

## 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 <u>website</u>. 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 (XI)**

#### József Ádám, Member of the Finance Committee 2019-2023

I was born on 24 January 1950 in Kocsér, Hungary. I completed my primary school studies (1956-1964) in my home village. After that, I continued my studies in the mathematics-physics class of the "Arany János" Grammar School (Gymnasium) in Nagykőrös. I passed the matriculation exam in 1968 with excellent results. I completed my university studies at the surveying engineering section, Faculty of Civil Engineering, Budapest University of Technology and Economics (BME), earning my engineering degree in 1974. I obtained the title of doctor of engineering ("dr. techn.") with the qualification "summa cum laude" in 1977 at BME. I received the degree of "Candidate of Technical Sciences" (CSc) in 1981 and the degree of "Doctor of Technical Sciences" (DSc) in 1991.

The continuous research work in the Scientific Student Circle (TDK) played a fundamental role in the development of my scientific interest during my university student years. I have won several university and national awards with my TDK dissertations. Based on my successful work at TDK and my good academic results, I received a People's Republic Study Scholarship for several years and between 1972-74 I was a demonstrator at the former Department of Geodesy at BME.

Immediately after graduating from university, I was admitted to the Satellite Geodetic Observatory (KGO) of the Institute of Geodesy, Cartography and Remote Sensing (FÖMI). Here I mainly dealt with the domestic geodetic application of artificial satellites and the further development of the

Hungarian geodetic bases. My employment at FÖMI/KGO lasted from 1 July 1974 to 31 December 1993, with which I was still under contract until the end of 1996 in order to complete the research projects I had begun earlier.

At Station PENC of the FÖMI/KGO, I first dealt with the photographic and laser observations of artificial satellites in the framework of the "Intercosmos" program, and at the same time, as a researcher, I investigated procedures for the optimal determination of station coordinates from satellite measurements. A key area of my professional and scientific activity since 1978 has been the investigation and interpretation of the physical and geometrical content of position coordinates determined from Doppler satellite observations (1978-1988). I organised and conducted satellite Doppler measurement campaigns (Hungarian Doppler Observation Campaign 1982, HDOC82 and HDOC85) to further develop our basic geodetic network. Based on the results of the measurements, I determined the numerical data on the spatial location, scale and orientation of our basic geodetic network and studied the network torsions. I performed a least squares spectral analysis of the Penc Doppler station co-ordinate time-series.

Since 1985, I have been exploring the astrometric and geodetic-geodynamic applications of the space-VLBI measurement method. I was the first to perform a detailed structural study of the mathematicalgeodetic model of space-VLBI measurements and to specify the range of parameters that can be estimated from the measurements. I summarised my results on this in a report to NASA/GSFC.

From 1987 I dealt with the solution and management of theoretical and practical tasks related to the determination of the Hungarian geoid (theoretical, mathematical earth form). With the help of geopotential model coefficients and the inclusion of satellite geodetic data, I also numerically analysed the structure of the gravity field in the region of Hungary.

I have been continuously involved in higher education since 1976. First as a consultant and reviewer of diploma theses, dissertations and TDK dissertations, and as an ancillary occupation I worked as an assistant professor at the Department of Geodesy, BME for several semesters between 1982 and 1984. As an "invited lecturer", I gave lectures in several subjects during the 1980s. In 1988 I was awarded the title of "Honorary Associate Professor". In 1992, I was appointed a university professor. From January 1, 1994 I worked as a university professor at the Department of Geodesy and Surveying) until 24 January 2020. I was the Deputy Head of the Department, and then between 1995-1999 I also managed the Department. From July 1, 1999 I became the Deputy Head of the Department again, then between 1 July 2001 and 30 June 2014 I headed the Department of Geodesy and Surveying. As of 25 January 2020, I am Professor Emeritus at the department.

Professionally I maintain extensive international relations. Based on my scientific results, I have been invited abroad several times to conduct research. In 1985, I worked for six months at the Institute of Geodesy at the University of Stuttgart as a Humboldt Fellow, as a guest of Professor Erik W. Grafarend, and then during 1989-90 at the Department of Geodesy and Surveying, The Ohio State University (USA) for one and a half years. Under the direction of Professor Ivan I. Mueller, I conducted basic research for NASA's Goddard Space Flight Center (GSFC). In 1988, I was invited to the International Summer School of the International Association of Geodesy (IAG) (Assisi, Italy) to lecture on the field of theoretical geodesy. In 1995, I was a guest researcher at the Paris Astronomical Observatory, at the invitation of Dr. Martine Feissl.

In 1998 I was elected as a corresponding member of the Hungarian Academy of Sciences (MTA), and in 2004 as a full member of MTA. This comprises the highest domestic recognition of my scientific work. In 2001 I was elected as a corresponding member of the German Geodetic Committee (DGK) of the Bavarian Academy of Sciences, Germany.

I actively participate in the work of many professional and scientific committees both domestically and internationally. I'm active and have experience in the IAG as well as the IUGG as: Member of a

few IAG Special Study Groups (SSGs) between 1983-1995, Chairman of the SSG 2.109 "Application of Space VLBI in the Field of Astrometry and Geodynamics" (1991-1995), IAG National Correspondent for Hungary since 1991, Member of the Hungarian National Committee for IUGG since 1990 and President of this Committee since 1994, President of the IAG Communication



At the Budapest IAG International Geoid School in 2005. A few of the School's Professors on the photo (from left to right): myself; Michael G. Sideris, later IAG President 2007-2011 and IUGG President 2015-2019; Christian C. Tscherning, IAG Secretary General 1995-2007; Gerhard Beutler, IAG President 2003-2007; Christina S. Pedersen, Secretary to Christian C. Tscherning; and Fernandó Sansó, IAG President 1999-2003.

My first major IUGG/IAG meeting was the General Assembly (GA) in Vienna, Austria in 1991, and then I attended all subsequent GAs. I hope to participate at the Berlin (2023) GA.

I also attended numerous IAG Scientific Assembly (SA), starting with Beijing in 1993, and then Rio de Janeiro (1997), Budapest (2001), Cairns (2005), Buenos Aires (2009) and Potsdam in 2013. I became a "Fellow of the IAG" in 1995 and I received an IAG appreciation plaque in Montreal, 2019.

and Outreach Branch (2003-2019), Member of the IUGG Working Group on History (2015-2019) and Member of the IUGG Permanent Council since 2015. In 2019, I was elected Member of the IUGG Finance Committee 2019-2023.

I have organised important IAG conferences in Budapest (3rd EUREF Symposium, 1993; 2nd Continental Workshop on the Geoid in Europe, 1998; IAG Scientific Assembly, 2001 and IAG International Geoid School, 2005). I was convenor or co-convenor of IUGG Union and Inter-Association Symposia in 2011, 2015 and 2019.



At IAG Executive Committee Meeting at GFZ in Potsdam, Germany, in spring 2016. I am the sixth from right, between Harald Schuh, IAG President 2015-2019; and Hermann Drewes, IAG Secretary General 2007-2019.

#### 2. IUGG Business Meetings 2020 and 2021

Due to the COVID-19 pandemic there will be no physical meeting of the IUGG Bureau in 2020. Instead, the Bureau is meeting regularly via teleconference to discuss pending items and the daily business of the Union. On this occasion, the IUGG Bureau would like to thank Prof. Sang-Mook Lee, the IUGG National Committee for the Republic of Korea, and Seoul National University, for their generous offer to host the Bureau Meeting 2020 in Seoul, and for their understanding to instead meet in Korea in one of the following years. The next physical IUGG Business Meetings including the Bureau, Executive Committee, Finance Committee, and others, are planned to take place from 13 to 17 September 2021 in Berlin and Potsdam, Germany, in preparation for the IUGG General Assembly 2023 in Berlin.

#### 3. IUGG signs Kyoto Landslide Commitment 2020

On 18 August 2020, the IUGG President, Prof. Kathy Whaler, signed the Kyoto 2020 Landslide Commitment 2020 (KLC2020)- a framework aimed at providing key actors and stakeholders concerned with landslide risk at all levels and sectors with the tools, information, platforms, technical expertise and incentives to promote landslide risk reduction on a global scale. It supports the implementation, follow-up and review of the Sendai Framework, the 2030 Agenda for Sustainable Development, the New Urban Agenda and the Paris Climate Agreement as it addresses the adverse effects of climate change. Kathy Whaler and John LaBreque (Chair, Union Commission on Geophysical Risk and Sustainability - GRC) will attend an online signatory and launching session for KLC2020 on 5 November 2020.

The signed commitment can be found <u>here</u>.



#### 4. IAPSO – 2021 Prince Albert I Medal: Call for Nominations

The International Association for the Physical Sciences of the Oceans (IAPSO) calls for nominations for the 2021 Prince Albert I Medal. Nominations should reach the IAPSO Secretary General, Dr. Stefania Sparnocchia (iapso.sg@gmail.com), by 20 October 2020.

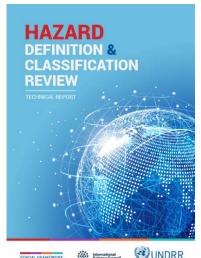
In partnership with IAPSO, Prince Rainier of Monaco established the Prince Albert I Medal in the physical and chemical sciences of the oceans. This medal is named in honour of the late Prince Albert I of Monaco who, in 1919, organised the Oceanography Section of IUGG. He also served as first President of that section and first IUGG Vice-President. The medal is awarded biannually by IAPSO at its Scientific Assembly.

More information about the call and the requirements for nominations can be found here.

#### 5. ISC – News from the International Science Council

#### Hazard Definition & Classification Review: Technical Review

The Sendai Framework for Disaster Risk Reduction 2015–2030 ('the Sendai Framework') was one of three landmark agreements adopted by the United Nations in 2015. The other two are the Sustainable Development Goals of Agenda 2030 and the Paris Agreement on Climate Change. The UNDRR/ISC Sendai Hazard Definition and Classification Review Technical Report, which calls for "a data revolution, rigorous accountability mechanisms and renewed global partnerships" supports all three landmark agreements by providing a common set of hazard definitions for monitoring, reviewing and implementation.



The broad range of hazards, and the interconnected, cascading and complex nature of natural and human-induced hazards, including their potential impact on health, social, economic, financial, political and other systems, calls for a standardised fully-fledged characterisation of hazards that serves as a basis for countries to assess and accordingly enhance their risk reduction policies and operational risk management practices.

Recognising this challenge, in 2019 the United Nations Office for Disaster Risk Reduction (UNDRR) and the International Science Council (ISC) launched an ambitious science project to identify the full scope of all hazards relevant to the Sendai Framework and the scientific definitions of these hazards.

Supported by the Integrated Research for Disaster Risk (IRDR) programme of the ISC and UNDRR, a dedicated technical working group brought together scientists, technical UN agencies and other experts from the private sector and civil society to develop <u>a detailed report including six targeted</u> recommendations.

# 6. WMO Outcome Statement – Virtual Symposium on Climatological, Meteorological and Environmental Factors in the COVID-19 Pandemic



WORLD METEOROLOGICAL ORGANIZATION

The international virtual symposium on Climatological, Meteorological and Environmental (CME) factors in the COVID-19 pandemic was held from 4 to 6 August 2020 and brought together hundreds of researchers from a wide range of disciplines and organizations to discuss what is known, understood, and can be reliably predicted about CMEs'

influence on the trajectory of the COVID-19 epidemic.

More information on the symposium incl. the outcomes can be found  $\underline{here}$  .

#### 7. Awards and Honours

*Mioara Mandea* (France), President of the International Association of Geomagnetism and Aeronomy (IAGA), became an Honorary Citizen of her home town Comănești, Romania.

#### Congratulations Mioara!



Mioara receives the honour from Viorel Miron, the major of Comănești.

#### 8. Obituaries

With great sadness IUGG informs about the decease of

*Michael Freilich (1954-2020), Director of NASA's Earth Science Division (2006-2019)* A NASA Administrator Statement on the Passing of Michael Freilich can be found <u>here</u>.

## *Konrad Steffen (1952-2020), Member of the IUGG Fellow Selection Committee (2015)* An obituary written by Thomas Stocker, the former IAPSO National Correspondent of Switzerland, can be found here.

#### 9. Meetings affected by COVID-19

#### IAMAS

The IAMAS sponsored "Understanding the Climatic Response to Strong Volcanic Eruptions - First VolMIP Meeting" planned to be held in Venice, Italy, in November 2020, has been postponed 2021. Further information should be announced soon.

#### IAVCEI

The IAVCEI sponsored <u>Cities on Volcanoes 11</u> planned to be held in Heraklion, Greece, from 25 to 30 September 2020, has been postponed to 14 to 18 June 2021, to be held in the same place.

#### **10. Meeting calendar**

Meetings are subject to change due to the COVID-19 pandemic.

#### October

- 5-9, IAG, GFZ, Online, International Autumn School 'NEROGRAV'
- 5-16, ICTP, IUGG, Rabat, Morocco, African Workshop on GNSS and Space Weather
- 7-9, IACS, Concepción, Chile, <u>Third Annual Meeting of the Chilean Cryosphere Society</u> (SOChiCri)
- 11-17, AGI, Earth Science Week
- 19-21, IAG, Shanghai, China, International Workshop on GNSS Ionosphere (IWGI2020)
- 19-21, IAG, Online, International DORIS Service Workshop
- 19-22, SCOR, Online, 2020 SCOR Annual Meeting
- 21-24, IAG, Nanjing, China, International Symposium on Satellite Navigation (ISSN 2020)
- 26-30, IAHS, Bydgoszcz, Poland, <u>IAHS/ICCE International Symposium River Sediment</u> <u>Quality and Quantity: Environmental, Geochemical and Ecological Perspectives</u>
- 26-30, CCTF, Online, <u>22nd Meeting of the Consultative Committee for Time and Frequency</u>
- 26-6 November, ICTP, Addis Ababa, Ethiopia, <u>Integrating Climate Data, Predictions and</u> <u>Projections Into Health Planning</u>

#### November

- 2-6, IAG, Kunming, China, <u>22nd International Workshop on Laser Ranging</u>
- 9-13, ICTP, IUGG, Trieste, Italy, <u>Impact and Risk Relevant Climate Information from</u> <u>Global Scale Projections to Local Scale Climate Hazards</u>
- 16-18, WMO, Geneva, Switzerland, <u>WMO Data Conference Earth System Data Exchange</u> in the 21<sup>st</sup> century

- 16-20, IAGA, URSI, Online, <u>9th VERSIM Workshop VLF/ELF Remote Sensing of</u> <u>Ionospheres & Magnetospheres</u>
- 17-19, ICTP, IUGG, Buenos Aires, Argentina, <u>Conference on Regional Climate Modeling</u> and Extreme Events over South America: results from the CORDEX-Flagship Pilot Study
- 24-28, IAHS, Cotonou, Benin, <u>Hydrology of the Major African Basins</u>
- 30 4 December, CODATA, Online, <u>International FAIR Convergence Symposium and</u> <u>CODATA General Assembly</u>
- 30 4 December, ISPRS, Sydney, Australia, and Online, <u>Climate Change and Disaster</u> <u>Management - Technology and Resilience in a Troubled World</u>

#### December

- 1-17, AGU, Online Everywhere, AGU Fall Meeting 2020
- 13-19, IASPEI, IUGG, Kasane, Botswana, <u>3rd General Assembly of the African</u> <u>Seismological Commission</u>

#### Association Scientific Assemblies 2021-2022

- 28 June 2 July 2021, Montpellier, France, IAHS Scientific Assembly
- 28 June 5 July 2021, Beijing, China, IAG Scientific Assembly
- 18-23 July 2021, Possibly Online, <u>IACS-IAMAS-IAPSO Joint Scientific Assembly</u>
- 22-27 August 2021, Hyderabad, India, <u>IAGA-IASPEI Joint Scientific Assembly</u>
- 20-24 January 2022, Rotorua, New Zealand, IAVCEI Scientific Assembly

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