

# **IUGS - International Union of Geological Sciences**

## **Activities' Report - Year 2019**

**Prof. Rodolfo Carosi**

### **1. Introduction**

Founded in 1961, the International Union of Geological Sciences (IUGS) is one of the largest and most active scientific NGOs in the world. IUGS promotes and supports the study of geological problems of global interest and facilitates cooperation and interdisciplinarity in Geological Sciences. One of the major bodies of the International Science Council, the IUGS has more than 110 member nations and represents more than fifty scientific associations.

### **2. Main activities carried on by (Union name) during 2019 relevant for Italy and for CNR**

The activities of the IUGS Commissions are the basis of the daily work of geologists, in Italy and worldwide. Nomenclatures, classifications, regulatory parameters, analytical procedures, protocols - the so-called geostandards - are studied and conventionally established by the IUGS Commissions. If geologists from all over the world speak a common language and can effectively compare the results of research and professional and industrial activities, it is because, for over half a century, IUGS has mobilized a large number of geologists in an attempt to encourage discussion and consent.

As part of the TecTask Commission (Tectonics and Structural Geology) activities -in collaboration between the University of Turin, Catania and Aberdeen- an international YORSGET congress was planned to be held in Sicily in June 2020, but with the evolution of the emergency Covid-19 was postponed to June 2021.

A meeting of the TecTask Commission was held in Turin on May 31, 2019 with the participation in presence of some members (including R. Carosi, M. Mantani and S. Iaccarino) and via online connection with others, for the discussion of the Commission's core activities and future prospects. The new activities for the diffusion of the knowledge of Tectonics and Structural Geology through the Outcropedia portals (for the outcrops) and the TecTask YouTube channel (for the monthly seminars) are giving excellent feedback in terms of thousands of people involved both in Italy and abroad.

From 2 to 5 July 2019 the international STRATI 2019 congress was held in Milan promoted by the International Commission of Stratigraphy (ICS-IUGS) ([www.strati2019.it](http://www.strati2019.it)). The congress saw a strong participation of high scientific level. ICS and related subcommittees were held within the congress to discuss problems related to improving the geological time scale, a very important tool in Geosciences.

In addition to representing an international consensus platform in geological practices, IUGS is active in identifying and stimulating potentially emerging disciplines. For example, in recent years IUGS activities have brought to international attention two new and important disciplines, such as Medical Geology and Forensic Geology. Even in this case, it is difficult to identify the effects – even if considerable - of the various IUGS activities at individual nations' level. However, we can consider the founding of the Association of Medical Geology and the Association of Forensic Geologists as a fallout at the national level of IUGS activities. The intense activity aimed at promoting and spreading Geoethics both nationally and internationally should be noted with the active participation of Italian researchers (Silvia Peppoloni and Giuseppe Di Capua).

### **3. Activities carried on by the Italian Delegate within the Union during 2019 and impact on the Italian scientific community**

As the Italian delegate at the IUGS, I have disseminated communications from the *Executive Committee* and the *Secretariat*. Most importance is the attention of the Italian community in the creation of geoparks and the contribution to the endorsement of Italian scientists for IUGS commissions and awards.

The Commission has appointed the seven members of the Italian official delegation within the 36th ICG of Delhi 2020, which includes two members of this commission: S. Monechi and R. Carosi.

There was an intense Italian participation both in organizational and scientific terms (proposal of scientific sessions, session chairs, talks, poster keynotes etc.) at the 36th ICG in Delhi 2020. Unfortunately, in conjunction with the onset of the worldwide emergency Covid-19 the 36th ICG of Delhi 2020 was postponed to November 2020.

### **4. Evaluation of the participation in terms of benefits and membership cost**

It is practically impossible to evaluate the direct benefits of participating in the IUGS. The Union's activity is basic and irreplaceable for researchers from the various disciplines of Earth Sciences, geological services, analysis laboratories, and professionals and even for students of geological disciplines. From this point of view, the economic support to the IUGS coming from CNR -as well as from the various Academies, Geological Services, Ministries, and research bodies of the over one hundred member countries- must be seen and interpreted as a support for a basic and widespread international activity, essential for the entire global system of research in the field of Earth Sciences.

### **5. Evaluation of Italians' attendance and how to improve interest and involvement**

The Italian community has always been significantly involved in the various IUGS activities, both at an organizational and scientific level. Regarding the Italian participation in the IGCP (IUGS-UNESCO) international scientific cooperation program, Project 641 - Deformation and fissuring caused by exploitation of subsurface fluids (2015-2019) sees prof. Pietro Teatini (University of Padua) as co-leader. Italian researchers participated during 2019 in the activities of five other IGCP projects.

### **6. Italian experts with important roles within the Union or within related Commissions and Programs (if known)**

Italian representatives are part of the main management bodies of the IUGS, namely the Bureau and the Executive Committee, and chair or participate in the activities of various IUGS Committees and Commissions. Italy currently has two representatives on the Executive Committee, made up of ten members. Together with Germany, it is the only Country with two representatives. As for the IGCP international scientific cooperation program (IUGS / UNESCO), a project is currently directed by an Italian researcher (see point 5).

William CAVAZZA  
IUGS Vice-President

Rosa Maria DI MAGGIO  
Officer for Europe, Initiative on Forensic Geology

Silvia PEPPOLONI  
IUGS Councillor

Maria Rosa PETRIZZO  
Chair, Cretaceous Subcommission of the IUGS International Commission on Stratigraphy

Isabella RAFFI  
Chair, Neogene Subcommission of the IUGS International Commission on Stratigraphy

Carlo Alberto RICCI  
IUGS Delegate to SCAR (Scientific Committee on Antarctic Research)

Simonetta MONECHI  
Chair, Paleogene Subcommission of the IUGS International Commission on Stratigraphy

Ezio VACCARI  
Vice-President, IUGS Commission on the History of Geological Sciences

Igor M. VILLA  
Chair, IUGS Task Group on Isotope Geology and Geochronology

Rodolfo CAROSI  
Chair, IUGS commission on Structural Geology and Tectonics (TecTask)

During the last two EC-IUGS meetings in Beijing 2019 and Busan 2020, Italy has been one of the Countries with the largest participation in IUGS initiatives both in terms of number of researchers and presence in the top roles of various bodies.

- **Lucia Angiolini**, Milano, Secretary, ICS Subcommission on Permian Stratigraphy
- **Gabriella Bagnoli**, Pisa, Voting Member, ICS Subcommission on Cambrian Stratigraphy
- **Marco Balini**, Milano, Past Chair and Voting Member, ICS Subcommission on Triassic Stratigraphy
- **Rodolfo Carosi**, Torino, Chair, Commission on Tectonics and Structural Geology (TECTASK)
- **William Cavazza**, Bologna, Vice President, International Union of Geological Sciences
- **Rodolfo Coccioni**, Urbino, Voting Member, ICS Subcommission on Paleogene Stratigraphy
- **Carlo Corradini**, Calgiari, Vice-Chair, ICS Subcommission on Silurian Stratigraphy, Voting Member, ICS Subcommission on Devonian Stratigraphy
- **Perri Maria Cristina**, Bologna, Voting Member, ICS Subcommission on Devonian Stratigraphy
- **Jaume Dinares-Turel**, Gainesville, Roma, Voting Member, ICS Subcommission on Paleogene Stratigraphy
- **Francesca Falzoni**, Milano, Secretary, ICS Subcommission on Cretaceous Stratigraphy
- **Annalisa Ferretti**, Modena, Voting Member, ICS Subcommission on Stratigraphic Classification
- **Piero Gianolla**, Ferrara, Voting Member, ICS Subcommission on Stratigraphic Classification
- **Silvia Iaccarino**, Parma, Voting Member, ICS Subcommission on Neogene Stratigraphy
- **Fabrizio Lirer**, Napoli, Voting Member, ICS Subcommission on Quaternary Stratigraphy
- **Rosa Maria Di Maggio**, Rome, Officer Europe, Initiative on Forensic Geology
- **Pietro Teatini**, Padova, Co-Leader IGCP Project 641, Deformation and Fissuring Caused by Exploitation of Subsurface Fluids
- **Paolo Mietto**, Padova, Voting Member, ICS Subcommission on Triassic Stratigraphy
- **Simonetta Monechi**, Firenze, Chair, ICS Subcommission on Paleogene Stratigraphy
- **Alda Nicora**, Milano, Voting Member, ICS Subcommission on Triassic Stratigraphy
- **Giorgio Pennacchioni**, Padova, member, Commission on Tectonics and Structural Geology
- **Salvatore Iaccarino**, Torino, member, Commission on Tectonics and Structural Geology
- **Silvia Peppoloni**, Rome, Councilor (beginning 2018), International Union of Geological Sciences
- **Maria Rose Petrizzo**, Milano, Chair, ICS Subcommission on Cretaceous Stratigraphy, Secretary, ICS Subcommission on Stratigraphic Classification
- **Isabella Raffi**, Chieti Scalo, Chair, ICS Subcommission on Neogene Stratigraphy
- **Ausonio Ronchi**, Pavia, Voting Member, ICS Subcommission on Permian Stratigraphy
- **Lorenzo Rook**, Firenze, Voting Member, ICS Subcommission on Neogene Stratigraphy
- **Caludia Spalletta**, Bologna, Voting Member, ICS Subcommission on Devonian Stratigraphy
- **Robert Tomas**, Ispra, Council Member, Commission for the Management and Application of Geoscience Information
- **Elena Turco**, Parma, Secretary, ICS Subcommission on Neogene Stratigraphy
- **Ezio Vaccari**, Varese, Vice President, International Commission on History of Geological Sciences
- **Gian Battista Vai**, Bologna, Voting Member, ICS Subcommission on Neogene Stratigraphy

## **7. If Union with CNR Commission, short summary about the 2019 CNR Commission activities**

The CNR-IUGS Commission was reconstituted with the CNR President's provision (no. 37 of 1<sup>st</sup> April 2019) and will remain in office until 31 December 2022. Members of the new Commission are: Dr. Daniela Di Bucci, Prof. Carlo Doglioni, Dr. Massimo Frezzotti, Dr. Biagio Giaccio, Prof. Simonetta Monechi, Prof. Isabella Raffi, Dr. Guido Ventura, Dr. Marco Amanti, Prof. Carlo Baroni, Dr. Giacomo Corti, Dr. Antonello Provenzale.

Prof. William Cavazza and Prof. Silvia Peppoloni IUGS Liaison.

The Commission met in Rome at the CNR headquarters on 7 November 2019 and elected the undersigned as President and Dr. Biagio Giaccio as Scientific Secretary of the Commission.

The Italian National Commission of the IUGS publishes an annual report on the International Geoscience Program (IGCP) in electronic format that is distributed to the entire scientific community of Earth Sciences through the Italian Geological Society. The report reaches over 2,000 geoscientists.

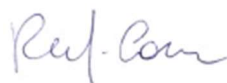
The Commission does not directly organize dissemination activities for scientific culture. However, some members of the Commission participated in the organization of the 2019 edition of the "Week of Planet Earth" (month of October), a series of events aimed at promoting awareness of geological issues among the general public developed simultaneously on the whole National territory. The latest edition of the week, which is now annual, included more than 160 events and the participation of over 60,000 people.

As Members of the CNR-IUGS Commission, dr. Daniela Di Bucci, dr. Massimo Frezzotti and dr. Guido Ventura (delegated by Prof. Carlo Doglioni) participated at the Workshop "State of the art and perspectives in the predictability of natural events" held in Rome at CNR on 26-27 November 2020. The CNR-IUGG (International Union of Geodesy and Geophysics) Commission organized the Workshop with the aim of discussing on forecasts of various natural phenomena, understanding the differences in approaches, talking about terminology and dealing with what is done in different research areas.

## **8. Conclusions**

The perception diffused in the Italian community of Earth Sciences is that IUGS plays a fundamental role in the definition of geostandards used by the global geological community (stratigraphic, structural and petrographic nomenclature, definition of stratotypes, laboratory constants, etc.). Knowledge of other important IUGS activities in the field of knowledge transfer, geoeducation, promotion of geological knowledge in developing Countries, as well as in certain specific international research projects is not equally widespread. Regarding the dissemination of knowledge, some Italian researchers belonging to TecTask (Rodolfo Carosi and Salvatore Iaccarino) have started the monthly publication of seminars on Tectonics and Structural Geology on a special You Tube channel. They have also started the revision of the Outcropedia platform dedicated to the knowledge of best outcrops of rocks of considerable interest through the geolocation of images on a digital topographical basis. Again, in the TecTask area, an updated glossary/vocabulary of Tectonics and Structural Geology (wikiterminology) was edited.

The Commission intends to promote this knowledge in order to further stimulate Italian participation in specific projects.



Turin, 30<sup>th</sup> April 2020