

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

# The IUGG Electronic Journal

Volume 22 No. 8 (1 August 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 <a href="here">here</a>. E-Journals may be forwarded to those who will benefit from the information. Your comments are welcome.

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# 1. IUGG Awards 2023 – Call for Nominations (Reminder)

IUGG Fellowships (Honorary Memberships) are a tribute to individuals who have made exceptional contributions to international cooperation in geodesy or geophysics and attained eminence in the field of Earth and space sciences. The deadline for submission of nominations for IUGG Fellowships is 20 September 2022. Nominations will be examined by the IUGG Fellow Selection Committee, which is chaired by Andrew Yau (Canada). IUGG Fellowships are bestowed on up to 10 individuals. Details on IUGG Fellowships, including the procedure for nomination, eligibility criteria, and technical requirements, can be found here.



The *IUGG Gold Medal* is the highest honour awarded by the International Union of Geodesy and Geophysics. The medal was established in 2013 to recognise Earth and space scientists for outstanding contributions to geodesy and geophysics and for unselfish international cooperation in research. The deadline for submission of nominations for the IUGG Gold Medal is **20 October 2022**. The nominations will be considered by the <u>IUGG Gold Medal Committee</u>, chaired by Tom Beer (Australia). The Gold Medal is awarded to one individual. Details on the IUGG Gold Medal, including the procedure for nomination, eligibility criteria, and technical requirements, can be found here.

Please take this opportunity to recognise colleagues for their contributions to the Earth and space sciences and international research cooperation.

For more information, please contact the **IUGG Secretariat**.

# 2. IAG – GGOS Survey on Strategic Plan



As the observing system of the International Association of Geodesy (IAG), the Global Geodetic Observing System (GGOS) (see details in the film "Discover GGOS") serves a unique and critically important combination of roles – centring upon advocacy, integration, and international relations. GGOS also promotes high-level outcomes through a variety of internal and external channels. As GGOS reaches its 20th anniversary of service to the IAG and global geodesy community, we need your input to inform and guide the goals of the next GGOS Strategic Plan . Your contribution is highly appreciated.

Please fill out the GGOS Survey.

#### 3. IAHS – WMO Hydrological Research Strategy: Call for Research Proposals

IUGG is a partner organisation of WMO, and thus IAHS would like to draw your attention to the <u>WMO call for</u> research proposals.



1. Improve hydrological monitoring to generate hydrologic and cryospheric information that enhances our understanding and assessment of the quantity and quality of water resources, including both surface and groundwater. This includes both issues related to hydrologic data collection, and to the design and evaluation of hydrological monitoring networks.

- 2. Improve hydrological forecasting, including hydrological and cryospheric modelling and forecasting; precipitation estimation and forecasting; understanding and predicting hydrological extremes; and assessing/modelling human-water-ecosystem interactions.
- 3. Develop and improve relevant methods, procedures, and techniques for the collection, analysis, and transmission/communication of hydrological data for the user community. This includes issues related to data processing and quality control; data storage, access, and dissemination; and communications to the end users.

Additional background information and modalities are provided in the <u>WMO Hydrology research</u> call for proposals

#### Submit your proposal

Proposals should comply with the <u>WMO Hydrological Research Strategy Proposal template</u>, and be submitted by **30 September 2022**, using the e-mail address <u>hydrology@wmo.int</u> with the following subject: WMO Hydrological Research Strategy – research proposal

Received proposals will be evaluated by an external Technical Evaluation Board with representatives from WMO, UNESCO-IHP and IAHS.

### 4. Meeting Reports

# 2nd World Conference on Meteotsunamis (IAPSO)

Since the 1990s, tsunamis whose origin are not geological but meteorological, have been called meteotsunamis. The 1st World Conference on Meteotsunamis was held in Split, Croatia, in 2019. After the big success of that <u>event</u>, it was considered of great interest to give continuity to such a meeting. The 2nd World Conference on Meteotsunamis was held in Menorca, Spain, between 18 and 20 May 2022. The conference was sponsored, among others, by IUGG and IAPSO.

Due to the persistent COVID-19 pandemic and, more recently, the war in Ukraine, participation was not as large as anticipated, involving 35 registered participants, mainly from Europe and North America.



Participants of the 2nd World Conference on Meteotsunamis

36 contributions were presented, including six invited lectures, organised into five sessions and one sub-session. The aim was to deepen, extend and share our knowledge of the scientific, technical and social aspects of the meteotsunamis.

In the first session, general aspects of meteotsunamis in the Balearic Islands and Catalonia, the Persian Gulf, the United Kingdom, and Lithuania were presented. A sub-session was devoted to the consequences of the volcanic explosion in Hunga-Tonga, January 2022. In addition to the geological tsunamis, the explosion also generated an atmospheric pressure wave that went around the world several times and generated meteotsunamis in many places. Despite the many research results, much remains to be clarified.

The second session was devoted to the establishment and operation of sea level and pressure observation networks for research and early detection of meteotsunamis. The most useful networks are those with high temporal and spatial resolution.

The third session, on mesoscale weather disturbances likely to generate meteotsunamis, had two contributions. The interest of the meteorological community in meteotsunamis needs to be stimulated further.

In the fourth session, prediction was discussed. Forecasting can be based on an analysis of the meteorological situation, on numerical models of the atmosphere and ocean, or by means of stochastic models, etc. The reliable prediction of atmospheric mesoscale disturbances is more difficult than the prediction of the marine response to these disturbances, supposing they are correctly simulated. As in meteorology, forecasting by ensembles opens a way to improve forecasting and limit uncertainty.

The fifth session addressed the contribution of meteotsunamis to sea level peaks. Dangerous peaks of maximum sea level can grow significantly if a meteotsunami is added. Of course, sea levels peaks will increase with climate change induced sea level rise.

Agustí Jansa, Chairman of the Scientific and Organising Committees of the conference

# Cermak7. 7th International Meeting on Heat Flow and the Thermal Structure of the Lithosphere (IASPEI)

Čermák7, the "7th International Meeting on Heat Flow and the Thermal Structure of the Lithosphere", was held from 20 to 22 June 2022 in Potsdam, Germany, hosted by the German Research Center for Geoscience (GFZ) under the auspices of the International Heat Flow Commission (IHFC) of IUGG. The meeting, which was held both as a conference and a workshop, was organised for researchers, students, and industry experts to present and discuss recent results and developments in heat-flow determination and interpretation, experimental petrophysics, geothermal exploration, and lithosphere studies.

The conference activities included oral presentations and a poster session, covering a broad spectrum of subjects in the field of heat flow studies. Moreover, social events were held, accompanied by plenary lectures. The workshop focused on the basic workflow of a new quality scheme and specific scoring characteristics for heat flow data.

The specific areas addressed included petrophysical properties of rocks, deep borehole logging, perturbation effects on heat flow, thermal observations and models for different regions, methods and infrastructure on heat flow exploration, conductive and advective heat transfer, heat production, and the global heat flow database.

The one-day workshop continued the work on the development of a new quality scheme for the Global Heat Flow Database that was started as an online workshop series in November last year.

Additionally, a business meeting of the IHFC was held on Tuesday evening that addressed several issues: (i) the rules about member nominations and election, (ii) the structure of working groups within the IHFC, (iii) the preparation of a special issue to collect posters and presentations from the Čermák7, and (iv) the ongoing activities and the proposal for summer school on heat-flow determination hosted by GFZ a week before the 2023 IUGG General Assembly in Berlin.



Participants of Cermak7

Cermak 7 was a great success as confirmed by the number of contributions and participants, with a total of 26 short oral presentations, 22 posters, and 2 plenary lectures delivered during the conference. 60 people from 19 countries attended the meeting, including students, early-career scientists, industry participants, and several retired experts, who worked and contributed over the last decades to the field of heat flow research and expanded our understanding of terrestrial thermal processes. Among them, Dr. Vladimír Čermák, of the Geophysical Institute of the Czech Academy of Science, whose name was adopted for the conference series and future meetings, organised under the auspices of the IHFC. The meeting continued the successful Czech castle meetings, which were organised by him between 1982 and 2006.

The meeting was mainly sponsored by the German Research Foundation (<u>DFG</u>) and IUGG. More information can be found <u>here</u>.

Sven Fuchs, Ben Norden, Angela Spalek, Florian Neumann

#### COV11. 11th Conference Cities on Volcanoes (IAVCEI)



The 11th Conference Cities on Volcanoes (COV11), which has been postponed twice owing to the COVID19 pandemic, was the very first large IAVCEI hybrid meeting to be held since the 2019 IUGG General Assembly. COV11, which was hosted in the Cultural Center of Heraklion, was very successful, thanks to the Greek Steering Committee, the local organiser (CONVIN) and the support of Greek national, regional and local authorities.

The conference involved about 600 participants, both volcanologists and emergency managers, among whom 354 attended in person and about 240 virtually. In terms of both physical and virtual participation, the top twelve countries were Italy (117), USA (77), UK (65), France (33), New Zealand (30), Greece (26), Germany (24), Japan (20), Singapore (15), Switzerland (14), Belgium (13) and Columbia (11). We were delighted to see a large participation of early-career scientists, with a dominant proportion of female scientists. Volcanology and IAVCEI are moving rapidly towards gender equality!

More than 800 abstracts were submitted and presented during sessions of four main symposia, eight plenary lectures, special sessions and a series of pre- and post-conference workshops. The presentations focused on both i) research novelties, and ii) experiences in hazard assessment and risk management gathered during major volcanic eruptions in 2020-2021, in particular at the Soufriere of St. Vincent (West Indies), Mount Etna (Sicily) and Cumbre Vieja (La Palma, Canaries). Thanks to all participants for the overall excellent presentations, posters and discussions. Recordings of presentations and online posters will remain accessible for two months on the COV11 website.

The participants enjoyed a concert of Aegean Jazz by the Vasilis Rakopoulos Quintet on 12 June and a closing ceremony on 16 June with Cretan music, dance and delicacies.

From 18 to 21 June, a post-conference field trip to Santorini volcano, 120km north of Crete, was organised, whose Plinian eruption in 1620 BCE devastated Crete and contributed to the decline of the Minoan civilisation. The field trip, led by Prof. Paraskevi Nomikou (National and Kapodistrian University of Athens, GRE), hosted 43 scientists from Belgium (2), Canada (1), Colombia (2), Costa Rica (1), Germany (4), Italy (1), Japan (3), Rep. of Korea (3), New Zealand (3), Philippines (3), Portugal (1), Singapore (5), and the USA (12).

It was announced that the 12th Conference Cities on Volcanoes (COV12) will be hosted by the city of Antigua in Guatemala, from 11 to 17 February 2024.



Participants of the field trip to Santorini volcano

Patrick Allard, IAVCEI President

#### 5. Meeting Announcements

#### Virtual Workshop on Ice-Ocean Interactions (IACS/IAPSO)

The IACS-IAPSO Joint Commission on Ice-Ocean Interactions (<u>JCIOI</u>) will host a virtual workshop on ice-ocean interactions from 17 to 21 October 2022. The workshop aims to draw together researchers interested in the processes that govern ocean-driven melt of glaciers and ice sheets, across a range of locations and timescales. Session topics will include:

- The physics of the ice-ocean boundary
- The role of glacial melt in the wider ocean
- The impact of ocean-driven melt on glacier and ice sheet mass balance
- New and emerging technologies for studying ice-ocean interaction

The workshop will have a mixture of presentations and breakout sessions scheduled asynchronously to facilitate interactions across time zones. We hope that this meeting will be an opportunity to draw together the community, share knowledge across different research areas, and identify critical knowledge gaps. It is also an opportunity to share upcoming research plans, and create synergies across different groups/research programs.

Further information on JCIOI and its activities can be found <u>here</u>.

#### 6th IAGA Summer School (IAGA)

The 6th IAGA School will be held in early July 2023 at the Niemegk Geomagnetic Observatory at the GFZ just before the IUGG General Assembly, to be held 11 to 20 July 2023 in Berlin, Germany. It aims at providing early career scientists (mainly PhD students) with a good basic understanding of a wide range of the scientific topics covered by the International Association of Geomagnetism and Aeronomy (IAGA). The IAGA School consists of lectures accompanied by practical exercises, presented by international experts in the fields.

About 20 PhD students will be sponsored by IAGA for accommodation and costs of living. As it is expected that participants will also attend the IUGG General Assembly, they are expected to cover their own travel costs to Berlin, Germany.

#### *How to apply*

Students interested in participating should apply to the Chair of the IAGA Working Group or Division relevant for their topic of work. See <u>About IAGA</u> for IAGA topics and contact information. Please use the <u>application form</u>. Applications should be sent to Division or Working Group Chairs by **30 September 2022**.

Nominations of participants will then be made by Division Chairs after discussions with their Working Groups. Nomination deadline for the Divisions is **31 October 2022**. Selection of participants will be made by the IAGA Executive Committee and notice of acceptance will be sent to the applicants before 31 December 2022.

#### Definition of early career scientists for eligibility

Being an undergraduate or postgraduate (Masters/PhD) student or having received the highest degree qualification (e.g., BSc, MSc, PhD) within the last two years from 31 December 2022.

# 6. SCOR – Call for Applications for an Early-Career Scientist to Join the SCOR Executive Committee

The 2022 call for applications for an Early-Career Scientist (ECS) to join the Scientific Committee on Oceanic Research (SCOR) Executive Committee is open. The ECS in the SCOR Executive Committee will help reaching out to the broader early-career community and get it involved into SCOR activities.



<u>Position Description</u>: The early-career scientist will have the same <u>responsibilities</u> as other SCOR Executive Committee members with a term of appointment of two years to start in October 2022.

<u>Requirements</u>: Applicants should be no more than 10 years from PhD not counting time for family leaves, and should be affiliated to an ocean science organisation, institution, or government agency. Applicants should have good communication skills in English, both speaking and writing. Candidates from developing countries are encouraged to apply.

More information about the position and application instructions can be found <u>here</u>.

<u>Deadline for submission of applications</u>: **26 August 2022**.

Please e-mail the completed application form and requested documents to the **SCOR Secretariat**.

Patricia Miloslavich, SCOR Executive Director

# 7. ISC – Annual Report 2021



The International Science Council's (ISC) 2021 Annual Report is now available <a href="here">here</a>. 2021 was a pivotal year for the ISC, with the launch of major new activities, a well-attended General Assembly, and the election of the Council's second Governing Board.

#### 8. Awards and Honours

*Sang-Mook Lee*, President of the Korean National Committee for IUGG, was awarded the <u>Manhae Practice Prize 2022</u> for his outstanding contribution to the development of science education for disabled people.

Committee on Space Research (COSPAR)

*Joyce E. Penner* (USA), IAMAS President 2019-2023, was awarded the COSPAR William Nordberg Medal for distinguished contributions to the application of space science.

#### Congratulations!

#### 9. Obituaries

With great sadness IUGG reports the death of

*Will Featherstone* (1967-2022), Editor-in-Chief of IAG's Journal of Geodesy from 2003 to 2007. An obituary can be found <a href="here">here</a> (see page 6),

Jill Gash, IAHS Office Member from 1991 to 2013. An obituary can be found here, and

Özden Özdemir (1946-2022), Chair of IAGA's Division I from 2007 to 2011.

#### 10. Important IUGG Deadlines

20 September 2022: Submit nominations for the 2023 Fellowship Awards.

11 October 2022: Submit nominations for IUGG Bureau and Finance Committee Members

(2023-2027).

**20 October 2022:** Submit nominations for the 2023 Gold Medal.

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.

#### 11. Meeting Calendar

This calendar includes meetings which are planned to be organised in 2022 under the umbrella of IUGG, and major conferences of IUGG's partner organisations. Meetings are subject to change due to the COVID-19 pandemic. The calendar is updated regularly and is also available <u>online</u>. If you would like to include the mention of a meeting, or report changes, please contact the <u>IUGG Secretariat</u>.

#### August

- 1-5, AOGS, Online, AOGS 19th Annual Meeting
- 1-10, SCAR, Online, Open Science Conference 2022 Antarctica in a Changing World
- 2-11, IAU, Busan, Rep. of Korea, 31st International Astronomical Union General Assembly
- 21-26, IACS, IAHS, UNESCO-IHP, WMO, Reykjavík, Iceland, <u>Cryosphere 2022 International Symposium on Ice, Snow and Water in a Warming World</u>
- 22-26, EMSEV, IUGG, IAGA, IASPEI, IAVCEI, Taipei, Rep. of China, <u>Electromagnetic</u> Studies of Earthquakes and Volcanoes 2022 (EMSEV2022)
- 28-3 September, IAGA, Trakošćan, Croatia, <u>17th Castle Meeting New Trends on Paleo</u>, Rock and Environmental Magnetism
- 29-3 September, IAMG, Nancy, France, <u>21st Annual Conference of the International Association for Mathematical Geosciences (IAMG2022)</u>

#### September

- 4-9, IASPEI, IUGG, Bucharest, Romania, <u>3rd European Conference on Earthquake</u>
   <u>Engineering and Seismology</u>. A joint event of the 17th European Conference on Earthquake
   Engineering and the 38th General Assembly of the European Seismological Commission
   (ESC)
- 5-8, IAG, IAGA, GFZ, Potsdam, Germany, <u>2nd International Symposium of Commission 4:</u> Positioning and Applications

- 11-15, IACS, IUGG, IGU, Innsbruck, Austria, International Mountain Conference 2022
- 11-17, IAGA, Cesme, Turkey, <u>25th International Electromagnetic Induction Workshops of</u> IAGA Division VI (EMIW2022)
- 12-16, IAG, Austin TX, USA, Gravity, Geoid, and Height Systems 2022 (GGHS2022)
- 17-20, IAHS, Chia, Sardinia, Italy, <u>12th International Workshop on Statistical Hydrology</u> (STAHY2022)
- 19-25, IUGG, Berlin and other cities, Germany, <u>100th Anniversary of the German Geophysical Society (DGG)</u>
- 20-21, IUGG, Berlin, Germany, IUGG Bureau Meeting
- 25-29, IUGG, IAMAS, SCOR, WCRP, Cape Town, South Africa, <u>SOLAS Open Science</u> Conference 2022
- 26-30, IUGG, IAGA, L'Aquila, Italy, <u>International School of Space Science Course on</u> Radiation Belt Dynamics and Remote Sensing of the Earth's Plasmasphere

#### October

- 3-5, IASPEI, IUGG, Quito, Ecuador, <u>4th Regional Assembly of the Latin American and</u> Caribbean Seismological Commission (LACSC-2022)
- 3-7, SCOR, Busan, Rep. of Korea, 2022 SCOR Annual Meeting
- 10-13, IASPEI, IUGG, Hurghada, Egypt, <u>14th General Assembly of the Asian</u> <u>Seismological Commission and 3rd General Assembly of the African Seismological</u> Commission
- 17-19, GEO, ISC, WMO, UNESCO-IOC, Darmstadt, Germany, <u>2nd Climate Observation</u> Conference
- 17-20, IAG, Thessaloniki, Greece, <u>REFAG 2022 IAG International Symposium on Reference Frames for Applications in Geosciences</u>
- 17-21, IACS, IAPSO, Online, Workshop on Ice-Ocean Interactions
- 17-21, IAHS, Bydgoszcz, Poland, <u>IAHS/ICCE International Symposium 'River sediment quality and quantity: environmental, geochemical and ecological perspectives' (ICCE2022)</u>
- 17-21, IAHS, Copenhagen, Denmark, Quantitative Isotope Hydrology Course
- 17-21, IASPEI, Cargèse, France, <u>STATSEI 12: International conference on statistical</u> seismology
- 21-23, IAG, Thessaloniki, Greece, Unified Analysis Workshop (UAW) 2022
- 25-29, IAG, IASPEI, Marrakech, Morocco, 20th Assembly of Wegener

#### IAVCEI Scientific Assembly 2023

- 30 January-3 February 2023, IAVCEI, Rotorua, New Zealand, <u>IAVCEI Scientific Assembly</u>

### IUGG General Assembly 2023

- 11-20 July 2023, IUGG, Berlin, Germany, IUGG General Assembly 2023

IUGG Electronic Journal Volume 22 Number 8 (1 August 2022)

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

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