



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

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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 the actions of the IUGG Secretariat, Bureau, and Executive Committee. Past issues are posted on the IUGG [website](#). E-Journals may be forwarded to those who will benefit from the information. Your comments are welcome.

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1. Editorial: 27th IUGG General Assembly

The 27th General Assembly of the International Union of Geodesy and Geophysics (IUGG) held from 8 – 18 July 2019 in Montreal, Canada, was a big success. The IUGG Executive Committee thanks the Montreal Local Organising Committee, the Canadian Geophysical Union (CGU), the Canadian Meteorological and Oceanographic Society (CMOS), and JPdL International, the professional conference organiser, for excellent management and hospitality provided to the almost 4,000 participants of the assembly.

The IUGG General Assembly consisted of three important parts: (i) an open Scientific Assembly, (ii) a meeting of the duly accredited Delegates of the IUGG Member Countries and guests invited in accordance with the By-Laws (referred to as the Council Meeting); and (iii) business meetings of the IUGG, its Associations, and their scientific bodies.

Scientific Assembly

The Scientific Program of the General Assembly consisted of 234 symposia, 18 workshops, and 558 sessions in total. Among the more than 4,580 presentations at the General Assembly there were 9 Union Lectures (see below), 437 invited presentations, 2,329 oral presentations, and 1,814 poster presentations.

Nine distinguished speakers delivered the Union Lectures.

11 July 2019:

- *“Earth Sciences as the Underlying Pillars to Meet Societal Challenges in the Next Century”* by David Grimes (Canada)
- *“Bridging the Science-Policy Gap to address India’s Water Crisis: Insights from Cauvery Basin Research”* by Veena Srinivasan (India)
- *“The Ocean’s Role in Atmospheric Carbon Dioxide Changes During Ice Age Cycle”* by Karen Kohfeld (Canada)



David Grimes

Veena Srinivasan

Karen Kohfeld

13 July 2019:

- *“Exploring and Understanding Earth from Space: The Power of Perspective”* by Waleed Abdalati (USA)
- *“Improving Atmospheric Reconstructions for Historical Extreme Events by Rescuing Lost Weather Observations”* by Ed Hawkins (UK)
- *“Hunting the Magnetic Field”* by Lisa Tauxe (USA)



Waleed Abdalati

Ed Hawkins

Lisa Tauxe

16 July 2019:

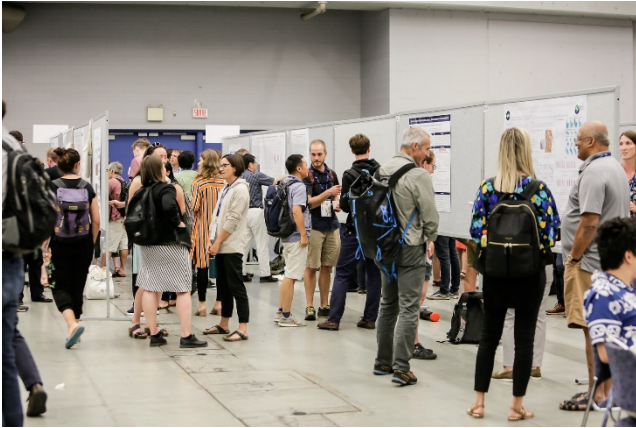
- *“Geodesy Sharpens You Up”* by Kosuke Heki (Japan)
- *“Singing Seismograms: Harmonic Tremor Signals in Seismological Records”* by Vera Schlindwein (Germany)
- *“Volcanic Giants - What We Know, What We Think We Know, What We Can’t Know About Cataclysmic Super-Eruption”* by Paolo Papale (Italy)
-



Kosuke Heki

Vera Schlindwein

Paolo Papale



At poster and oral sessions



Enjoying Canadian food



Between sessions

Photos: IUGG2019

2. IUGG Centennial Celebration Day

IUGG celebrated its 100th anniversary at UNESCO headquarters in Paris, France on 29 July 2019. More than 150 people joined the event. The program of the Day can be found [here](#).

Since 1919, IUGG has been advancing, promoting, and communicating knowledge of the Earth system, its space environment, and the dynamical processes causing change. IUGG envisions a future Earth that is environmentally sustainable and where societies are resilient against natural hazards. To achieve this goal, participation in global networks of interdisciplinary programs is vital. IUGG places particular emphasis on the scientific problems of economically less-developed countries by sponsoring activities relevant to their scientific needs. In addition to the many beneficial relationships that IUGG Associations develop with partners, IUGG as a whole also develops and maintains formal contacts with a wide range of organizations, including the International Science Council (ISC) and its international scientific unions and interdisciplinary bodies, UNESCO, and the World Meteorological Organization (WMO).



Participants of the IUGG Centennial Celebration Day at UNESCO

The Centennial Celebration Day started with the Opening Ceremony attended by senior representatives of ISC, UNESCO, WMO, the United Nations Office for Disaster Risk Reduction (UNDRR), the Preparatory Commission for the Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO), and the guest of honour H.S.H. Prince Albert II of Monaco. In her opening remarks, IUGG President Kathryn Whaler mentioned: *“The underpinning fundamental science we all do is as important to-day as it was a century ago, but the research landscape in which we operate and the societal issues we aim to address have transformed the way we work – supercomputers (even computers!), the space age and satellite observations, the world-wide web, sustainable development goals, the Sendai Framework for Disaster Risk Reduction, climate change, ecosystem services and many other terms familiar to to-day’s scientists were unknown then. Over the intervening century, the Unions and other international organisations have enabled scientists to collaborate and co-operate more effectively, and brought a spectrum of ideas to bear on the question of how to solve the world’s most serious problems. The need for the IUGG and its counterparts is as great as ever as we move into our second century.”*

“The earth sciences hold the record of our small planet, a record stretching back 4,600 million years” reminded Shamila Nair-Bedouelle, UNESCO Assistant Director-General for the Natural Sciences. *“Humanity has been here just for a tiny fraction of that time, yet it is increasingly obvious the threat we pose to life on earth. We have a short time to transform modern society in order to secure a*

sustainable future for all and our collaboration with the IUGG and several other scientific unions and associations is of vital importance for us.” Heide Hackmann, ISC Chief Executive Officer, Elena Manaenkova, WMO Deputy Secretary-General, Ricardo Mena, UNDRR Chief of Support and Monitoring of Sendai Framework Implementation, and Lassina Zerbo, CTBTO Executive Secretary welcomed the conference participants, spoke about cooperation between their organization and IUGG, and congratulated the Union on its Centennial anniversary.

The Opening ceremony was followed by the award ceremony. President Whaler presented Centennial Memorial Plaques to IUGG Founding Members [Australia, Belgium, Canada, France, Italy, Japan, Portugal, the United Kingdom, and the United States of America] and to its Partner organizations.

H.S.H. Prince Albert II of Monaco received IUGG Honorary Membership for his “outstanding contributions to the promotion of climate change, water, biodiversity and oceanographic research”, handed over by the IUGG President. In His speech, H.S.H. Prince Albert II mentioned: *“On the occasion of the centenary of your international union, I am very honoured and proud that you have granted me honorary membership. I see it as both a recognition for the secular action of my country in the field of oceanography and as an encouragement to continue and extend my personal commitment, faithful to the ideas of the person who brings us together today, Prince Albert I.”* (Prince Albert I was Vice President of IUGG 1919-1922).



IUGG President Kathryn Whaler and H.S.H. Prince Albert II of Monaco

On the occasion of the Centennial Celebration, IUGG organized four topical sessions. The 1st Session with contributions to “Earth and Space Sciences and Society” was chaired by President Kathryn Whaler. Presentations were given on “Centennial of the International Cooperation in Earth and Space Sciences” by Alik Ismail-Zadeh (IUGG), “Climate and our Planet” by Valérie Masson-Delmotte (Intergovernmental Panel on Climate Change, IPCC), and “Disasters and Society” by Marcia McNutt (National Academy of Sciences, USA).



Speakers: M. McNutt, A. Montanari, and A. Aoudia

The 2nd Session, chaired by IUGG President-Elect Chris Rizos, consisted of contributions on the topic “Earth Science for Sustainable Development” from Sierd Cloetingh (Utrecht, The Netherlands), from Kurt Lambeck (ANU, Australia), Vladimir Ryabinin (IOC/UNESCO), Alberto Montanari (Bologna, Italy and EGU President) and Abdelkrim Aoudia (ICTS, Trieste, Italy).

The 3rd Session, entitled “Strengthening International Cooperation in Science and Education in a Multi-Cultural World”, was organized as a panel discussion and moderated by IUGG Immediate Past President Michael Sideris. Panelists were Robin Bell (Columbia University, USA and AGU President), Paul Arthur Berkmann (Tufts University, USA), Anny Cazenave (L'Observatoire Midi-Pyrénées, France), Athena Coustenis (Paris Observatory, France), and Ligia Pérez Cruz (UNAM, Mexico and President of the Mexican Geophysical Union).



Panelists: R. Bell, P.A. Berkmann, A. Cazenave, A. Coustenis, L. Pérez Cruz, and H. Langenberg

The 4th Session, also a panel discussion, was focused on the “21st Century Triad: Sustainable Development, Climate Change and Disaster Risk Reduction”, and moderated by Alik Ismail-Zadeh, the Immediate Past Secretary-General of IUGG. Michael Rast (European Space Agency), Harsh Gupta (National Geophysical Research Institute, Hyderabad, India) Heike Langenberg (Nature Geoscience), Detlef Stammer (University of Hamburg, Germany, and World Climate Research Program) and Kristof Vandenberghe (UNESCO) participated in the panel discussion.

The celebrations closed with a performance by the PhiloGaïa Orchestra, of compositions based on geophysical images, entitled “We love our planet!” More information on the event is available [here](#).

Photos: IUGG/C. Vallentin

3. Call for IGCP Project Proposals

UNESCO is the only United Nations organisation with a mandate to support research and capacity in geology and geophysics, and the International Geoscience Programme (IGCP) is [UNESCO's flagship scientific programme](#). The programme's mission includes promoting sustainable use of natural resources, advancing new initiatives related to geodiversity and geoheritage and geohazards risk mitigation, and facilitating international scientific cooperation in the geosciences. Its vision is: efficient, safe and sustainable earth resources exploration and extraction; innovative renewable energy production and CO₂ mitigation; and better understanding and prediction of climate change and geohazards. The programme emphasises women and young and early career scientists, who are especially encouraged to submit project proposals.

2019 Special Topics defined by the IGCP Council are as follows: (1) Mining geosciences and sustainability; (2) Efficient and sustainable extractive industry technologies and stimulation methods; (3) Geology for the sustainable and safe scale-up of renewable energy production; (4) Big Data, Cloud Computing and Artificial Intelligence in the geosciences; (5) Geohazards near metropolitan areas; (6) Global warming CO₂ emission mitigation using new methods (such as Carbon Storage and Sequestration); (7) Sustainable small and volcanic islands: water, energy, resource management; (8) Geoheritage for sustainable development; and (9) Geoscience and the Anthropocene.

The 2019 project proposal call is open with the deadline for proposal submission of 15 October 2019. More information on the proposals submission can be found [here](#). For further information, please contact [Ozlem Adiyaman Lopes](#) or [Marie-Laure Faber](#).

Submitted by the UNESCO Earth Sciences and Geohazards Risk Reduction Section

4. Call for nominations of experts for IPBES

The Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES) is seeking experts to assist with the scoping of a thematic assessment of the interlinkages among biodiversity, water, food and health.

The IUGG is pleased to share this [call for nominations from IPBES](#).

Interested experts wishing to be nominated by a government are encouraged to contact their [IPBES National Focal Point](#) regarding any country-specific processes or deadlines and are requested to fill out their application form by **15 October 2019**. Nominators (governments or organisations) should approve the applications and submit their nominations by **29 October 2019**. Early nominations ahead of the deadline are encouraged.

5. Awards and Honours

The American Geophysical Union (AGU) announced its [Awardees, Fellows, Union Medals and Section](#) Awardees and Named Lecturers who will be honoured for their sustained and unique contributions to advancing our understanding of Earth, its atmosphere and oceans, and planets and astral bodies beyond our own. They will receive their honours at the [2019 AGU Fall Meeting](#) in San Francisco CA, USA from 9 – 13 December 2019. Among the 2019 Fellow and Named Lecturers are the following scientists who have been active in IUGG:

Amir AghaKouchak (USA), IUGG Early-Career Scientist Awardee, will receive the James B. Macelwane Medal.

Zuheir Altamimi (France), President of IAG, was elected AGU Fellow.

Benjamin F. Chao (China-Taipei), former IAG National Correspondent for China-Taipei, was elected AGU Fellow.

Ulrich R. Christensen (Germany), Executive Committee Member of SEDI, will receive the Inge Lehmann Medal.

Véronique M. A. Dehant (Belgium), Vice-President of the IUGG National Committee for Belgium will deliver the William Bowie Lecture (Geodesy Section).

Efi Foufoula-Georgiou (USA), IAHS National Correspondent for the USA will deliver the Walter B. Langbein Lecture (Hydrology Section).

Kosuke Heki (Japan), former Secretary of the IUGG National Committee for Japan, was elected AGU Fellow.

Gauthier Hulot (France), Executive Committee Member of SEDI will deliver the Edward Bullard Lecture (Geomagnetism, Paleomagnetism, and Electromagnetism Section).

Alik Ismail-Zadeh (Germany), IUGG Secretary General (2007-2019), will receive the Ambassador Award.

Alan G. Jones (Ireland), IAGA National Correspondent for Ireland, was elected AGU Fellow.

Kuo-Fong Ma (China-Taipei), Secretary of the IUGG National Committee for China-Taipei, was elected AGU Fellow.

Barbara A. Romanowicz (USA/France), IUGG Fellow and former Executive Committee Member of IASPEI, will receive the William Bowie Medal.

Chunmiao Zheng (China), former President of the IAHS International Commission on Groundwater (ICGW), was elected AGU Fellow.

Congratulations to all awardees and honourees!

6. Editorial note

Dear Reader: after the retirement of Alik Ismail-Zadeh as IUGG Secretary General (2007-2019) and Editor-in-Chief of the IUGG Electronic Journal until August 2019, we would like to announce that the editorial board of the E-Journal has been renewed as follows:

- Tom Beer, Franz Kuglitsch, Chris Rizos and Alexander Rudloff (Editor-in-Chief)
-

7. Meeting calendar

September

- 1-6, IAHS, Birmingham, United Kingdom, [10th Annual Catchment Science Summer School](#).
- 2-14, IUGG, ICTP, Trieste, Italy, [Advanced Workshop on Earthquake Fault Mechanics](#).
- 9-12, IAHS, Liege, Belgium, [10th International Groundwater Quality Conference](#).
- 9-13, YES, GFZ, IUGS, Berlin, Germany, [5th International YES Congress 2019 "Rocking Earth's Future"](#).

- 16-20, IAG, IUGG, Buenos Aires, Argentina, [Workshop on the Implementation of the Global Geodetic Reference Frame \(GGRF\) in Latin America](#).
- 17-21, IPCC, Monaco, [51st Session of IPCC](#).
- 18-20, IAG, ISPRS, Munich, Germany, [MRSS19 - Munich Remote Sensing Symposium 2019](#).
- 19-20, CODATA, IAG, Beijing, China, [CODATA 2019: Towards next-generation data-driven science: Policies, practices and platforms](#).
- 23-25, SCOR, Toyama, Japan, [2019 SCOR Annual Meeting](#).
- September 30-October 1, IAG, Paris, France, [DORIS Analysis Working Group meeting](#).

October

- 1, IAG, Paris, France, [ILRS Analysis Standing Committee \(ASC\) meeting](#).
- 1-4, IAG, Saint Petersburg, Russia, [5th IAG Symposium on Terrestrial Gravimetry: Static and Mobile Measurements \(TG SMM 2019\)](#).
- 2-4, IAG, Paris, France, GGOS/IERS Unified Analysis Workshop. Web: TBA
- 7-9, IAG, Paris, France, [Journées 2019: Astrometry, Earth Rotation and Reference Systems in the Gaia era](#).
- 10, BIPM, IAG, Sèvres, France, [BIPM Workshop on Advanced Time and Frequency Transfer](#).
- 13-18, AGU, Selfoss, Iceland, [Chapman Conference on Large-scale Volcanism in the Arctic: The Role of the Mantle and Tectonics](#).
- 14-18, AGU, Polson MT, USA, [Chapman Conference on Winter Limnology in a Changing World](#).
- 14-18, WCRP, Beijing, China, [International Conference on Regional Climate. ICRC-CORDEX 2019](#).
- 19-20, IAHS, Nanjing, China, [STAHY 2019](#).
- 21-24, AGU, Valencia, Spain, [Chapman Conference on Quest for Sustainability of Heavily Stressed Aquifers at Regional to Global Scales](#).
- 21-25, IAG, Stuttgart, Germany, 2019 [ILRS Technical Workshop](#).
- 22-25, IAMAS, WCRP, Madrid, Spain, [DynVarMIP workshop on atmospheric circulation in a changing climate](#).

November

- 4-8, COSPAR, IAMAS, Herzliya, Israel, [4th Symposium of the Committee on Space Research. Small satellites for sustainable Science and Development](#).
- 6-8, IAMAS, Santiago, Chile, [19th GEIA Conference – The Global Emission Initiative’s efforts to accelerate societal transformations](#).
- 11-14, IAG, Rio de Janeiro, Brazil, GGOS Days 2019. Web: TBA
- 11-14, IAG, PAIGH, Rio de Janeiro, Brazil, [SIRGAS Symposium 2019](#).
- 11-15, IAGA, Pilar and Cordoba, Argentina, III Pan-American Workshop on Geomagnetism. Web: TBA
- 18-22, IAGA, Rancagua, Chile, [6th biennial LATINMAG 2019](#).
- 20-23, ISC, UNESCO, Budapest, Hungary, [World Science Forum 2019](#).
- 25-27, IAHS, Paris, France, Sécheresses, étiages et déficits en eau. Web: TBA

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