

## The IUGG Electronic Journal

## Volume 25 No. 2 (1 February 2025)

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

#### Contents

- IUGG The People at the Forefront (XLI): Costanza Bonadonna, President of the International Association of Volcanology and Chemistry of the Earth's Interior (IAVCEI), 2023-2027
- 2. IUGG ASSOCIATIONS Journals
- 3. IUGG ASSOCIATIONS Scientific Assemblies 2025: Important Deadlines and Updates
- 4. IUGG ASSOCIATIONS Awards 2025: Call for Nominations
- 5. EMSEV EMSEV2024: Report
- 6. ISC New Governing Board Members
- 7. Awards and Honours
- 8. Meeting Calendar

## 1. IUGG – The People at the Forefront (XLI): Costanza Bonadonna, President of the International Association of Volcanology and Chemistry of the Earth's Interior (IAVCEI), 2023-2027

I grew up in the countryside of Pisa, in a small town called Colignola, where I started early to appreciate the importance of developing a strong relationship with our natural system. Being born and raised in Italy, I was also exposed to the importance of better managing our territory to face various natural risks, namely earthquakes, floods, landslides and volcanic eruptions. I was always fascinated by the dynamic interplay between our communities and nature's raw expression through volcanic eruptions, including negative impacts (e.g., death and disruption) and beneficial aspects (e.g., fertilisation of soils and tourism). In this context I realised the importance of developing strategies for a more sustainable development of our planet where people and nature can coexist and support each other. These holistic strategies can only be based on a solid multi-disciplinary scientific approach.



Costanza Bonadonna

After obtaining a BS degree in Geology from the University of Pisa and a PhD degree from the University of Bristol, I was awarded the position of SOEST Young Investigator at the University of Hawaii and the position of Assistant Professor at the University of South Florida. I am a now Full Professor at the Department of Earth Sciences at the University of Geneva and the director of the <u>CERG-C program</u> for the assessment and management of geological and climate-related risks. I am currently also Dean of the Faculty of Science of the University of Geneva, President of IAVCEI, and Past-President of the Volcanology, Geochemistry and Petrology section of the American Geophysical Union (AGU).

I have been fortunate to have great friends, colleagues, mentors and inspirational figures through my whole life who supported both my personal and scientific development. Their support, along with various recognitions, has strengthened and further motivated my work. Among these, I am particularly honoured to have received awards such as the President's Award of the Geological Society of London (2001), the IAVCEI Outstanding Recent Graduate Award (George Walker Award) (2004), the Outstanding Woman in Science Award of the Geological Society of America (2004), and the International Galileo Galilei Award of the Italian Rotary Clubs for Science (2020).

The main objective of my research is to characterise and describe volcanic phenomena based on the integration of field, experimental and numerical approaches. Part of my mission as a scientist is also to make use of key scientific knowledge to engage in discussions and collaborations with stakeholders involved in risk and crisis management in order to optimise risk reduction strategies and contribute to the resilience of communities and a more sustainable development of our planet. In particular, I devoted most of my research to the modelling of particle dispersal and sedimentation from volcanic plumes and clouds, to the exploration of new methodologies for characterising volcanic ash deposits and eruptive source parameters, and to the development of probabilistic analysis for hazard and risk assessment.

IAVCEI and IUGG have always been my communities of reference as I developed professionally as a physical volcanologist with increasing involvement in the characterisation and management of volcanic hazard and risk. The key added values of being part of these communities include their ability to convene and support scientists from diverse disciplines and regions, promoting scientific exchange and fostering multi-disciplinary and innovative approaches to better understand the Earth's dynamic systems. My research was first based in the Caribbean, Hawaii and Central America. My active projects are currently mostly in South America, Spain and Italy. All these projects allowed me to work with scientists and stakeholders from the international and local level. On several occasions, I worked with communities exposed to risk, gaining useful insights not only into volcanic phenomena, but also into how people have lived with and adapted to changing levels of risk.

One of the aspects that I like the most about my job is the group I built at the University of Geneva, the research we carry out together, the interaction with my post-graduate students and collaborators, and the exchanges with my colleagues on topics that have important implications for society, such as geological risk. This includes also the capacity building that we are promoting with the CERG-C program, which allows me to work directly with scientists and risk reduction practitioners from all over the world, and the outreach activities we carry out with children in various contexts and countries. I especially like working with the youngest generations to offer alternative paradigms and to shape together future opportunities.

I encourage Early Career Scientists to broaden their horizons through science, embrace different cultures, and cultivate a deep connection with nature. This approach not only fosters a greater appreciation for the importance of our ecosystem but also helps develop a healthy work-life balance. I believe that by understanding and embracing our multi-dimensional essence as scientists and individuals, we can better serve both society and science on a broader scale.

More information about me can be found <u>here</u>.

#### 2. IUGG ASSOCIATIONS - Journals

The IUGG, through some of its Associations, regularly publishes a number of peer-reviewed journals covering various topics of Earth and space sciences. All the journals are either full or hybrid openaccess. Here, we would like to introduce you to the major journals of our Associations.

## International Association of Geodesy (IAG)

The Journal of Geodesy is an international journal concerned with the study of scientific problems of geodesy and related interdisciplinary sciences. It presents peer-reviewed papers on theoretical or modelling studies, and on results of experiments and interpretations. In addition to original research papers, the journal includes commissioned review papers on topical subjects, occasional short notes on topics with broad significance to the readership, and special issues arising from, for example, scientific symposia or workshops. The journal covers the whole range of geodetic science and reports on theoretical and applied studies in research areas such as positioning; reference frame; geodetic networks; modelling and quality control; space geodesy; remote sensing; gravity fields, and geodynamics. The Journal of Geodesy is published by Springer. **Five year impact factor: 5.1 (2023).** 



- A journal of the IAG
- An international journal examining scientific problems of geodesy and related interdisciplinary sciences
- Covers the entire range of geodetic science
- Presents peer-reviewed papers on theoretical or modelling studies, and on results of experiments and interpretations
- Reports on theoretical and applied studies in research areas such as positioning; reference frame; geodetic networks and more
- 97% of authors who answered a survey reported that they would definitely publish or probably publish in the journal again

## International Association of Hydrological Sciences (IAHS)

The <u>Hydrological Sciences Journal</u> is the official Journal of IAHS and provides a forum for original papers and for the exchange of information and views on significant developments in hydrology worldwide. The Hydrological Sciences Journal is published by Taylor & Francis. **Five year impact factor: 3.9 (2023).** 

The scope of the journal includes:

- The hydrological cycle
- Surface water, groundwater, snow and ice, in all their physical, chemical and biological processes, their interrelationships, and their relationships to geographical factors, atmospheric processes and climate, and Earth processes including erosion and sedimentation
- Hydrological extremes and their impact
- Measurement, mathematical representation and computational aspects of hydrological processes
- Hydrological aspects of the use and management of water resources and their change under the influence of human activity

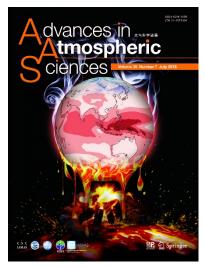


- Water resources systems, including the planning, engineering, management and economic aspects of applied hydrology

## International Association of Meteorology and Atmospheric Sciences (IAMAS)

<u>Advances in Atmospheric Sciences</u>, launched in 1984, aims to publish the latest achievements and developments on the dynamics, physics and chemistry of the Earth's atmosphere and ocean. It also aims to publish potentially high impact papers on the atmospheres of other planets and on earth system dynamics in which the atmosphere and/or ocean are involved.

Papers cover the subject areas, including but not limited to, atmospheric and oceanic theories, modelling and observations; weather and general circulation systems, numerical weather prediction, climate dynamics; satellite meteorology, remote sensing, air chemistry and the boundary layer, clouds and precipitation; earth system dynamics, particularly on interactions of the atmosphere and ocean with the biosphere, the cryosphere, and the anthroposphere.

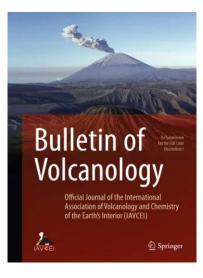


The journal encourages studies seeking universal and generalised laws from local and specific phenomena.

Advances in Atmospheric Sciences is sponsored by the Chinese Committee for IAMAS, the Institute of Atmospheric Physics at Chinese Academy of Sciences and Chinese Meteorological Society. It is the official journal of IAMAS. **Five year impact factor: 5.2 (2023).** 

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

The <u>Bulletin of Volcanology</u> was founded in 1922, as the Bulletin Volcanologique, and is the official journal of the IAVCEI. The Bulletin of Volcanology publishes papers on volcanoes, their products, their eruptive behaviour, and their hazards. Papers aimed at understanding the deeper structure of volcanoes, and the evolution of magmatic systems using geochemical, petrological, and geophysical techniques are also published. Material is published in four sections: Review Articles; Research Articles; Short Scientific Communications; and a Forum that provides for discussion of controversial issues and for comment and reply on previously published Articles and Communications. The Bulletin of Volcanology is published by Springer. **Five year impact factor: 2.9 (2023).** 



#### 3. IUGG ASSOCIATIONS – Scientific Assemblies 2025: Important Deadlines and Updates

In 2025, our eight Union Associations will organise the following (joint) Scientific Assemblies in chronological order:



AC02025

Geneva, Switzerland 29 June-4 July 2025

Early Bird Registration Deadline: **31 March 2025** 

BACO2025 Busan IAMAS-IACS-IAPSO Joint Assembly G 11 11 11 11 11 11 11 11

WARMANNA MANANANANA

O, Busan, Republic of Korea

Busan, Rep. of Korea 20-25 July 2025

Abstract Submission/ Grant Application Deadline: 15 February 2025

Early Bird Registration Deadline: **30 April 2025** 

JOIN THE

# IAGA / IASPEI Joint Scientific Meeting 2025

31 AUGUST - 5 SEPTEMBER 2025

Lisbon, Portugal 31 August-5 September 2025

Abstract Submission/ Grant Application Deadline: 12 March 2025

Early Bird Registration Deadline: 21 May 2025

Rimini, Italy 1-5 September 2025

Abstract Submission Deadline: 15 March 2025

Early Bird Registration Deadline: **31 May 2025** 



RIMINI, SEPTEMBER 1-5, 2025

Roorkee, India 5-10 October 2025

Grant Application Deadline: 21 February 2025

Early Bird Registration Deadline: **15 April 2025** 

#### 4. IUGG ASSOCIATIONS - Awards 2025: Call for Nominations

#### IAMAS

- <u>Early Career Medal 2025</u> (early-career level). Deadline for nominations: **1 March 2025 IASPEI** 

- Medal 2025 (late-career level). Deadline for nominations: **31 March 2025** 

IAG Scientific Assembly 2025

Geodesy for a changing environment

#### IAVCEI

- <u>George Walker Award 2025</u> (early-career level). Deadline for nominations: **7 March 2025**
- Fisher Medal 2025 (mid-career level). Deadline for nominations: 7 March 2025
- <u>Wager Medal 2025</u> (mid-career level). Deadline for nominations: **7 March 2025**
- Thorarinsson Medal 2025 (late-career level). Deadline for nominations: 7 March 2025

#### 5. EMSEV – EMSEV2024: Report

EMSEV2024 was held in Chania, Greece from 6 to 9 October 2024. It was the first face-to-face meeting for the Electromagnetic Studies of Earthquakes and Volcanoes (EMSEV) in six years (EMSEV2020 was postponed for two years due to Covid19, and EMSEV2022 in Taoyuan was held remotely).

This year's meeting in Chania was organised by Professor Filippos Vallianatos from the University of Athens as the committee chair, with Professor Nicholas V. Sarlis as the vice-chair. The meeting was attended by 70 people from 16 countries and regions, and there were 44 oral and 29 poster presentations. Also worth mentioning is that a training course for young researchers was held for two days before the start of EMSEV2024, entitled 'Advances in Space and Ground Base Studies of Earthquakes and Volcanoes. New Concepts'. Around 10 researchers participated in this event, and lectures were given on the latest research results and analysis methods. During the meeting, we organised the business meeting, where the location for EMSEV2026 was discussed, and it was decided that it will be held in Kumamoto, Japan in August 2026. 2026 is the 10th anniversary of the Kumamoto Earthquake (M7.3) and the 15th anniversary of the devastating Tohoku Earthquake with M 9.0. Furthermore, Kumamoto is also the nearest city to the extremely active Aso Volcano.



Participants of EMSEV2024

Concerning the Bureau members, more than 20 years have passed since EMSEV was established, and in order to rejuvenate the Bureau and improve gender issues, we have decided to add six new Bureau members. Please find the minutes of the business meeting <u>here</u>.

We are grateful for the continuous support we have received from IUGG, and we would also like to express our sincere thanks to the three parent associations (IAGA, IASPEI, and IAVCEI) for their assistance.

Toshiyasu Nagao, EMSEV Chair, Valerio Tramutoli, Qinghua Huang, EMSEV Vice-Chairs, and Jann-Yenq Liu, EMSEV Secretary

#### 6. ISC – New Governing Board Members

The ISC membership, including IUGG, has elected eight new members of the ISC Governing Board who will take office at the conclusion of the Third ISC General Assembly on 30 January 2025. Of 213 Members eligible to vote, a total of 185 Members cast their vote.

The following candidates were elected as Officers:

- President-elect: Robbert Dijkgraaf (Netherlands; Natural and formal sciences)
- Vice-President for Freedom and Responsibility in Science: *Marcia Barbosa* (Brazil; Natural and formal sciences)
- Vice-President for Membership: **Yongguan Zhu** (China; Natural and formal sciences)

The following candidates were elected as Ordinary Members:

- **Frances Colón** (USA; Life and medical sciences, natural and formal sciences, social and behavioural sciences)
- Catherine Jami (France; Humanities, natural and formal sciences)
- Maria Esteli Jarquin Solis (UK; Social and behavioural sciences)
- Nalini Joshi (Australia; Natural and formal sciences)
- Mobolaji Oladoyin Odubanjo (Nigeria; Life and medical sciences)

More information can be found <u>here</u>.

#### **Congratulations!**

#### 7. Awards and Honours

**Dmitry Storchak** (UK), IASPEI's 2nd Vice President (2023-2027), was awarded the Service Award (G) of The Royal Astronomical Society (RAS) for his longstanding dedication and support of the seismological community.

#### **Congratulations!**

#### 8. Meeting Calendar

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

#### February

- 24-28, IASPEI, Windhoek, Namibia, <u>4th General Assembly of the African Seismological</u> <u>Commission</u>

#### March

- 15-23, IUGG, IAPSO, Honolulu HI, USA, <u>ENSO (El Niño-Southern Oscillation) Winter School</u> 2025

- 23-25, IACS, Boulder CO, USA, <u>Bringing the Arctic Sea Ice Observational and Modelling</u> <u>Communities Together to Assess Sea Ice Loss and Its Impacts</u>
- 24-25, IAG, Online, <u>3rd Workshop of the Inter-Commission Committee on Geodesy for</u> <u>Climate Research</u>
- 24-28, IUGG, IAMAS, Cambridge, UK, Improved Simulations of the Stratosphere for Better Predictions of Weather, Climate and Extreme Events
- 31-4 April, IUGG SOUTH AFRICA, Cape Town, South Africa, <u>14th International Conference on</u> <u>Southern Hemisphere Meteorology and Oceanography</u>

## April

- 7-9, IAG, ISPRS, Karlsruhe, Germany, <u>6th Joint International Symposium on Deformation</u> <u>Monitoring (JISDM)</u>
- 7-11, IAVCEI, Hungary, Workshop of the Commission on Volcanogenic Sediments
- 23-26, IUGG, IAMAS, Beijing, China, <u>2025 International Symposium on Lightning Physics and</u> <u>Lightning Meteorology</u>

## May

- Tbc, IUGG, IAG, PAIGH, Mendoza, Argentina, <u>Topical School and Workshop in Latin America:</u> <u>Terrestrial Reference Framework and Atmospheric Monitoring. How to Achieve the</u> <u>Maximum Utilization of the GNSS Network?</u>
- Tbc, IUGG, IAMAS, ESA, ITU, Frascati, Italy, <u>Resilience to Natural Hazards Through AI</u> <u>Solutions</u>
- 4-9, IUGG, IASPEI, Castasegna, Switzerland, <u>QuakeHack: A Statistical Seismology Hackathon</u> for Early Career Scientists
- 5-16, IUGG, ICTP, Trieste, Italy, <u>6th Summer School on Theory, Mechanisms and</u> <u>Hierarchical Modelling of Climate Dynamics: Artificial Intelligence and Climate Modelling</u>
- 12-16, IUGG, IAGA, L'Aquila, Italy, Course on Cross-Scale Coupling of Heliophysics System
- 13-15, IAG, Wuhan, China, <u>3rd International Symposium of IAG Commission 4: Positioning</u> and Application
- 18-24, IAVCEI, Iceland, Field Workshop of the Volcano-Ice Interactions Commission
- 19-30, IACS, Karthaus, Italy, <u>Summerschool on Ice Sheets and Glaciers in the Climate System</u>
- 25-30, JpGU, Chiba, Japan, <u>JpGU Meeting 2025</u>

## June

- 2-6, IACS, IAG, IASPEI, Sidney BC, Canada, <u>2025 Glacial Isostatic Adjustment Workshop:</u> <u>Advancing Models and Observational Constraints</u>
- 8-16, IAVCEI, Lipari, Vulcano, Stromboli, Italy, <u>International School of Volcanology 'Working</u> on Active Volcanoes: Learning the Tools of Modern Volcanology'
- 9-13, UN, Nice, France, 2025 UN Ocean Conference
- 25-28, IUGG, UCPS, Shanghai, China, Science Symposium of the Union Commission on Planetary Science
- Tbc, IAVCEI, Catania, Italy, Workshop of the Commission on Tephra Hazard Modelling
- 29 June 4 July, IAVCEI, Geneva, Switzerland, <u>IAVCEI Scientific Assembly 2025</u>

## July

- 7-9, IAVCEI, IFRC, UNDRR, WMO, Geneva, Switzerland, Early Warning For All Workshop
- 9-11, IUGG, IAMAS, Abidjan, Ivory Coast, <u>21st Global Emission Initiative Conference</u>

<sup>- 27-2</sup> May, EGU, Vienna, Austria, EGU General Assembly 2025

- 15-18, IUGG, Incheon, Rep. of Korea, IUGG Business Meetings 2025
- 19-21, IAHS, Tokyo, Japan, 2nd International Sociohydrology Conference
- 20-25, IACS, IAMAS, IAPSO, Busan, Rep. of Korea, <u>IACS-IAMAS-IAPSO Joint Scientific</u> <u>Assembly 2025</u>
- 27-1 August, Singapore, AOGS, AOGS Annual Meeting 2025

#### August

- 16-22, ICA, Vancouver BC, Canada, <u>32nd International Cartographic Conference</u>
- 25-29, IUGG, IAGA, IASPEI, Lisbon, Portugal, 1st IAGA/IASPEI Early Career Scientists School
- 25-5 September, IUGG, ICTP, Trieste, Italy, <u>12th Workshop on the Theory and Use of</u> <u>Regional Climate Models</u>
- 31 August 5 September, IAGA, IASPEI, Lisbon, Portugal, <u>IAGA-IASPEI Joint Scientific</u> <u>Assembly 2025</u>

#### September

- 1-5, IAG, Rimini, Italy, IAG Scientific Assembly 2025
- 9-11, IAVCEI, Hveragerði, Iceland, <u>LASI VII Workshop on 'The Physical Geology of Subvolcanic</u> <u>Systems: Laccoliths, Sills and Dykes'</u>
- 14-18, IACS, Innsbruck, Austria, International Mountain Conference 2025
- 15-19, GFZ, Potsdam, Germany, <u>Potsdam Summer School 2025 Trajectories and Priorities</u> <u>for a Sustainable Future</u>

#### October

- Tbc, IUGG, IAMAS, Dakar, Senegal, Workshop on 'Data Science for Weather and Climate Research' and Training School on 'Climate Data Analysis and AI in the Global South'
- 5-12, IUGG, IAVCEI, Nicolosi, Italy, <u>10th Training School on Convective and Volcanic Clouds</u> (CVC) Detection, Monitoring and Modelling
- 5-10, IAHS, Roorkee, India, IAHS Scientific Assembly 2025
- 13-24, IUGG, ICTP, Trieste, Italy, <u>Workshop on the Deformation at the Intersection</u> <u>Between Physics of Earthquakes and Volcanic Processes</u>
- 19-22, GSA, San Antonio TX, USA, <u>GSA Connects 2025</u>

#### November

- 3-7, IUGG, GRC, Suva, Fiji, GeTEWS Oceania Joint Workshop

#### December

- Tbc, IUGG, IAPSO, Puerto Madryn, Argentina, 10th Oceanography Colloquium and 12th National Marine Sciences Conference
- 15-19, AGU, New Orleans LA, USA, AGU Fall Meeting 2025

#### Tbc

- Tbc, IUGG, IAMAS, Paris, France, Titan: 20-year Anniversary of Cassini-Huygens Mission

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Editors: Franz Kuglitsch, Mioara Mandea, Alexander Rudloff (Editor-in-Chief), and Kathy Whaler.