INTERNATIONAL UNION OF GEODESY AND GEOPHYSICS
UNION GEODESIQUE ET GEOPHYSIQUE INTERNATIONALE

The IUGG Electronic Journal

Volume 22 No. 11 (1 November 2022)

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 here. E-Journals may be forwarded to those who will benefit from the information. Your comments are welcome.

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1. IUGG General Assembly 2023 – Registration and Abstract Submission is open

We are pleased to inform you that the online registration and abstract submission for the 28th General Assembly of the International Union of Geodesy and Geophysics (IUGG2023) to be held at the CityCube in Berlin, Germany, from 11 to 20 July 2023, is now open. In addition, applications for the IUGG2023 Travel Grants Program are now being accepted.

The scientific programme covers a wide variety of topics and reflects the latest trends and concerns in Earth and space sciences. Inter-association Symposia highlight strong elements of interdisciplinary research, while the Association Symposia focus on more specific topics. Union Symposia, Union Lectures, and the new session format “Big Themes” will complete the programme.

Abstracts will be accepted until **14 February 2023**.

The Early-bird registration will be available until **28 April 2023**.

For more information, please visit the IUGG2023 website or contact the IUGG2023 Secretariat.

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2. IUGG General Assembly 2027 – Call for invitation to host

Proposals to host the 29th IUGG General Assembly in 2027 are now being accepted and must be submitted to the IUGG Secretariat by ***11 January 2023*** (six months before the next General Assembly, consistent with IUGG By-Law 6). The requirements and guidelines for the proposals are now available. All proposals will be evaluated by the Site Comparison Committee, and a report will be submitted to the IUGG Council. The IUGG Council, at its meeting during the 28th IUGG General Assembly in Berlin, Germany, in July 2023, will make the final selection of the venue for the 29th IUGG General Assembly.

For more information, please contact the IUGG Secretariat.

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3. IUGG Yearbook 2023 – Request for updates

Corrections and updates to the information contained in the IUGG Yearbook for 2022 are now being finalised. Please contact the IUGG Secretariat by ***30 November 2022*** with additions and corrections.

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4. IAHS Travel Awards – Call for applications

Applications are invited for the IAHS SYSTA (Sivapalan Young Scientists Travel Awards) towards the costs of participating in the IAHS programme at the IUGG General Assembly 2023 (IUGG2023) in Berlin, Germany from 12 to 16 July 2023.

Full details of the SYSTA eligibility criteria and application procedures can be found here.

Applications will be considered from hydrologists that meet ALL of the following criteria:

- they grew up and now reside in a financially disadvantaged country,
- they are registered for a PhD, or completed their PhD less than five years ago (an extra year per child is allowed for parents if they took parental leave),
- there is evidence of their high quality/high potential as a scientist in the form of a paper of which they are first author in Hydrological Sciences Journal (HSJ) or Proceedings of the International Association of Hydrological Sciences (PIAHS) (or in another listed hydrological journal),
- they have not previously received a SYSTA award for travel, and
- they will be giving a presentation at the meeting.

Applicants must have submitted an abstract for IUGG2023. The maximum award value is EUR 2,500.

Applicants should simultaneously apply for an IUGG2023 travel grant.

The closing date for SYSTA applications for IUGG2023 is 12:00 noon (GMT) on **6 December 2022**.

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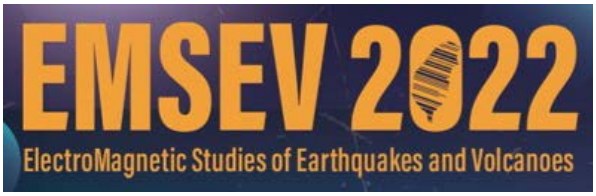
5. EMSEV2022 – Meeting report

The 2022 symposium ElectroMagnetic Studies of Earthquakes and Volcanoes (EMSEV2022) was held in a hybrid format from 22 to 24 August 2022 at the National Central University (NCU), Taoyuan, Rep. of China. The symposium was mainly planned by Prof. J.Y. Liu from NCU and the EMSEV Bureau.



The scientific programme of EMSEV2022 included six sessions:

- Electromagnetic methods for seismicity and volcano monitoring.
- Theoretical and laboratory studies for understanding seismic and volcanic phenomena.
- Satellite observations for volcanic and seismic hazard assessment and monitoring.
- Earthquake and volcano related phenomena investigation by multidisciplinary and multi-parametric approaches.
- Magnetospheric, ionospheric, atmospheric, and lithospheric coupling.
- Electromagnetic signals associated with earthquakes and volcanic eruptions.

and a special session on "Hunga Tonga Hunga Ha'apai volcano eruption, 15 January 2022".

EMSEV2022 was attended by more than 80 participants from ten countries incl. Rep. of and P.R. China, USA, Japan, France, Italy, Russia, Greece, India, and Fiji.

At the EMSEV Bureau Meeting on 9 September 2022, Prof. S. Kumar of The University of the South Pacific in Fiji and Prof. F. Vallianatos of the National and Kapodistrian University of Athens in Greece presented their bids to host EMSEV2024. It was decided to organise EMSEV2024 in Crete, Greece, in September 2024.

Our thanks go to all the participants, NCU as the host, and the co-sponsors incl. Academia Sinica, NCU Space Physics and Engineering Center, and IUGG for making EMSEV2022 a great success.

Toshiyasu Nagao, EMSEV Chair

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6. SnT2023 – Meeting announcement

The Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO) relies on innovation to enhance the capabilities of the Treaty's verification regime as well as to help move the Treaty closer to universal acceptance and entry into force. As the seventh event in the CTBT: Science and Technology conference series, SnT2023 will bring together well over 1,000 scientists, technologists, academics, students and representatives of the CTBTO's policy making organs. In addition, representatives from the fields of research and development, science diplomacy, science advisory, media and advocacy are invited to attend the conference.

SnT2023 is scheduled to take place from 19 to 23 June 2023 at the Hofburg Palace in Vienna, Austria, featuring virtual components for active online participation to support broader outreach and global inclusiveness. While restrictions on physical attendance at SnT2023 due to COVID-19 are not currently foreseen, the structure of the conference will be hybrid and will remain flexible in order to adapt to any circumstances as needed.

The programme is available here. The deadline for abstract submission is **30 November 2022**.

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7. 1st VERSIM School and 10th VERSIM Workshop – Meeting announcement

The 10th VERSIM Workshop comes back to its origins and will be held from 7 to 11 November 2022 at the Sodankylä Geophysical Observatory, Finland. The format of the conference will be hybrid, but we hope most participants will be able to join us on site. Sodankylä is located north of the arctic circle in the region of Lapland in northern Finland. It is one of the best locations to enjoy the northern lights and all the nature that Finland has to offer.

The 1st VERSIM school will be held from 5 to 6 November with tutorials and practical applications to get acquainted with a variety of VERSIM topics for the uninitiated.

VERSIM is an international group of scientists that are interested in studying the behaviour of the magnetosphere and ionosphere by means of ELF and VLF radio waves, both naturally and artificially generated. Since 2004, VERSIM workshops have been held every two years in multiple locations. They are the occasion to present and discuss recent results, new techniques and encourage collaboration within the space physics community.

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8. Awards and Honours

American Geophysical Union (AGU)

AGU announced its Union Medallists, Awardees, and Prize Recipients for their excellence in scientific research, education, communication, and outreach. The awardees will receive their honours at the 2022 AGU Fall Meeting. Among the 2022 Union Medallists and Awardees are the following scientists who have been active in IUGG: ***Efi Foufoula-Georgiou*** (USA), IAHS National Correspondent (since 2017), was awarded the Robert E. Horton Medal; ***Toshio Koike*** (Japan), Vice-President of IAHS International Commission on Remote Sensing (ICRS, 2003-2007), ***Marino Protti*** (Costa Rica), President of the IUGG National Committee (since 2011), and ***Roger S. Pulwarty*** (USA), IUGG Liaison Officer to the World Meteorological Organization (WMO, since 2020) were awarded Ambassador Awards.

Geological Society of America (GSA)

GSA announced the award of the 2022 GSA President's Medal to ***Priscilla Grew*** (USA), Member of the IUGG Finance Committeee (since 2019), for "*her illustrious career which has intertwined higher education, the intersection of public policy with Earth and geosciences and service to government and professional societies. Her unique career trajectory, boldness of leadership, and support of other women and the geosciences for the greater good, continues to be inspirational across the globe*", says GSA Past President Barbara Dutrow. The award ceremony was held on 9 October 2022 in Denver CO, USA.

In August 2022, a mineral, Priscillagrewite-(Y), ideally $(Ca_2Y)Zr_2Al_3O_{12}$, was named after Priscilla Grew.

Congratulations!

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9. Obituaries

Helmut Moritz (1933-2022), IUGG President 1991-1995

Helmut Moritz

With profound sadness we have taken notice of the death of a brilliant scientist and highly gifted academic teacher: Helmut Moritz, who passed away on October 21, 2022 at the age of 89.

Born on November 1, 1933 in Graz, Austria, Helmut Moritz attended the Academic high school in Graz. He lost his father during World War II, and as a consequence he grew up under very difficult circumstances. His high aptitude in general and his strong interest in mathematics, natural sciences, music and languages in particular became obvious already during his high school time. In 1956 he completed his study of surveying and geodesy at the University of Technology in Graz, followed by a PhD study which he completed in 1959. For his excellent performance and the outstanding quality of his PhD thesis „*Theory of errors in the function space*" he was awarded the doctor´s degree by the President of the Republic of Austria – a top honor for an exceptional academic performance in Austria. In his thesis he introduced for the first time the infinite-dimensional Hilbert space into geodesy. In the same year he got married with his beloved Gerlinde, who gave birth to two children, Berta (1960) and Albrecht (1962).

After a three years employment at the Federal Bureau for Metrology and Surveying in Austria he received in 1962 an invitation by the Department of Geodetic Science of the Ohio State University, at that time the undisputed center of geodesy under the chairmanship of Weikko A. Heiskanen. Together with Heiskanen he wrote his first scientific book which became a bestseller in theoretical geodesy, which was translated into several foreign languages and is still up-to-date after more than 50 years: „*Physical Geodesy*".

Shortly after his return from Columbus to Graz in 1964 he became appointed as an Associate Professor at the University of Hannover and in the same year he was offered the full professor position by the Technical University of Berlin. During this period of time he had devoted himself very intensively to research regarding the problem of Molodensky.

And suddenly, during the hot phase of the student revolution in 1968, he received an invitation by the Graz University of Technology, however, Helmut Moritz preferred to stay in Berlin and rejected the appoinment thankfully. A few years later, in 1971 he was again approached by Graz University of Technology to become full professor for Physical Geodesy. This time he could no longer resist and accepted the invitation. And his time in Graz should become a very long and extremely fruitful professional phase of more than 30 years In his early phase in Graz his research activities had been focused on „*Least squares collocation*" – a newly developed adjustment technique in Hilbert space which had actually two scientific fathers: Helmut Moritz and Torben Krarup.

Helmut Moritz, a young and very dynamic professor in Graz - an outstanding scientist who had literally written the book of theoretical geodesy from scratch – the news went quickly public. The student community was enthusiastic and loved to attend lectures by Helmut Moritz. He had always been very devoted to his subject and had been carefully listening to his students, to their problems and also to their interests. His exceptional talent of explaining even very complex matters in an easily „digestible" way has made him a highly appreciated academic teacher. In his lectures he had always

followed the recommendation of Albert Einstein, that one should make things as simple as possible, but not simpler. Yes, simplicity is indeed a result of maturity.

His many years in Graz became probably the most intensive time in his life, scientifically, of course, but also in terms of his strongly growing international profile which could also be observed in his institute and its very international atmosphere. He himself considered the decade from 1975 – 1985 as the most interesting and creative in his entire life. During this time and the consecutive years he had published numerous scientific contributions regarding the geodetic boundary value, the Earth´s rotation and the theory of nutation and polar motion, to relativistic effects in reference frames, to satellite gradiometry, and the realization of the Geodetic Reference System 1980. „*Least squares collocation*" was further extended and developed in all its details, and became an exceptionally powerful and worldwide applied tool in physical geodesy And it was once again Helmut Moritz, who had compiled and carefully structered the mathematical and stastistical foundation of collocation in all its facets in his fundamental book „*Advanced Physical Geodesy*". Jointly with Ivan I. Mueller he wrote the extensive volume „*Earth Rotation: Theory and Observation*". His book „*Geometry, Relativity, Geodesy*", jointly written with B. Hofmann-Wellenhof, may be considered a beautiful sort of bridge building, starting from the curved surface, known to every contemporary geodesist, towards the curved space, and his volume „*Science, Mind and the Universe*" can be understood as a demanding journey into the vast dimensions of our universe, and its reflection by our human mind, enriched by a glimpse on the special and general theory of relativity and quantum physis, And finally, a strong international demand for a revised new edition of his fundamental early book „*Physical Geodesy*", now jointly with B. Hofmann-Wellenhof, closed the circle of his scientific volumes in a very harmonic way.

In 2002 when he retired from his professor position at Graz University of Technology Helmut Moritz was very hardly hit by a personal tragedy: the sudden death of his beloved spouse Gerlinde, who was not just a wonderful partner of life and a strong retaining clip for the entire family, but also an adviser to her husband and a sparring partner in scientific matters. This personal break in his life was followed by his strong inclination towards philosophy of natural sciences, to philosophy and religion, up to metamathematics and metabiology. In total his scientific oevre comprises more than 230 scientific contributions and 9 scientific books, many of them translated into several languages.

Parallel to his enormous activities in writing scientific articles and books, Helmut Moritz has also been consequently climbing the stepladder of functions in scientific bodies, literally from his Berlin period on. Starting with the chair of the German and, several years later, the Austrian Geodetic Commission, followed by the chair of an IAG Study Group, the section President of IAG, the IAG Vize President and then IAG President, followed by the big step to the position as the IUGG President, and finally the Bureau member of IUCC, the International Council of Scientific Unions as his culmination point – a three decades long most impressive climb – a storybook career of highest possible level! And as a kind of rounding off of his scientific profile he was appointed as President of the International League of Humanists in Sarajevo and in parallel Director General of the Inter-University Centre in Dubrovnik, positions which he was holding until 2006.

Some colleagues were wondering, if his series of exceptional and ever increasing international positions could be logically followed by comparable local positions within the university. As a consequence Helmut Moritz had been invited several times to become Dean of the University. All these invitations were rejected by him, thankfully and immediately with the argument that he prefers foreign politics over the handling of interior affairs. In his consequent way he always remembered the recommendation of Euripides: „*You are saying that the throne is attractive? For a wise man not at all*!" (The author of this obituary can - from his own experience - very well understand Helmut

Moritz´ firm position in this matter: it is very wise indeed. Think how much theoretical geodesy would have missed with Helmut Moritz as a Dean, let away as a University President!)

Without any doubts Helmut Moritz was a scientific genious. But his scientific talent was also balanced by another outstanding talent; languages. To have a reasonable command of Greek and Latin as a student at a humanistic high school was considered quite normal at that time, and English was usually considered to be learned „on the job". But in the course of his life Helmut Moritz made it to as many as 14 (!) languages, which he practiced regularly by conversation with native speakers – hard to believe, but true!. And during the last years of his long life he has even studied Hebrew and Arabic – for reasons of curiosity, as he argued!

Particularly gifted scientists often develop a personal inclination to music and literature. This is also true for Helmut Moritz: playing piano was his hobby already as a high school student and remained so for all his life. He particularly loved the weekly „training sessions" with Sir Prof. Karl Haidmayer, a composer with international profile and a good friend of Helmut Moritz. Inspired by W.A. Mozart, who considered an organ as the „queen of all instruments", Helmut Moritz took up this challenge and learned to play organ. Quite often one could listen him playing organ in his community church. Helmut Moritz was also particularly well-versed in literature. His interests were equally broad as they were deep-going. But it is was particularly Adalbert Stifter, who was most appreciated by him.

It goes without saying that a career of highest level combined with such an impressive dimension cannot remain unnoticed. As a consequence, Helmut Moritz became a strongly requested person, honoured by top international recognitions and awards: the Gauß-Medal, the Alexander-von-Humboldt-Medal and the Kopernikus-Medal, just to name a few particularly outstanding recognitions among numerous others. Worldwide scientific Academies became very much interested in having Helmut Moritz in their „hall of fame", and Helmut Moritz contributed scientifically as well as strategically to the academic life of many academies and their delopment. To make a long story short: Helmut Moritz became member of as many as 15 (!) scientific Academies worlwide.

Three universities with highest international reputation had honored Helmut Moritz with an honorary doctorate for his outstanding scientific achievements in theoretical geodesy: The Technical University Munich, the Ohio State University in Columbus/Ohio and MIIGAIK, the Geodetic University in Moskau. And also the Wuhan University of Technology awarded an honorary professor position to him in recognition of his great scientific achievements and his continuous support of the Chinese geodetic community.

Top-class scientists are often accompanied by particularly sympathetic and supportive partners, and are sometimes even borne by their family. This was absolutely true for his beloved spouse Gerlinde as well as for his daughter Berta and his son Albrecht. Within his extended family, in terms of his co-workers and colleagues, Helmut Moritz found not just admiration, but much more a warm and beneficial embedding which he appreciated and which he very much deserved.

In this way we say goodbye to Helmut Moritz, to an exceptional personality, who was both a particularly gifted scientist and at the same time a very modest person with humor and also with a firm determination - a wonderful friend who was always committed to excellence.

Thank you, Prof. Moritz, for all what you have done for science and for our community at large.

Hans Sünkel, Graz, October 2022

With great sadness IUGG reports the death of

Juhani Kakkuri (1933-2022), former President of the IUGG National Committee for Finland, and

Gerd Boedecker (1944-2022), former Secretary of IAG Section III: Determination of the Gravity Field.

Both obituaries can be found here (see pages 8-11).

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10. Important IUGG Deadlines

11 January 2023: Submit proposals to host the 29th IUGG General Assembly in 2027.
11 January 2023: Submit proposals for changes to the Statutes and By-Laws.
31 January 2023: Submit Draft Resolutions for the 28th IUGG General Assembly in 2023.

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11. Meeting Calendar

This calendar includes meetings which are planned to be organised in the next three months under the umbrella of IUGG, and major conferences of IUGG's partner organisations. The calendar is updated regularly and is also available online. If you would like to add a meeting, or report changes, please contact the IUGG Secretariat.

November

- 1-4, ISPRS, Beijing, China, ISPRS Workshop Geo-Informatics Supported Disaster Risk Reduction and Smarter Urban Management
- 5-11, IAGA, SCOSTEP, URSI, Sodankylä, Finland, 1st VERSIM School and 10th VERSIM Workshop
- 7-9, IAG, Santiago de Chile, Chile, SIRGAS Symposium 2022
- 7-11, IAG, Kunming, China, 22nd International Workshop on Laser Ranging
- 14-15, IAG, Munich, Germany, GGOS Days 2022
- 27-2 December, IAGA, São José dos Campos, Brazil, XIII Latin American Conference on Space Geophysics (COLAGE)

December

- 9-12, IAHS, Zhuhai City, China, IAHS-ICWQ International Workshop on Flood-drought chain disasters and water ecological degradation in a changing environment
- 12-16, AGU, Chicago IL, USA, AGU Fall Meeting 2022

IAVCEI Scientific Assembly 2023

- 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

IUGG Electronic Journal Volume 22 Number 11 (1 November 2022)

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