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## News at a Glance

1. **IUGS initiative for facilitating data-driven Earth science transformation: new article**
  2. **36<sup>th</sup> IGC: publications available**
  3. **News from IUGS- Geoscience Education, Training & Technology Transfer (COGE)**
  4. **News from IUGS Heritage Stones Subcommittee (HSS)**
  5. **News from the IUGS Initiative on Forensic Geology (IFG)**
  6. **International survey on Geoethics**
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### **1. New article introducing IUGS initiative for facilitating data-driven Earth science transformation**

A new article co-authored by IUGS President Qiuming Cheng and IUGS Past President Roland Oberhaensli is published by the Geological Society of London (GSL) as a special paper in a volume of RFG2018 which contains papers based on the materials presented at the RFG2018 on “Changing Roles of Geological Surveys”. The session was attended by about 20 Geological Survey Organizations (GSOs) with a focus on frontiers of earth sciences and the roles of GSOs for supporting the UN 2030 SDGs. The article by Cheng et al. in the volume introduces the principle and evolution of the IUGS new initiative big science program. It demonstrates the necessity of the new program and international collaboration for facilitating frontiers of Earth science in response to digital revolutionary. It elaborates on the main opportunities and benefits of utilizing data-driven approaches in geosciences and the challenges in facilitating data-driven earth science transformation. It encourages the geoscience community to work collectively to support the Deep-time Digital Earth (DDE), the first IUGS big science program. The DDE aims to facilitate the transformation of Earth science research from human learning to integration of human learning and AI, including machine learning (ML), as well as from known questions seeking answers to formulating as-yet unknown questions with unknown answers.



You can read and/or download the article at:

<https://sp.lyellcollection.org/content/early/2020/05/13/SP499-2019-158>

How to cite the article:

Cheng Q. et al., 2020, A new international initiative for facilitating data-driven Earth science transformation. In HILL, P. R., LEBEL, D., HITZMAN, M., SMELROR, M. & THORLEIFSON, H. (eds) *The Changing Role of Geological Surveys*. Geological Society, London, Special Publications, 499, <https://doi.org/10.1144/SP499-2019-158>.



Fig. 1 - Issues addressed by geoscientists are closely related to the UN 2030 Sustainable Development Goals.

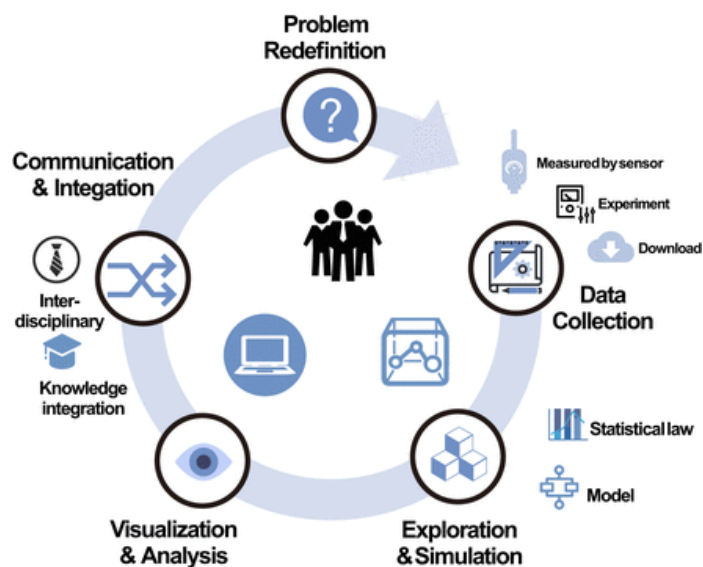


Fig. 2 - Integration of main components of data, model, algorithms, data mining processes, computer network and people in supporting data-driven knowledge discovery.



## 2. 36<sup>th</sup> IGC: publications available

The 36<sup>th</sup> IGC scheduled between March 2 and 8, 2020 had to be cancelled unexpectedly and deferred to a later date in the wake of the global Covid19 pandemic. Subject to the normalization of the global situation the Congress has been rescheduled for November and the tentative dates have been agreed by the IUGS. Meanwhile, several major publications supposed to be formally released in the first week of March at the 36<sup>th</sup> Congress have now been published. These are available on-line and the IUGS members and their colleagues can freely download these articles for their personal use. The links are provided below



- Proceedings of the Indian National Science Academy, Vol 86 (1), March 2020 (the official report of the IUGS Indian National Committee submitted to the IUGS, in conjunction with the 36<sup>th</sup> IGC):
  - Part I: Editors: D.M.Banerjee, A.K.Jain, Somnath Dasgupta, Sunil Bajpai
  - Part II and Tectonic Map - Editors: A.K. Jain and D.M.BanerjeeBoth parts are available [here](#).
- The Geodynamic Evolution of the Indian Subcontinent: 36<sup>th</sup> IGC Legacy Volume. Editors: Faredduddin et al. Episodes Vol. 3, No.1, March 2020. Available online at the journal website <http://www.episodes.org>.
- Tectonics of Indian Subcontinent. Authors: A.K.Jain, D.M.Banerjee, Vivek Kale. Springer. Available at: [https://link.springer.com/chapter/10.1007/978-3-030-42845-7\\_1](https://link.springer.com/chapter/10.1007/978-3-030-42845-7_1).



### 3. News from IUGS- Geoscience Education, Training & Technology Transfer (COGE)

The first of the Earthlearningidea online teacher education workshops, is now available at: [https://www.earthlearningidea.com/home/Teaching\\_videos\\_workshops.html](https://www.earthlearningidea.com/home/Teaching_videos_workshops.html). It was developed from one of the Earth Science Education Unit (ESEU) professional development workshops for teachers.

You can access the above link and take part in the new online professional development workshop for teachers, "The dynamic rock cycle". The online version has been developed from an Earth Science Education Unit workshop which gave extremely high evaluation data and changed teaching in schools. Follow the teaching videos of all the activities to become part of the worldwide audience. Other workshops will follow. More information [here](#).



Figs. 3, 4, 5, 6, 7, 8 - Workshop activities in action from the Earthlearningidea photo gallery at: [https://www.earthlearningidea.com/home/Photo\\_gallery.html](https://www.earthlearningidea.com/home/Photo_gallery.html).



#### 4. News from IUGS Heritage Stones Subcommittee (HSS)

##### *Second Workshop on Heritage Stones postponed*

Organizers regret that, due to uncertainty connected to the global pandemic crisis for Covid 19, the Second International Workshop on Heritage Stones had to be postponed. The new period for the workshop is scheduled for 27<sup>th</sup> of September to 1<sup>st</sup> of October 2021 (the exact dates to be confirmed: however, the workshop will last 3 days in total). Abstract submission is extended to the 1<sup>st</sup> of April 2021. Previously received abstracts will be taken into account for the workshop in 2021 and, if required, can still be updated through the abstract submission webpage until the new deadline (shown above).

Abstract submission webpage is available at:

[http://www.diati.polito.it/focus/workshop\\_on\\_heritage\\_stones/abstract\\_submission](http://www.diati.polito.it/focus/workshop_on_heritage_stones/abstract_submission)

##### *IUGS Heritage Stone Subcommittee at EGU 2020*

HSS organized live chat session at EGU on May 07, 2020. Chat ERE5.2 Heritage Stones: Global relevance vis-à-vis architectonic heritage, co-organized by EOS8, with Convener: Gurmeet Kaur, Co-conveners: David Martin Freire-Lista, Paola Marini had fifteen abstracts. The live chat session was joined by 24 participants. It was a fruitful session as it led to sharing of ideas on heritage stones from different countries and it aroused curiosity and queries from those who participated.

To know more: <https://meetingorganizer.copernicus.org/EGU2020/displays/34726>

##### *New book*

The HSS has published a new book within the Series Natural Stone and World Heritage. Authored by Gurmeet Kaur and collaborators, the book is a product from the IGCP project, as part of the Book Series. It is dedicated to the heritage stones which were used in the making of the architectural heritage of Delhi and Agra, encompassing UNESCO world heritage sites and heritage sites designated as prominent by the Indian government. The most famous





monument of the two cities is the 'Taj Mahal' of Agra. The book will be soon available for online purchase.

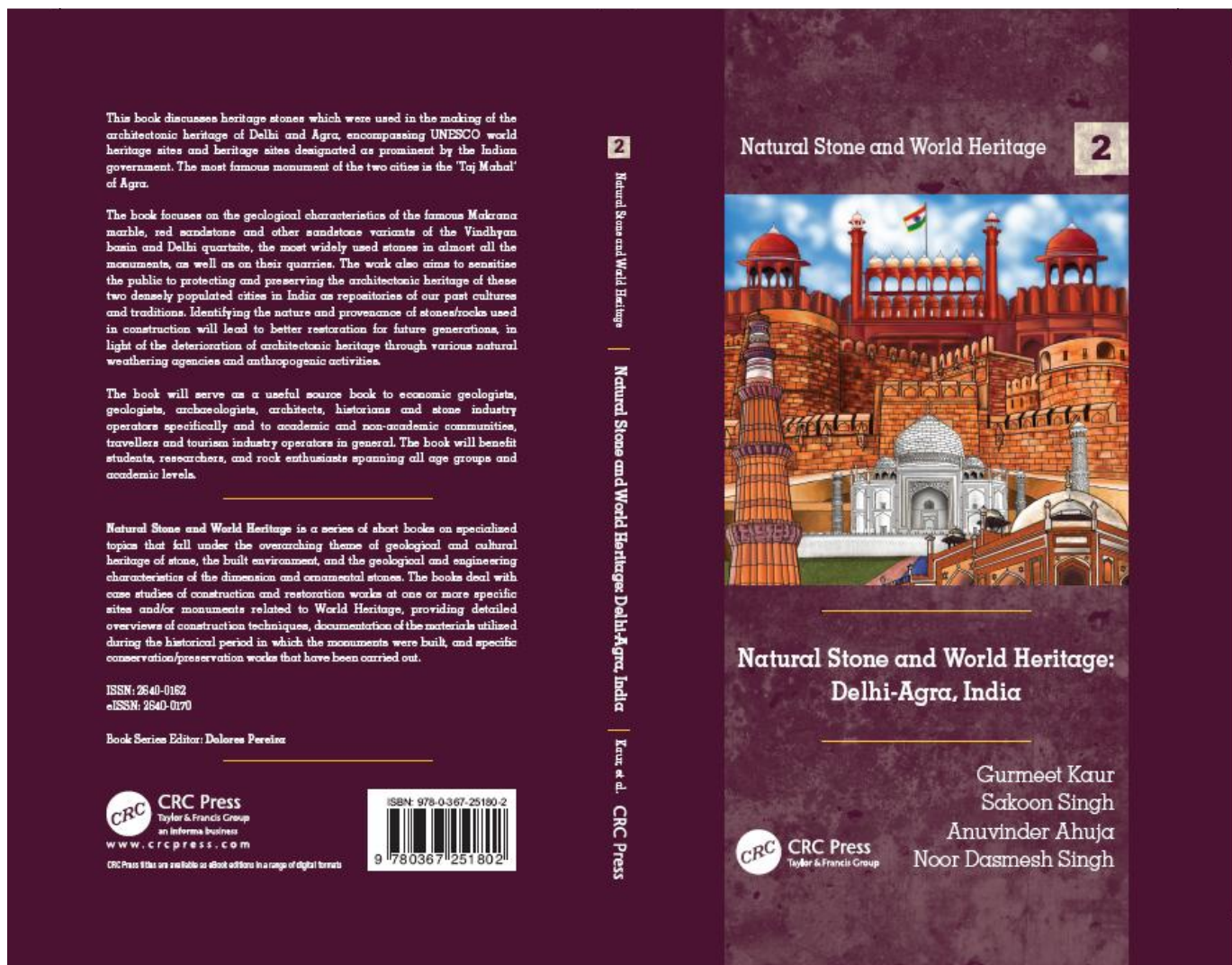


Fig. 9 - Cover of the book "Natural Stone and World Heritage: Delhi-Agra, India".



*Outstanding Student Poster Presentation for the IUGS-HSS correspondent*

Parminder Kaur, PhD student at the department of Geology of Panjab University, India, and correspondent of the Heritage Stones Subcommittee, has received the award Outstanding Student Poster Presentation at the Energy, Resources & the Environment (ERE) Virtual Division Meeting, that took place the 7 May 2020 during the EGU 2020 meeting.



## Outstanding Student Poster Presentation

The European Geosciences Union presents the OSPP award to



# Parminder Kaur

for the presentation entitled

**"Jaisalmer Golden Limestone and Sandstone: A Heritage Stone Province from the Desert of Western India"**

presented at the EGU General Assembly 2019 in Vienna.

Fig. 10 - Certificate of the Parminder Kaur's award.



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

### *Proceedings for Forensic Geology in Mexico*

IUGS-IFG has produced proceedings, comprising abstracts for the 4<sup>th</sup> Iberoamerican Seminar on Forensic Geology, which was held in Puerto Vallarta, Mexico, in October 2019. This took place in association with; Reunion Annual de la Unión Geofísica Mexicana (RAUGM); Universidad Antonio Nariño (Colombia); the Brazilian Federal Police and Forensic Geoscience (Italy). A copy of the proceedings is available from Dr Laurance Donnelly (IUGS-IFG Chair) ([geologist@hotmail.co.uk](mailto:geologist@hotmail.co.uk)) and Prof Carlos Martin Molina Gallego (IUGS-IFG Officer for Latin America) ([martin.molina@uan.edu.co](mailto:martin.molina@uan.edu.co)). The proceedings will become available on the IUGS-IFG web site

### *Forensic Geology Soil Collection in Mandarin*

In 2019, IFG supported a FBI led training video on the collection of soil for the provision of geological trace evidence, available on YouTube at <https://youtu.be/o9dWZOj1U5A>.

This video now includes sub-titles in Mandarin and will be uploaded onto the IUGS-IFG new web site, when completed. The translation was completed by Prof Guo Hongling (IFG Officer for China) and Prof Wang Ping, Institute of Forensic Science, Ministry of Public Security, in China.

### *New IFG Web Site Confirmed*

The IFG web site is in the process of being updated and upgraded. The new website is expected to be available later in 2020 and will be hosted by Queens University Belfast, UK.

### *United Kingdom National Crime Agency (NCA)*

Several UK based members of IUGS-IFG continue to be registered with the NCA as Expert Advisers (Forensic Geologists) and provide operational support to the British police.





International Union of Geological Sciences (IUGS),

Initiative on Forensic Geology (IFG)

4th Iberoamerican Seminar on Forensic Geosciences

Puerto Vallarta, México, 27 to 29 October 2019



RAUGM 2019  
GEOCIENCIA Y SOCIEDAD

Fig. 11 - Front Cover: Proceedings for 4<sup>th</sup> Iberoamerican Seminar on Forensic Geology in Mexico.



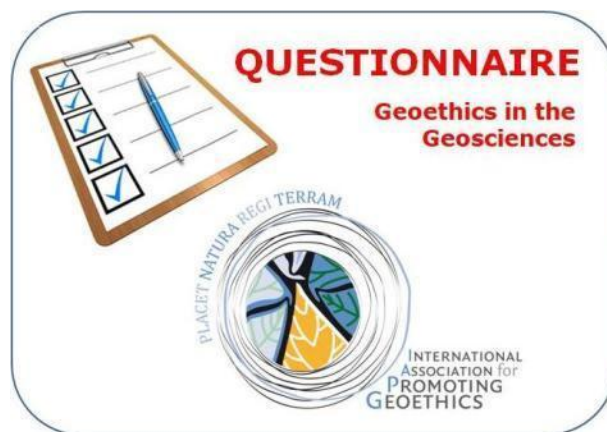
## 6. International survey on Geoethics

The IAPG - International Association for Promoting Geoethics (<http://www.geoethics.org>) has launched an international survey entitled "Geoethics in the Geoscience", aimed at investigating the geoscience community's perception about the importance of the ethical and social aspects in geoscience research and practice.

The survey has been partially funded by the IUGS through the annual fund allocation to the IAPG.

All the members of the geoscience community are invited to fill in the questionnaire at: <https://form.jotformeu.com/93223788145362>

Compilers can decide to fill in the questionnaire anonymously. No personal data or information related to private life are requested.





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## EDITORS' NOTES:

### CONTRIBUTING TO THE IUGS E-BULLETIN, WEBSITE AND SOCIAL MEDIA

IUGS wishes to improve the co-ordination of the publication of information on **news, events and achievements** arising from IUGS activities (**not science reports or papers**). All IUGS Commissions, Task Groups, Initiatives and IGCP projects are requested to provide a steady flow of material. Contributions from Adhering Bodies will also be welcomed.

To aid co-ordination and standardization, IUGS has introduced a preferred format and a monthly timetable.

#### Format of submitted material:

Contributors should provide:

**For the E-Bulletin:** 2 or 3 sentences with between 1 and 3 illustrations (photographs, diagrams etc.) with captions as separate .jpg, .gif or .png files with a resolution of 150 dpi; optimally accompanied, by:

**For the website:** a concise text of about 0.5 to 1 A4 page (up to about 600-700 words), if possible providing a web-link (e.g. to an IUGS activity website).

The short text in the E-Bulletin will be hyperlinked to any longer text which will be placed on the IUGS website. Items that are not in reasonably good English will be returned for improvement. Others will be edited for use of English if necessary. If proposed contributions are too long, they will be returned for shortening. All images must, if necessary, be copyright-cleared before submission.

**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:**

[silvia.peppoloni@ingv.it](mailto:silvia.peppoloni@ingv.it)  
[giuseppe.dicapua@ingv.it](mailto:giuseppe.dicapua@ingv.it)  
[gurmeet28374@gmail.com](mailto:gurmeet28374@gmail.com)

(E-Bulletin Editor-in-Chief)  
(Webmaster)  
(Social Media Manager)





## Timetable:

The idealized timetable for the E-Bulletin is:

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 that month (**items arriving after that date cannot be included in the next monthly issue**);
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 Team will aim to compile that month's 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;
6. Long versions of material will be posted on the IUGS Website in coordination with the publication of the relevant E-Bulletin.

This timetable will be varied, as necessary, to allow for public holidays that affect the E-Bulletin Team and IUGS Secretariat such as Christmas and Chinese New Year.

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## NOTES

- If you require notices, information on publications, etc. to be considered for inclusion in forthcoming IUGS e-bulletins, please mail to: [silvia.peppoloni@ingv.it](mailto:silvia.peppoloni@ingv.it).
- Please check the IUGS [Calendar of Events](#) for upcoming scientific meetings this coming month. 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. Silvia Peppoloni (IUGS, INGV)

*English review by:* Prof. Jennifer McKinley (IUGS-IFG, IAMG)

[www.iugs.org](http://www.iugs.org)