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## News at a Glance

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### 1. IUGS President Elected Foreign Member of the Academia Europaea

Prof. Cheng Qiuming, IUGS President and Member of the Chinese Academy of Sciences, has been elected Foreign Member of the Academia Europaea (the Academy of Europe) following a rigorous peer review process in recognition of his outstanding research in mathematical geosciences and mineral exploration. Prof. Sierd Cloetingh, President of the Academia Europaea, sent a congratulatory letter to Prof. Cheng Qiuming for his election.

The Academia Europaea (formed in 1988) is the pan-European academy of science, humanities and letters, with a membership of over 4000 eminent scholars, drawn from all countries of Europe, and all disciplines, nationalities and geographical locations. Amongst them are seventy-two Nobel Laureates, several of whom were elected to the Academia before they received the prize. Membership invitations are made only after peer group nomination, scrutiny and confirmation as to the scholarship and eminence of the individual in their chosen field. Election is confirmed by the Council of the Academia.

With a long engagement in mathematical geosciences research, Prof. Cheng Qiuming created the singularity theory as well as non-linear theory and method for quantitative assessment and prediction of mineral resources, which have been widely used across the globe. He has received several prestigious awards including the William Christian Krumbein Medal, the highest award given by International Association for Mathematical Geosciences (IAMG). In recent years, Prof. Cheng Qiuming has been greatly promoting the transformation of traditional earth science research to data-driven earth science research and championing



the IUGS Big Science Program – Deep-time Digital Earth (DDE). He has endeavoured to establish an extensive and effective international cooperation network in close cooperation with ISC, UNESCO, academia and the industry to advocate scientific openness and social sharing with an aim to increase the contribution of earth sciences in supporting the UN Sustainable Development Goals and the global science and technology advancement.



Fig. 1 - IUGS President Qiuming Cheng at the first meeting of the Committee for Science Planning (CSP) at ISC headquarter in Paris, on January 29, 2020.





## 2. IUGS INHIGEO Anniversaries

### *Scientific Examination of the Falun of Touraine, 300 Years Ago*

A 1720 report by the French naturalist Réaumur on an enormous deposit of fossil shells in Touraine, helped intensify scientific attention to provide evidence for the former presence of the sea over presently inhabited land. This paper, presented to the Paris Academy of Sciences and printed in its annual *Mémoires* (appearing in 1722), was highlighted by the Academy's Secretary, Fontenelle, whose discretion in selecting several researches for summary and comment in the accompanying *Histoire* gave him opportunities to explain their significance to a wider audience. Turning aside any possibility of attributing these great deposits to the Flood, both Réaumur and Fontenelle interpreted the huge accumulation of fossils in actualistic terms, as the consequence of ordinary natural processes acting over a prolonged period. Réaumur's study and Fontenelle's commentary may be seen in retrospect as serving to catalyse a growing conviction that aspects of the



Fig. 2 - Portrait of R. A. F. de Réaumur. Engraving by Philippe Simonneau, from painting by Alexis-Simon Belle. Image from Wikimedia Commons. Wellcome Images.



Earth's history — and specifically past configurations of land-sea relations — might gradually be uncovered by robust examination of remnants like the Touraine *Falun*.

More information [here](#).

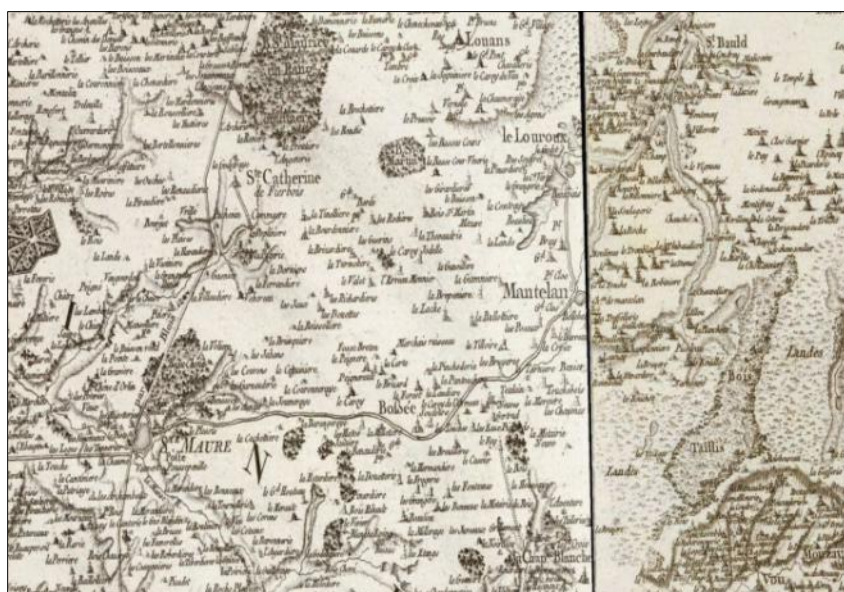


Fig. 3 - Detail from the famous eighteenth-century Cassini map showing the location of the falun discussed by Réaumur. He reported it extended from Sainte-Maure to Mantelan, and included the parishes of Sainte-Catherine de Fierbois, Louans, and Bossée. The area is approximately 15–20 Km south of Tours. César François Cassini, Carte de France levée par ordre du Roy, no. 66 (Richelieu – Saumur), 1765. Courtesy of David Rumsey Map Collection, David Rumsey Map Center, Stanford Libraries.



Fig. 4 - Portrait of B. Le B. de Fontenelle. Detail from portrait by Nicolas de Largillière. From Wikimedia Commons. Musée des Beaux-Arts de Chartres.





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

#### *IFG Commences a 'Special Project' on Crimes in Minerals, Mining and Metals*

The Initiative on Forensic Geology (IFG) has started a 'Special Project', which has been awarded by the IUGS and will focus on the 'Forensic Geological Analysis of Crimes in International Mining, Minerals and Metals'. Civilisation could not exist, as we know it, without the minerals upon which it relies. However, there is a global growing crime problem. Mining-related crime includes, but is not restricted to: (i) illegal mining beyond regulatory control, (ii) fraud, (iii) theft, (iii) adulteration of mineral concentrates or processed metals, (iv) the substitution of samples ahead of assaying, (v) the mining and trading of conflict minerals, (vi) mineral smuggling and (vii) fakery. The scale of such criminal activity is at present poorly documented, but is suspected to take place around the world and is linked to serious and organised crime cartels, terrorist organisations and some political regimes. As a result, mining crime, can directly or indirectly affect many parts of society. The project will last for two years and aims to report its findings in 'Episodes'. If you would like further information about the Special Project, or would like to contribute to it, please contact Laurance Donnelly (geologist@hotmail.co.uk) or Duncan Pirrie (duncan.pirrie@southwales.ac.uk). We are particularly interested in hearing from geologists working in the global mining and minerals industry.

#### *Forensic Geology Training, International Commission on Missing Persons (ICMP), Bogota, Colombia*

IUGS-IFG provided training in forensic geology with the ICMP in Bogota, Colombia. This included an introduction to forensic geology, the collection and analysis of geological trace evidence (soils, minerals, rocks and fossils) and anthropogenic materials. Training in search was provided based on the development of a conceptual geological model (CGM). Field training in Colombia included the use remote sensing, aerial photography, geomorphology and geophysics. Care was taken to avoid areas where there were suspected antipersonnel mines. A simulated grave using a pig, within the campus of the Antonio Nariño University,



gave the opportunity for the search strategy and geophysical instruments to be demonstrated. Operational cases were referenced of searches for missing persons in Colombia including the positive results obtained at a cemetery in Granada, Meta, in Colombia.

#### *Establishment of a Forensic Geology Sub-Group in Brazil*

A sub-group on forensic geology (known as the 'Student Chapter') has been established in Brazil by students to create an academic network for the development of forensic geology. This is supported and endorsed by IUGS-IFG. Further information can be found on the web site link: [Geoforense.com](http://Geoforense.com) The 1<sup>st</sup> Brazilian Geoforensic Webinar and Virtual Workshop be held from 30 November to 4 December 2020, called 'Exploring Advances in Forensic Geoscience'. This will be supported by IFG including the delivery of key presentations.

#### *Geological Society of London (GSL) Forensic Geoscience Group (FGG) Webinar, December 2020*

GSL-FGG plans to host a joint two-day meeting on forensic geology, with the GSL Near Surface Geophysics Group (NSGG) and in collaboration with IUGS-IFG, on 1-2 December 2020), which will include webinar facilities.



Figs. 5 and 6 - Illegal, artisanal mining in Colombia (Photos: Dr Laurance Donnelly).





Figs. 7, 8 and 9 - Geophysical prospecting with electric tomography, as part of training delivered by IUGS-IFG in Colombia, with the International Commission for Missing Persons (ICMP), a simulated grave using a pig (Photo: Carlos Molina Gallego) and finding of victims of the armed conflict in a cemetery ([www.fiscalia.gov.co](http://www.fiscalia.gov.co)).



Fig. 10 - Logos associated with the Brazilian Sub-Group on Forensic Geology, associated with IUGS-IFG (The Student Chapter).



Figs. 11 and 12 - Extract from the website [Geoforense.com](http://Geoforense.com) (The Brazilian Sub-Group on Forensic Geology, associated with IUGS-IFG (The Student Chapter)).





## Exploring advances in Forensic Geosciences

It is with great honor and joy that we announce the **1st Brazilian Geoforensic Virtual Workshop**, which will take place between November 30th and December 4th, 2020, in a complete online environment.

Supported by the Initiative on Forensic Geology (IUGS-IFG), the meeting will gather national and worldwide forensic geoscientists that plays a major role on their fields of expertise. The goal is to set forth the latest achievements and advancements on Soil Forensics, Forensic Geophysics, Environmental Forensics, Forensic Ecology, Forensic GIS, and Forensic Isotopes.

The webinar will held lectures and short courses designed for academics and professionals that aims to improve their knowledge on the subject. Save the date and be our guest on the 1st Brazilian Geoforensic Virtual Workshop!

### ORGANIZATION



### NGO TO DONATE



### SUPPORT



Fig. 13 - Extract from flier on the 1<sup>st</sup> Brazilian Geoforensic Webinar and Virtual Workshop be held from 30 November to 4 December 2020.



#### 4. UNESCO/IUGS International Geoscience Programme (IGCP) Project 685: an update

[Geology for Global Development](#) is pleased to announce the development of a short, open-access module on 'Geoscience and Sustainable Development', as part of their contribution to the [UNESCO/IUGS International Geoscience Programme \(IGCP\) Project 685](#). This project recognises the increasing demand for the inclusion of sustainability concepts into geoscience teaching within higher education, as well as the impact of Covid-19 on the means of delivering learning resources. The module will have approximately eight classes, with themes including the SDGs, working in Global South contexts, decarbonisation, disaster risk reduction, water security, global health, sustainable urban development, and reducing inequalities. The resources will be available free-of-charge to all in early September, via their [website](#). This activity was supported by an IUGS grant to Geology for Global Development, and IGCP Project 685. Read more [here](#).



Fig. 14 - Educational Resources Banner





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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 are also 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:**

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(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/>

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