

## News at a Glance

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### 1. The First 100 IUGS Geological Heritage Sites



Figure 1. First 100 IUGS Geological Heritage Sites Event

**Zumaia (Basque Coast UNESCO Global Geopark), home of one of the most impressive stratigraphic outcrops on Earth, will host in October the presentation of The First 100 IUGS Geological Heritage Sites**

**Zumaia /26.09.2022.** The International Union of Geological Sciences (IUGS) is one of the World's largest scientific organizations with 121 national members representing over a million geoscientists. It is celebrating its 60th anniversary and the main IUGS 60th Anniversary Event will take place in Zumaia, Basque Coast UNESCO Global Geopark (Spain) with the presentation of *The First 100 IUGS Geological Heritage Sites* list. This announcement will kick off an endeavor to designate geological sites from around the world that are iconic, recognized by all geoscience community for their impact in understanding the Earth and its history.

The scientific community has long demanded the establishment of a global program with global standards for the recognition of geological heritage sites of high international importance. *The First 100 IUGS Geological Heritage Sites* is a great milestone that will inspire the work of this ambitious program.

An IUGS Geological Heritage Site is a key place with geological elements and/or processes of scientific international relevance, used as a reference, and/or with a substantial contribution to the development of geological sciences through history.

More than 200 specialists from almost 40 nations and ten international organisations, representing different disciplines of Earth Sciences, have participated in the definition of standards and the selection of candidates. 181 candidates from 56 countries were proposed and were evaluated by 33 international experts. The result of this challenging and collaborative process is the list of the First 100 IUGS Geological Heritage Sites that will be presented by most of the authors in Zumaia. The final program of the event is available at <https://geoparkea.eus/iugs-globalgeosites>



IUGS recognition of Geological Heritage Sites gives visibility to those sites. It identifies them as being of the highest scientific value. They are sites that served to develop the science of geology, particularly its early history. They are the world's best demonstrations of geologic features and processes. They are the sites of fabulous discoveries of the Earth and its history. Their visibility is greatly enhanced by IUGS recognition. Some of the sites are classic and known to almost all geologists and general public, but few geologists know most of the sites because of their diverse types and geographic settings. The announcement of the "First 100" and the attractive book and webpage will lead to many of the sites becoming known for the first time to large numbers of geologists and the public. Interest in individual sites will increase as will geo-visitors. Many of the "First 100" are well protected in national parks, geoparks, and natural reserves, but many are not. Recognition and visibility of the "First 100" IUGS Geological Heritage Sites can lead to their further appreciation, to their use as educational resources, and, most importantly, to their preservation.

The "First 100" aspires to be a memorable event that culminates in a spectacular celebration on October 25-28th in Zumaia, Basque Coast UGGp. Registration is available in [www.geoparkea.eus/iugs-globalgeosites](http://www.geoparkea.eus/iugs-globalgeosites). We hope to see you soon. Save the dates!

- [Programme \(pdf file\)](#)
- [Press release \(pdf file\)](#)
- [The First 100 IUGS Geological Heritage Sites Dossier \(pdf file\)](#)
- [Website of the Basque Coast Geopark](#)
- [This event in the IUGS60 website](#)

## 2.IUGS-Episodes

September issue of IUGS-Episodes is now online and is freely downloadable @ <https://www.episodes.org/main.html>

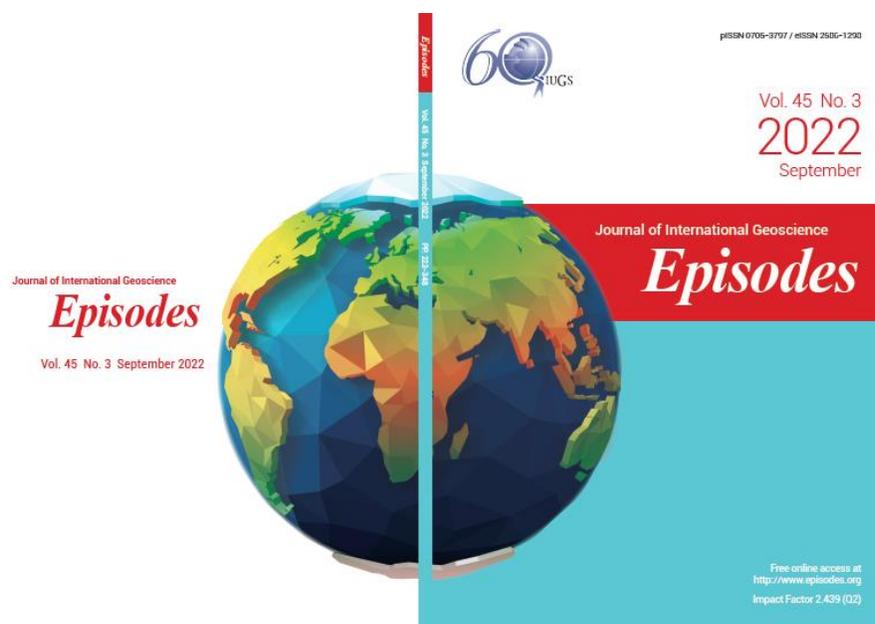


Figure 2. Cover page of Episodes

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September 2022  
Vol. 45, No. 3

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**Episodes**

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Figure 3. Contents of September 2022 issue of Episodes

**3. Deep Digital Earth (DDE) Forum (9 November 2022)**

co-organised by UNESCO, IUGS & DDE

UNESCO Headquarters, Paris, France

To know more open the link below:

[https://www.iugs.org/\\_files/ugd/f1fc07\\_8ef2fb21788d487f84078b2550a439d8.pdf?index=true](https://www.iugs.org/_files/ugd/f1fc07_8ef2fb21788d487f84078b2550a439d8.pdf?index=true)

**4. News from the Subcommittee on Permian Stratigraphy SPS**

On April 12, 2022 the webinar “Joining the Dots: Sequence Stratigraphy-Based Regional Geology” by Prof. Mike Simmons of Halliburton was organized live online through Zoom

<https://permian.stratigraphy.org/files/MS%20Permian%20120422%20Edit.pdf>

In August 2022, a new *Permophiles* issue has been released

<https://permian.stratigraphy.org/publications>

In August 2022, five new voting members have been selected based on their extensive experience in Permian stratigraphy: Annette Goetz, Landesamt für Bergbau, Energie und Geologie, Hannover, Germany; Sam Lee, School of Earth, Atmospheric and Life Sciences, University of Wollongong, Australia; Ana Karina Scomazzon, Universidade Federal do Rio Grande do Sul, Porto Alegre, Brazil; Elisabeth Weldon, School of Life and Environmental Sciences, Deakin University, Australia; Dongxun Yuan, School of Resources and Geosciences China University of Mining and Technology, Jiangsu China.

## 5. IUGS@60 News



- a. The IUGS [Earth Sciences Festival](#) starts next week. This comprises eight separate geoscience events ([six ticketed on Eventbrite](#)) as well as the Earth Futures Film Festival and the IUGS First 100 Geoheritage Sites event in late October.



Airing interview between IUGS President Professor John Ludden and Dr Jack Mathews one of the founders of International Geodiversity Day

**INTERNATIONAL GEODIVERSITY DAY**  
OCTOBER 6

Joint talk by Ass. Prof. Gurmeet Kaur, chair of IUGS Heritage Stone subcommission / Prof. Benjamin van Wyk de Vries IUGS Geosites subcommission  
"Understanding geodiversity and cultural evolution through stone heritage and geoheritage"

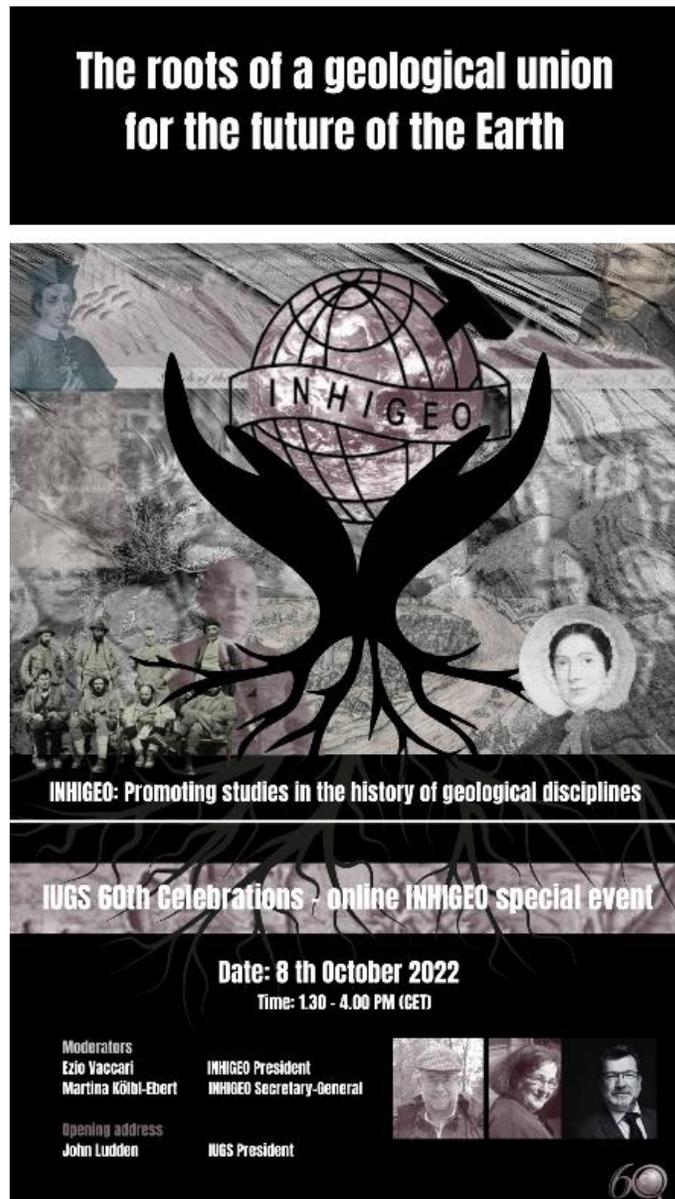
**Geodiversity in twenty-two stones**  
twenty-two stones significant in human culture as GHSR (IUGS – Global Heritage Stone Resources) - an IUGS video, made for the day with input from researchers around the world

**The International Stratigraphic Chart, sequencing geodiversity's universal code**  
Insights from Professor David Harper, head of the International Commission on Stratigraphy

An International Geodiversity Day message from the IUGS and it's constituent Commissions Programmes and Task groups

**Website Live on the Day: <https://iugs60.org/geodiversity/>**

- b. On the 6<sup>th</sup> October the IUGS is celebrating International Geodiversity Day (IGD). For this special event, we have a special [live mini-event](#), 1 hour of interactive talks on the Geodiversity of time, Geohertiage, Permian environments (analogues for climate change), and the Geodiversity of geothermal reservoirs. Visit our [website](#) on the day where we will be showing a series of interviews and short films on the theme of geodiversity, including interviews between the president of the IUGS John Ludden and IGD founder Dr. Jack Mathews and a very special collection of specially recorded videos documenting the geodiversity of our [heritage stone from around the world](#). Our colleagues from the IGCP will be hosting a tour of the geology garden of UNESCO HQ in Paris.



**The roots of a geological union  
for the future of the Earth**

**INHIGEO: Promoting studies in the history of geological disciplines**

**IUGS 60th Celebrations - online INHIGEO special event**

**Date: 8 th October 2022**  
Time: 1.30 - 4.00 PM (CET)

Moderators  
Ezio Vaccari  
Martina Kölbl-Ebert

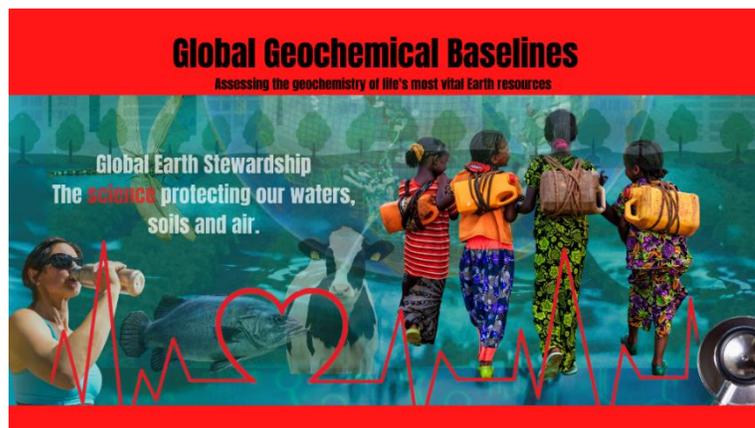
INHIGEO President  
INHIGEO Secretary-General

Opening address  
John Ludden

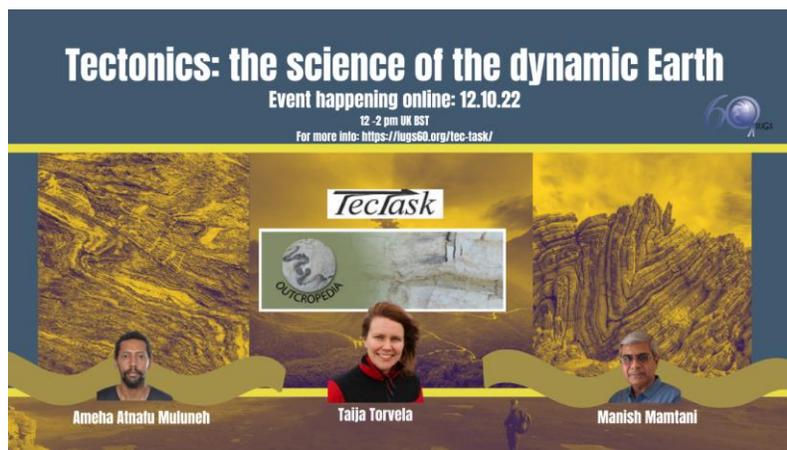
IUGS President



- c. On the 8<sup>th</sup> October we have an INHIGEO event named [Roots of a geological Union for the future of the Earth](#). In this 60<sup>th</sup> Anniversary year of the IUGS the team of historians at INHIGEO will be bringing together their experts from around the world, to talk about the origins of the IGC, IUGS and the changing topics of focus at the IGC's through time. Examining society's changing relationships with the geosciences and evolution of geoscience solutions presented at these IGCs addressing pressing global challenges of their time. It will pose the question of what role do the geological unions have in shaping the future of the planet. For more information, visit our [website](#).



- d. On the 10th October is the Commission on Global Geochemical Baselines (CGGB) event. [“A Planetary Health Check, Establishing Global Geochemical Baselines”](#) brings together geochemical experts to talk about the need to have accurate global geochemical baselines and will showcase the most recent CGGB’s [International Union of Geological Sciences Manual of Standard Methods for Establishing the Global Geochemical Reference Network](#). Guest speakers include Professor Mark Macklin and Professor Hassina Mori. Click here to obtain tickets to the [event](#).



- e. On the 12<sup>th</sup> October we have the [‘Tectonics: the science of the dynamic Earth Event’](#). Guest [talks](#) include “Splitting a continent: Deformation in the Ethiopian Rift, East Africa by Associate Professor Ameha Atnafu Mulneh, and “How do gold deposits form? Insights from structural geology” by Professor Manish Mamtani.

# Geoscience Solutions for Net Zero



In preparation for COP28 to be held in UAE Dubai in 2023, which has a focus on Technology, the IUGS working closely with: other geoscience unions, societies, academia, industry, geoscience communication experts, geoscience individuals and the public, together championing **Geoscience Solutions for Net Zero**.

## Public Online Event- 13.10.22

12-2.15 pm BST, **9 x short** talks by leading science, policy and energy experts  
2.15 pm-3.15 pm panel discussions  
3.15pm - 4pm roundtable breakout discussions

**2022 - A world of change** - reviewing progress since COP26 and energy mix perspective of what 2028 could hold  
Overview talk -  
Professor Mads Huuse, University of Manchester

**Sharing the science - pathways to progress**  
International Science Council - Alison Meston

**Geothics of Addressing a Climate Crisis**  
The International Association for Promoting Geothics (IAPG)

**The big geocommunications re-think**  
Leading a critical voice for geoscientists  
Head of COP27 Science Communication  
Professor Ian Stewart

**Exploring Geological Unions Role in Pursuing Net Zero**  
IUGS's President Professor John Ludden

**Exploring the case for Geological Net Zero**  
Professor Myles Allen and Team

**The Giants - the subsurface zero's**  
Exploring Geological Solutions:  
1) review of biological vs geological solutions with a focus on CCS  
A panel with Prof. Steve Brewer  
Shant Koushik, Professor of Carbon Capture Tech & Prof. the Offshore Geology, University of Exeter  
2) Nuclear (Ethel)  
3) Geothermal  
Overview by expert Dr. Saraah al-Jayak

2.30 - 3.15 pm Discussion panel with those staying on from talks + guests  
3.15 - 4.30 pm Breakout group round table talks with geosurveys/societies/unions/geological community



- f. The 13<sup>th</sup> of October welcomes the [Geosolutions for Net Zero event](#). This event will provide an overview of energy transition progress since COP26, geothics of advocacy for geosolutions, the geoscience communications re-build, the International Science Council's thoughts on science unions developing stronger climate solution advocacy rolls ahead of COP28, the concept of Geological Net Zero. [This event will culminate in both a panel and round table discussions](#) with participating geoscientists, Geounions, Geosocieties and Geosurveys as to the role of geounions in championing geological solutions to climate change and discussing who might like to join the IUGS in creating a roadmap of activities and global geological development goals to be raised at COP28.



**Extinctions and the Stratigraphical Record:  
Is the past the key to the present?**

Free online Event: 14.10.22 12-3 pm BST  
More information: <https://iugsgo.org/extinctions-event/>

Past Present Future

**Format:**

**Introduction:** by Professor David Harper, Chair of the International Commission on Stratigraphy

**Talks:** 6x15 min talks by global stratigraphic experts focusing on the great extinctions

Followed by a 1 hr **Discussion Panel** chaired by Professor Mike Benton, University of Bristol

More details coming shortly

Past Present Future

- g. On the 14<sup>th</sup> October the IUGS will be supporting the International Commission on Stratigraphy (ICS) in delivering a vibrant event the title of which is **‘Extinctions and the Stratigraphical Record: is the past key to the present?’** This event comprises six unique talks and a one-hour discussion given by global extinction experts. **The event** will focus on decrypting the great extinctions, key similarities and patterns that could possibly inform us about what Earth has in store for us. Chairing the talks is Professor Mike Benton. To find out more about this event please click **here**.



## 6. News from the IUGS Initiative on Forensic Geology (IFG)

### 5th Iberoamerican Conference on Forensic Geology, Bogota, Colombia

The fifth in the series of conferences on forensic geology in Latin America, has been confirmed to take place in Bogota, Colombia, 26-28 October 2022, will also include a meeting on the IUGS-IFG 'Special Project', which focuses on the contribution of forensic geology to investigate crimes in the international mining, minerals and metals industries. This is aimed at victims of conflict, NGOs, the UAN Community, individuals, judicial entities and the general community. The event is held in cooperation with: Unidad para La Construcción de Paz UAN (UniPAZ UAN), Red Iberoamericana de Investigadores Forenses (RIIF), The International Union of Geological Sciences (IUGS), Initiative on Forensic Geology (IFG). Participating countries include Argentina, Brazil, Chile, Colombia, Spain, United States, Guatemala, Italy, Northern Ireland, England, Mexico and Portugal.

<https://sites.google.com/uan.edu.co/seminarioiberoamericanogf/english?authser=0>

### Geophysics and the search for missing persons

Information and guidance on the applications of geophysics in police and law enforcement and references to case work can be found on the link below.

<https://geoforenses.com/2022/03/geofisica-nas-ciencias-forenses/>  
<https://igeologico.com.br/voce-sabe-o-que-e-geologia-forense-e-para-que-ela-serve/>

### Forensic Geology in Chile

The Student Chapters of the Initiative on Forensic Geology (IFG) are formed by undergraduate and graduate students in Geological, Geophysical, Geodesic or Oceanographic Sciences and who have a great interest in deepening their knowledge and skills in the area. IUGS-IFG Student Chapter has commenced collaboration with forensic geology students in Chile.

<https://geoforenses.com/student-chapters/>

### IUGS-IFG New Secretary Appointed

Following the retirement of Dr Marianne Stam (formerly California State Justice Department), Prof Duncan Pirrie (University of South Wales and Helford Geoscience) has been appointed as the IUGS-IFG Secretary. Prof Pirrie was previously the IUGS-IFG Special Publications Adviser, he is a highly experienced and internationally well respected forensic geologist.

### Scientific Luncheon, CAFSS, Australia

On 15 September 2022, Prof Rob Fitzpatrick, IUGS-IFG Vice-Chair, at the request of the Australian Forensic Soil Society (CAFSS) gave a presentation on real operational police and law enforcement cases held in Supreme Courts throughout Australia. Formed in 2003, CAFSS have conducted over 200 forensic investigations in counter terrorism, homicide, rape, kidnapping and major environmental crimes.

### Isotopes Used for Solving Crimes in Forensic Geology

Isotopes (atoms of the same chemical element that have the same number of protons and different numbers of neutrons), may be used to help investigate crimes, and is being advanced and develop in Brazil. This also includes the search for missing persons.

**5th Seminario Iberoamericano de Geociencias Forenses**  
ciencias forenses al servicio de la búsqueda de personas desaparecidas

**Dirigido a**  
Victimas del conflicto, ONGs, Comunidad UAN, particulares, entidades judiciales y comunidad general

**En cooperación con:**  
Unidad para la Construcción de Paz UAN (UniPAZ UAN), Red Iberoamericana de Investigadores Forenses (RIIF), The International Union of Geological Sciences (IUGS), Initiative on Forensic Geology (IFG)

**Países participantes**  
Argentina, Brasil, Chile, Colombia, España, Estados Unidos, Guatemala, Italia, Irlanda del Norte, Inglaterra, México y Portugal.

**Fecha**  
26 y 27 de Octubre 2022  
Sede: Federación, Bogotá - Colombia  
Calle 58 de No. 837-84

**Inversión**  
Comunidad UAN: \$12.000  
Particulares: \$16.000  
ONGs y víctimas del conflicto armado: Gratuito

**Inscripción**  
Presencial con transmisión Online

**28 de Octubre 2022**  
Sede: Sede Bogotá - Colombia  
Calle 14 de No. 21 Sur  
(Cajero restringido)

**Inscríbete Aquí**

**Link de inscripción**  
<https://sites.google.com/uan.edu.co/seminarioiberoamericanogf/english?authser=0>

**Mayores Informes:** unipazuan@uan.edu.co +57 322 856 08 70 +57 300 212 17 36





<https://geoforensics.com/2022/04/isotopos-como-ferramentas-para-resolucao-de-crimes/>  
<https://geoforensics.com/2021/09/isotopos-estaveis-e-a-busca-por-desaparecidos/>

#### **Professional opportunists and guidance in forensic geology**

Professional opportunities for students to enter the forensic geoscientist career can be found in the link below:

<https://geoforensics.com/estagios/>

#### **6. News from INHIGEO Anniversaries**

“Karst Phenomenon” 130 years ago

The Serbian Geoscientist Jovan Cvijić (1865–1927) and the emergence of karst geomorphology (Author: Johannes Mattes, Austria)

The Serbian geoscientist Jovan Cvijić (1865–1927) was the first to classify karst features and to propose a unified typology that is still widely in use to this day. His notable Ph.D. thesis “Das Karstphänomen” (The Karst Phenomenon, 1892), which he completed as a student of the world-renowned geographer Albrecht Penck (1858–1945) and geologist Eduard Suess (1831–1914) at the University of Vienna, is considered the starting point of karst geomorphology.

To know more open the links below:

<http://www.inhigeo.com/anniversaries.html>  
[http://www.inhigeo.com/anniversaries/Mattes, J. Karst Phenomenon 130 years ago.pdf](http://www.inhigeo.com/anniversaries/Mattes,_J._Karst_Phenomenon_130_years_ago.pdf)

**For the IUGS website:** A one-page concise text (up to about 500 words), if possible providing a web-link (e.g. to an IUGS activity website).

**Each contribution to the IUGS e-Bulletin, website and/or social media should be marked as to which target medium or media it should be published in. Each contribution should be sent, at the same time, to the following addresses:**

[gurmeet28374@gmail.com](mailto:gurmeet28374@gmail.com) (e-Bulletin Editor-in-Chief)  
[giuseppe.dicapua@ingv.it](mailto:giuseppe.dicapua@ingv.it) (Webmaster)  
[gurmeet28374@gmail.com](mailto:gurmeet28374@gmail.com) (Social Media Manager)

#### **Time Frame for submissions to the e-Bulletin:**

1. IUGS sends a reminder to leaders of activities in the last week of each month;
2. Contributions should be provided by the 16<sup>th</sup> day of every month.
3. IUGS will evaluate all submitted items in terms of urgency and will allocate these to the next monthly issue or a later issue and will also check that these comply with IUGS policy for publications and ethics;
4. The IUGS Publications Committee Team will aim to compile monthly e-Bulletin by the 25<sup>th</sup> day of the month and send it to the IUGS Secretariat;
5. The IUGS Secretariat will dispatch the e-Bulletin to the IUGS Community on, or before, the last day of each month;

This time frame may vary due to public holidays that affect the e-Bulletin Team and IUGS Secretariat such as Christmas and Chinese New Year.

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#### **NOTES**

- Please check the IUGS [Calendar of Events](#) for upcoming scientific meetings. If you require information on international conferences, meetings, etc. to be considered for inclusion in this Calendar please mail to: [giuseppe.dicapua@ingv.it](mailto:giuseppe.dicapua@ingv.it)
- To be added to or removed from the IUGS e-Bulletin distribution list, please mail to: [iugs.beijing@gmail.com](mailto:iugs.beijing@gmail.com) or [secretariat@iugs.org](mailto:secretariat@iugs.org).
- Follow the IUGS on Social Media! We are on [Facebook](#), [Twitter](#), and [LinkedIn](#).
- Check the IUGS website: <http://www.iugs.org/>

Edited by:

*Dr. Gurmeet Kaur, Panjab University, Chandigarh, India*

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