he was the principal investigator of the Greenland Magnetometer Array. From 1991 to 1997, he was Head of the Solar-Terrestrial Physics Division, Danish Meteorological Institute. He was appointed Director of the Danish Space Research Institute in 1997, which in 2004 changed its name to the Danish National Space Center.

In 2007 this became DTU Space, an Institute at the Technical University of Denmark, for which Eigil was Director until his retirement in 2012. In 1992, he was also the Project scientist on the first Danish satellite, Ørsted, which was launched in February 1999. He was an Adjunct Professor of Geophysics and Space Physics at the Niels Bohr Institute of University of Copenhagen from 1996 to 2006. Eigil authored over 140 research articles and books.

Eigil had tremendous impact as a scientific leader, working tirelessly throughout his career to promote interdisciplinary approaches and international collaboration. His scientific achievements include ground-breaking studies of the interaction between Earth's magnetic field and the solar wind, in particular using data from the Greenland magnetometer chain that he initiated and installed in the 1970s; the Oersted and Swarm satellite missions to explore Earth's magnetic field, and investigations of the connection between global temperature and the length of the solar cycle. He was highly regarded and recognized internationally for his many achievements. To list just a few: in 2009 he was awarded the Petrus Peregrinus Medal of the European Geosciences Union for "his fundamental contributions to our knowledge of the Earth's magnetic field from space and his innovative leadership in geomagnetism" and also was elected a fellow of the American Geophysical Union for "his pathbreaking cross-disciplinary scientific research and multi-national leadership in initiating new space-based research missions". Eigil was elected as Honorary Fellow of the UK's Royal Astronomical Society and Foreign Member of the Royal Swedish Academy of Sciences. He devoted considerable energy to the IUGG and its Associations. In 1997 he initiated the "Decade of

Geopotential Field Research” within the IUGG; he was Executive Committee member of the International Association of Geomagnetism and Aeronomy (IAGA) from 1993 to 2015 and between 2007 and 2011 he served as President of IAGA and was a member of IUGG Executive Committee. Even after he had served his term as President of IAGA, he continued to represent IAGA on the Commission for Climatic and Environmental Change (CCEC), and was completing a chapter for the forthcoming CCEC book "Global Change and Future Earth" at the time of his death. Eigil's quiet and kind personality, combined with his dedication to science and his ability to inspire his younger colleagues and promote their individual careers, will be remembered by all who had the privilege to work with him. We have lost an outstanding scientist and a remarkable person.

Nils Olsen and Chris Finlay, DTU Space, Technical University of Denmark;
Therese Moretto Joergensen, University of Bergen, Norway

8. 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 may list more meetings on their websites according to their disciplines.

October

- 2-4, IAG, Tsukuba, Japan, GGOS Days 2018. Web: <http://176.28.21.212/en/meetings/2018/ggos-days/general/>
- 4-5, IAHS, Potsdam, Germany, International Conference on "Natural Hazards and Risks in a Changing World". Web: <https://www.uni-potsdam.de/en/natriskchange/activities/internationalnatriskchangeconference2018.html>
- 9-12, IAG, PAIGH, Aguascalientes, Mexico, SIRGAS 2018, Web: <http://geoweb2.inegi.org.mx/sirgas2018/html/en/index.html>
- 15-17, IAG, PAIGH, Aguascalientes, Mexico, SIRGAS Workshop 2018 on Vertical Reference System. Web: <http://geoweb2.inegi.org.mx/sirgas2018/html/en/index.html>
- 16-18, IAHS, Xi'an, China, International Symposium of Eco-Hydrology and Water Security: Opportunities & Challenges from Developing Countries. Web: <http://isews.nwu.edu.cn>
- 24-26, GEO, Kyoto, Japan, 11th GEOSS Asia-Pacific Symposium. Web: <https://aogeoss.com/en/>
- 25-27, IAHS, Harare, Zimbabwe, 3rd IAHS Panta Rhei Conference. Web: https://iahs.info/uploads/Meetings/IAHS_Zim_2018_PantaRhei.pdf
- 28 October – 2 November, Mexican Geophysical Union, IUGG, Puerto Vallarta, Jalisco, México, Annual Meeting. Web: <https://www.raugm.org.mx>
- 29 October - 2 November, GEO, Kyoto, Japan, GEO Week 2018. Web: <http://earthobservations.org/geo15.php>
- 29 October - 2 November, IAG, Wuhan, China, IGS 2018 Workshop. Web: <http://igsworkshop2018.gnsswhu.cn/>
- 31 October - 2 November, IAHS, Livingstone, Zambia, 19th WaterNet/WARFSA/GWP-SA Symposium. Web: <http://www.waternetonline.org/annual-symposium/current-theme>

November

- 4-6, IAG, Shanghai, China, International Workshop on GNSS Ionosphere (IWGI2018). Web: <http://202.127.29.4/geodesy/iwgi2018/>

- 5-8, CODATA, WDS, Gaborone, Botswana, International Data Week 2018. Web: <http://www.codata.org/events/conferences/international-data-week-2018>
- 5-9, IAG, Canberra, Australia, 21st International Workshop on Laser Ranging. Web: <http://www.iwlr2018.serc.org.au/>
- 5-9, IAGA, Santa Maria-RS, Brazil, 7th Symposium of the Brazilian Space Geophysics and Aeronomy Society (SBGEA). Web: <http://www.sbgea.org.br/en/vii-sbgea-2/>
- 6-9, IAHS, UNESCO-IHP, Beijing, China, 8th Global FRIEND Water Conference. Web: <http://8thfriendwater.iahr.org.cn>
- 9-10, CODATA, Gaborone, Botswana, 31st CODATA General Assembly. Web: <http://www.codata.org/events/general-assembly/general-assembly-2018>
- 12-17, IAMAS, San Juan, Puerto Rico, School of Atmospheric Measurements in Latin America and the Caribbean: Atmospheric Particles and Reactive Gases (SAMLAC). Web: <http://samlac.uprrp.edu>

December

- 9, AGU, IUGG, Washington, DC, USA, AGU-IUGG Workshop on Disaster Science.
- 10-14, AGU, Washington, DC, USA, AGU 2018 Fall Meeting. Web: <http://fallmeeting.agu.org/2018>

IUGG Electronic Journal Volume 18 Number 10 (1 October 2018)

Editors: Tom Beer, Alik Ismail-Zadeh (Editor-in-Chief), Franz Kuglitsch (Associate Editor), and Kathryn Whaler.

To ensure compliance of the IUGG Electronic Journal with the General Data Protection Regulation, individuals who would prefer not to receive the IUGG Electronic Journal should send an email to the IUGG Secretariat (secretariat@iugg.org) with a word “unsubscribe” in the Subject line.