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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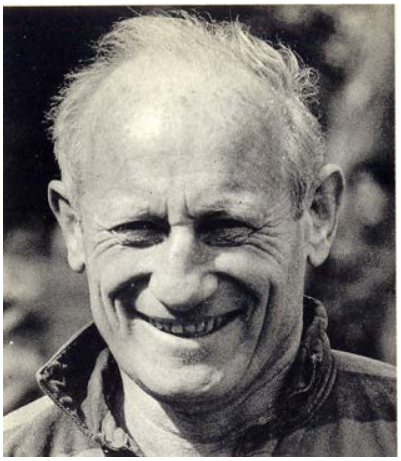
Patrick Allard, IAVCEI President, 2019-2023

Patrick Allard is a member of the IUGG Executive Committee, being the President of IAVCEI (the International Association of Volcanology and Chemistry of the Earth's Interior). He has spent most of his research career in the French CNRS, and worked in different institutes both in France (CFR, LSCE, Lab. Pierre Süe, IPGP) and beyond (Italy, Japan, Singapore). Since 2014 he has been emeritus CNRS Director of Research at IPGP, the Institut de Physique du Globe de Paris.

An early discovery of volcanoes

I grew up at the seaside in Brittany, western France, where my father used to be a fisherman and my mother a teacher at elementary school. There was no scientist in my broad family and I could never imagine dealing with volcanoes. This happened when I was 14: already fan of

collecting rocks after my Geology course at Buffon High School in Paris, I got the shock of my life at a cinema screening the first general public documentary of Haroun Tazieff on erupting volcanoes, titled “Appointments with the Devil” (premiered at the 1959 Cannes Movie Festival). I just realised how volcanism was a fascinating manifestation of our dynamic planet Earth and immediately told my parents: “when I grow up I’ll be a volcanologist”! I was probably born under a lucky star since three years later, in 1967, I met Tazieff by pure chance while playing a rugby match against him. At that time Tazieff had become very famous in France, for his films, conferences and books, but also for leading innovative research on active volcanoes within CNRS. Two of his emblematic targets were Nyiragongo in Congo (he had discovered and studied the exceptional lava lake since 1948) and the Erta’Ale basaltic rift volcano in the Afar Depression. Many young people thus dreamed of joining his team. Telling him my deep interest in volcanology after that rugby match, he encouraged me to quickly get my high school diploma in order to join his next field campaign on Etna and Stromboli (which I did!). This marked for me the onset of 15 years of fantastic adventures with Tazieff in discovering and studying active volcanoes all over the world, first as a student then as a researcher.



Haroun Tazieff

Education parcourse

In the late sixties Volcanology was not yet a discipline taught in French universities. Moreover, most volcanologists at that time were either geologists or seismologists. Very little attention was paid to studying the magmatic gas phase of volcanic systems – even though it is the actual driving force of eruptions and a sensitive messenger on the evolution of underground processes. I thus decided to target this still fairly virgin area of volcanology. After a preparatory class in Mathematics Superior, I followed a classical undergraduate course in Sciences at Paris University, while working part-time to earn my living and to participate in summer field campaigns on Nyiragongo and Italian volcanoes. In 1971 a group of young professors, led by Claude Allègre and Xavier Le Pichon, launched a new Department of Earth Sciences at Paris-7 University, near to IPGP, where up-to-date discoveries in Plate Tectonics, Geophysics, Geochemistry but also Volcanology began to be taught. I joined this new Department with great enthusiasm. There I got a MSc Degree in Earth Sciences, then I did my PhD in Geochemistry under the guidance of Marc Javoy. My PhD focused on tracking the origin(s) of water, carbon and sulfur in magmatic gases from basaltic volcanoes by measuring their stable isotope ratios with mass spectrometry. I could apply this to 900-1130°C gases from Etna and Erta’Ale, among others, collected during fieldworks with Tazieff.

FTIR remote sensing of magma degassing from Eyjafjallajökull crater rim in May 2010, Iceland

My lucky star further manifested when the La Soufrière volcano in Guadeloupe, French Lesser Antilles, decided to erupt in July 1976. One year before I had volunteered to do my military service, after my PhD, as a technical assistant with IPGP to monitor the volcano, dormant since its last phreatic eruption in 1956. I was part of the first team rapidly sent there to reinforce the local IPGP Observatory and to analyse the eruption, daily climbing, collecting and measuring the emitted gases. This 1976-1977 volcanic crisis, marked by

intense seismicity and 26 phreatic eruptions, led to the 4-months evacuation of 73,000 people and, unfortunately, to a strong public controversy between my two mentors, Tazieff (at that time Director of IPGP's Volcano Observatory Service) and Allègre (freshly elected new IPGP Director). Both shared a mutual antipathy since their first encounter in 1964. While Tazieff argued that the eruptive crisis was purely phreatic (emitting steam and only old lithic material), with low probability of a magmatic issue in the medium term, Allègre claimed that the volcano was highly dangerous as the emitted ashes apparently contained up to 40% juvenile magmatic glass. In the end, the volcanic crisis gradually declined, juvenile glass in ash was verified to be an erroneous observation, and the evacuated population could return home. However, that story heavily fractured the French volcanological community for over two decades. Because I had supported Tazieff's interpretation of the purely phreatic nature of the eruptive crisis, upon my return to Paris in 1978 I was banned from working at IPGP or Paris-7 University.

Being a volcanologist

In September 1978 I joined Tazieff, Le Guern and Sabroux at the Centre des Faibles Radioactivités (CFR) of Gif/Yvette, a joint CEA-CNRS Institute south of Paris, where I was awarded a 4-yr research grant from CEA (the French Agency for Atomic Energy). This allowed me to study the Ardoukoba rift eruption in Afar but, principally, to develop stable isotope investigations of He, H, C, O, S in magmatic gases from arc volcanism in different subduction zones (Indonesia, Central America, Lesser Antilles, Japan). This constituted the research for my State Doctorate. In 1982 I won a permanent research position in CNRS.

In 1983-1985 I served as Secretary of the French National Committee for the Evaluation of Volcanic Hazards, attached to the Prime Minister. Then, in 1986-1987 I went to Naples for a post-doctoral stay at the Vesuvius Observatory, where I contributed by studying volcanic gases and thermal waters from both the Vesuvius and Campi Flegrei calderas. In these years, and during the nineties I diversified my research objectives, using widely different tools. In particular, I focused on volcanic fluxes of gas species and trace metals into the atmosphere, using both ground-based and airborne plume measurements; on magma degassing processes and budgets, by coupling volcanic gas fluxes with microprobe analysis of volatiles dissolved in crystal melt inclusions (together with my colleague Nicole Métrich); on the interactions between magmatic fluids and hydrothermal systems using chemical and isotopic tracers; and, on diffuse soil emanations (CO_2, He, ^{222}Rn) through the flanks of volcanoes and their potential impact on the ^{14}C content of plants and, hence, radiocarbon dating of eruptions. I was part of the team who discovered the existence of diffuse soil degassing on volcanoes (first on Etna and Vulcano) which, today, has become an important research area in volcanology. On those topics I coordinated several European, bilateral and national research contracts, while supervising Master and PhD students (including Alessandro Aiuppa, today Professor at Palermo University).

In 2000, upon request of Franco Barberi, I acted as scientist responsible for the geochemical monitoring of Etna (Poseidon System). I could locally recruit a team of young volcanologists, among whom Mike Burton (now professor at Manchester University), and I promoted the use of novel remote sensing of eruptive gas compositions with open-path Fourier transform infrared (FTIR) spectroscopy by using lava as the radiation source. We applied this tool to lava fountains on Etna and explosive activity on Stromboli. In the past two decades I further applied FTIR spectroscopy to track magma degassing processes during effusive and explosive eruptions at Piton de la Fournaise (Reunion), Eyjafjalljökull (Iceland), Yasur and Ambrym (Vanuatu), and Mayon (Philippines). A key feature of such tools is that they permit the exploration of the real-time correlations between geochemical and geophysical signals.

Since 2003 I have continued studying Etna's activity and degassing as an Associate Researcher at INGV (the National Institute of Geophysics and Volcanology of Italy). In 2010, 34 years after the La Soufrière eruption, I was invited to move back to IPGP by the Director Vincent Courtillot. Since then I have been a member of the Volcanic Systems team of IPGP where, for two years, I coordinated the

Institute's Transverse Research Program in Volcanology. Over the last decade I also actively participated in the international DECADE (Deep Carbon Degassing) research initiative of the Deep Carbon Observatory, during which we improved the quantification of global carbon emissions by volcanism.

IUGG, IAVCEI and the mitigation of volcanic hazards

I discovered both IUGG and IAVCEI General Assemblies in Grenoble (1975), and then Hamburg (1983). My first IAVCEI role was as Executive Secretary of the Commission on the Chemistry of Volcanic Gases (CCVG), for two mandates in 1991-1997, then as co-Leader of that Commission in 2011-2014. I also served as a member of the Scientific Program Committee of the 2013 IAVCEI General Assembly in Kagoshima, then as vice-President of the Association in 2015-2019. Like IUGG, the IAVCEI involves multi-disciplinary thematic research and competences whose interactions are absolutely essential to better understand how volcanoes work. I have long been convinced that closely combining our gas measurements with geophysical survey is crucial to interpreting our data and to deciphering the complexity of magmatic/volcanic processes. I early on put this idea into practice in my own researches, but also during my 2002-2020 presidency of the Volcanology Section of the National French Committee of Geodesy and Geophysics (CNFGG), as well as during my invited stays in Italy, Japan (Earthquake Research Institute, ERI, Tokyo), and Singapore (Earth Observatory of Singapore, EOS).

Finally, while volcanoes are fascinating research objects, their eruptions constitute a potential danger to the over 800 million humans living within 100km of an active volcano. Over the next decades risks are expected to increase due to global population growth and the widespread development of infrastructure. Therefore, while being important for basic research, improved monitoring of volcanoes, using both ground-based and space-borne sensors, is crucial for the forecasting of eruptions and risk mitigation. During my career I have acquired skill in volcanic hazard assessment while staying in volcano observatories or as a mandated expert during volcano emergencies (e.g. the 2002 Nyiragongo eruption and the European evacuation exercise at Vesuvius in 1996). As the current President of the IAVCEI, one of my central objectives will be to strengthen our WOVO – the World Organization of Volcano Observatories – in order to improve its networking efficiency and its capabilities to provide helpful assistance to volcano observatories in low-to-medium income countries.

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2. IUGG2023 – Important Dates

Important dates related to the IUGG General Assembly 2023, which is planned to be held from 11-20 July 2023 in Berlin, Germany is now available here.

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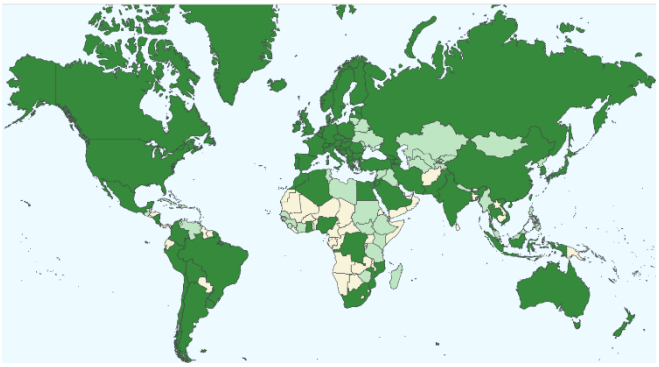
3. IUGG Member Countries 2021



Current (dark green) and former (light green) IUGG Member Countries (as of 2021)

IUGG is fortunate in having 73 member countries. The members are distributed throughout the world and participate in IUGG activities through Adhering Organisations (e.g. National Academies) and National Committees which usually consist of a President, Secretary and Association representatives.

More information about the current IUGG/Association representatives of your country can be found here.

Your country is not yet a member of IUGG? Please find more information about how to join IUGG here or send an e-mail to the IUGG Secretariat.

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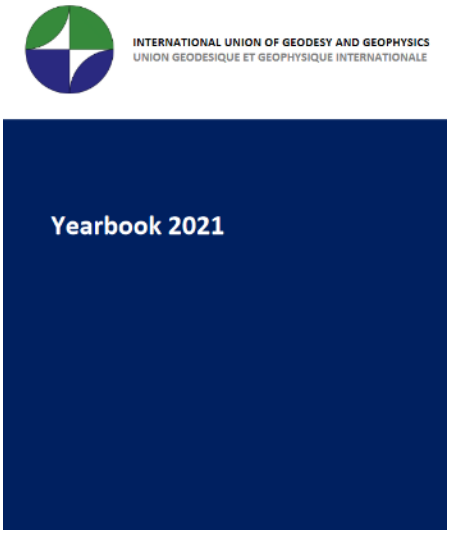
4. IUGG Yearbook 2021 – UPDATE

An updated version of the IUGG Yearbook 2021 is now available here. The IUGG Yearbook is a reference document of IUGG members, administrative officers, Association and Union Commission officers.

Thanks to all who helped to update the information in the Yearbook. During 2021, 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.

The IUGG Yearbook 2022 will be published in January 2022.



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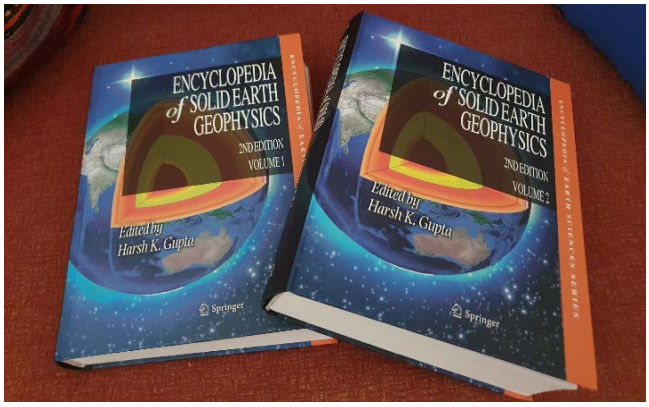
5. New Publication: Encyclopedia of Solid Earth Geophysics (2nd Edition)



Springer has recently published the Second Edition of the Encyclopedia of Solid Earth Geophysics (ESEG). All the Editorial Board Members (Kusumita Arora, Anny Cazenave, Eric Robert Engdahl, Rainer Kind, Ajay Manglik, Sukanta Roy, Kalachand Sain and Seiya Uyeda) as well as the Editor (Harsh K. Gupta) have been closely associated with the IUGG.

The earlier edition of the ESEG was published in 2011 by Springer, which had 217 articles spread

over 1,500 pages in 2 volumes. The Encyclopedia did well, and there were over 70,000 downloads by 2018.

In less than 10 years, a need for an updated second edition arose, driven by the desire to expand the scope of the entries and include the new knowledge derived through novel observations and techniques since the publication of the 2011 volume. The second edition, published in 2021, serves as a comprehensive compendium of information on important topics in solid Earth geophysics. It provides a systematic and up-to-date coverage of the central concepts and key topics of interest, while making no claims to represent every aspect of this multi-disciplinary and multi-faceted field. This edition contains 256 entries written by 347 authors, including 44 new topics, such as Fibre Optics in Geophysics, Tracking Earth's Water in Motion, A New Era of Earth Observatories and Others Based on Satellite Observations, Deep Continental Boreholes like the KTB, Seismic Arrays in Boreholes, Environmental Seismology, High-Frequency Seismology, Floating Seismographs, and several other new topics that have established themselves in recent years. The second edition is spread over 1950 pages in two volumes. The entries, written by leading experts, are intended to provide a holistic treatment of solid Earth geophysics and guide researchers to more detailed sources of knowledge through an exhaustive bibliography.

I am grateful to the members of the Editorial Board as well as to all the authors for their valuable inputs. For more information, please contact me.

Harsh K. Gupta, IUGG President 2011-2015

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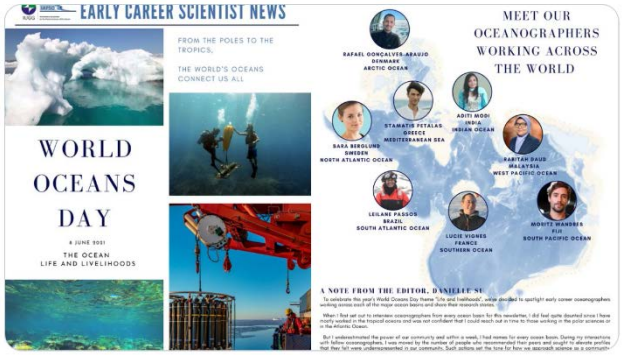
6. IAPSO – Early Career Scientists Network celebrates World Oceans Day 2021

To celebrate this year's world ocean day theme "Life and Livelihoods", the IAPSO interviewed early career oceanographers across each major ocean basins and shared their stories here.

More information about the IAPSO Early Career Scientists Network can be found here.



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7. CMG – News from the Union Commission on Mathematical Geophysics

Vladimir Keilis-Borok Medal – Call for nominations

The Vladimir Keilis-Borok Medal of the IUGG Union Commission on Mathematical Geophysics (CMG) was established in 2021, and recognises middle career scientists who have made important contributions in the field of mathematical geophysics. The aim of the medal is to honour the legacy of Keilis-Borok – a visionary science leader and organiser, prolific seismologist and mathematical geophysicist, the CMG founder, and former IUGG President – in promoting transformative scientific advancement and selfless leadership.

CMG calls for nominations for the inaugural IUGG Vladimir Keilis-Borok Medal (the deadline for nominations is ***1 December 2021***). The medal will be awarded during the 2022 biannual CMG

meeting in the Republic of Korea. Scientists after 10 years and within 20 years of receiving their PhD or full-time equivalent working are eligible to be nominated. More information about the medal can be found here.

Joint ICTP-IUGG Workshop on Data Assimilation and Inverse Problems in Geophysical Sciences

CMG, supported by IAGA, IASPEI, and IAVCEI, was awarded an IUGG grant to organise a workshop on the topic of data assimilation and inverse problems in geophysical sciences". This workshop will be organised from 18 to 29 October 2021 together with the Abdus Salam International Centre for Theoretical Physics (ICTP) in Trieste, Italy and the East African Institute for Fundamental Research (EAIFR), Kigali, Rwanda. The workshop will attract international early career and female scientists, and PhD students, especially those from less-affluent countries. International experts in the field of geophysical inversion and data assimilation will be invited to give lectures. Due to the ongoing pandemic, it was decided to hold the workshop either online or in a hybrid format, where local students of EAIRF and ICTP as well as some lecturers can participate in the school onsite (in Trieste or Kigali, respectively), and others can join online. More information on the workshop can be found here.

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8. SCAR: Report on the 36th Delegates Meeting

The Scientific Committee on Antarctic Research (SCAR) is an interdisciplinary committee of the International Science Council (ISC). SCAR is charged with initiating, developing and coordinating high quality international scientific research in the Antarctic region including the Southern Ocean, and on the role of the Antarctic region in the Earth system. IUGG has been one of nine Union Members of SCAR since its inception in 1958, and IUGG is entitled to send a voting Delegate to the biennial SCAR Meetings. The 36th Delegates Meeting of SCAR, which was scheduled to be held in Hobart, Australia in August 2020 was deferred because of COVID19 travel restrictions. However, the associated 9th SCAR Open Science Conference (OSC) was held online from 3 to 7 August 2020.

Proposed amendments to the SCAR Articles of Association were approved by the Delegates in an online meeting on 16 March 2021, enabling the full Delegates' Meeting to be held online in four 2-hour sessions the following week (22-25 March). Delegates' Meetings conduct administrative business and formulate SCAR scientific policy and strategy. The 2021 meeting was attended by over 70 delegates and observers, including delegates representing 6 ISC Union Members.

SCAR had 33 full National Members, 12 Associate National Members and 9 ISC Union Members at the start of the meeting. At the meeting, Delegates voted to upgrade the status of Turkey and the Czech Republic to full Members, and Mexico was accepted as a new Associate Member. Steven Chown (Australia) finished his term as President and Yeadong Kim (Republic of Korea) was elected as the next SCAR President. Two Vice Presidents, Jefferson Simões (Brazil) and Deneb Karentz (USA) were elected at the meeting while Muthalagu Ravichandra (India) and Gary Wilson (New Zealand) continued in their roles as Vice Presidents until the next Delegates' Meeting. The 37th SCAR Delegates' Meeting, and the next OSC are scheduled to be held from 19 to 28 August 2022 in

Hyderabad, India, and will be one of the government-sponsored programmes for India's 75th anniversary. The 38th SCAR Delegates' Meeting and the 2024 OSC will be hosted by Chile in Pucón. SCAR scientific activities are managed by three Science Groups (SGs) on Physical, Geo-, and Life Sciences. In addition to these, there is a Standing Committee on the Humanities and Social Sciences. Under each of these disciplinary bodies there are a number of sub-groups that deal with specific research areas. Expert Groups deal with ongoing issues and Action Groups tackle issues that can be addressed within a limited time period of several years. SCAR focuses its international collaborative science efforts on high priority topics through Scientific Research Programmes (SRPs), which are often multi-disciplinary and are approved by Delegates. These receive modest management funding (not implementation funding) from SCAR for a fixed period. Three new programmes were approved by the Executive in 2020 and began officially in January 2021. These address conservation and management of Antarctica and the Southern Ocean ("Ant-ICON"), Antarctica's contribution to sea level and the way in which interactions between the ocean, atmosphere and cryosphere influence ice-sheets in the past and future ("INSTANT") and the prediction of near-term conditions in the Antarctic climate system on timescales of years to multiple decades ("AntClimnow"). Six Scientific Research Programmes that had been active during 2012-2020 presented their final reports to the Delegates' Meeting. Details of the SRPs, past and present, can be found on the SCAR website.
IUGG continues to be one of the ISC Unions that interacts actively with SCAR. Please contact me if you want further information on SCAR or its programmes that could help develop closer collaboration from IUGG and its Associations.

Ian Allison, IUGG Liaison Officer to SCAR and Delegate to SCAR XXXVI

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9. Awards and Honours

International Association of Seismology and Physics of the Earth's Interior (IASPEI)

Barbara Romanowicz (USA/France), IASPEI Bureau Member (2000-2003), was awarded the 2021 IASPEI Medal for her outstanding contributions to seismology and to IASPEI.

Congratulations!

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10. Obituaries

Karl Fuchs (1932-2021)

The international scientific community has lost one of its giants in lithosphere research. Professor Dr. Karl Fuchs passed away on 22 March 2021 after a remarkable scientific career.
Karl Fuchs studied Geophysics in Hamburg, London and Clausthal. In the late fifties he worked as an exploration geophysicist in South America and North Africa which gave him very valuable experience and understanding of the importance of data for science. His PhD degree from Clausthal in 1963 was based on a theoretical study of seismic wave propagation. After two years of postdoctoral studies in Saint Louis and Dallas, he joined Karlsruhe University where he received his Habilitation in 1968 and became Professor and Director of the Geophysical Institute until his retirement in 1997. He had sabbaticals at ANU in Canberra, Stanford University and USGS Menlo Park.
Karl received several honours from learned societies, including fellowships of AGU, Geological Society of London, Royal Astronomical Society and AAAS. He was elected a member of Academia Europaea and the Heidelberg Academy, and honorary member of the German Geophysical Society.

He received the Heitfeld Award from the Alfred Wegener Society. Karl made groundbreaking contributions to seismic wave propagation and the study of the Earth's crust and deep Earth with novel seismological methodologies and concepts developed by him. The Fuchs and Müller 1971 paper on the Reflectivity Method has been tremendously important for the interpretation of seismological data by simulation of observed data and the method is still being enhanced. Karl made significant contributions to our understanding of rifting processes in the continents, stress distribution in the lithosphere, and the impact of large earthquakes on society.

Karl Fuchs (photo credit Fuchs Family, Karlsruhe)

Karl had an exceptionally broad vision for the geosciences, championing integrated solid Earth science long before the term became common. As such he was a driving force in connecting geology and geophysics, and in connecting people. Through his efforts and vision, Karlsruhe became a "hot spot" for Earth sciences and the home base for many international programs such as the World Stress Map programme of ILP and the Vrancea project, monitoring seismicity in the bending zone of the Romanian Carpathians. His understanding of the importance of political diplomacy for science was demonstrated when the Kenya Rift Seismic Project 1990 (KRISP'90) ran into problems. Karl resolved the situation for the working group by using his connections to get access to the presidential office where he could resolve a few misunderstandings, after which the project could continue.

Karl was an initiator of the very successful EUROPROBE programme, which became one of the first large scale, international scientific programmes in the geosciences with broad focus on a suite of the most important subjects for understanding lithosphere evolution. It brought together geoscientists from all disciplines, and it had immense importance for building collaboration between scientists in the east and the west at the time of the fall of the Iron Curtain in Europe. During this changeable period, Karl took another, and probably less known, important initiative to secure invaluable long-range, seismological data from the former Soviet Union which were recorded with nuclear explosions as source along profiles across Siberia. This Peaceful Nuclear Explosion (PNE) data was stored on analogue tapes and might have deteriorated unless Karl had secured funding for digitising it. The data became the source for major discoveries on structure and processes in the mantle at all depth ranges during the following years, and it formed the basis for developing strong east-west collaboration.

Karl served as the second President of the International Lithosphere Program (ILP), motivating and inspiring with his enthusiasm and energy a whole generation of young researchers to be actively involved in its task forces. Karl often spotted new young talents, and the list is very long of eminent scientists who owe the start of their career to his unselfish support and supervision.

Karl had a global vision and was actively engaged in building a strong, global community of solid Earth scientists through his active continuing participation in ILP and Academia Europaea, the pan-European academy with its more than 4,500 members which he joined soon after its foundation in 1988.

The International Lithosphere Program and Academia Europaea are grateful for Karl Fuchs' contributions, both as a warm person and as a great scientist. The international scientific community has lost one of its giants in lithosphere research.

Hans Thybo, President ILP
Sierd Cloetingh, President Academia Europaea and Past-President ILP

With great sadness IUGG reports the death of

***Edgar Kausel (1934-2021)**, a renowned Chilean seismologist and member of the International Association of Seismology and Physics of the Earth's Interior Executive Committee (IASPEI; 1979-1987),*

and

***Mitiyasu Ohnaka (1940-2021)**, a renowned Japanese geophysicist and seismologist and member of the International Association of Seismology and Physics of the Earth's Interior Executive Committee (IASPEI; 1991-1995).*

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11. Meeting Calendar

July

- 5-9, ISPRS, Online, 24th ISPRS Congress
- 11-17, IAHS, Perugia, Italy, 2021 International Summer School on Hydrology
- 12-16, IAHS, Online, Hydro-JULES Summer School 2021
- 16-18, IUGG National Committee for China, Qingdao, China, 4th Congress of China Geodesy and Geophysics (in Chinese)
- 19-23, 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)
- 25-31, IUHPST, Online, 26th International Congress of History of Science and Technology

August

- 1-6, AOGS, Online, AOGS 18th Annual Meeting
- 2-6, IAMAS, Online, International Conference on Clouds and Precipitation
- 3-6, IAHS, Moscow, Russia and Online, International Conference on the Status and Future of the World's Large Rivers
- 15-20, IAMAS, Brisbane, Australia, 21st International Conference on Nucleation and Atmospheric Aerosols
- 14-22, IUCr, Prague, Czech Republic and Online, 25th Congress and General Assembly of the International Union of Crystallography
- 16-20, IAGA, Online, 5th IAGA School
- 16-20, IASPEI, Online, IASPEI School
- 16-20, IGU, Online, 34th International Geographical Congress
- 16-21, IUGS, New Delhi, India, 36th International Geological Congress
- 22-27, IUTAM, Online, 25th International Congress of Theoretical and Applied Mechanics
- 21-27, IAGA, IASPEI, Online, IAGA-IASPEI Joint Scientific Assembly and 13th General Assembly of the Asian Seismological Commission (ASC)
- 28-4 September, URSI, Rome, Italy and Online, 23rd URSI General Assembly and Scientific Symposium
- 29-3 September, IAHS, Online, 12th Annual Catchment Science Summer School

September

- 6-10, IAHS, UNESCO, Online, Online Training Workshop on River Basin Sediment Monitoring and Management
- 14-18, IAMAS, Manchester, UK, International Global Atmospheric Chemistry Conference

- 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
- 21-23, IUGG NC Germany, Online, Frontiers of Geodetic Science Digital
- IASPEI, Cargèse (Corsica), France, 3rd International School on Earthquakes: Nucleation, Triggering, and Relationship With Aseismic Processes

Association Scientific Assemblies 2021-2023

- 28 June - 2 July 2021, IAG, Beijing, China and Online, 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, IAGA-IASPEI Joint Scientific Assembly
- 29 May - 3 June 2022, IAHS, Montpellier, France, IAHS Scientific Assembly
- 30 January - 3 February 2023, IAVCEI, Rotorua, New Zealand, IAVCEI Scientific Assembly

The full IUGG Events Calendar 2021 can be found here.

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

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