



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

## **The IUGG Electronic Journal**

**Volume 21 No. 3 (1 March 2021)**

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. IUGG – The People at the Forefront (XVI)**

#### **Günter Blöschl, President of the International Association of Hydrological Sciences (IAHS), 2017-2021**

My first encounter with IUGG was the 22nd General Assembly of IUGG in Vienna, Austria in August 1991, a few months after having graduated from the Vienna University of Technology. I recall being very impressed by the richness of the information presented at the Assembly, on hydrology in particular and Earth science in general, and by the exciting international ambience. I presented my PhD work, which was on spatially distributed hydrological modelling in Alpine landscapes. During my PhD studies I had of course been very well aware of IAHS, as its publications had been a key source of knowledge for me.

The path that had led me towards my PhD has been interesting. Water has fascinated me ever since I was a child. One of my favourite pastimes in the early years was to sit and watch the flow of water and, where there was opportunity, build little dams in mountain creeks or at the beach to divert the water and shape its flow. In hindsight, one could say these were my early attempts at combining water science and engineering. These also were the early signs of an interest in patterns, patterns the flowing

water produced, or the patterns left behind by flowing water, and how they may be related. Years later, while doing a Diploma of Civil Engineering at Vienna University of Technology, I learned that some of these patterns could indeed be predicted from first principles, which was a major revelation to me, and hence my fascination with understanding and predicting patterns of water.

The interest in hydrological patterns led me to take on a Postdoctoral position at the Australian National University in Canberra, where I was lucky to meet great people like Siva Sivapalan and Rodger Grayson who distinctly shaped my own thinking. My research topic was scale issues in hydrology, a logical continuation of my interest in patterns and which was also the topic of my Habilitation thesis at Vienna a couple of years later. In hindsight, scale issues were a fortunate subject choice, as it has ever since then underpinned all my thinking about hydrological processes. I have worked on floods droughts, climate change impacts on the water cycle, hydrological risk, and all of these themes have a very relevant scale aspect, in particular when considered in a spatial context.

A few years later I was appointed Full Professor at the Vienna University of Technology, continuing to collaborate with great people both at my university and around the world. I have always felt that our science needs more collaboration, thus getting involved in our learned societies was a logical consequence: EGU (where I served as a President from 2013 to 2015), AGU (where I was an Editor of the WRR journal), and of course IUGG, and in particular IAHS. I have not missed many of the IAHS and IUGG Assemblies (after my first one) that take place in alternating odd years. Since 2017 I have been the President of IAHS, which has proven to be an excellent platform both for furthering our science and for strengthening collaborations. My interest in learning from patterns turned out to be a natural fit to the IAHS Predictions in Ungauged Basins (or PUB) initiative to which I was glad to contribute, in order to strengthen networking across different disciplines, across different parts of the world and between individuals and research groups of various sizes. Appropriately, its final report, published by Cambridge University Press is subtitled “Synthesis across Processes, Places and Scales”. Another IAHS initiative (out of many) which I cherish is the „Twenty-three Unsolved Problems in Hydrology (UPH)” agenda-setting initiative (see the 2019 article that appeared in Hydrological Science Journal for reference).



*Left: IAHS Bureau meeting in Montreal in July 2019. Right: Günter Blöschl during a meeting on the PUB initiative in 2011.*

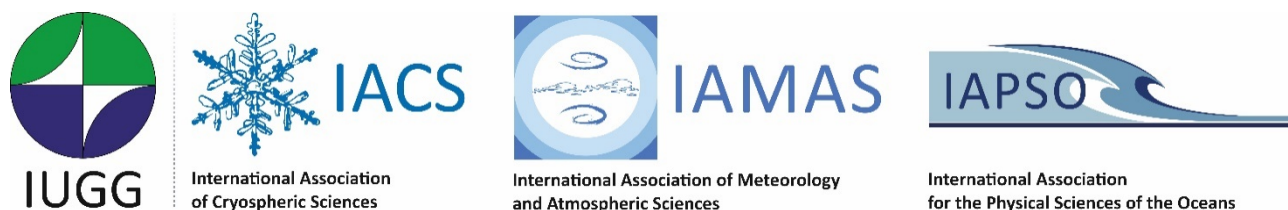
Two other interests are close to my heart. Throughout my career, I have been a strong advocate of bridging the gap between fundamental process understanding and the practice of water resources management. And second, my doctoral students. There were generations of them where the early apprenticeship most often turned into a partnership and, finally, shared learning and friendship. In the Vienna Doctoral Programme on Water Resource Systems, which I’ve had the privilege to chair for

the past few years, there was still more for me to learn by way of patterns and processes, as the programme ventured from hydrology to the wider domain of water science that included chemical, biological and socio-economic processes.

As I will be stepping down as the President of the IAHS in a few months, I am glad that the IAHS will be in able hands, with Berit Arheimer from the Swedish Meteorological and Hydrological Institute as the incoming President, and Christophe Cudennec from the Institute Agro, France, continuing as the Secretary General.

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## 2. IAMAS-IACS-IAPSO Online Seminar Series 2021



A series of online seminars organised by IACS, IAMAS and IAPSO will take place in the week from 19 to 23 July 2021, replacing the Joint Scientific Assembly in Busan, Republic of Korea cancelled due to the COVID-induced uncertainty surrounding international travel. The programme is being finalized and will be distributed soon. It will feature presentations by the Association early career award winners for 2021 and invited speakers on the broad topics of remote sensing, field observations, modelling and coupled process of change in the atmosphere, cryosphere and oceans. Registration for this seminar series will be free; details of how to register will be announced soon in the IUGG E-Journal and the Association newsletters.

### *Confirmed seminar themes and speakers:*

#### *Remote sensing of the atmosphere, ocean and cryosphere*

Paolo Cipollini (European Space Agency)

Byongjun Hwang (University of Huddersfield)

Pepijn Veefkind (Royal Netherlands Meteorological Institute)

#### *Field observations of the atmosphere, ocean and cryosphere*

Joellen Russell (University of Arizona)

Laura Stevens (University of Oxford)

Markus Frey (British Antarctic Survey)

#### *Modelling atmosphere, ocean and cryosphere interactions*

Jenny Mecking (National Oceanography Centre)

Cecile Agosta (LSCE)

Doug Smith (Met Office)

#### *Coupled changes and variability in the atmosphere, ocean and cryosphere*

Matthew England (University of New South Wales)

Ruzica Dadic (University of Wellington)

Elizabeth Barnes (Colorado State University)

### 3. IAG Scientific Assembly 2021



**International Association  
of Geodesy**

The Scientific Assembly of the International Association of Geodesy (IAG) will be held in Beijing, China from 27 June to 2 July 2021. The Scientific Assembly is a quadrennial event, in the middle of the periods of the IUGG General Assembly. Due to the ongoing COVID-19 pandemic, the Assembly will be organised as a hybrid meeting.

The Local Organising Committee (LOC) has reserved a number of conference rooms, but due to the current situation with travel restrictions, the main way for the foreign scientists to participate will be by virtual meeting. The LOC will make best efforts to offer the full programme and experience of the Scientific Assembly to everyone, regardless of the way they participate. The Assembly papers will be published in the renowned peer-reviewed book series, International Association of Geodesy Symposia. All papers will be available through Open Access, and publishing will be free of charge.

There will be eight Symposia, with topics covering the activities of IAG Commissions, Services, Inter-Commission Committees and a timely topic on “Geohazards”.

More information about the IAG Scientific Assembly (including deadlines, schedule, programme, abstract submission and registration) will become available [here](#) in March 2021.

More information about the IAG can be found [here](#).

In case of questions, please contact the [IAG Secretary General](#) or the LOC, the address of which will be given on the Assembly website.

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### 4. IAGA-IASPEI Scientific Assembly 2021

The Joint Scientific Assembly (JSA) of the International Association of Geomagnetism and Aeronomy (IAGA) and the International Association of Seismology and Physics of the Earth’s Interior (IASPEI) will be organised from 21 to 27 August

2021 on a fully virtual platform, to overcome the risks due to the pandemic. The JSA will be preceded by the IAGA and IASPEI Schools and GIFT Workshop. The 13th General Assembly of the Asian Seismological Commission (ASC) will follow the JSA, adding to the variety and diversity of the scientific programme.

The LOC in consultation with the two Associations has substantially reduced the registration fees which shall allow many young researchers to participate and present their scientific papers and join us in plenary lectures and other joint sessions.





More information about the IAGA-IASPEI Joint Scientific Assembly (including deadlines, schedule, programme, abstract submission and registration) can be found [here](#).

More information about [IAGA](#) and [IASPEI](#).

Abstract Submission Deadline: **15 April 2021**

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## 5. IAVCEI eVolcano Platform



IAVCEI is proud to celebrate the launch of its new IAVCEI e-learning platform, "[eVolcano](#)", whose Project Manager is Jessica Kandlbauer.

eVolcano delivers peer-reviewed teaching videos across the diverse volcanology disciplines and will be made freely available to everyone. An Editorial Board and authors are already working on the first set of videos, which will be available within the coming months.

eVolcano provides:

- a complementary and innovative tool to study for students, teachers, and the public,
- state of the art content, and
- a tool to raise interest and promote volcanology.

How you can contribute:

- follow us on [twitter](#) EVolcano E-learning Platform,
- spread the word - let your colleagues and students know about this initiative,
- get involved as a voluntary helper behind the scenes, and
- get involved as an Editor.

For any questions please do contact us [here](#).

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## 6. ILP - New Secretary General

In January 2021, the IUGG and IUGS named a new Secretary General for their joint inter-Union programme - The International Lithosphere Program - [ILP](#).



INTERNATIONAL  
LITHOSPHERE  
PROGRAM

Professor Mian Liu from the University of Missouri, Columbia MO, USA will take on a four-year mandate until the end of 2024. The ILP Office will also be transferred from the German Research Centre for Geosciences (GFZ) in Potsdam, Germany.

He succeeds Professor Magdalena Scheck-Wenderoth from the GFZ, who served two terms as Secretary General. We thank Magdalena and her team for their dedication to this task.

*ILP was established in 1980 by the International Council of Scientific Unions (ICSU – today the International Science Council, ISC) at the request of the IUGG and the IUGS and was charged with promoting multidisciplinary research projects of interest to the solid Earth science communities which spans IUGG and IUGS activities. More specifically the ILP will in the future be asked to develop large integrated projects for the community which contribute to the UN sustainable development goals (SDG).*

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## 7. IYBSSD 2022 at the 76th United Nations General Assembly



In late 2019, the UNESCO General Conference adopted a [resolution](#) to proclaim the year 2022 as the “International Year of Basic Sciences for Sustainable Development” (IYBSSD). Meanwhile, the Dominican Republic has agreed to present the resolution for the proclamation of IYBSSD 2022 to the 76th United Nations General Assembly, planned to be held from 14 to 30 September 2021 in New York City NY, USA.

It is intended that IYBSSD will be organised in 2022, under the aegis of UNESCO and with the collaboration of UNESCO International Basic Sciences Programme (IBSP). Multiple scientific

organisations, including IUGG, support this initiative as Founding Unions or Partners.

During IYBSSD, there will be several international events organised by Founding Unions and Founding Partners, with the aim to promote the role of basic sciences in the achievement of the United Nations ‘Sustainable Development Goals’. We encourage anyone with an idea (or already ongoing project) that could fit within the scope of IYBSSD to apply for a grant. There will also be communication actions at various scales, and incentives for local, regional and national organisations to set up their own events with the same aim.

More information about IYBSSD can be found [here](#).

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## 8. ISC CODATA – SciDataCon: Call for Sessions

The [deadline for session proposals for SciDataCon 2021](#), part of [International Data Week](#) (IDW2021), is on 31 March 2021.

SciDataCon 2021 is an integral part of International Data Week 2021, which will be held both virtually and onsite in Seoul, Republic of Korea from 8 to 11 November 2021. IDW2021 will also feature the CODATA 2021 General Assembly from 12 to 13 November 2021.



## 9. ISC GeoUnions – New Standing Committee on Disaster Risk Reduction



**International  
Science Council**

The newly established Standing Committee on Disaster Risk Reduction (DRR) seeks to strengthen the long-standing International Science Council (ISC) leadership in advancing DRR. It also honours the ISC's (former ICSU's) role in preparation of world conferences on DRR.

By decision of the IUGG Executive Committee of 10 June 2020, the authors were appointed as IUGG representatives to this new committee. In addition to IUGG, the [GeoUnions](#) IGU, ISPRS, and URSI also delegated their members.

Already at the first virtual meeting on 1 July 2020, work was started under the leadership of Professor Orhan Altan, nominated by ISC and ISPRS. The undersigned took on the task of formulating and adapting the Terms of Reference to meet international standards. At the second meeting on 16 September 2020, Dr. Alexander Rudloff was unanimously elected as co-chair. A [website](#) of the committee has been set up and jointly developed.

At the meetings No. 3 (19 November 2020) and No. 4 (4 December 2020), the drafting of policy briefs was intensively discussed. The meeting No. 5 (15 January 2021) focused on the planning of the next [GI4DM](#) conference, to be held in Beijing, China in November 2021. At the last meeting No. 6 (4 February 2021) new members from INQUA and IUGS joined the committee.

Alexander Rudloff, IUGG Secretary General  
John LaBrecque, GRC Chair

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## 10. ISC Extraordinary General Assembly 2021

The Extraordinary General Assembly 2021 of the International Science Council (ISC) was held online from 1 to 5 February 2021. The agenda can be downloaded [here](#). IUGG was represented by President Kathy Whaler and Secretary General Alexander Rudloff.

ISC Members, including IUGG were invited to discuss and vote on the proposed changes to the ISC Statutes and Rules of Procedure and to elect the 2021 Elections Committee.

The new ISC Statutes and Rules of Procedure are available [here](#).

The composition of the 2021 Elections Committee is available [here](#).

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## 11. Klaus Töpfer Sustainability Fellowship - Call for Applications 2021/2022

The Institute for Advanced Sustainability Studies (IASS), Potsdam, Germany is currently seeking nominations for the 2021 Klaus Töpfer Sustainability Fellowship. The fellowship is intended to honour individuals who strive, like Klaus Töpfer (the former Executive Director of the United Nations Environment Programme), to bring together the fields of science and politics in their work. Applicants

from the fields of academia, politics, civil society, business, and the arts are invited to submit their applications by **12 April 2021**.

With a wealth of experience in science, politics and the non-profit sector, Klaus Töpfer embodies the unique combination of perspectives that underpin the vision of the IASS. With its Klaus Töpfer Sustainability Fellowship, the IASS wants to support individuals who are committed to sustainable development and work to build bridges between science, politics, and society.

The IASS is currently seeking applications from talented young early- to mid-career professionals from Germany or abroad who have worked for at least ten years on sustainability issues and have the potential to serve as change agents towards sustainable development. Applicants should be innovative minds and practitioners in their respective fields in science, the arts, civil society, business, politics or other sectors, and have work experience across different countries and cultures.

The Klaus Töpfer Sustainability Fellowship is awarded for one year. The Fellow is expected to work on site at the IASS during their fellowship, and actively contribute to the work of the institute by holding seminars and participating in other IASS activities.



Institute for Advanced  
Sustainability Studies

For further information on how to apply, see here: [Call for applications 2021](#)

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## 12. Awards and Honours

### *International Association for the Physical Sciences of the Oceans (IAPSO)*

Prof. [Carl Wunsch](#), Cecil and Ida Green Professor of Physical Oceanography, Emeritus, at the Massachusetts Institute of Technology is the Prince Albert I Medal recipient 2021, in recognition of his ground-breaking contributions to the development of modern physical oceanography.

Prof. Wunsch pioneered the use of satellite altimetry, was the intellectual and creative driving force behind the World Ocean Circulation Experiment, established the modern practice of global ocean state estimation to synthesise observations and models, contributed seminal studies to improve our understanding of the global ocean circulation and its role in climate, and with Walter Munk, invented acoustic ocean tomography and established the contemporary paradigm of the global overturning circulation as a mechanically-driven phenomenon.

His commitment to education produced a list of former students, postdoctoral researchers, and collaborators that reads like a Who's Who of Physical Oceanography.

### *Royal Astronomical Society (RAS)*

Professor [Tamaz Chelidze](#) of the Nodia Institute of Geophysics, Tbilisi State University, and President of the IUGG National Committee for Georgia, was awarded RAS Honorary Fellowship for his outstanding contributions to theoretical and applied geophysics.

***Congratulations!***

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### 13. Obituary

#### *Alan Edward Beck*

Alan Edward Beck, Professor Emeritus of Geophysics at the University of Western Ontario, passed away peacefully on 1 December 2020 at his home in London, Ontario. He was born 27 January 1928 in London, England.

Professor Beck was the Head of the Department of Geophysics (now Earth Sciences) at the University of Western Ontario from 1963 to his retirement in 1993. From 1979 to 1983, he chaired the International Heat Flow Commission (IHFC), the inter-association commission of the IASPEI, and held leading positions in several international scientific organisations. In particular, he was a promoter of the foundation of the International Geothermal Association (IGA) since its first preparatory meeting, held in 1987 in Sparks (USA).

He took part in several heat-flow measurement projects in regions of North, Central and South America, Australia, Africa, Asia and Europe. Alan's lifelong scientific interest in the terrestrial heat-flow measurement and the study of the Earth's thermal state led to invitations to speak around the world.

Among his pioneering works are experimental studies on borehole temperature measurements, thermophysical properties of geological materials and crustal radiogenic heat production. He designed and implemented the "Divide-Bar apparatus", a well-known, classic technique for thermal conductivity measurements, which has been adopted in many laboratories worldwide and calibrated following his indications. More recently, he addressed the reconstruction of ground surface temperature history from underground temperature records. He was the author of the textbook "Physical Principles of Exploration Methods" and numerous other publications. Professor Beck was the 1993 winner of the J. Tuzo Wilson Medal of the Canadian Geophysical Union.

Alan was one of the most respected and loved members of the geothermal community and his passing is indeed a great loss. He played a formative role model for many scientists in several respects - in his approach to scientific questions, as a textbook author, and (not the least important aspect) also in human terms. His benevolent smile, exigent but highly equitable personality and witty humour were displayed since the first meeting.

This is why we will always keep his honorable memory in our hearts.

The International Heat Flow Commission

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### 14. Meeting Calendar

#### *March*

- 20-26, IASC, Online, [Arctic Science Summit Week 2021](#)
- 22-26, IAGA, Online, [VIII SBGEA & VIII SimFAST Joint Symposium](#)
- 29-31, IAG, Online, [1st ICCG Workshop on Geodesy for Climate Research](#)

#### *April*

- 19-30, EGU, Online, [EGU General Assembly 2021](#)

## **May**

- 9-14, IWA, Copenhagen, Denmark, [IWA World Water Congress & Exhibition](#)
- 12-14, IASPEI, GFZ, Potsdam, Germany, [Cermak7 – 7th International Meeting on Heat Flow and the Geothermal Field](#)
- 17-21, CCEC, Online, [25th International Clean Air and Environment conference \(CASANZ 2021\)](#)
- 26-28, IAG, Ljubljana, Slovenia, EUREF 2021 Symposium

## **Association Scientific Assemblies 2021/2022**

- 27 June - 2 July 2021, IAG, Online and Beijing, China, IAG Scientific Assembly
- 19-23 July 2021, IACS, IAMAS, IAPSO, Online, [Seminar Series](#) (replaces the IACS-IAMAS-IAPSO Joint Scientific Assembly planned to be held in Busan, Rep. of Korea, from 18-23 July)
- 21-27 August 2021, IAGA, IASPEI, Online and Hyderabad, India, [IAGA-IASPEI Joint Scientific Assembly](#)
- 20-24 January 2022, IAVCEI, Rotorua, New Zealand, [IAVCEI Scientific Assembly](#)
- 30 May - 3 June 2022, IAHS, Montpellier, France, [IAHS Scientific Assembly](#)

The full IUGG Events Calendar 2021 can be found [here](#).

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