



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

The IUGG Electronic Journal

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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.

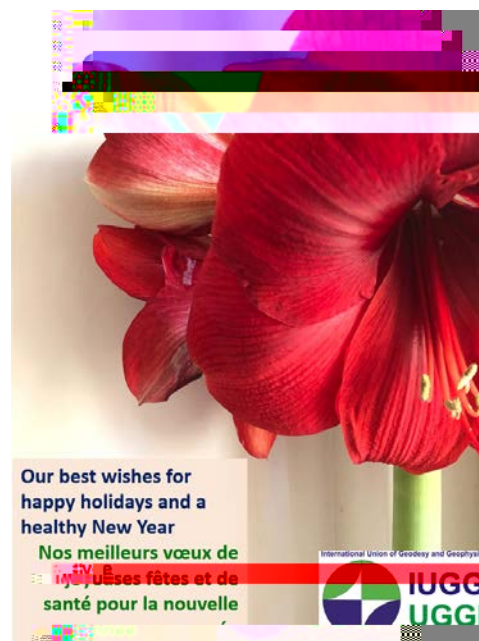
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1. Season's Greetings

The IUGG Executive Committee and the Secretariat thank the Adhering Bodies and National Committees, Union Associations and Union Commissions as well as all individuals who helped make the year 2019 exciting and productive and who contributed to strengthening international scientific cooperation in Earth and space sciences for the benefit of society.

We wish all IUGG scientists happiness, health and scientific success in 2020.



2. IUGG Highlights 2019

The year 2019 was again a remarkable one in the IUGG's history and in the history of the science-policy-society interface.

2.1. IUGG General Assembly 2019

The 27th IUGG General Assembly was held in Montréal, Canada from 8 to 18 July, bringing together about 4,000 Earth and space scientists from 94 countries. The Scientific Program of the General Assembly consisted of 234 symposia and workshops, with 558 sessions in total. Among more than 4,500 presentations at the General Assembly were 9 Union lectures, 437 invited presentations, 2,329 oral presentations, and 1,814 poster presentations. Delegates from 37 IUGG Adhering Bodies attended the Union Council Meeting and approved/elected:

- [New IUGG and Association Officers](#)
- [IUGG Liaison Officers](#) to various intergovernmental and international scientific bodies
- The [IUGG Budget for 2020-2023](#)
- Berlin, Germany as the venue for the 28th IUGG General Assembly in 2023
- Three [resolutions](#)
- The admissions of Algeria as a Regular Member, of Serbia and Uruguay as Associate Members and the transfer of North Macedonia to Associate Membership
- that Least Developed Countries (as defined by the United Nations) can now become IUGG Regular Members in Category 1 by paying annual contributions at the level of 25% of the Category 1 membership dues

William Richard Peltier (Canada) received the [IUGG Gold Medal](#), 7 distinguished scientists were elected as [IUGG Fellows](#), IUGG Fellowship was also conferred on 27 former IUGG Executive Committee and Finance Committee members and Association Secretaries General. Ten researchers received the [IUGG Early Career Scientist Award](#).

For further information see IUGG's E-Journals from [August 2019](#) and [September 2019](#).

2.2. *The Union celebrated its Centennial 1919-2019*

IUGG celebrated its 100th anniversary at UNESCO headquarters in Paris, France on 29 July 2019. More than 150 people joined the event. 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”, from the IUGG President. For further information see IUGG’s E-Journal for [September 2019](#).

A Special Volume “[The International Union of Geodesy and Geophysics: From Different Spheres to a Common Globe](#)” of the Journal “History of Geo- and Space Sciences” consisting of papers on the history of IUGG and its Associations was published.

Several activities in Member countries have been supported via the IUGG Grants Program to celebrate the IUGG Centennial in 2019. Major Centennial events were organised in [Argentina](#) and [Japan](#).

2.3. The Union was involved in various other activities during the last year and showed its strength in international cooperation and science promotion

- *Research programs and projects.* IUGG together with the International Union of Geological Sciences ([IUGS](#)) continued to support the International Lithosphere Program ([ILP](#)).
- *Science education.* IUGG and the Abdus Salam International Centre for Theoretical Physics ([ICTP](#)) in Trieste, Italy, have continued their cooperation in geophysical and geodetic education and science collaboration. IUGG co-sponsored six geoscience education events held at ICTP in Trieste, Italy as well as in Brazil, Rwanda, and the Philippines.
- *New publication.* The International Association for Geomagnetism and Aeronomy (IAGA) produced a volume for the IUGG Special Publications series “[Geomagnetism, Aeronomy and Space Weather. A Journey from the Earth's Core to the Sun](#)” that was published by Cambridge University Press.
- *Cooperation.* (i) IUGG continued to strengthen its cooperation with ISC scientific unions including the GeoUnions and others such as the International Union of Biological Sciences (IUBS). For further information visit the IUGG Website, [Liaisons and Representatives](#).

Alexander Rudloff, IUGG Secretary General

3. IUGG Membership and Financial Situation 2020

As of 1 January 2020, IUGG has 73 National Members including 58 countries in paying status. The paying members are placed in categories from 1 to 14 depending on their financial contribution to the Union (the membership dues rise with increasing category number). At present, the highest category used is category 11. The members pay dues according to a number of units assigned to their category (in category 1 the number of units is 1, and in category 11 the number is 35). According to a decision made at the XXII IUGG General Assembly (Boulder, USA, 1995), the price of 1 unit is determined every year using an inflator index obtained from the Bureau of Labor Statistics, U.S. Department of Labor. In 2020, the price of 1 unit will be US\$ 2,055. The 58 paying members represent a total of 276 units, which is equivalent to a total income of US\$ 567,180. The funds received as dues are the basis for IUGG's operations as a scientific union, although Union Associations may have their own funds earned through book sales, donations, or other means. The funds are spent to support: (i) scientific activities of Union Associations and Commissions; (ii) international scientific programs, projects and services; (iii) general and scientific assemblies, symposia, workshops, and schools; (iv) the IUGG Grants Program; (v) the International Lithosphere Program; (vi) the International Science Council; (vii) travel of students, early career scientists, and scientists from developing countries to attend scientific meetings; and (viii) administration and management.

Niels Andersen, IUGG Treasurer

4. IUGG Yearbook 2020

The [IUGG Yearbook 2020](#) is now available. Thanks to the National Committees, the Associations and Commissions for helping to update the information in the Yearbook! During 2020, updates on addresses and other information in the Yearbook should be sent to the [IUGG Secretariat](#). As soon as they are known. Our aim is to update the Yearbook as needed throughout the year.

5. IUGG Grants to Support Geoscience Education Events in 2020

IUGG awarded six grants (US\$15,000 in total) to support workshops and training schools organised by the Abdus Salam International Centre for Theoretical Physics (ICTP, Trieste, Italy) in 2020 as recommended by the IUGG Committee on Capacity Building and Education and in accordance with the Memorandum of Understanding (MoU) between IUGG and ICTP signed in 2019. The list of the events co-sponsored by the IUGG is as follows:

- [Public Health and Water Resources - Adaptation to Climate Change in the Eastern Mediterranean](#), 27-29 January 2020, Trieste, Italy
- [The Coastal Ocean Environment Summer School in Ghana 2020](#), 13-19 July 2020, Legon, Ghana
- [3rd Summer School on Theory, Mechanisms and Hierarchical Modeling of Climate Dynamics: Tropical Oceans, ENSO, and their teleconnections](#), 3-14 August 2020, Trieste, Italy
- [African Workshop on GNSS and Space Weather](#), 5-16 October 2020, Rabat, Morocco
- [Impact and Risk Relevant Climate Information from Global Scale Projections to Local Scale Climate Hazards](#), 9-13 November 2020, Trieste, Italy
- [Conference on Regional Climate Modeling and Extreme Events over South America: results from the CORDEX-Flagship Pilot Study](#), 17-19 November 2020, Buenos Aires, Argentina

Founded in 1964 by the late Nobel Laureate Abdus Salam and co-sponsored by UNESCO, IAEA, and the Italian government, the Abdus Salam International Centre for Theoretical Physics ([ICTP](#)) seeks to accomplish its mandate by providing scientists from developing countries with the continuing education and skills that they need to enjoy long and productive careers. ICTP has been a major force in stemming the scientific brain drain from the developing world. The impact of ICTP extends well beyond the Centre's facilities to virtually every corner of the Earth. The Earth System Physics (ESP) Section of ICTP studies a wide spectrum of the Earth-system, from its fluid components (oceans and the atmosphere) to the planet's interior. In 2011, IUGG and ICTP agreed to enhance geophysical and geodetic education and science collaboration and signed the first MoU to promote educational programs related to geodesy and geophysics for 2012-2015. In 2015 and 2019, the second and third MoUs were signed to extend cooperation between IUGG and ICTP for the periods 2016-2019 and 2020-2023, respectively.

6. REMINDER: IUGG Grants Program 2020-2023

IUGG continues its Grants Program for 2020-2023, which will complement the Union program of funding symposia and workshops organised or co-sponsored by Union Associations and Union Commissions (see item 4 of this issue). Key priority areas are defined for the Grants Program in line with IUGG overall scientific strategies:

- Creation of new knowledge in Earth and space sciences
- Dissemination of knowledge, data and information on geophysics and geodesy
- Geoscience for sustainable development
- Geoscience and policy interface
- Geoscience education and outreach in developing countries

Proposals of high quality related to the priority areas will be funded for a fixed term of one or two years. The IUGG Grants Program aims to support projects of importance to the international

geophysical and geodetic community, which will explore new scientific ideas and develop future international initiatives. A typical proposal may be for a workshop or a meeting of experts from several disciplines to develop a specific scientific program or assessment, particularly addressing an enhancement of geophysical research and Earth science education in underdeveloped and developing countries. Although the range of activities supported is broad, the project proposals should be of scientific and societal importance, and their results are expected to provide clear recommendations to politicians and other decision makers at national and local levels and to the general public in terms of the urgent actions to be undertaken. The deliverables of the projects should bring increased visibility to the IUGG and the Union Associations.

Proposals can be submitted by IUGG Associations and Union Commissions only. Associations' bodies (e.g., Commissions, Task and Work Groups) seeking funding for a project should submit their proposals via relevant Union Associations or Union Commissions. Any grant application must involve at least two IUGG bodies (Associations or Union Commissions): a Lead Applicant plus at least one Supporting Applicant. Preference will be given to proposals that are multi- and trans-disciplinary and truly international, especially those involving more than two of the IUGG Associations and Union Commissions and representatives of several countries. Proposals should be global or regional in scope and involve a multi-national group, especially scientists from developing countries, women, and early career researchers.

The number of proposals to be funded per year is not fixed, but depends upon relevance, quality, proposal budget requests, and the total amount of funds available for the Grants Program. The total funding for the Program in 2020-2021 is USD 80,000. The same amount of funds is reserved for 2022-2023. A ceiling of USD 20,000 is imposed on all applications. Co-sponsorship from other sources is encouraged.

The deadline for the project proposal submission is 1 April 2020 for the first call and 1 April 2022 for the second call. Following a biennial call, all proposals are peer-reviewed in open competition by the IUGG Bureau. If necessary, experts may be invited to participate in the review process. Successful applicants will be notified by 1 July 2020 (and 1 July 2022, respectively).

Grants will be made for periods of one or two years commencing from 1 August 2020 (and 1 August 2022, respectively). Projects may be cancelled if progress has been unsatisfactory. For funded projects, an annual report is to be sent to the IUGG Secretariat by 31 October 2021 (31 October 2023, respectively) and subsequently annually on the same date for all multi-year projects. A final report is to be submitted within three months of the date of the project completion.

Applicants are encouraged to submit their applications electronically. The application form can be obtained from the [IUGG Secretariat](#) on a request of an IUGG Association or Union Commission Secretary General.

Further information is available [here](#).

7. IUGG-AGU Centennial Celebration in India

A special symposium to celebrate the centennial of IUGG and AGU was held during the Federation of Indian Geosciences Associations' triennial congress at CSIR's National Geophysical Research Institute (NGRI) in Hyderabad, India, from 13th to 16th October 2019 on "Geosciences for sustainable development goals". The IUGG President, Kathy Whaler, spoke about IUGG in the last century and going forward, and how it is helping to address the Sustainable Development Goals (SDGs) both in the inaugural session on 13th October and the centenary session itself on 14th October. The AGU President sent a video address for the inaugural session and presented her contribution to the symposium via a skype call. IUGG Past President Harsh Gupta also spoke in the

centenary session, highlighting Indian scientists' contributions to the two Unions. Besides attending the Congress, the IUGG President was Guest of Honour at CSIR's Foundation Day at NGRI on 11th October, where she met its senior management team and a number of other scientists during a tour of its laboratories and scientific observatories, and gave the Foundation Day lecture. She also visited the Hyderabad International Convention Centre, where the joint IAGA-IASPEI Scientific Assembly will be held in 2021.



Kathy Whaler (IUGG President 2019-2023) together with Harsh Gupta (IUGG President 2011-2015) and the organisers of Federation of Indian Geosciences Associations' triennial congress

8. IUGG at the World Science Forum 2019

The IUGG President, Kathy Whaler, attended the [World Science Forum](#) 2019 in Budapest, Hungary, from 20-23 November 2019, where she co-moderated a [Special Session](#) as part of the UNESCO year celebrating the centenary of the death of Roland Eötvös. She also attended the opening of an exhibition dedicated to his life and work at ELTE University Library, with interactive exhibits and commentary in Hungarian and English. More information on Roland Eötvös and the centenary can be found [here](#).



Kathy Whaler, IUGG President, receiving commemorative coins from László Szarka, Chair, Eötvös 100 Coordination Committee

9. ISC - News from the International Science Council

[Extracted from [“The latest from the International Science Council - December 2019”](#)]

As the longest ever COP talks ended with a compromise deal, ISC Special Envoy Flavia Schlegel called upon the science community to provide knowledge that can help countries to take action. The ISC Community was active at COP25, with the Future Earth programme releasing 'ten new insights in climate science' and Global Climate Observing System (GCOS) and World Climate Research Programme (WCRP) delivering statements during the Earth Information Day of the Subsidiary Body for Scientific and Technological Advice (SBSTA). ISC is now collecting views on possible themes for Earth Information Day in 2020.

The World Climate Research Programme (WCRP) celebrated its 40th anniversary with a symposium showcasing the many successes of the community over the last four decades, and highlighting some of the challenges and opportunities that climate science faces now and will face in the future. Since its creation in 1979, WCRP has considerably advanced research on climate predictability and human influence on climate, equipping decision-makers with essential information on climate-risk management, adaptation planning, and impacts and vulnerabilities assessment.

ISC Secretary Alik Ismail-Zadeh received the American Geophysical Union (AGU) Ambassador Award at the recent AGU meeting, in recognition of his outstanding contribution to the Earth and space science community. In addition to serving on the ISC Governing Board, Alik has served on the advisory committees of several regional, international and intergovernmental organizations. His scientific interests cover geophysics, mathematical geosciences, natural hazards and disaster risk research. (*Please see also [IUGG eJournal, Volume 19 No. 9, Topic 5 – Awards and Honours](#)*).

10. Awards and Honours

The European Geosciences Union (EGU) announced its [President, General Secretary and Division Presidents for 2021-2023](#). Among the Division Presidents are the following scientists who have been active in IUGG:

Ira Didenkulova (Russia), IUGG Early-Career Scientist Awardee 2019, was re-elected Division President for *Natural Hazards (NH)*.

Annette Eicker (Germany), acting President of the IAG Inter-Commission Committee on Geodesy for Climate Research (ICCC), will become new Division President for *Geodesy (G)*.

Fabio Florindo (Italy), acting Chair of the IAGA Working Group I-2, was re-elected Division President for *Earth Magnetism & Rock Physics (EMRP)*.

Congratulations to all of you!

11. Obituaries

With great sadness IUGG informs about the decease of

Sergey A. Fedotov (1931 – 2019), IAVCEI President 1979 – 1983 and

Alexey V. Nikolaev (1934 – 2019), IASPEI President 1991 – 1995

Please visit the [IASPEI Newsletter December 2019](#) for detailed information.

12. Meeting calendar

2020

January

- 5-9, AGU, Washington DC, USA, [Chapman Conference on the Evolution of the Monsoon, Biosphere and Mountain Building in Cenozoic Asia](#)
- 7-10, UNESCO-IOC, Halifax, Canada, [UN Decade of Ocean Science for Sustainable Development 2021-2030: North Atlantic Workshop](#)
- 8-10, UNESCO-IOC, Chennai, India, [UN Decade of Ocean Science for Sustainable Development 2021-2030: North and Central Indian Ocean Workshop](#)
- 21-23, UNESCO-IOC, Venice, Italy, [UN Decade of Ocean Science for Sustainable Development 2021-2030: Mediterranean](#)
- 27-29, ICTP, Trieste, Italy, [Public Health and Water Resources - Adaptation to Climate Change in the Eastern Mediterranean](#)

February

- 17-22, GEO, Beijing, China, [GEO Data and Knowledge Week 2020](#)

March

- 2-8, IUGS, Delhi, India, [36th International Geological Congress](#)
- 10-12, IUGG, UNESCO-IOC, Paris, France, [Workshop on Sea Level Data Archaeology](#)
- 16-20, AGU, Flagstaff AZ, USA, [Chapman Conference on Distributed Volcanism and Distributed Volcanic Hazards](#)
- 22-28, IAG, Annapolis MD, USA, [11th IVS General Meeting](#)
- 31, IUGG, SCOR, Valparaiso, Chile, Surface Ocean - Lower Atmosphere Study (SOLAS) South America Community Workshop

2021

Association Scientific Assemblies

- 15-19 February, Rotorua, New Zealand, [IAVCEI Scientific Assembly](#)
- 28 June – 2 July, Montpellier, France, IAHS Scientific Assembly
- 28 June – 5 July, Beijing, China, IAG Scientific Assembly
- 18-23 July, Busan, Rep. of Korea, IACS-IAMAS-IAPSO Joint Scientific Assembly
- 22-27 August, Hyderabad, India, [IAGA-IASPEI Joint Scientific Assembly](#)

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