



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

Richard Essery, Secretary General of the International Association of Cryospheric Sciences (IACS), 2019-2023



Richard Essery is the Secretary General of the International Association of Cryospheric Sciences, Professor of Cryosphere-Atmosphere Interactions at the University of Edinburgh, and director of the Edinburgh Earth, Ecology and Environment Doctoral Training Partnership.

Snow is an excellent subject for interdisciplinary research. It starts out as meteorology when it falls. After it has been on the ground for some time, it melts and becomes hydrology or does not, and becomes glaciology instead. Either way, it has profound interactions with climate, ecology, geomorphology and human

Richard Essery: Snow surveying near Toolik Lake, Alaska

activities. Snow is a heat sink, a reservoir, a resource, a habitat, a playground, an ornament and a hazard.

I have now worked on snow research for nearly 30 years and with four different employers, but I only entered this field by chance.

As a child, I was sure that I wanted to be a “scientist” long before I had any clear idea of what scientists actually do. My interests moved with time from astronomy to chemistry to electronics, and I had settled on physics by the time I went to university. With what may seem like huge presumption to undergraduate students today, I started my degree at the University of Edinburgh in 1983 with no career plans and only a strong conviction that studying physics would open up interesting possibilities. I soon found that I was much more excited by theory than introductory lab classes, and I switched to a Mathematical Physics degree. With an undimmed enthusiasm for sitting in lecture theatres after graduation, I then spent a year on a taught postgraduate course in the Department of Applied Maths and Theoretical Physics at the University of Cambridge, selecting particle physics classes and ignoring all of the fluid dynamics options that would have been of much more use to me in later years. This course was crucial in showing me that quantum field theory was a fascinating field in which I would never make any professional contribution. Instead, I moved from the centre of Cambridge to the outskirts in 1988 for a PhD on polymer physics in the Theory of Condensed Matter group at the Cavendish Laboratory.

Approaching the end of my PhD, it became apparent that I would finally have to make some decisions about gainful employment. Wondering if meteorology might be a possibility, I borrowed a copy of John Houghton’s “The Physics of Atmospheres” from the library and took it to read on holiday. I was fortunate that the Met Office had recently established the Hadley Centre and needed to recruit people with maths, physics and programming skills for climate model development. Despite singularly failing to explain the principles of geostationary orbits in interview, I was offered a job as part of a general intake and presented myself to the Met Office HR Department at 09:00 on 5 January 1992. By 10:00, having been passed around several research groups, it had been decided that I would take charge of snow model development for climate studies. And that, more or less, is what I have been doing ever since. Getting to spend five months training in operational meteorology at the start of my career was a great opportunity that informs my own teaching to this day, despite huge advances in the field. I can amuse students with stories of the days when forecasters would collect printouts of mesoscale model forecasts and put them straight in the bin, sure that the guidance would be of no use.

The first few years of my snow modelling career were very much desk based, but IUGG meetings gave me opportunities to meet many prominent hydrologists and glaciologists (John Pomeroy, Gerry Jones, Liz Morris and Georg Kaser to name a few). On the strength of one afternoon spent tracking pilot balloons at the Met Office College, I was invited to participate in the Boreal Ecosystem-Atmosphere Study (BOREAS) in the forests of Saskatchewan in 1994. This opened my eyes to the necessity of modellers engaging with measurements of the systems that we model. Inspired, I took a leave of absence from the Met Office in 1998 to work with John Pomeroy at the Canadian National Hydrology Research Centre. John later moved to the Centre of Glaciology at the University of Aberystwyth, Wales, for a few years. I followed in 2002 on a Natural Environment Research Council advanced fellowship. This was another marvellous opportunity, with no administration and only



Installing eddy-covariance instruments on the debris cover of the Miage glacier, Italy

enough teaching for career development leaving a lot of time for network building and fieldwork. Over five years, I had opportunities to join or lead Arctic and alpine field studies in Alaska, Alberta, Colorado, Finland, Idaho, the Northwest Territories, Sweden, Switzerland and the Yukon.

After a chance conversation with David Sugden on a U-Bahn platform in Vienna (not such a coincidence – it was during EGU), I applied for a lectureship at the University of Edinburgh and moved back to my hometown in 2007 after 20 years away. Embracing the movements for open access to code and data in the past few years has opened up new collaborations, and most of the model development work that I do now is driven by student projects.

My first IUGG General Assembly was Boulder in 1995, and I have attended every four years since then. With no clear home association in IUGG, I would alternate between IAHS and IAMAS in the intervening years (or even both IAHS Maastricht and IAMAS Innsbruck in 2001). Being still at an early career stage, I was not in the room when plans for the formation of IACS were being made, but I was friends with many of the people involved, and intense discussions would continue in the bar afterwards. Since its formation in 2007, IACS has been my IUGG “home”. Another thing that has changed since my earliest involvement with IUGG is that I think we now pay much more attention to early-career researchers. As the director of a PhD programme, I often hear about how enthusiastic our students are for increasing the diversity of our research communities and decreasing the environmental impacts of our activities. IUGG associations are in a strong position to lead on these initiatives, but if our resolutions do not lead to results, we will be held to account by the next generation of scientists.

2. IUGG – Committees for the 28th IUGG General Assembly appointed

The IUGG President appointed members to several Union Committees for the [28th IUGG General Assembly](#) (Berlin, Germany, 11-20 July 2023) responsible for (i) the selection of candidates to be included in the election of the IUGG Bureau and Finance Committee Members 2023-2027 (Nominating Committee); (ii) for the comparison of the sites proposed for the IUGG General Assembly 2027 (Site Comparison Committee); (iii) for the resolutions of the IUGG General Assembly 2023 (Resolution Committee); as well as three award committees: (iv) the Gold Medal Committee; (v) the Fellow Selection Committee; and (vi) the Early Career Scientist Award Committee. The membership of the committees is the following:

Nominating Committee

- Harsh Gupta (India, IASPEI), Chair
- Anny Cazenave (France, IAG)
- Hugo Delgado Granados (Mexico, IAVCEI)
- Alberto Montanari (Italy, IAHS)

Resolution Committee

- Michael G. Sideris (Canada, IAG), Chair
- Atalay Ayele (Ethiopia, IASPEI)
- Athena Coustenis (France, IAMAS)
- Masahito Nosé (Japan, IAGA)
- Denise Smythe-Wright (UK, IAPSO)

Site Comparison Committee

- Fiona Darbyshire (Canada, IASPEI), Chair
- Isabelle Ansorge (South Africa, IAPSO)
- Kosuke Heki (Japan, IAG)
- Andrew Mackintosh (Australia, IACS)
- Stefania Sparnocchia (Italy, IAPSO)
- Eduard Petrovsky (Czech Republic, IUGG, ex-officio)

Gold Medal Committee

- Tom Beer (Australia, IAMAS), Chair
- Zuheir Altamimi (France, IAG)
- Günter Blöschl (Austria, IAHS)
- Kumiko Goto-Azuma (Japan, IACS)
- Emma Hill (Singapore, IASPEI)
- Catherine Johnson (Canada, IAGA)
- Jan Marie Lindsay (New Zealand, IAVCEI)
- Hans van Haren (Netherlands, IAPSO)
- Alexander Rudloff (Germany, IUGG, ex-officio)

Fellow Selection Committee

- Andrew Yau (Canada, IAGA), Chair
- Agatha de Boer (Sweden, IAPSO)
- Georg Kaser (Austria, IACS)
- Allison Kealy (Australia, IAG)
- Barbara Romanowicz (USA/France, IASPEI)
- Dan Rosbjerg (Denmark, IAHS)
- Mary Scholes (South Africa, IAMAS)
- Roberto Sulpizio (Italy, IAVCEI)
- Steve McNutt (USA, IUGG, ex-officio)

Early Career Scientist Award Committee

- Katrin Schröder (Italy, IAPSO), Chair
- Keith Alverson (Japan, IAMAS)
- Marie Dumont (France, IACS)
- Julia Eychenne (France, IAVCEI)
- Michelle Grobbelaar (South Africa, IASPEI)
- Paola Passalacqua (USA, IAHS)
- Prasanta Patro (India, IAGA)
- Peiliang Xu (Japan/China, IAG)
- Thorsten Wagener (Germany, IUGG, ex-officio)

Thank you for your support!

3. IUGG – Symposia Support 2022

The IUGG support for scientific meetings (e.g. workshops, advanced schools, symposia) is one of the most important means by which the Union and its Associations pursue a goal of promoting geophysics and geodesy through international collaboration. A portion of the IUGG budget is devoted to the support of these scientific meetings. The IUGG Executive Committee places great emphasis on maintaining high scientific standards, coverage of a balanced spectrum of topics, and an appropriately broad and international flavour for the scientific programme of the meetings. In that respect, the ISC rules on non-discrimination in the access of qualified scientists from all parts of the world to any IUGG-sponsored meeting apply.

The number of co-sponsored meetings ranges from 10 to 15 (up to USD 2,000 each). Accordingly, not all meeting proposals worthy of support can be awarded IUGG sponsorship. The following guidelines for obtaining IUGG sponsorship should be observed by prospective proposers:

- IUGG-sponsored scientific meetings should have a well-defined and scientifically relevant theme, should be scheduled at a propitious time for significant progress in the field, and should be of interest to young researchers as well as senior experts.
- While the IUGG embraces all fields in geophysics and geodesy, a proposed programme should maintain a balanced scope relevant to IUGG Associations. Each proposal will be judged on its own scientific merits.
- Given the international nature of the Union, meetings are by definition internationally oriented. This requires a well-balanced geographical distribution of participants.

Normally, the initiative to propose a scientific meeting for IUGG sponsorship originates from a group of scientists in a certain field. Prospective meeting organisers should contact the respective Association Secretary General (ASG) well in advance of their intended proposal submission, and then send their request for IUGG support to the ASG by **15 October 2021**.

The scientific merit of each scientific meeting's proposal will be evaluated by the respective ASG, taking into consideration comments and advice received from the Association Executive Committee. The ASGs should communicate their recommendation for selection to the [IUGG Secretariat](#) by **31 October 2021**.

The tentative allocations will be made by the IUGG Secretary General and then reviewed by the Members of the IUGG Bureau to assure impartiality. The Bureau will decide on the final selection of the meetings to be supported. Their decision will be communicated to the ASGs by the IUGG Secretary General in a letter of award not later than **1 December 2021**. The IUGG support should be acknowledged in all documents related to a sponsored meeting (e.g. in the scientific programme, on the website, brochures, publications of proceedings, etc.)

More information is available [here](#).

4. IACS-IAMAS-IAPSO Symposia Series 2021 – Report

In place of the Busan Atmosphere-Cryosphere-Ocean (BACO-21; IAMAS-IACS-IAPSO Joint Scientific Assembly), which had to be cancelled due to travel restrictions, IAMAS, IACS and IAPSO arranged a Virtual Atmosphere-Cryosphere-Ocean seminar series (VACO-21) from 19 to 23 July 2021. IAMAS President Joyce Penner, IACS President-Elect Liss Andreassen and IAPSO President Trevor MacDougall introduced 17 invited speakers, including the recipients of the IAMAS, IACS and IAPSO early career awards for 2021. Over the week, 187 individuals joined the audience. Although the event is now over, recordings of the excellent presentations are available [here](#). In

recognition of the large amount of work that the Local Organising Committee had already put into planning BACO-21 before its cancellation, the associations have agreed to hold their July 2025 Joint Scientific Assembly in Busan, Republic of Korea, as BACO-25.

Richard Essery, IACS Secretary General
Steve Ackerman, IAMAS Secretary General
Stefania Sparnocchia, IAPSO Secretary General

5. 4th Congress of China Geodesy and Geophysics – Report

From 17 to 21 July 2021, the 4th Congress of China Geodesy and Geophysics (CCGG) was successfully held in Qingdao, China. The 4th CCGG was sponsored by the Chinese National Committee for International Union of Geodesy and Geophysics (CNC-IUGG) and organised by the China University of Petroleum (HUADONG).

The theme of the 4th CCGG was "Maritime Silk Road and Earth System Sciences". 15 academicians from the Chinese Academy of Sciences and Chinese Academy of Engineering, and more than 3,300 scientists and students from over 300 universities and research institutions from all over the country gathered in the beautiful seashore city of Qingdao to exchange their scientific achievements, ideas and visions.

Jun Xia, President of CNC-IUGG and member of the IUGG Bureau delivered a welcome speech at the Opening Ceremony. Kathryn Whaler, IUGG President and Chris Rizos, IUGG President-Elect delivered keynote speeches via pre-recorded videos. Nine keynote presentations were delivered by eminent scientists from China and abroad. The 4th CCGG Excellent Student Paper Award was presented to 10 students at the Opening Ceremony.



Speech from Kathryn Whaler, IUGG President, at the Opening Ceremony of the 4th CCGG

34 scientific sessions were organised, and over 700 oral and 300 poster presentations were selected after a peer-review process, which covered such topics as the cryospheric sciences, geodesy, geomagnetism and aeronomy, hydrology, atmospheric sciences, oceanography, seismology, volcanology and interdisciplinary sciences, which reflected the latest achievements and progress made in Earth science in China over the past two years.

Jun Xia, CNC-IUGG President
Yamin Dang, CNC-IUGG Secretary General

6. IAHS Scientific Assembly 2022 – Announcement

The organisation of the XIth Scientific Assembly of the International Association of Hydrological Sciences ([IAHS 2022](#)) is going according to plan!

We are pleased to confirm that the assembly will be held at the Corum in the city centre of Montpellier, France from 29 May to 3 June 2022.

The call for abstracts and registration will open in September 2021.



International Association
of Hydrological Sciences

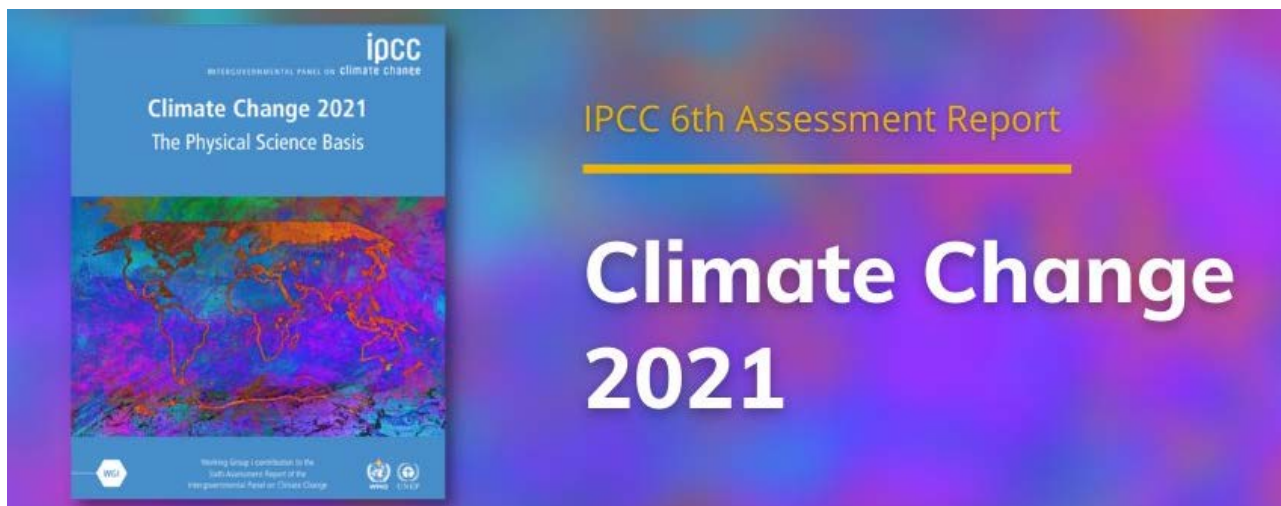
In the meantime, please learn more about the [scientific](#) and [workshop programmes](#).

IAHS-AISH 2022 Local Organising Committee

7. IPCC – Sixth Assessment Report

The Working Group I (The Physical Science Basis) contribution to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change was published on 9 August 2021 and addresses the most up-to-date physical understanding of the climate system and climate change, bringing together the latest advances in climate science, and combining multiple lines of evidence from paleoclimate, observations, process understanding, and global and regional climate simulations.

The full report, the summary for policymakers, the technical summary, and supplementary material can be found [here](#).



The IUGG thanks all the authors, editors, and the members of the production team for the Working Group I contribution to the 6th Assessment Report. Congratulations!

8. ISC – Annual Report 2020

The International Science Council's 2020 Annual Report is now available [here](#). 2020 was an unprecedented year for the scientific community and for the world. The COVID-19 pandemic caused widespread disruption, but also created new opportunities and demonstrated the importance of international scientific collaboration.

9. Awards and Honours

International Association of Geodesy (IAG)

The IAG Young Authors Award 2019 and 2020 were presented to **Susanne Glaser** (Germany) from the German Research Centre for Geosciences (GFZ) for her paper: Glaser S., König R., Neumayer K. H., Nilsson T., Heinkelmann R., Flechtner F. and Schuh, H. (2019): [On the impact of local ties on the datum realization of global terrestrial reference frames](#). Journal of Geodesy, 93: 655–667, and **Khosro Ghobadi-Far** (USA) from Virginia Tech for his paper: Ghobadi-Far, K., Han, S. C., Allgeyer, S., Tregoning, P., Sauber, J., Behzadpour S., Mayer-Guerr T., Sneeuw N. and Okal E. (2020): [GRACE gravitational measurements of tsunamis after the 2004, 2010, and 2011 great earthquakes](#). Journal of Geodesy 94: 65.

International Association of Volcanology and Chemistry of the Earth's Interior (IAVCEI)

Donald Dingwell, IAVCEI President (2015-2019), was awarded the Order of Newfoundland and Labrador (Canada), the province's highest honour. As a member of the Order, Prof. Dingwell is one of around 120 Newfoundlanders who have received this honour. The award ceremony will take place in St John's, Canada. There, Prof. Dingwell will receive his Order from the Lieutenant-Governor at Government House.

Union Commission on Planetary Sciences (UCPS)

Shuanggen Jin, UCPS Chair (2019-2023), was selected as World Class Professor of the Ministry of Education and Cultures, Indonesia, and elected as a Member of the Academy of the United Nations Sciences and Technology Organization (UNSTO).

Congratulations!

10. Jubilee

Wolfgang Torge (90th birthday)



Wolfgang Torge

On 4 June 2021, Wolfgang Torge, President of the International Association of Geodesy (IAG; 1991-1995), celebrated his 90th birthday. His home institution, the Institute of Geodesy of the Leibniz University Hannover, organised an online festive colloquium in his honour with a worldwide audience, where the undersigned had the honour to present the laudation. All friends, colleagues and scholars congratulated him, wishing him all the best for the future.

Wolfgang Torge was born in 1931 in Lower Silesia, at that time East Germany, today Poland. Due to the displacement of his family after World War II, he grew up in Lower Saxony, West Germany, and he studied Surveying and Geodesy at the Technical University Hannover, where he graduated in 1955. Gravimetry aroused his main interest; therefore, he started his career as a scientist in the geophysical prospecting company Seismos Ltd. In 1958, he decided to complete the qualification for the government service of surveying and cadastre, and passed the state examination of Lower Saxony in 1961. Because of his obvious interest in science, the government agency seconded him as a postgraduate to Geodetic Institute of the

Technical University Hannover, where he received his doctoral degree in 1966. In 1967, he joined as an expert in cadastre a project of the German Fund for Developing Countries in Central America. This was the basis for his excellent scientific and personal relationship to Latin America. He became fluent in the Spanish language, which benefited him in his future projects and research in South America.

The scientific career of Wolfgang Torge started in 1968, when he was appointed Professor for Mathematical and Physical Geodesy and Director of the Institute for Theoretical Geodesy at the Technical University Hannover. He remained in this position until his retirement despite other distinguished offers. His outstanding scientific achievements are obvious from his more than 200 publications from 1964 to date, and his more than 20 PhD students covering all branches of Physical Geodesy. Most important, and a standard at many universities worldwide, are his textbooks “Geodesy” (first edition in German 1975, in English 1980, fourth edition together with his successor Jürgen Müller 2012; translated to Spanish, Greek, Chinese and Russian) and “Gravimetry” (1989). Fundamental projects were the gravimetric network from North Cape to Cape Town, whose results contributed to the International Standardization Net (IGSN 71), and gravity measurements in several European, South American and Asian countries. Furthermore, he conducted geoid determinations for Germany and Europe, and established gravimetric Earth tide stations in several countries in Europe, South America and Asia, which contributed to the global Earth tide parameter estimation.

Wolfgang Torge’s official positions include membership of many national scientific boards, e.g. the presidency of the German Geodetic Commission, the National Committee for Geodesy and Geophysics, and the Commission for Geoscientific Research of the German Research Council. In the International Association of Geodesy, he was Secretary of the IAG Section “Gravimetry” in 1976, and President of the Section “Determination of the Gravity Field” in 1983. From 1987 to 1991, he was Vice President and 1991 to 1995 President of the IAG. During this time, he initiated many activities and projects. He acted as Congress Director of the General Assembly of the International Union of Geodesy and Geophysics (IUGG) in Hamburg 1983, and he initiated the Geocentric Reference System for South America (SIRGAS) at the IAG Scientific Assembly in Beijing 1993,

which was launched as a continental project under his direction in Asunción, Paraguay, in October 1993.

The academic awards bestowed upon Wolfgang Torge are manifold and include: honorary membership in the Hungarian Academy of Sciences and the Argentine National Engineering Academy, honorary professorship of the Institute of Seismology in Wuhan, China, and the Golden Helmert Medal of the German Association for Geodesy, Geoinformation and Land Management. He became Honorary President of the IAG and a Fellow of the IAG and IUGG.

Without doubt, Wolfgang Torge has rendered outstanding services to the IAG and the international geodetic community. His always mediating and never confronting way of discussion has convinced his colleagues and collaborators. Students around the world appreciate his textbooks for completing their education in geodesy, and scientists and practitioners acknowledge his advice. All of them are wishing him health and happiness for the coming years.

Hermann Drewes, IAG Secretary General 2007-2019

11. Obituaries

Rudolf Gutdeutsch (1930-2021)

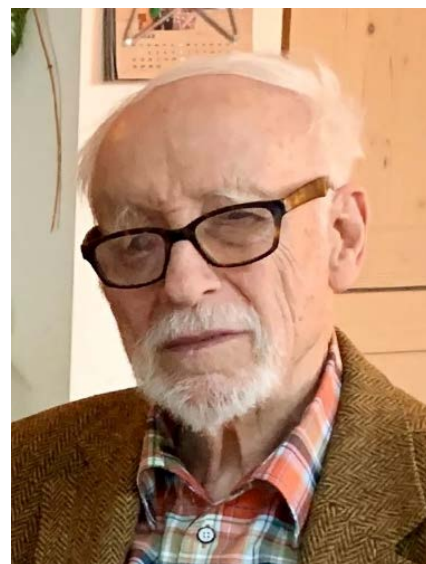
On 11 August 2021, at the age of 90, Prof. Rudolf Gutdeutsch, the renowned Austrian geophysicist passed away.

Gutdeutsch was born on 9 October 1930 in Hannover, Germany. Before he joined the Technical University at Clausthal in 1959, he worked for the company SEISMOS. From 1963 to 1972 he worked at the University of Hamburg – with a short sabbatical at the University of California in Berkeley. During that time he took part in several marine seismic surveys. From 1970 to 1971 he was Professor of Geophysics at the Institute for Physics of the Earth's Interior at the University of Hamburg. In 1971 he accepted a full professorship at the University of Vienna, Austria – a position he held until his retirement in 2000.

The mid 1970's were dominated by seismic surveys of the Austrian Alps conducted by his institute. These surveys led to a better understanding of the structure of the Alpine orogene.

After the plebiscite against the use of nuclear power to meet electric power demands in Austria in 1978, Gutdeutsch was instrumental in establishing the discipline of „Historical Earthquake Research” in Austria, which culminated in the 1987 publication „Erdbeben als Historisches Ereignis“ (together with C. Hammerl, I. Mayer and K. Vocelka). In 1986, he became chairman of the newly established Working Group on “Historical Earthquake Data” of IASPEI's European Seismological Commission (ESC). During that time, Gutdeutsch also developed a keen interest in potential theory and its application in geophysics, which led to the book „Anwendungen der Potentialtheorie auf Geophysikalische Felder“ in 1986. He lectured in all fields of geophysics – including signal analysis. After the introduction of computers in the 1980's the latter was then – and still is – a hot topic and its knowledge remains a pre-requisite for the understanding of digital data.

After many working trips to the countries of Hungary, the Czech Republic, USA and New Zealand, he remained in close contact with Lajos Stegena of the Eötvös University in Budapest, Antal Ádám of the Hungarian Academy of Sciences in Sopron, and Vít Kárník of the Technical University Prague. He also very much appreciated the arts, literature and – last but not least - music.



Rudolf Gutdeutsch
(photo credit Christa Hammerl)

Peter Steinhauser (1941-2021)



*Peter Steinhauser
(photo credit STCE)*

Prof. Peter Steinhauser passed away unexpectedly on 7 August 2021 in Vienna, Austria.

He researched essential aspects of the gravity field in the Eastern Alps – and he was one of the first to point out the necessity of equally spaced gravity measurements, being well aware how difficult it is to meet this requirement in such a rugged region. Consequently he initiated, an extensive gravimetric survey in Austria, leading to a highly accurate gravimetric map, thus contributing to the understanding of the lithosphere under the Eastern Alps. In 1977 he initiated the „Alpengravimetrie“ colloquiums at which the most recent results were presented.

Prof. Steinhauser not only worked on gravimetric issues but was also interested in solar activity and its impact on short term variations of the Earth’s magnetic field, and on paleomagnetic studies. His contributions to rock properties led to the foundation of the rock and paleomagnetic laboratory in Gams in Styria, and improved the area-wise collection of surface rocks. Other studies

dealt with seismic profiles across glaciers and the determination of the „true“ depth of sediments that filled Alpine valleys.

The application of geophysical methods for environmental and geotechnical issues were other topics in which he was an expert. Vibration studies helped him to minimise unwanted effects on humans in trains and allowed the forecasting of amplifications of ground motions that were dependent on frequency and distance (VibroScan®). The latter method has been further developed and is now used internationally by the building-engineering community.

He also lectured at the University of Vienna, and was director of the Central Institution for Meteorology and Geodynamics (ZAMG) in Vienna from 1985 to 2004. He served as the IAGA National Correspondent for Austria from 2003 to 2005.

Prof. Steinhauser was a corresponding member of the Austrian Academy of Sciences.

Wolfgang Lenhardt, President of the IUGG National Committee for Austria

12. Meeting Calendar

September

- 6-10, IAHS, UNESCO, Online, [Online Training Workshop on River Basin Sediment Monitoring and Management](#)
- 6-5 November, CODATA, ICTP, Online, [CODATA-RDA Research Data Science Summer School](#)
- 15-16, IUGG, Online, IUGG Executive Committee Meeting 2021
- 16-17, IAHS, Online, [STAHY 2021](#)
- 19-24, IASPEI, Online, [37th General Assembly of the European Seismological Commission](#)
- 19-24, BGR, Karlsruhe, Germany and Online, [GEOKARLSRUHE 2021. Sustainable Earth – from processes to resources](#)
- 20-22, AOGS, EGU, Online, [NATHAZARDS2021 – The Third AOGS-EGU Joint Conference on New Dimensions for Natural Hazards in Asia](#)
- 27-1 October, IASPEI, Cargèse (Corsica), France, [3rd International School on Earthquakes: Nucleation, Triggering, and Relationship With Aseismic Processes](#)

October

- 3-9, IAMAS, Online, [Quadrennial Ozone Symposium 2021](#)
- 5-6, IAHS, Potsdam, Germany and Online, [Second International Conference on Natural Hazards and Risks in a Changing World](#)
- 11-13, IAG, Online, [GGOS Days 2021](#)
- 11-15, ISC, Online, [2nd General Assembly of the International Science Council](#)
- 18-29, IUGG, ICTP, CMG, IAGA, IASPEI, IAVCEI, Trieste, Italy and Online, [Joint ICTP-IUGG Workshop on Data Assimilation and Inverse Problems in Geophysical Sciences](#)
- 20-22, IAHS, Victoria Falls, Zimbabwe and Online, [22nd WaterNet/WARFSA/GWP-SA Symposium on Integrated Water Resources Management for Sustainable Development in Eastern and Southern Africa](#)
- 20-22, IUPAP, Online, [30th General Assembly of the International Union of Pure and Applied Physics](#)
- 26-31, ILP, GFZ, AGU, Online, [International Symposium on Deep Earth Exploration and Practices \(DEEP-2021\)](#)

November

- 2-6, WLF, Kyoto, Japan, [5th World Landslide Forum](#)
- 8-11, CODATA, WDS, Seoul, Rep. of Korea, [International Data Week 2021](#)
- 15-16, CODATA, Online, [32nd CODATA General Assembly](#)
- 16-18, IAHS, Cotonou, Benin, [Hydrology of the Major African Basins](#)
- 23-26, GEO, Online, [GEO Week 2021](#)
- 29-1 December, IAG, Online, [SIRGAS Symposium 2021](#)

Association Scientific Assemblies 2022-2023

- 29 May-3 June 2022, IAHS, Montpellier, France, [IAHS Scientific Assembly](#)
- 30 January-3 February 2023, IAVCEI, Rotorua, New Zealand, [IAVCEI Scientific Assembly](#)

IUGG General Assembly 2023

- 11-20 July 2023, IUGG, Berlin, Germany, [IUGG General Assembly 2023](#)

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

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