



**Geology for a sustainable  
management of our Planet**

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## PATRONAGE



## SPONSORS



## CHARITY PARTNER



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## Workshop nell'ambito della Cerimonia di Apertura 2 settembre 2024, ore 17:00

Aula Magna Attilio Alto  
Campus Universitario Ernesto Quagliariello - Bari

### La geologia per la società: l'importanza della comunicazione, così difficile, così necessaria



Christopher Jackson  
(BBC)  
Geoscience Communication  
During the Energy Transition



Özlem Adiyaman Lopes  
(UNESCO)  
Geology and the  
Sustainable Development Goals



Luigi Bignami  
(FOCUS)  
Geologia: quanto bella e  
affascinante...ma quanto  
difficile raccontarla



Emilio Casalini  
(RAI 3)  
Raccontare la bellezza per  
imparare a riconoscerla e a  
condividerla

Progetto Euroseeds UNIBA S63 - Patrimonio naturalistico  
e turismo culturale ed escursionistico in aree protette (pa.na.c.e.a.)

Divulgazione dei concetti  
di "sviluppo sostenibile"  
e di "conservazione e gestione  
della geo/bio-diversità"



## PLENARY SESSIONS

Tuesday 3<sup>rd</sup> September 2024

Aula Magna [14.45 - 15.30]

F. Javier Hernández Molina - Spanish Research Council (CSIC)

### Contourites and mixed depositional systems: a paradigm for deepwater sedimentary environments



Along-slope bottom currents and a series of secondary oceanographic processes interact at different scales to form sedimentary deposits referred to as contourite and mixed (turbidite-contourite) depositional systems. Recent proliferation of both academic and industry research on deep-marine sedimentation documents significant advances in the understanding of these systems, but most non-specialists remain unaware of the features in question and how they form.

Contourites and mixed depositional systems represent a major domain of continental margin and adjacent abyssal plain sedimentation in many of the world's oceans. They also appear in Palaeozoic, Mesozoic and Cenozoic stratigraphic sections. The growing interest in these systems has led to a refined but still evolving understanding of them. In addition to resolving their exact origins and evolutionary trajectories, research must also continue to ascertain their role in deep-sea ecosystems, geological hazards, environmental policy and economic development. Key gaps in understanding persist regarding their formation, their function in oceanographic systems and their evolution over time.

This Plenary Session summarises current conceptual paradigms for contourite and mixed depositional systems, lists global geographic examples of these systems and discusses their identification and interpretation in terms of diagnostic features as they appear in 2D and 3D seismic datasets and at sedimentary facies scale. It also considers the role that bottom currents play in shaping the seafloor and controlling the sedimentary stacking patterns of deepwater sedimentary successions.

The growing interest in, and implications of, contourite and mixed depositional systems demonstrates that these systems represent significant deep-marine sedimentary environments. Combined efforts of researchers, industry partners and policy-makers can help advance understanding and responsible stewardship of deepwater depositional systems.

## PLENARY SESSIONS

**Wednesday 4<sup>th</sup> September 2024**

Aula Magna [14.45 - 15.30]

Karen Hudson-Edwards - University of Exeter, Penryn, UK

### Sustainable mining of critical raw materials: opportunities and obstacles for geoscientists



The 'green' energy transition away from carbon-based fuels is driving a resurgence in mining because Earth materials are needed in renewable technologies such as battery-driven vehicles, solar panels and wind turbines.

These technologies require specialist materials, many of which are known as Critical Raw Materials (CRMs). CRMs have high economic importance and a high supply risk. Variable CRM lists have been defined by different countries and regions (US, EU, Canada, Australia, etc.) but the lists often include metals such as Li, Co, REE and tungsten, and materials such as graphite and fluorspar.

Globally, significant exploration and development of CRM deposits is in progress, with the aim of mining many of these to increase the supply of CRMs. To reduce the negative aspects of mining, and to respond to pressures from consumers, many companies have adopted a 'sustainable mining' policy to undertake mining that is profitable and maximises the flow of resources into circulation while protecting the environment and human rights and health.

This presentation outlines opportunities and obstacles for geoscientists with respect to sustainable mining of CRMs. Opportunities include developing geomodels for previously understudied CRM orebodies and working in multidisciplinary teams to deliver innovation technologies and procedures along the whole mining value chain for the industry.

Time constraints and integration of natural, engineering and social science research are some of the obstacles that will be discussed. Overall, geoscientists have a major leading role to play in the global sustainable mining of CRMs.

## PLENARY SESSIONS

**Thursday 5<sup>th</sup> September 2024**

Aula Magna [14.45 - 15.30]

Elisabetta Erba - Università di Milano

### The birth of the modern ocean and its first 180 million years of crises, speciations and extinctions



Along with diatoms, cyanobacteria and dinoflagellates, coccolithophores are responsible for primary productivity, energy transfer, export of biogenic particles, and exchanges with the atmosphere. Coccolithophores are the most abundant calcifying organisms in the oceans, and their fossils are key for tracking global climate-ocean changes.

The rise of coccolithogenesis is a profound ecological innovation in the ocean ecosystem. Early Triassic nannofossils from South China help understand the circumstances prompting (or allowing) phytoplankton to mineralize calcite, marking the birth of the modern ocean. Coccolithophore origination shortly after the Permian mass extinction reset marine ecosystems, forcing biota to adapt to extreme climatic and chemical conditions and novel niches. The onset of coccolithogenesis began a long and successful evolutionary trajectory that influenced oceanic ecosystem dynamics, biochemical processes, and sedimentation. The geological history of coccolithophores indicates Mesozoic evolution characterized by increasing diversity, punctuated by speciations, extinctions, and turnovers that led to 25 coccolith/nannolith families and 5 groups Incertae sedis, peaking before the end-Cretaceous mass extinction.

Times of accelerated rates or drops in nannofossil diversification correlate with global changes in the geo-sphere, hydrosphere, and atmosphere, linking evolutionary patterns to environmental perturbations. Significant events in Mesozoic nannoplankton evolution align with changes in CO<sub>2</sub> concentrations, nutrient availability, ocean chemistry, and climate. Global environmental changes are interconnected with geological processes, and biosphere evolution should be linked to the Earth's interior. However, it is challenging (and contentious) to single out causes triggering coccolithophore evolution and calcification; a combination of environmental changes likely drives evolutionary innovations and stability.

Mesozoic coccolithophore biodiversity and calcification patterns can assess their resilience: calcareous nannoplankton as a whole showed high resistance to global disturbances maintaining diversity, while individual taxa varied in resilience. Calcification patterns reveal moderate to lowered resilience, with species-specific sensitivity and resistance: timing, magnitude, and recovery dynamics aids understanding the impacts of current global changes and thresholds leading to ecological crises. Improved chronology of paleobiological and geological events is crucial for understanding evolutionary processes.

## SPONSOR COMMUNICATIONS



**Tuesday 3<sup>rd</sup> September 2024**

Aula Magna [14.30 - 14.45]

Federico Foria & Serena Pantaneschi

L'analisi qualitativa e quantitativa del rischio geomorfologico e la sua gestione tramite sistemi di allertamento lungo le infrastrutture ferroviarie



**Wednesday 4<sup>th</sup> September 2024**

Aula Magna [14.30 - 14.45]

Marco Antonucci

Digital classroom for petrology and mineralogy



**Thursday 5<sup>th</sup> September 2024**

Aula Magna [14.30 - 14.45]

Maura Pellegrini M. & Meike Fischer

Carbon isotope analyses on dissolved inorganic carbon of seawater samples: Sample preparation and analysis using the GasBench Plus system



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# Understanding the fundamental processes that shape the universe



**ZEISS Microscopy Solutions for Geoscience**



Seeing beyond

## PANEL DISCUSSION

Thursday 5<sup>th</sup> September 2024

Aula I [13.30 - 14.30]

Fabrizio Berra (Università degli Studi di Milano Statale)

Michele Lustrino (Università di Roma, La Sapienza)

### **Where are geosciences going? Experiences and proposals to disseminate the geological knowledge and to increase attractiveness of geology courses**

Share the different experiences and their results in promoting geosciences, focussing on their efficiency in increasing the attractiveness of the different levels of geology courses. Comparison of the numerous, but not always coordinated, initiatives proposed by different university and scientific associations. Identification, on the basis of the different experiences, of the most efficient initiatives towards different target audiences, identifying those activities recognizable as best practices.

# Town Hall Meeting

Perforazione scientifica in aree oceaniche  
e continentali: partecipazione, ricerca e  
comunicazione nell'ambito della comunità  
italiana delle Geoscienze



3 settembre 2024

17.30 - 19.30

Atrio Cherubini - Politecnico di Bari

L'evento mira a condividere alcune delle numerose esperienze dei ricercatori italiani  
nell'ambito dei programmi IODP e ICDP attraverso brevi presentazioni e poster.  
Seguirà un piccolo aperitivo.

Partecipazione libera e aperta a tutti gli interessati!

## SESSION LIST (WHERE & WHEN)

- S1. Geobiological and geochemical approaches in the study of bioconstructions and microbe-mineral interactions: new tools for modern and ancient environmental reconstructions and bio-remediation

Oral Session

Aula A

Poster Session

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- S2. The global challenge of plastic pollution: causes, impacts and solutions

Oral Session

Aula D

Poster Session

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▷ Wednesday 4<sup>th</sup> pag. 101

- S3. Antarctica and the Arctic: unveiling the geological past and future evolution of polar regions

Oral Sessions

Aula G

Poster Session

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▷ Thursday 5<sup>th</sup> [11.00-13.00] pag. 130

- S4. Chemostratigraphy through time and space: Reconstruction of palaeoenvironment and palaeoclimate by using geochemical proxies and isotopes

Oral Session

Aula E

Poster Session

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- S5. Geosciences for Cultural Heritages

Oral Sessions

Aula A

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- S6. Geosciences on display: the role of Natural History Museums in the future of our planet

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Aula A

Poster Session

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- S7. Vibrational spectroscopy studies of geomaterials: case studies and new perspectives

Oral Sessions

Aula N

Poster Session

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**■ S8. Geodiversity, Geoheritage and Geotourism: wondering about awareness for a sustainable planet**

- Oral Sessions  
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- Poster Session  
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▷ Wednesday 4<sup>th</sup> pag. 102

**■ S9. Advances in remote sensing for hazard monitoring and geo-resource management through multi-dimensional digital models**

- Oral Sessions  
Aula M  
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- Poster Session  
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**■ S10. The role of multidisciplinary approach in the geochemical study of natural systems**

- Oral Session  
Aula E  
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- Poster Session  
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**■ S11. BACK TO THE FUTURE. History of geological studies and mapping as a key for sustainable development**

- Oral Sessions  
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- Poster Session  
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**■ S12. Field and digital geological mapping: the numerous facets of CARG project from crystalline basement to sedimentary deposits**

- Oral Sessions  
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- Poster Session  
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**■ S13. Geomorphology in the Anthropocene: from human-landscape interaction to geoheritage and geohazard management issues**

- Oral Session  
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- Poster Session  
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**■ S14. Interoperable and multiscale geological data-analysis for landscape evolution monitoring by applying innovative remote sensing technologies**

- Oral Sessions  
Aula M  
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- Poster Session  
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**■ S15. Analysis and management of coastal areas, from risk assessment to perspectives arising from new technologies**

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**■ S16. Geomaterials for a Sustainable Development**

- Oral Sessions  
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**■ S17. Advanced minero-chemical characterization and processing of waste for a conscious reuse**

- Oral Sessions  
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**■ S18. Geosciences for the characterization, exploration and exploitation of primary and secondary mineral resources**

- Oral Sessions  
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- Poster Session  
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**■ S19. Environmental mineralogy and sustainable development**

- Oral Session  
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- Poster Session  
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**■ S20. High-resolution chemical and textural imaging techniques as analytical tools in Earth Sciences**

- Oral Session  
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**■ S21. Mineralogy behind Earth processes: insights from the atomic to the macroscopic scale**

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**■ S25. Landslide monitoring, modelling, and prediction: bridging new tools and data to the 'slope-failure model' perspective**

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**■ S26. Sinkholes vs. land subsidence: assessment of the geological hazards and impacts on environment and society**

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**■ S27. Caves, mines and other underground spaces as field laboratories in environmental geology**

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**■ S28. Experiences of data sharing and use in the frame of Research Data Infrastructures**

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**■ S29. Multidisciplinarity and numerical modelling: a comprehensive approach for upcoming Geosciences**

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**■ S30. Women in Geosciences: a journey through the social changes from the past to present and future scenarios**

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**■ S31. The art of Geosciences communication**

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**■ S32. Geosciences at school 2024**

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**■ S33. Fossil record, paleoenvironment and climate change throughout the Neogene and Quaternary Earth history**

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**■ S34. A petrologic journey through the lithosphere**

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**■ S35. New frontiers of Planetary Geology**

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**■ S36. Challenges in the characterization of active faults: the contribution from seismology, geodesy, and structural analysis**

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**■ S37. Carbonate platform systems: records of palaeoenvironmental change**

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**■ S38. Frontiers in the regional geology of the Apennines: a multidisciplinary perspective**

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**■ S39. Open session on Stratigraphy and Sedimentology**

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▷ Thursday 5<sup>th</sup> pag. 169**■ S40. Source-to-sink processes and genesis of resources in sedimentary deposits: advances in understanding of geologic and environmental dynamics through a multidisciplinary perspective**

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▷ Wednesday 4<sup>th</sup> pag. 113▷ Wednesday 4<sup>th</sup> [11.00-13.00] pag. 89**■ S45. Recent advances in karst research, with particular focus on underground waters**

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▷ Wednesday 4<sup>th</sup> pag. 115**■ S46. Sustainable raw material supply to boost the green and digital transition: the role of mineral waste recovery and recycling**

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Aula B

▷ Tuesday 3<sup>rd</sup> [15.30-17.30] pag. 49

Poster Session

Poster Area

▷ Tuesday 3<sup>rd</sup> pag. 65**■ S48. Multidisciplinary Approaches to 3D Geological Modelling: Uncertainty mitigation for basin analysis and geological applications**

Oral Sessions

Aula C

▷ Thursday 5<sup>th</sup> [15.30-17.30] pag. 148

Poster Area

Poster Session

**■ S49. Multidisciplinary approaches to the geometric and kinematic definition of seismogenic faults**

Oral Sessions

Aula B

▷ Thursday 5<sup>th</sup> [08.30-10.30] pag. 128

Poster Session

Poster Area

**■ S50. Unveiling earthquake mechanics, from field to laboratory based approach**

Oral Session

Aula B

▷ Wednesday 4<sup>th</sup> [17.30-19.30] pag. 99

Poster Session

Poster Area

▷ Wednesday 4<sup>th</sup> pag. 116**■ S51. Unveiling the long-lasting evolution of active margins from field to micro-scale**

Oral Sessions

Aula B

▷ Wednesday 4<sup>th</sup> [08.30-10.30] pag. 80

Poster Session

Poster Area

▷ Wednesday 4<sup>th</sup> [11.00-13.00] pag. 90▷ Wednesday 4<sup>th</sup> pag. 116**■ S52. Open session on volcanic processes**

Oral Session

Aula D

▷ Tuesday 3<sup>rd</sup> [15.30-17.30] pag. 50

Poster Session

Poster Area

▷ Tuesday 3<sup>rd</sup> pag. 66**■ S53. Open Poster Session**

Poster Session

Poster Area

▷ Tuesday 3<sup>rd</sup> pag. 67



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## ■ S6. GEOSCIENCES ON DISPLAY: THE ROLE OF NATURAL HISTORY MUSEUMS IN THE FUTURE OF OUR PLANET

Conveners and Chairpersons: Rosarosa Manca (Università di Firenze), Maura Fugazotto (Università di Catania), Luca Bellucci (Università di Firenze), Daniela Mauro (Università di Pisa)

Tuesday 3<sup>rd</sup> September 2024 [08.30-10.30]

### Aula A

#### ► 6-1 08.30 - 09.00

[KEYNOTE] Barbagli F.: What is the role of Natural History Museums in the future of our planet?

#### ► 6-2 09.00 - 09.15

Senesi M. & Fino M.: The mineralogical and petrographic collections of the Regional Museum of Natural Sciences in Turin, Italy: a dazzling journey through the wonders of nature

#### ► 6-3 09.15 - 09.30

Benvenuti M., Barbagli F., Fabrizi L., Manca R. & Moggi Cecchi V.: An "enlightened" museum of Nature, Art and Science. Rediscovering Specola 250 years after its foundation

#### ► 6-4 09.30 - 09.45

Contessi M., Balzani R., Fanti F., Caruso C. & Managlia A.: From a XIX century museum to a 3D digital experience: the challenges of making a geological museum appealing to modern audience

#### ► 6-5 09.45 - 10.00

Michelletti F., Coppola G., Fanelli G., Fornelli A., Montenegro V., Santarcangelo S., Semeraro V., Venisti N. & Monno A.: Museums for the development of inclusive education practices: a case study in the Earth Sciences Museum - University of Bari Aldo Moro

#### ► 6-6 10.00 - 10.15

Spironello M.Y., Majorana S., Barone G. & Fugazzotto M.: A multi-sensory experimental laboratory for Earth Sciences at the Museum of Sicilian Knowledge and Mirabilia of the University of Catania

#### ► 6-7 10.15 - 10.30

Terranova E., Casati S., Bosio G., Di Cencio A., Pieri A. & Collareta A.: "Fauglia... un mare di anni fa": a new palaeontological exhibition and an example of valorization of the palaeontological heritage in the Fauglia Municipality (Pisa Province, Italy)

## ■ S9. ADVANCES IN REMOTE SENSING FOR HAZARD MONITORING AND GEO-RESOURCE MANAGEMENT THROUGH MULTI-DIMENSIONAL DIGITAL MODELS

Conveners and Chairpersons: Rosa Colacicco (Università di Bari), Eugenio Fazio (Università di Catania), Giovanni Forte (Università di Napoli), Marco La Salandra (Università di Bari), Miller Zambrano (Università di Camerino), Martina Zucchi (Università di Bari)

Tuesday 3<sup>rd</sup> September 2024 [08.30-10.30]

### Aula M

#### ► 9-1 08.30 - 09.00

[KEYNOTE] Tavani S., Corradetti A., Rizzo R. & Seers T.D.: Measuring geological surfaces in virtual outcrop models

#### ► 9-2 09.00 - 09.15

Lippolis E., Spalluto L. & Tropeano M.: A 3D model to enhance, study and make an inaccessible quarry "virtually accessible": the example of Cava Porcili (Minervino, southern Italy)

#### ► 9-3 09.15 - 09.30

Spadaro A., Piras M., Grasso N., Lollino P., Parisi A. & Giordan D.: The role of advanced surveying technologies for geomechanical analysis of artificial caves: the case study of Gravina in Puglia (Puglia region, Southern Italy)

#### ► 9-4 09.30 - 09.45

Russo D., Fazio E., Fiannacca P., Vento S., Portale S. & Cirrincione R.: Digital field mapping of granitoid outcrops: a study case of late Variscan granitoids from Michelino Beach, Capo Vaticano Promontory (southern Calabria)

#### ► 9-5 09.45 - 10.00

Foletti M.G., Menegoni N., Poggi E., Maino M. & Benedetti G.: Development of innovative digital methods for assessing the stability of rock masses in the context of railway infrastructure

#### ► 9-6 10.00 - 10.15

Marsico A., Colacicco R., La Salandra M. & Capolongo D.: Monitoring badland features and dynamics through LiDAR and UAV technology

#### ► 9-7 10.15 - 10.30

Minervino Amodio A., Gioia D., Corrado G., Abate N., Masini N., Lasaponara R. & Schiattarella M.: Monitoring and quantifying soil erosion rates using LiDAR data and soil erosion models in a Post-Fire area: the Pisticci (Italy) case study

## ■ S11. BACK TO THE FUTURE. HISTORY OF GEOLOGICAL STUDIES AND MAPPING AS A KEY FOR SUSTAINABLE DEVELOPMENT

Conveners and Chairpersons: Alessio Argentieri (Città metropolitana di Roma Capitale), Rossella De Ceglie (Università di Bari), Paolo Macini (Università di Bologna), Marco Pantaloni (ISPRA), Carla Petrocelli (Università di Bari)

Tuesday 3<sup>rd</sup> September 2024 [08.30-10.30]

### Aula N

#### ► 11-1 08.30 - 08.45

Sabato L.\*: Maria Matilda Ogilvie Gordon: the "Lady of Dolomite", a pioneer of geological surveying and more...

#### ► 11-2 08.45 - 09.00

Cofano A.\* & De Ceglie R.: The "Signora" of limnology. Rina Monti: geological experience, ecosystem protection and the impact of human activity

#### ► 11-3 09.00 - 09.15

Romano M.\* & Chiocci F.L.: The woman who painted the ocean floor: celebrating Marie Tharp's legacy

#### ► 11-4 09.15 - 09.30

Innamorati G.\*, Fabbi S., Romano M. & Argentieri A.: One against all: fifty years after the geological scheme of Calabria by Leo Ogniben (1973)

#### ► 11-5 09.30 - 09.45

Macini P.\*, Mesini E. & Argentieri A.: Reflection vs. refraction seismic: Tiziano Rocco and the development of applied geophysics in Italy

#### ► 11-6 09.45 - 10.00

Garzarella A.\*: Military geology and historical archives: from De Ambrosis' monographs to Bulow-Krantz-Sonne's Wehrgeologie, the role of geology in the Second World War

#### ► 11-7 10.00 - 10.15

Musumeci D.\*, Branca S., Ingaliso L., Baumann B., Briole P., Cirrincione R., Corsaro R.A., Monaco C., Napolitani M. & Privitera F.: The Der Aetna and the studies on Etna by Sartorius von Waltershausen (1809-1876)

#### ► 11-8 10.15 - 10.30

Rosati A.\*, Sabato L. & Tropeano M.: Staring into the abyss: the unfathomable true age of the Earth or how to reshape the way we perceive Time

## ■ S12. FIELD AND DIGITAL GEOLOGICAL MAPPING: THE NUMEROUS FACETS OF CARG PROJECT FROM CRYSTALLINE BASEMENT TO SEDIMENTARY DEPOSITS

Conveners and Chairpersons: Laura Tomassetti (ISPRA), Attilio Sulli (Università di Palermo), Diego Pieruccioni (ISPRA)

Tuesday 3<sup>rd</sup> September 2024 [08.30-10.30]

### Aula C

#### ► 12-1 08.30 - 08.45

Cipriani A.\*, Fagioli C., Capotorti F., Consorti L., Fabbi S., Muraro C., Pampaloni L., Prinzi E.P. & Tomassetti L.: Towards a lithostratigraphic correlation of Mesozoic-Cenozoic carbonate platform-to-basin successions of central and southern Apennines: insights from the CARG Project

#### ► 12-2 08.45 - 09.00

Amadio S.\*, Barattolo F., Bravi S., Cesarano M., Angiolilli D., Auciello E., Boscaino M., Girardi G., Randisi A. & Pappone G.: The Jurassic-Miocene Apenninic limestones in southern Matese: biostratigraphy and sedimentary evolution from geological mapping of the Sheet 418 Piedimonte Matese

#### ► 12-3 09.00 - 09.15

Rossi G.\*, Cipriani A. & Fabbi S.: Jurassic evolution and paleogeography of the Fiastrone gorge (Marche, Italy): new data from detailed geological mapping

#### ► 12-4 09.15 - 09.30

Foti A.\*, Cianflone G. & Dominici R.: New geological evidence in the Miocene successions of the eastern part of the Catanzaro Strait (Calabria-Southern Italy)

#### ► 12-5 09.30 - 09.45

Innamorati G.\*, Fabbi S., Notaro A., Tancredi S. & Santantonio M.: New constraints on the southernmost portion of the Ligurian and Sub-Ligurian Domains: insight from the Sheet "363" Civitavecchia

#### ► 12-6 09.45 - 10.00

Bruno L.\*, Cicala M., Festa E., Marroccoli M., Parisi A., Sabato L., Tropeano M. & Vescogni A.: Surface and subsurface geology of Gravina in Puglia, Southern Italy

#### ► 12-7 10.00 - 10.15

Amato V.\*, Aucelli P.P.C., Auciello E., Cesarano M., Pappone G., Petrosino P. & Roskopp C.M.: Timing and lithofacies of the intermountain basins quaternary infilling from 1:50.000 geological maps (Piedimonte Matese, Isernia and Castel di Sangro sheets)

#### ► 12-8 10.15 - 10.30

Gambino S., Barreca G., Tarascio S., Carbone S. & Monaco C.\*: Quaternary faulting in the NE sector of the Hyblean Plateau (SE Sicily): new insight from survey within the CARG project (sheet N. 646 Siracusa)

## ■ S15. ANALYSIS AND MANAGEMENT OF COASTAL AREAS, FROM RISK ASSESSMENT TO PERSPECTIVES ARISING FROM NEW TECHNOLOGIES

Conveners and Chairpersons: Giovanni Scicchitano (Università di Bari), Giovanni Scardino (Università di Bari), Pietro P.C. Aucelli (Università di Napoli Parthenope), Marco Anzidei (INGV), Francesco Faccini (Università degli Studi di Genova), Danilo Godone (CNR Torino)

Tuesday 3<sup>rd</sup> September 2024 [08.30-10.30]

### Aula E

#### ► 15-1 08.30 - 08.45

Anzidei M.\* Tripanera D., Bosman A., Brunori C.A., Alberti T., Vecchio A., Bignami C., Serpelloni E., Tolomei C., Aucelli P.P.C. & Mastronuzzi G.: Vertical land movements and relative sea level rise scenarios up to 2150 along the Italian coasts: implications for multi-risk assessments

#### ► 15-2 08.45 - 09.00

Bertoni D.\* Diana E., Luppichini M., Trembanis A. & Sarti G.: Spheres vs. disks: real-time movement of pebbles in the swash-zone of coarse-clastic beaches

#### ► 15-3 09.00 - 09.15

Borzi L.\* Marino M., Stagnitti M., Sciandrello S., Cavallaro L., Di Stefano A., Foti E. & Musumeci R.E.: Coastal land use transformation as a key driving factor for coastal erosion, the case study of Southern Sicily (Italy)

#### ► 15-4 09.15 - 09.30

Faccini F.\* Allasia P., Godone D. & Notti D.: Analysis of the sea cliff collapse and the subsequent fall of the Camogli cemetery on February 22<sup>th</sup>, 2021 (Liguria, Italy)

#### ► 15-5 09.30 - 09.45

Caldarerri E.\* Balsamo L., Parrino N., Maltese A. & Sulli A.: A new isoradiometric remotely-sensed shoreline extraction method: a time series case study in southern Sicily (Central Mediterranean region)

#### ► 15-6 09.45 - 10.00

Fasciglione G.\* Benassai G., Mattei G., Mucerino L., Pappone G. & Aucelli P.P.C.: Erosive effects of sea-storms, human pressure, and sea level rise on Volturno coastal plain (mid-Tyrrhenian area): present to future coastal hazard

#### ► 15-7 10.00 - 10.15

Imam C.\* Chaibi M., Ayt Ougougdal M. & Charif A.: Analyzing coastal cliff stability and recession rates along the Safi Atlantic Coast, Morocco

#### ► 15-8 10.15 - 10.30

Kushabaha A.\* Scardino G., Sabato G. & Scicchitano G.: Mediterranean Sea surface response during the cyclone events: impacts on physical and biogeochemical parameters

## ■ S17. ADVANCED MINERO-CHEMICAL CHARACTERIZATION AND PROCESSING OF WASTE FOR A CONSCIOUS REUSE

Conveners and Chairpersons: Paola Stabile (Università di Camerino), Azzurra Zucchini (Università di Perugia), Francesco Radica (Università G. d'Annunzio Chieti - Pescara), Luciana Mantovani (Università di Parma), Valerio Funari (CNR)

Tuesday 3<sup>rd</sup> September 2024 [08.30-10.30]

### Aula H

#### ► 17-1 08.30 - 09.00

(Invited) Valentini L.\* Liu Y., Molinari S., Dalconi M.C. & Artioli G.: Thermodynamic modelling in the management of industrial waste streams

#### ► 17-2 09.00 - 09.15

Fornari G.\* El Chami D., Clausi M. & Pinto D.: Multi-methodical approach for a detailed characterization of cogeneration ashes and their valorisation in the fertilizer industry

#### ► 17-3 09.15 - 09.30

Stagno V.\* Mignardi S., Antonacci A., Gasperuzzo G., Carfi Pavia F., Lima S., Scargiali F. & Medeghini L.: BIO-DUST: BIO-circular 3D printable prodUctS for cultural heriTage

#### ► 17-4 09.30 - 09.45

Vitale L., Varola G., Graziano L., Coppola D., Galasso G., Tedesco P., Vitale G.A., de Pascale D., Meisel T.C., Ulian G., Moro D., Valdré G., Dinelli E. & Funari V.\*: Biotechnological potential of marine extremophiles in the treatment of valuable anthropogenic materials like spent car catalysts

#### ► 17-5 09.45 - 10.00

Pandolfi Balbi E.\* Comodi P., Fastelli M., Zucchini A., Cambi C., Corradini A., Mantovani L., Cerni G., Bou Farhat H. & Snellings R.: Sustainable binders for the stabilisation of subgrade layers of road pavement by recycling of biomass ash, municipal solid waste incineration ash and concrete demolition waste

#### ► 17-6 10.00 - 10.15

Ercoli R.\* Luconi I., Renzulli A., Paris E., Buczkowska K.E., Łoś P. & Prałat K.: Innovative approaches for treating industrial byproducts: towards inertization and reutilization in advanced technological materials

#### ► 17-7 10.15 - 10.30

Radica F., Iezzi G.\* Piccioni R. & Bernardini V.: Petrographic variation of CDW in an industrial plant: a case from Central Italy

## ■ S22. THE SCIENCE OF CLAYS AND ZEOLITES: FROM GENESIS TO SUSTAINABLE APPLICATIONS

Conveners and Chairpersons: Francesco Cavalcante (CNR), Francesco Izzo (Università di Napoli Federico II), Mariano Mercurio (Università del Sannio), Daniela Pinto (Università di Bari), Claudia Vitone (Politecnico di Bari), Chiara Zanelli (CNR)

Tuesday 3<sup>rd</sup> September 2024 [08.30-10.30]

### Aula D

#### Clays

##### ► 22-1 08.30 - 08.45

[KEYNOTE] Tateo F.\*: Clay sediments for health in the special geological area of the Euganean Hills

##### ► 22-2 08.45 - 09.00

Cavalcante F., Belviso C. & Prosser G.\*: Detailed characterization of mixed-layer Illite/Smectite provide new constraints for the geodynamic reconstruction of the Southern Apennines

##### ► 22-3 09.00 - 09.15

Bolla A.\*, Pinto D., Lenaz D., Del Fabbro M. & Paronuzzi P.: The clays involved in the 1963 Vajont slide: mineralogy, geotechnical characterization and geomechanical implications

##### ► 22-4 09.15 - 09.30

De Bonis A.\*, Arienzo I., Ciarcia S., D'Antonio M., Ottner F., Verde M. & Morra V.: The clays from the Campania sector of southern Apennines (Italy): new mineralogical and geochemical insights to reconstruct their sedimentological and stratigraphic evolution

##### ► 22-5 09.30 - 09.45

Di Leo P.\*: Mechanochemical technologies for decontamination of soils polluted by organic and inorganic xenobiotics based on the use of clay substrates and oxides/hydroxides

##### ► 22-6 09.45 - 10.00

Conte S.\*, Fantini R., Nodari L., Gualtieri A.F., Arletti R., Molinari C., Dondi M. & Zanelli C.: Red clays as alternative raw materials in porcelain stoneware tiles: the effect of iron on the sintering process

##### ► 22-7 10.00 - 10.15

Javed S.\*, Dondi M., Molinari C., Conte S., Arletti R., Fantini R., Gualtieri A., Siligardi C., Miselli P., Bignozzi M.C., Ridolfi G., Spalanzani G. & Zanelli C.: Characterization and valorization of dam sediments: potential use in building materials

##### ► 22-8 10.15 - 10.30

Clausi M.\*, Fernández-Jiménez A. & Pinto D.: A sustainable use of carbonates-rich clays for alkali activated materials manufacturing

## ■ S36. CHALLENGES IN THE CHARACTERIZATION OF ACTIVE FAULTS: THE CONTRIBUTION FROM SEISMOLOGY, GEODESY, AND STRUCTURAL ANALYSIS

Conveners and Chairpersons: Maria Grazia Ciaccio (INGV), Lorenzo Petracchini (CNR), Laura Scognamiglio (INGV), Marco Cuffaro (CNR), Francesco Iezzi (Università di Napoli), Andrea Brogi (Università di Bari)

Tuesday 3<sup>rd</sup> September 2024 [08.30-10.30]

### Aula B

##### ► 36-1 08.30 - 08.45

Bacchiani A.\*, Ferranti L., Iezzi F. & Pavano F.: Structural setting and tectonic evolution of the Central Matese Fault System, Southern Apennines: preliminary observations

##### ► 36-2 08.45 - 09.00

Mowbray V.\*, Sue C., Beauval C., Lemoine A., Mathey M. & Baize S.: Integrating geophysical, structural and tectonic data in a probabilistic seismic hazard assessment (PSHA) for the South- East of France

##### ► 36-3 09.00 - 09.15

Puliti I., Pizzi A.\*, Gori S., Falcucci E., Galadini F., Moro M. & Saroli M.: Paleoseismological evidence of multiple, large magnitude earthquake surface ruptures on the active Mt. Morrone normal fault, central Apennines, Italy

##### ► 36-4 09.15 - 09.30

Bonini S.\*, Asti R., Viola G., Tartaglia G., Rodani S., Benedetti G. & Vignaroli G.: Addressing fault structural complexity and geometric interference in seismic hazard assessment for railways design

##### ► 36-5 09.30 - 09.45

Riva F.\*, Marzorati S., Agostinetti N.P., Latorre D., Chiaraluce L. & Barchi M.R.: Integration of active and passive seismic data to investigate the relationships between seismicity and geological structures at the hanging-wall of the alto Tiberina fault (Northern Apennines of Italy)

##### ► 36-6 09.45 - 10.00

Rossi F.\*, Pucci S., Volpe G. & Collettini C.: The role of structural complexity in seismicity distribution: L'Aquila 2009 seismic sequence (Central Apennines, Italy)

##### ► 36-7 10.00 - 10.15

Fonzetti R.\*, Valoroso L., De Gori P., Govoni A. & Chiarabba C.: ML vs semi-automatic seismic catalogs: a new catalog for the L'Aquila 2009 earthquake sequence

##### ► 36-8 10.15 - 10.30

Mele G.\*, Battelli P., Castello B., Carluccio I., Ciaccio M.G., Della Bina E., Lauciani V., Di Stefano R., Nardi A., Maniscalco M., Marchetti A., Latorre D. & BSI Working Group: The new website of the Italian Seismic Bulletin (BSI): architecture and content

■ S43. GROUNDWATER RESOURCES INNOVATION AND SUSTAINABILITY:  
FROM CHARACTERISATION TO MANAGEMENT OF SATURATED AND  
UNSATURATED ZONE

Conveners and Chairpersons: Maria Clementina Caputo (CNR), Stefania Da Pelo (Università di Cagliari), Lorenzo De Carlo (CNR), Matia Menichini (CNR), Maurizio Polemio (CNR), Glenda Taddia (Politecnico di Torino)

Tuesday 3<sup>rd</sup> September 2024 [08.30-10.30]

Aula G

► 43-1 08.30 - 08.45

Peruzzo L.\*, De Carlo L., Caputo M.C. & Cassiani G.: ERT characterization of treated water pathways from large infiltration trenches in unsaturated fractured/karstified calcarenous

► 43-2 08.45 - 09.00

De Giglio O., Savino A.F.\*, Bagordo F., Grassi T., Brigida S., Triggiano F., Apollonio F., Colella D., Turturro A.C., De Carlo L., Caputo M.C. & Montagna M.T.: Column test to study the influence of lithological characteristics of rocks on the hygienic-sanitary quality of groundwater

► 43-3 09.00 - 09.15

Verani M.\*, Caputo M.C., Cassiani G., De Giglio O., Milani M., Carducci A., Federigi I., Pagani A., Angori A., De Carlo L., Turturro A.C., Prigobbe V., Triggiano F., Savino A.F., Bagordo F., De Donno M.A., Grassi T., Brigida S., Consoli S., D'Emilio A., Barresi S., Bivona F. & Montagna M.T.: Predictive dynamics of microbiological contamination of groundwater in the earth critical zone and impact on human health: the DY.MI. CR.ON Project

► 43-4 09.15 - 09.30

Arras C., Calia M.\*, Biddau R., Murgia A. & Da Pelo S.: Evaluation of recharge sources and nitrates origin in a karst spring: a case study from the F.na Nurighe spring (NW Sardinia, Italy)

► 43-5 09.30 - 09.45

Lobina F.\*, Da Pelo S., Biddau R., Coppola A., Vacca A., Hassan M.B.S., Arras C. & Porru C.: Evaluation of nitrate leaching processes during infiltration and transport in the unsaturated zone

► 43-6 09.45 - 10.00

Piscedda F.A.\*, Wanty R., Arras C., Porru M.C., Biddau R., Musu F., Podda F. & Da Pelo S.: Assessing surface water-groundwater exchange dynamics for managed aquifer recharge design: a case study in Muravera, Southeastern Sardinia, Italy

► 43-7 10.00 - 10.15

Porru M.C.\*, Davids T., Arras C., Oude Essink G.H.P., Piscedda F.A. & Da Pelo S.: Methodological approach to simulate the evolution seawater intrusion with climate change

► 43-8 10.15 - 10.30

Surian B.\*, Forte E. & Zini L.: Monitoring saltwater intrusion in the area surrounding the Grado lagoon (NE Italy)



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## ■ S6. GEOSCIENCES ON DISPLAY: THE ROLE OF NATURAL HISTORY MUSEUMS IN THE FUTURE OF OUR PLANET

Conveners and Chairpersons: Rosarosa Manca (Università di Firenze), Maura Fugazotto (Università di Catania), Luca Bellucci (Università di Firenze), Daniela Mauro (Università di Pisa)

Tuesday 3<sup>rd</sup> September 2024 [11.00-13.00]

### Aula A

#### ► 6-8 11.00 - 11.15

(Invited) Tilley L.\*, Kroh A., Kvaček J., Howe M., Mergen P., Miller G., Dijkema T. & Norton B.: Unveiling Earth' archives: harnessing Earth Science collections to navigate modern challenges

#### ► 6-9 11.15 - 11.30

Franza A.\* & Pratesi G.: Stories for the future. The cataloging of the Italian geo-mineralogical heritage

#### ► 6-10 11.30 - 11.45

Storta E.\*, Senesi M. & Borghi A.: Mèmora: a showcase for the cultural heritage of Piemonte Region

#### ► 6-11 11.45 - 12.00

Zazzera A.\*, Spisso N., De Prezzo G., Bruno Stamerra F., Spada I., Marsico A., La Perna R., Marino M., Venisti N. & Girone A.: Digitalization and reconstruction of Pleistocene vertebrates from Museo di Scienze della Terra (University of Bari Aldo Moro) for the valorization of the Apulian paleontological heritage and territory

#### ► 6-12 12.00 - 12.15

Majorana S.\* & Barone G.: The cataloguing of the scientific instruments of the University of Catania: research and prospects

#### ► 6-13 12.15 - 12.30

Fabrizi L.\*, Moggi Cecchi V., Barbagli F. & Benvenuti M.: A dual approach to enhance the Targioni Tozzetti collection, a little-known mineralogical heritage: digital and analytical methods

#### ► 6-14 12.30 - 12.45

Veronese M.\* & Artioli G.: Falsification techniques and materials in Geoheritage

#### ► 6-15 12.45 - 13.00

Furlan A.\*, Contessi M. & Fanti F.: Taxonomic diversity of fossil vertebrates from the quaternary deposits of the Karst Pit of Cà Negra (Croatia)

## ■ S9. ADVANCES IN REMOTE SENSING FOR HAZARD MONITORING AND GEO-RESOURCE MANAGEMENT THROUGH MULTI-DIMENSIONAL DIGITAL MODELS

Conveners and Chairpersons: Rosa Colacicco (Università di Bari), Eugenio Fazio (Università di Catania), Giovanni Forte (Università di Napoli), Marco La Salandra (Università di Bari), Miller Zambrano (Università di Camerino), Martina Zucchi (Università di Bari)

Tuesday 3<sup>rd</sup> September 2024 [11.00-13.00]

### Aula M

#### ► 9-8 11.00 - 11.30

[KEYNOTE] Ortolano G.\*, Fazio E., Visalli R., D'Agostino A., Menta S., Portale S. & Cirrincione R.: Multiscale geological structural analysis of the late-Eocene to early-Miocene mylonites from the southern Calabrian Peloritani Orogen (Aspromonte Massif-Southern Italy): new insights for the western Mediterranean geodynamics

#### ► 9-9 11.30 - 11.45

Ursi A.\*, Tapete D., Montuori A., Sacco P., Virelli M., Zoffoli S. & Coletta A.: The role of ASI in the development of novel user-driven EO-based products for geo-hazards applications: the "Multi-mission and Multi-frequency SAR" and "I4DP\_SCIENCE" Programs

#### ► 9-10 11.45 - 12.00

Occhipinti M.\*, Carboni F., Amorini S., López-Martinez C., Paltriccia N. & Porreca M.: SNAP2DQuake: an implemented and automatic tool of ESA SNAP's Python module for DinSAR technique on ground deformation estimation from Sentinel-1 data

#### ► 9-11 12.00 - 12.15

Zito C.\*, Mangifesta M., Francioni M., Guerriero L., Di Martire D., Calcaterra D., Pasculli A. & Sciarra N.: Cascading landslide risk assessment by means of an integrated approach

#### ► 9-12 12.15 - 12.30

Marino L.\*, Cecere G., Di Maio R., Di Martire D., Devoti R., Calcaterra D. & Vicari A.: Fiastra DSGSD spatio-temporal evolution analysis by means of GPS and DinSAR data

#### ► 9-13 12.30 - 12.45

Zaragoza Alonzo A.D.\*, Zambrano M., Luzi L. & Tondi E.: Leveraging machine learning for ground motion prediction: advancements in seismic hazard assessment

#### ► 9-14 12.45 - 13.00

Roseto R.\*, La Salandra M., Dellino P. & Capolongo D.: Integrating probabilistic and hydrodynamic models for enhanced flood hazard assessment and mapping in the Basento River Basin (Southern Italy)

## ■ S11. BACK TO THE FUTURE. HISTORY OF GEOLOGICAL STUDIES AND MAPPING AS A KEY FOR SUSTAINABLE DEVELOPMENT

Conveners and Chairpersons: Alessio Argentieri (Città metropolitana di Roma Capitale), Rossella De Ceglie (Università di Bari), Paolo Macini (Università di Bologna), Marco Pantaloni (ISPRA), Carla Petrocelli (Università di Bari)

Tuesday 3<sup>rd</sup> September 2024 [11.00-13.00]

### Aula N

#### ► 11-9 11.00 - 11.15

Argentieri A., Occhigrossi B.C. & Rotella G.\*: Tommaso Tittoni, a geologist to the Prime Ministership

#### ► 11-10 11.15 - 11.30

De Caterini G., Leoni G.\*, Andrisani M.G., Carta R., De Benedetti A.A., De Corso S., Ferrigno F., Fumanti F., Guerra M., Guerrieri L., Lucarini M., Naitza S., Olivetta L., Pantaloni M., Patanè R.A., Serra M., Spizzichino D. & Amanti M.: The relevance of the 1973 mining map of Italy: its revamping in the GeoSciencesR project

#### ► 11-11 11.30 - 11.45

De Caterini G.\*, Ferranti N., Finocchiaro G., Fumanti F., Giarda M., Guerrieri L., Leoni G., Mestriner T., Roggero F., Savoca D., Spizzichino D. & Tria N.G.: Microhistory of the civilization of mines: from the golden fleece to the critical raw material act

#### ► 11-12 11.45 - 12.00

Sammuri P.\*: The ancient mine of Poggio Mozzeto in the Bai valley (Roccastrada, Grosseto)

#### ► 11-13 12.00 - 12.15

Palladino G.\*, Prosser G., Grimaldi S., Olita F., Cascini L. & Dello Iacovo B.: The geological map of the western side of the high Agri Valley

#### ► 11-14 12.15 - 12.30

Saltarelli C.\*: Seismic maps between historical approach and scientific research. A contribution from the history of science to risk reduction

#### ► 11-15 12.30 - 12.45

Romano M. & Petti F.M.\*: The legendary Central Asiatic Expedition: celebrating 100 years of Oviraptor

#### ► 11-16 12.45 - 13.00

Fabbi S.\*, Cestari R. & Dominici S.: The De filippi expedition (1913-1914) and the geological exploration of the Aksai Chin (western Tibet)

## ■ S12. FIELD AND DIGITAL GEOLOGICAL MAPPING: THE NUMEROUS FACETS OF CARG PROJECT FROM CRYSTALLINE BASEMENT TO SEDIMENTARY DEPOSITS

Conveners and Chairpersons: Laura Tomassetti (ISPRA), Attilio Sulli (Università di Palermo), Diego Pieruccioni (ISPRA)

Tuesday 3<sup>rd</sup> September 2024 [11.00-13.00]

### Aula C

#### ► 12-9 11.00 - 11.15

Morelli F.\*, Chiarini E., Nirta G., Nocentini M., Piacentini T. & Pizzi A.: Rock avalanche deposits along normal-fault and thrust-fault-related tectonic slopes: new insights from CARG Project surveys in the Majella-Porrara ridges (central-eastern Apennines, Abruzzo Region)

#### ► 12-10 11.15 - 11.30

Perozzo M.\*, Maino M., Menegoni N., Crispini L., Federico L. & Seno S.: Fracture network analysis in a polyphasic tectonic framework: the importance to integrate field-based structural data in the era of digital geology (CARG Project 245-Albenga)

#### ► 12-11 11.30 - 11.45

Lombardi S.\*, Stori L., Federico L., Crispini L., Seno S. & Maino M.: Pre to syn orogenic evolution of the European margin: clues from the Flysch units of the Ligurian Alps (CARG Project – Ormea sheet 244)

#### ► 12-12 11.45 - 12.00

Sulli A.\*, Agate M., Gasparo Morticelli M., Todaro S., Lo Presti V., Avellone G., Bonfardeci A., Maiorana M., Rizzo G.F., Gennuso M., Petrella F., Parrino N. & Muraro C.: From onshore to offshore, from outcrop to subsurface: an innovative multi-scale approach to the geological mapping of the Sheet 628 Sciacca (southwestern Sicily)

#### ► 12-13 12.00 - 12.15

Balsamo L.\*, Sulli A., Agate M., Budillon F., Gasperini L., Monaco C. & Carbone S.: Offshore geological map in south-eastern Sicily: the "Siracusa - 646" (CARG project)

#### ► 12-14 12.15 - 12.30

D'Abicco V.\*, De Giosa F., de Luca A., Fracchiolla T., Lisco S., Mastronuzzi G. & Moretti M.: Sedimentary dynamics and biological-anthropic processes on the seafloor: the natural laboratory of Taranto seas (northern Ionian Sea, southern Italy)

#### ► 12-15 12.30 - 12.45

Orefice S.\*, Pensa A. & Fiorentino A.: Geological mapping of submerged areas within the CARG project. The example of "Asinara" sheet (n. 425)

#### ► 12-16 12.45 - 13.00

Marcelli L.\*, Piana F., Barbero E., Ossella L., Fioraso G., Irace A., Mosca P., Barale L., Frasca G., Catanzariti R., d'Atri A., Bertok C. & Festa A.: CARG geo-tech revolution: digitizing geological maps with innovative tools (practical examples from the CARG project)

## ■ S15. ANALYSIS AND MANAGEMENT OF COASTAL AREAS, FROM RISK ASSESSMENT TO PERSPECTIVES ARISING FROM NEW TECHNOLOGIES

Conveners and Chairpersons: Giovanni Scicchitano (Università di Bari), Giovanni Scardino (Università di Bari), Pietro P.C. Aucelli (Università di Napoli Parthenope), Marco Anzidei (INGV), Francesco Faccini (Università degli Studi di Genova), Danilo Godone (CNR Torino)

Tuesday 3<sup>rd</sup> September 2024 [11.00-13.00]

### Aula E

#### ► 15-9 11.00 - 11.15

Mattei G.\* & Aucelli P.P.C.: Ongoing vs Holocene morphodynamic effects of sea-level changes: a new perspective for the assessment of coastal resilience to climate changes

#### ► 15-10 11.15 - 11.30

Spadotto S.\*, Fracaros S., Bezzi A., Casagrande G., Popesso C. & Fontolan G.: Coastal flooding risk scenario for the city of Grado, northern Adriatic Sea

#### ► 15-11 11.30 - 11.45

Mellone G.\*, Scarrica V., Mattei G., Staiano A., Ciaramella A. & Aucelli P.P.C.: New approaches for coastal zone monitoring aimed at litter detection in emerged and submerged environments

#### ► 15-12 11.45 - 12.00

Sabato G.\*, Scardino G., Kushabaha A., Casagrande G., Chirivì M., Fontolan G., Fracaros S., Luparelli A., Spadotto S. & Scicchitano G.: Using deep learning system-based for tide and surge measurement

#### ► 15-13 12.00 - 12.15

Tripanera D.\*, Anzidei M., Bosman A., Vecchio A., Alberti T. & Doumaz F.: Relative Sea Level Rise projections and flooding scenario for 2150 A.D. for the Panarea Island and Islets (Aeolian Islands, Italy) by Ultra High-Resolution terrestrial and marine Digital Elevation Models

#### ► 15-14 12.15 - 12.30

Sorrentino A.\*, Fasciglione G., Mattei G., Pappone G. & Aucelli P.P.C.: On the resilience to climate change of sites of community importance (SCI): the case of Cala del Cefalo (Southern Italy)

#### ► 15-15 12.30 - 12.45

Fontolan G., Bertoni D.\*, Bezzi A., Casagrande G., Conforti A., De Falco G., Deiana G., Orrù P.E. & Simeone S.: Beach-dune systems in a transgressive domain along the Sardinian coasts

#### ► 15-16 12.45 - 13.00

Tursi M.F.\*, Matano F., Fortelli A., Sacchi M. & Aucelli P.P.C.: Coastal hazard in tuffaceous high coast in the gulf of Naples (South Italy)

## ■ S17. ADVANCED MINERO-CHEMICAL CHARACTERIZATION AND PROCESSING OF WASTE FOR A CONSCIOUS REUSE

Conveners and Chairpersons: Paola Stabile (Università di Camerino), Azzurra Zucchini (Università di Perugia), Francesco Radica (Università G. d'Annunzio Chieti - Pescara), Luciana Mantovani (Università di Parma), Valerio Funari (CNR)

Tuesday 3<sup>rd</sup> September 2024 [11.00-13.00]

### Aula H

#### ► 17-8 11.00 - 11.30

[KEYNOTE] Bernasconi A.\*, Beretta M., Curetti N., Tribaudino M., Pavese A., Francescon F. & Sartori R.: Application of mineralogy to waste reuse in ceramic materials

#### ► 17-9 11.30 - 11.45

Caviglia C.\*, Bernasconi D., Destefanis E., Wehrung Q., Brombin V., Mancinelli M., Martucci A., Mantovani L., Bonadiman C. & Pavese A.: The CLEAN project: a sustainable methodology to reduce the environmental impact of MSWI fly ash and to recover strategic metals

#### ► 17-10 11.45 - 12.00

Ghani J.\*, Dinelli E., Funari V., Giuliani S. & Bellucci L.G.: Radionuclides assessment in municipal solid waste incineration plants wastes: a comparative case study of pre- and post-pandemic periods

#### ► 17-11 12.00 - 12.15

Curetti N.\*, Bernasconi D., Servetto G.P., Vigliaturo R., Tribaudino M. & Pavese A.: Complexity of the system and plethora of crystal phases in fly ashes: a careful investigation of processes and products from cooling of the flue gas in the MSW waste-to-energy incinerators

#### ► 17-12 12.15 - 12.30

Wehrung Q.\*, Pastero L., Bernasconi D., Cotellucci A., Bruno M., Destefanis E., Caviglia C., Cavagna S. & Pavese A.: Carbonation performance of waste incinerator air pollution control residues (APCr) under wastewater reuse conditions - Towards a sustainable stabilization process

#### ► 17-13 12.30 - 12.45

Mantovani L.\*, Bernasconi A., Tribaudino M., Destefanis E., Caviglia C., Nazzareni S., Fornasini L. & Bersani D.: Temperature treatments of bottom ash from municipal solid waste incinerator: new perspective and existing applications

#### ► 17-14 12.45 - 13.00

Bernasconi A., Mantovani L. & Tribaudino M.\*: Bottom ashes from MSWI in ceramics: a higher value reuse of waste

## ■ S22. THE SCIENCE OF CLAYS AND ZEOLITES: FROM GENESIS TO SUSTAINABLE APPLICATIONS

Conveners and Chairpersons: Francesco Cavalcante (CNR), Francesco Izzo (Università di Napoli Federico II), Mariano Mercurio (Università del Sannio), Daniela Pinto (Università di Bari), Claudia Vitone (Politecnico di Bari), Chiara Zanelli (CNR)

Tuesday 3<sup>rd</sup> September 2024 [11.00-13.00]

### Aula D

#### Zeolites

##### ► 22-9 11.00 - 11.15

[KEYNOTE] Borsatto F.\* & Jabbour C.: Analysis of practices with the potential to create sustainable value for the natural zeolite sector

##### ► 22-10 11.15 - 11.30

Montesano G.\*, Rispoli C., Petrosino P. & Cappelletti P.: Secondary and authigenic phase formation in the 50-year-old tuff from Surtsey (Iceland)

##### ► 22-11 11.30 - 11.45

Battiston T., Comboni D.\*, Lotti P. & Gatta G.D.: Exploring Pressure-Induced Crystal Structure and Fluid Interactions in ABC-6 Zeolite Group

##### ► 22-12 11.45 - 12.00

Molinari C., Graziano S.F., Guarini G., Conte S., Dondi M., Cappelletti P. & Zanelli C.\*: Suitability of zeolitized tuff use in porcelain stoneware tiles production

##### ► 22-13 12.00 - 12.15

de Azevedo B.\*, Panattoni F., Tardani M. & Masini C.: Innovative modified natural zeolites: effective strategies for hexavalent chromium removal from polluted waters

##### ► 22-14 12.15 - 12.30

Langella A., Bellino A., De Feo G., De Nicola F., De Sanctis M., Izzo F., Luciani E., Mercurio M., Napoletano M.\*, Oppido S., Picariello E., Romano C., Trasacco F. & Baldantoni D.: Enhancement of Microbial and plant Biodiversity by Restoration of degraded soils in Mediterranean Areas through marine Compost and zeolites Exploitation (EMBRACE project)

##### ► 22-15 12.30 - 12.45

Balzan S.\*, Botezatu C., Faccini B., Ferretti G., Galamini G., Mattioli L., Tassoni G. & Coltorti M.: A comprehensive study of ammonium removal from livestock effluents using zeolites in various operational scenarios

##### ► 22-16 12.45 - 13.00

Daković A.\*, Marković M., Ožegović M., Smiljanić D., Obradović M., Kozarski M. & Krajišnik D.: Enhanced adsorption of mycotoxin zearalenone by clay-chitosan-surfactant composite

## ■ S36. CHALLENGES IN THE CHARACTERIZATION OF ACTIVE FAULTS: THE CONTRIBUTION FROM SEISMOLOGY, GEODESY, AND STRUCTURAL ANALYSIS

Conveners and Chairpersons: Maria Grazia Ciaccio (INGV), Lorenzo Petracchini (CNR), Laura Scognamiglio (INGV), Marco Cuffaro (CNR), Francesco Iezzi (Università di Napoli), Andrea Brogi (Università di Bari)

Tuesday 3<sup>rd</sup> September 2024 [11.00-13.00]

### Aula B

##### ► 36-9 11.00 - 11.15

Doglioni C.\*: Fault activation energy

##### ► 36-10 11.15 - 11.30

Ferranti L.\*, Bacchiani A., Brighenti F., Carnemolla F., De Guidi G., Giuffrida S., Iezzi F. & Palano M.: Geodetic velocity constraints on fault strain accumulation in southern Italy

##### ► 36-11 11.30 - 11.45

Giuffrida S.\*, Anderlini L., Carnemolla F., Brighenti F., De Guidi G., Cannavò F., Graham S. & Monaco C.: Interseismic coupling degree along the Serre and Cittanova faults in Southern Calabria, (Italy): new constraints from geodetic data observations

##### ► 36-12 11.45 - 12.00

Iezzi F.\*, Bacchiani A., Ferranti L., Pavano F., Di Paola C., Pagliara F., Boni P. & Di Maio R.: Detailed geological and geophysical investigation of a segment of a major active normal fault: the Northern Matese Fault System

##### ► 36-13 12.00 - 12.30

(Invited) Muluneh A.\*, Brune S., Pagli C., La Rosa A., Keir D., Neuharth D. & Corti G.: Time-dependent rift connection between the Red Sea and Gulf of Aden rifts in central Afar

##### ► 36-14 12.30 - 12.45

Madarieta-Txurruka A.\*, Galindo-Zaldívar J., Pietrolungo F., Sparacino F., Ercilla G. & Palano M.: New geodetic 3D velocity field of Iberia and adjacent mountain ranges

##### ► 36-15 12.45 - 13.00

Occhipinti M.\*, Lanari R., Carboni F. & Porreca M.: DInSAR coseismic surface deformation of the 2023 Mw 6.8 Al Haouz earthquake(High Atlas Mountains, Morocco)

**S43. GROUNDWATER RESOURCES INNOVATION AND SUSTAINABILITY:  
FROM CHARACTERISATION TO MANAGEMENT OF SATURATED AND  
UNSATURATED ZONE**

Convenors and Chairpersons: Maria Clementina Caputo (CNR), Stefania Da Pelo (Università di Cagliari), Lorenzo De Carlo (CNR), Matia Menichini (CNR), Maurizio Polemio (CNR), Glenda Taddia (Politecnico di Torino)

Tuesday 3<sup>rd</sup> September 2024 [11.00-13.00]

Aula G

► 43-9 11.00 - 11.15

Agius B. & Mamo J.\*: Characterising rainfall-runoff processes and recharge rates in Mediterranean ephemeral streams with small impoundment dams

► 43-10 11.15 - 11.30

Caputo M.C., De Carlo L., Doveri M., Giamberini M.S., Giordano R., Masciale R., Menichini M., Portoghesi I.\*, Turturro A.C. & Passarella G.: Integrated assessment of climate impacts on ecosystem functions and productivity of critical-zone eco-hydrology: the Italian case study of the INTERACTION project

► 43-11 11.30 - 11.45

Di Giovanni A.\*, Di Curzio D. & Rusi S.: High-altitude minor springs in Central Italy tapped for drinking supply: hydrogeological characterization and aquifer potentialities evaluation

► 43-12 11.45 - 12.00

Franceschi L.\*, Menichini M., Parisi A., Giannecchini R. & Doveri M.: The effect of rainfall extreme events in the unsaturated and saturated zone: the case study of Pianosa Island (Tuscan Archipelago, Italy)

► 43-13 12.00 - 12.15

Parisi A.\*, Doveri M., Franceschi L., Baneschi I., Provenzale P., Raco B. & Menichini M.: Hydrological processes in the Aquifer System Unsaturated Zone: insights from the small Mediterranean island of Pianosa (Tuscan Archipelago)

► 43-14 12.15 - 12.30

Taddia G.\*, Gizzi M., Berta A. & Lo Russo S.: Renewable energy application: sustainability techniques in Torino Urban City

► 43-15 12.30 - 12.45

Turturro A.C.\*, De Carlo L. & Caputo M.C.: Integrated experimental approach for supporting the planning of a Managed Aquifer Recharge (MAR) plantIntegrated experimental approach for supporting the planning of a Managed Aquifer Recharge (MAR) plant

► 43-16 12.45 - 13.00

Tiwari S., Saviano S. & Polemio M.\*: An integrated numerical modelling approach to the management of a coastal plain aquifer (southern Italy)

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**■ S1. GEOBIOLOGICAL AND GEOCHEMICAL APPROACHES IN THE STUDY OF BIOCONSTRUCTIONS AND MICROBE-MINERAL INTERACTIONS: NEW TOOLS FOR MODERN AND ANCIENT ENVIRONMENTAL RECONSTRUCTIONS AND BIO-REMEDIATION**

Conveners and Chairpersons: Mara Cipriani (Università della Calabria), Mario Borrelli (Università della Calabria), Carmine Apollaro (Università della Calabria), Adriano Guido (Università della Calabria), Daniela Medas (Università di Cagliari), Marcello Natalechino (Università di Torino)

Tuesday 3<sup>rd</sup> September 2024 [15.30-17.30]

Aula A

**► 1-1 15.30 - 15.45**

Onnis P.\* Calandrelli T., Alisi C., Dore E., Fancello D., Frau F., Marras P.A., Medas D., Musu E., Pisano B., Podda F. & De Giudici G.: From bioleaching to biomining: learning from geomicrobial processes in mining areas

**► 1-2 15.45 - 16.00**

Guerrieri S.\* Borrelli M., Medas D., De Giudici G. & Perri E.: Biominerization of As-schwertmannite in acid mine drainage

**► 1-3 16.00 - 16.15**

Guido A.\* Fuoco I., Vespasiano G., Cipriani M., Maruca G., Scalercio A., Talà A., Calcagnile M., Belmonte G., Alifano P., Tredici S.M., Sicoli G., Gargano D., Bloise A. & Apollaro C.: Microbial activity involved in aluminosilicate mineralization in an arsenopyrite mine

**► 1-4 16.15 - 16.30**

Dela Pierre F.\* Natalicchio M., Birgel D., Giunti S., Guibourdenche L., Pellegrino L., Aloisi G. & Peckmann J.: Authigenic carbonate and native sulfur formation in Messinian (Upper Miocene) marine sediments: sedimentological, petrographical and geochemical constraints

**► 1-5 16.30 - 16.45**

Tenuta S.\* Evans K.A., Reddy S.R., Rickard W.D.A. & Saxe D.W.: Nanoscale biosignatures in native-Cu and sulphides from the Wadi Tayin ophiolite, Oman

**► 1-6 16.45 - 17.00**

(Invited) Youm C.I.\* Gueye A., Miyouna T., Ba F., Signaté A. S., Sow S.N., Sissokho M., Doumbouya M. F., Errami E. & Sow E.: Petrography of stromatolites from the summit of the Pelel Formation in the Walidiala valley (Madina Kouta Basin, Kédougou, Senegal)

**► 1-7 17.00 - 17.15**

Santagati P.\* Guerrieri S., Borrelli M. & Perri E.: Capo Colonna (Crotone Basin – Southern Italy) MIS 5 calcareous bioconstructions: an association of algal, metazoan, and microbial framebuilders

**► 1-8 17.15 - 17.30**

Vespasiano G.\* Cipriani M., Maruca G., Apollaro C., Ponte M., Dominici R., Bruno F., Muzzupappa M., Rosso A., Sanfilippo R., Bracchi V.A., Basso D. & Guido A.: Integrated Geochemical/Geobiological approach for the identification of environmental proxies in Coralligenous bioconstructions

**■ S4. CHEMOSTRATIGRAPHY THROUGH TIME AND SPACE: RECONSTRUCTION OF PALAEOENVIRONMENT AND PALAEOCIMATE BY USING GEOCHEMICAL PROXIES AND ISOTOPES**

Conveners and Chairpersons: Manuel Rigo (Università di Padova), Irene Cornacchia (CNR), Agata Di Stefano (Università di Catania), Alessandro Mancini (Università degli Studi di Roma, La Sapienza)

Tuesday 3<sup>rd</sup> September 2024 [15.30-17.30]

Aula E

**► 4-1 15.30 - 16.00**

[KEYNOTE] Preto N.\* Borsato A., Carampin R., Della Porta G., Frisia S., Gattolin G., Klügel A., Himmler T., Westphal H. & Zorzi F.: On the potential and pitfalls of REE+Y analyses on fossil microbial carbonates: two case studies from the Triassic of the Dolomites compared

**► 4-2 16.00 - 16.15**

Baldassarri L.\* Fanti F., Dinelli E. & Bais G.: Geochemical analysis and palaeoenvironmental reconstruction of the laminated limestones from the Villaggio del Pescatore fossil site (Trieste, Italy)

**► 4-3 16.15 - 16.30**

Sato H.\* Ishikawa A., Lowery C.M., Arenillas I., Arz J.A., Gilabert V., Claeys P., Goderis S., Gulick S.P.S. & Morgan J.V.: Post-impact marine environment within the Chicxulub impact basin inferred from Re-Os isotopes

**► 4-4 16.30 - 16.45**

Marianelli D.\* Yang J., Medici G., Cornacchia I., Aversa L. & Brandano M.: Diagenesis of karsified deposits to reconstruct the sea level drop at the Eocene-Oligocene Transition in the Apulian Platform, Southeastern Italy

**► 4-5 16.45 - 17.00**

(Invited) Mancini A.M.\* Marino G., Dela Pierre F. & Negri A.: ECORD and IODP-Italy Project: the mediterranean deoxygenation dynamics during the Pliocene in the Mediterranean

**► 4-6 17.00 - 17.15**

Caruso A.\* Maiorano P., Addante M., Cosentino C., Fasone S., Girone A., Guccione P., Maccotta A., Marino M., Militello G., Pernice M. & Scopelliti G.: The PRIN "REMEPP" project: response of Mediterranean calcareous plankton to CO<sub>2</sub> variability during some intervals of the Plio/Pleistocene

**► 4-7 17.15 - 17.30**

Columbu A.\* Asanidze L., Zanchetta G., Burns S., Lezhava Z., Tsikarishvili K., Avkopashvili I., Natali S., Lupichini M., Isola I., McGee D. & Fleitmann D.: Quantitative reconstruction of temperature changes during the last ~13500 years in Georgia through stable isotopes ( $\delta^2\text{H}$ - $\delta^{13}\text{C}$ - $\delta^{18}\text{O}$ ) from speleothems fluid inclusions and calcite

**■ S23. ASSESSING AND MITIGATING NATURAL RISKS: A MULTIDISCIPLINARY PATH FROM GEOSCIENCES TO CITIZEN SCIENCE**

Conveners and Chairpersons: Antonello Fiore (SIGEA-APS), Isabella Lapietra (UNIBA), Maria Luisa Carapezza (INGV), Laura Criscuolo (CNR-IGG), Daniela Di Bucci (Dipartimento della Protezione Civile), Alessandro Sarretta (CNR-IRPI)

Tuesday 3<sup>rd</sup> September 2024 [15.30-17.30]

Aula M

**► 23-1 15.30 - 15.45**

(Invited) Valensise G.\*: Beyond fault scarps: the role of geologists in the assessment of seismic hazard and risk

**► 23-2 15.45 - 16.00**

(Invited) Trigila A.\* & Iadanza C.: Data and maps on natural hazards to support risk mitigation measures

**► 23-3 16.00 - 16.15**

Ranaldi M.\*, Carapezza M.L., Tarchini L. & Barberi F.: Hazard from endogenous gas emission in the north and center Lazio Region

**► 23-4 16.15 - 16.30**

Tarchini L.\*, Carapezza M.L. & Ranaldi M.: Assessing and mitigating natural gas risk at Cava dei Selci (Colli Albani volcano) through combined geochemical, epidemiological and agro-environmental studies

**► 23-5 16.30 - 16.45**

Fracassi U.\*: The (un)stable stewardship: the Earth Sciences amid accrued vulnerabilities, climate disruption, and resource management

**► 23-6 16.45 - 17.00**

Mele D.\*, Dellino P., Dioguardi F. & Sulpizio R.: Probabilistic hazard maps of pyroclastic density current at Vesuvius volcano (Italy): a new strategy for risk reduction

**► 23-7 17.00 - 17.15**

Sandron D.\*, Saraò A., Tamaro A. & Rebez A.: Citizen Science for seismic risk reduction strategies and sustainable management

**► 23-8 17.15 - 17.30**

Colacicco R.\*, Lapietra I., La Salandra M., Roseto R., Bellini F. & Capolongo D.: Citizen Science for the enhancement and knowledge of the territory: the YouthMappers@Uniba experience

**■ S27. CAVES, MINES AND OTHER UNDERGROUND SPACES AS FIELD LABORATORIES IN ENVIRONMENTAL GEOLOGY**

Conveners and Chairpersons: Laura Sanna (CNR), Valentina Balestra (Politecnico di Torino), Isabella Serena Liso (Università degli Studi di Bari Aldo Moro), Mario Parise (Università degli Studi di Bari Aldo Moro)

Tuesday 3<sup>rd</sup> September 2024 [15.30-17.30]

Aula H

**► 27-1 15.30 - 16.00**

[KEYNOTE] Vigna B.\* & Balestra V.: Relationship between air-rock-water temperatures in karst caves and surface temperatures

**► 27-2 16.00 - 16.15**

Balestra V., Peruzzi A., Marini P. & Bellopede R.\*: Monitoring of lampenflora growth on speleothems exposed to LED lights in show caves

**► 27-3 16.15 - 16.30**

Vogel B., Calaforra J.M., Uasapud Enriquez N.V., Zupan Hajna N. & Parise M.\*: List of endangered caves and karst, an initiative from the International Union of Speleology

**► 27-4 16.30 - 16.45**

Balestra V.\*, Fiorucci A., Marini P. & Bellopede R.: A research to study the unstoppable subterranean journey of microplastics

**► 27-5 16.45 - 17.00**

Alberti N.\*, Esposito M. & Sanna L.: Radon monitoring in underground workplaces. The case of Sardinia region (Italy)

**► 27-6 17.00 - 17.15**

Idini A.\*, Masala O. & Sanna L.: Metals discharge from underground mine drainage of Argentiera Pb-Zn-Ag mine, NW Sardinia, Italy

**► 27-7 17.15 - 17.30**

Gaudiosi I.\*, Livani M., Simionato M., Mancini M., Tentori D., Paolella L., Gozzi M., Pennica F., Polpetta F., Stigliano F., Trapasso F., Di Monda D., Terzo M., Argiolas F., Croce P., Piro S. & Moscatelli M.: CALIGOLA: a project for enhancing the knowledge of underground archaeological sites in the Palatine Hill through the integration of geological and geophysical data with new technologies

**■ S30. WOMEN IN GEOSCIENCES: A JOURNEY THROUGH THE SOCIAL CHANGES FROM THE PAST TO PRESENT AND FUTURE SCENARIOS**

Conveners and Chairpersons: Martina Zucchi (Università degli Studi di Bari Aldo Moro), Roberto Braga (Università di Bologna), Sveva Corrado (Università Roma Tre), Daniela Di Bucci (Dipartimento della Protezione Civile Nazionale), Luisa Sabato (Università degli Studi di Bari Aldo Moro)

Tuesday 3<sup>rd</sup> September 2024 [15.30-17.30]

**Aula N**

**► 30-1 15.30 - 15.45**

Massaro S., Ashruf T., Anderlini L., Drymoni K., Forni F., Geyer A., Guerrero A., Pardo N., Scaini C., Tomašek I. & Viveiros F.: Is there still a price to pay for being a woman geoscientist? Perspectives and lessons learnt

**► 30-2 15.45 - 16.00**

Gambino E., Porrone A., Mancini S., Pereira L., Bellopede R., Marini P., Faraudello A. & Dino G.: Uncovering the glass ceiling mechanisms in the geosciences: towards equality in Academia and the private sector

**► 30-3 16.00 - 16.15**

Radeff G., Tomassetti L., Garzarella A., D'Ambrogi C. & Lettieri M.: Women at the Geological Survey of Italy: where we were, where we are, where we are going

**► 30-4 16.15 - 16.30**

Ducci D.: Participation of women in Engineering Geology and Hydrogeology research in Italy

**► 30-5 16.30 - 16.45**

Bozzano F., Antonielli B., Bigi S., Calzolari L., Della Seta M., Coltellacci D., Medeghini L., Pacella A., Piacentini D., Sannino A., Scuderi M., Tinti E., Tullio C., Scacchia E., Ruspandini T. & Vergari F.: Gender equality plan (GEP) of Earth Science Department in the framework of the Science Faculty and Sapienza University

**► 30-6 16.45 - 17.00**

Di Bucci D., Franceschetti C. & Postiglione T.: 30 years of Women in Science in Italy through the lens of the Major Risks Commission

**► 30-7 17.00 - 17.15**

Rosati A., Sabato L. & Tropeano M.: Stubbornly holistic: Zonia Baber and her groundbreaking work in the field of geosciences education

**► 30-8 17.15 - 17.30**

Sabato L., Zucchi M. & Tropeano M.: A contribute to the PLS Project from "Women in Geosciences" of Bari University

**■ S40. SOURCE-TO-SINK PROCESSES AND GENESIS OF RESOURCES IN SEDIMENTARY DEPOSITS: ADVANCES IN UNDERSTANDING OF GEOLOGIC AND ENVIRONMENTAL DYNAMICS THROUGH A MULTIDISCIPLINARY PERSPECTIVE**

Conveners and Chairpersons: Francesca Micheletti (Università di Bari Aldo Moro), Anna Chiara Tangari (Università G.d'Annunzio di Chieti-Pescara), Sara Criniti (Università della Calabria), Emilia Le Pera (Università della Calabria), Fabio Matano (CNR Napoli), Massimo Moretti (Università di Bari Aldo Moro)

Tuesday 3<sup>rd</sup> September 2024 [15.30-17.30]

**Aula C**

**► 40-1 15.30 - 15.45**

[KEYNOTE] Alvisi F.: The disappearance of sand: just a false alarm or a global emergency?

**► 40-2 15.45 - 16.00**

(Invited) Scarciglia F.: Weathering and erosion rates at different timescales in a granitic area of the Mediterranean (Sila Massif, Calabria, southern Italy): an overview on recent advances

**► 40-3 16.00 - 16.15**

Le Pera E., Dutta A. & Riber L.: (Paleo)weathering or diagenesis as the principal control factor of sand(stone) framework grains dissolution?

**► 40-4 16.15 - 16.30**

Pavano F., Pazzaglia F.J., Barnes L., Rittenour T.M., Catalano S., Corbett L.B. & Bierman P.: Tectonic forcing encoding in the geomorphic and stratigraphic records of a tight source-to-sink system (Northeastern Sicily, Italy)

**► 40-5 16.30 - 16.45**

Criniti S. & Martín-Martín M.: Detrital modes of the Culm facies in the Betic-Rifean chain

**► 40-6 16.45 - 17.00**

Civitelli M., Critelli S. & Ingersoll R.V.: Diagenetic and hydrothermal changes in submarine quartzofeldspathic turbidite sandstones of the Butano Sandstone, central California, USA

**► 40-7 17.00 - 17.15**

Pugliese E., Tangari A.C. & Le Pera E.: Heavy Minerals analysis of fluvial sand in the Crati River (Northern Calabria)

**► 40-8 17.15 - 17.30**

Amato V., Ebrahimi P., Matano F., Mattera R. & Scepi G.: Using a large dataset of field-based measurements to statistically estimate thickness of fallout pyroclastic deposits in the peri-volcanic areas of Campania region, southern Italy

**■ S46. SUSTAINABLE RAW MATERIAL SUPPLY TO BOOST THE GREEN AND DIGITAL TRANSITION: THE ROLE OF MINERAL WASTE RECOVERY AND RECYCLING**

Conveners and Chairpersons: Sossio Fabio Graziano (Università di Napoli), Gabriele Baldassarre (Politecnico di Torino), Giovanna Antonella Dino (Politecnico di Torino), Gianluca Iezzi (Università di Chieti)

Tuesday 3<sup>rd</sup> September 2024 [15.30-17.30]

**Aula G**

**► 46-1 15.30 - 15.45**

[KEYNOTE] Dolenec S.\*, Pavlin M. & Ducman V.: Standardization of innovative construction products as a tool for market up-take

**► 46-2 15.45 - 16.00**

Aquilano A.\*, Marrocchino E. & Vaccaro C.: Giving new life to granite quarrying waste: a case study from Buddusò (Sardinia, Italy)

**► 46-3 16.00 - 16.15**

Baldassarre G.\*, Fiorucci A. & Marini P.: Exploring critical and strategical raw materials recovery potential from mining waste: findings from some Italian historical mining districts

**► 46-4 16.15 - 16.30**

Fantini R.\*, Bernini M., Conte S., Zanelli C., Dondi M., Gualtieri A.F. & Arletti R.: Transforming extractive waste into ceramic innovation: a comprehensive characterization and recycling study

**► 46-5 16.30 - 16.45**

Sedda L.\*, Attardi A., De Giudici G. & Naitza S.: Sardinia's mining heritage revaluing: a path to sustainable critical raw materials extraction

**► 46-6 16.45 - 17.00**

Radica F.\*, Iezzi G., Capasso I., Galderisi A., Bianchini G., Paris E. & de Brito J.: Physical and petrographic features of CDW rubbles of 2016/2017 earthquakes from Central Italy

**► 46-7 17.00 - 17.15**

Spizzichino D.\*, Fumanti F., Mariano S., De Corso S., Andrisani M.G., Dacquino C., Guerra M., Lanz A., Lucarini M., Muto L., Serra M. & Amanti M.: URBES (URBan mining and Extractive waste information Sistem) Project

**► 46-8 17.15 - 17.30**

(Invited) Vitale E.: Alkaline-activation of natural and artificial pozzolans as binders for soil treatment

**■ S47. EVOLUTION OF THE VARISCAN CRUST**

Conveners and Chairpersons: Fabrizio Cocco (Università di Cagliari), Ícaro Fróis Dias da Silva (Università di Lisbona), Salvatore Iaccarino (Università di Torino), Alfredo Idini (Università di Sassari), Stefano Naitza (Università di Cagliari)

Tuesday 3<sup>rd</sup> September 2024 [15.30-17.30]

**Aula B**

**► 47-1 15.30 - 16.00**

[KEYNOTE] Funedda A.\*: The Variscan basement of Sardinia: state of the art and open questions

**► 47-2 16.00 - 16.15**

Dias da Silva I.\*, Pereira M.F., González Clavijo E., Gama C. & Steel Hart L.: Mississippian gneiss domes and synorogenic basins: keys to understand the Variscan collisional orogen

**► 47-3 16.15 - 16.30**

Zanchi A.\*, Angiolini L., Beauchamp B., Henderson C. & Snyder W.: Carlin Canyon, a key area for the study of the latest Carboniferous deformation in Nevada (USA)

**► 47-4 16.30 - 16.45**

Cardello G.L.\*, Amadori C., Rossignol C., Ferrero S., Cogné N., Poujol M., Persano C., Wildman M., Di Nicola L. & Casini L.: New geochronologic and thermochronologic constraints on the Variscan crustal evolution of the Einstein Telescope candidate site of Sardinia (Italy)

**► 47-5 16.45 - 17.00**

Russo D.\*, Fiannacca P., Fazio E., Cirrincione R. & Mamiani M.A.: An integrated field, microstructural, AMS and EBSD approach to unveil the architecture and construction mechanisms of post-collisional granitoid complexes: evidence from the late Variscan Serre Batholith (Southern Calabria)

**► 47-6 17.00 - 17.15**

Attardi A.\*, Cocco F., Deidda M.L., Sedda L., Funedda A. & Naitza S.: CRMs prospecting through comparative ore deposit modelling in SW Sardinia

**► 47-7 17.15 - 17.30**

Deidda M.L.\*, Naitza S., Casini L., Cocco F., Funedda A., Loi A., Oggiano G., Secchi F., Marchesini B. & Beranoaguirre A.: Distinct gold mineralisation events in the Variscan mineral system from southern Sardinia (Italy): implications for crustal sources

## ■ S52. OPEN SESSION ON VOLCANIC PROCESSES

Convenors and Chairpersons: Marco Knuever (Università di Bari), Alessandro Pisello (Università di Perugia), Francesco Maria Lo Forte (Università di Palermo), Emanuele Caruso (Università di Bari)

Tuesday 3<sup>rd</sup> September 2024 [15.30-17.30]

### Aula D

#### ► 52-1 15.30 - 15.45

Colle F.\*; Masotta M., Costa S., Giacomoni P.P., Marani M., Trua T. & Pichavant M.: Petrological evolution of the trans-crustal plumbing system of Marsili volcano (Tyrrhenian Sea, Italy): insights into crystal mush heterogeneity from glomerocrysts variability

#### ► 52-2 15.45 - 16.00

Masotta M.\*; Colle F., Costa S. & Landi P.: Plagioclase dissolution and reaction in a hydrous basaltic melt: a proxy for deciphering time scales of mixing events at Stromboli volcano (Italy)

#### ► 52-3 16.00 - 16.15

Knuever M.\*; Mele D. & Sulpizio R.: Skarn formation associated with alkaline magma chambers: comparison of Somma-Vesuvius, Colli Albani and Merapi volcanic systems

#### ► 52-4 16.15 - 16.30

Brum da Silveira D.\*; Thordarson T., Höskuldsson Á., Moreland W. & Jónsdóttir I.: The 3ka Búrfellshraun Lava Flow Field, Northeastern Iceland: Lava Dynamics and Surface Morphology

#### ► 52-5 16.30 - 16.45

Sortino F.\*; Calderone L., Giammanco S. & Ferlito C.: Monitoring fumarole emissions on the flanks of mount Etna and correlation with volcanic activity

#### ► 52-6 16.45 - 17.00

De Natale G.\*; Rolandi G., Troise C., Di Lascio M. & Sacchi M.: The 1538 eruption at Campi Flegrei resurgent caldera: implications for unrest evolution and eruption hazard

#### ► 52-7 17.00 - 17.15

Moretti R.\*; H<sub>2</sub>O-CO<sub>2</sub> fluid infiltration and the Campi Flegrei unrest: from hydrothermal drying to shallow magma rejuvenation

#### ► 52-8 17.15 - 17.30

--- Withdrawn --- Morelli R.S.\*; Delle Donne D., Orazi M., Nardone L., Pappalardo L., Gammaldi S., Soldovieri M.G., Benincasa A., Bobbio A., Caputo A., Morra V. & Caliro S.: Hydrothermal outgassing dynamics revealed by seismic observations at Pisciarelli, Campi Flegrei caldera



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## POSTER SESSION

Tuesday 3<sup>rd</sup> September 2024

### ■ S1. Geobiological and geochemical approaches in the study of bioconstructions and microbe-mineral interactions: new tools for modern and ancient environmental reconstructions and bio-remediation

#### ► 1-9      Booth 1

Guerrieri S.\*, Borrelli M., Medas D., De Giudici G., Sedda L., Musu E. & Perri E.: Heavy metal-minerals microbial mediated coprecipitation in mine tailings drainage

#### ► 1-10     Booth 2

Balzano S., Ghani J., Bettinelli A., Zhao Y., Guo L. & Funari V.\*: Mine tailings characterization and potential pychoremediation

#### ► 1-11     Booth 3

Borrelli M.\*, Kairouani H., Micheletti F., Zaghloul M.N., Fornelli A. & Perri E.: Microbial signatures in the Early Jurassic phosphatic sandstones of the External Rif (Northern Morocco)

#### ► 1-12     Booth 4

Borrelli M.\*, Perri E., Heimhofer U., Umbro B., Santagati P. & Le Pera E.: Role of microbes in the the Pliocene giant cold-seep system of the Crotone Basin

#### ► 1-13     Booth 5

Santagati P., Borrelli M., Guerrieri S. & Perri E.: Microbial micritic cementation in a Late Pleistocene (MIS 5.5) mid-latitude shallow-water calcarenite (Gulf of Taranto, central Mediterranean)

#### ► 1-14     Booth 6

Natalicchio M.\*, Pellegrino L., Carnevale G., Cavagna S., Dela Pierre F., Lozar F., Pastero L. & Varese C.: Minerals & microorganisms, a possible relationship: an awareness project of GEOMICROBiology

#### ► 1-15     Booth 7

Cipriani M.\*, Maruca G., Dominici R., Muzzupappa M., Bruno F., Lagudi A., Gallo A., Rosso A., Sanfilippo R., Bracchi V.A., Basso D. & Guido A.: ROV-based sampling as tools for geobiological determination of recent marine bioconstructions

#### ► 1-16     Booth 8

Maruca G., Cipriani M., Apollaro C., Vespasiano G., Dominici R., Bruno F., Lagudi A., Bracchi V.A., Basso D., Mauri F., Cellini E., Pirrera L., De Benedetto C., Piscitelli V.F. & Guido A.\*: GIS-based protocol for benthic habitat mapping of Coralligenous build-ups (Isola Capo Rizzuto, Calabria, Italy)

### ■ S4. Chemostratigraphy through time and space: Reconstruction of palaeoenvironment and palaeoclimate by using geochemical proxies and isotopes

#### ► 4-8      Booth 9

Onoue T.\*, Hori S., Tomimatsu Y. & Rigo M.: A dilute sodium hydroxide technique for extracting radiolarians and conodonts from chert

#### ► 4-9      Booth 10

Tomimatsu Y., Onoue T.\*, Sato H. & Rigo M.: Oceanic anoxia during the Carnian Pluvial Episode (Late Triassic) in the Panthalassa Ocean

#### ► 4-10     Booth 11

Akaki M.\*, Sato H., Onoue T., Maron M., Ishikawa A. & Rigo M.: Geochemical studies across the Norian/Rhaetian boundary in the Pignola-Abriola section of the Lagonegro Basin, southern Italy

#### ► 4-11     Booth 12

Rigo M.\*, Bertinelli A., Onoue T., Sato H., Tomimatsu Y., Maron M., Zaffani M., Satolli S., Roghi G. & Nicora A.: The Pignola-Abriola section (southern Apennines, Italy): a GSSP candidate for the base of the Rhaetian Stage

#### ► 4-12     Booth 13

Maron M.\*, Onoue T., Satolli S., Soda K., Sato H., Muttoni G. & Rigo M.: Weathering trends in the Norian through geochemical and rock magnetic analyses from the Pignola-Abriola Section (Lagonegro Basin, Italy)

#### ► 4-13     Booth 14

Omori S.\*, Sato H., Onoue T. & Rigo M.: High-resolution radiolarian biostratigraphy across the impact ejecta layer in the upper Norian hemipelagic sediments in the Sasso di Castaldo section, southern Italy

#### ► 4-14     Booth 15

Rigo M.\*, Di Stefano P. & Todaro S.: Organic carbon isotope ( $\delta^{13}\text{C}_{\text{org}}$ ) curve and extinction trends across the Triassic/Jurassic boundary at Mt Sparagio (Italy): a tool for global correlations between peritidal and pelagic successions

#### ► 4-15     Booth 16

Khatami M., Vahdati B., Gasparrini M.\*, Lasseur E., Spina A., Montano D., Dapiaggi M., Compostella C., Berra F., Decarlis A. & Ceriani A.: Chemostratigraphy study of the Toarcian marine deposits from the Paris Basin southern margin

#### ► 4-16     Booth 17

Aversa L., Cornacchia I.\*, Aldega L., Catanzariti R., Gori F., Marianelli D. & Brandano M.: Clay minerals, trace elements and stable isotope geochemistry reveal increased biogeochemical weathering during the Middle Eocene Climatic Optimum: the Ligurian Alps record (northern Italy)

#### ► 4-17     Booth 18

Catania G.\*, Barbagallo V., Brandano M., Borzì L., Cornacchia I., Distefano S., Pellegrino A., Mancini A., Marianelli D., Maniscalco R., Salerno A. & Di Stefano A.: Middle Miocene paleoclimatic phases: a Central Mediterranean perspective from the SE Sicily sedimentary succession

#### ► 4-18     Booth 19

Mancini A.\*, Cornacchia I., Lamal J., Capezzuoli E., Swennen R. & Brandano M.: Deciphering climate changes from stable isotopes in continental carbonate deposits: the Lapis Tiburtinus travertine succession (Acque Albule Basin, Tivoli, Central Italy)

#### ► 4-19     Booth 20

Brocke K.\*, Border E., Montagna P., Rigo M., Áki Ragnarsson S., Valdimarsson H., Hilma Ólafsdóttir S., Therre S., Fohlmeister J., Trotter J., McCulloch M., Schröder-Ritzrau A., Lausecker M., Blaser P., Reverdin G., Colin C. & Norbert F.: Seawater temperatures, pH and water mass provenance reconstructions over the last century from cold-water coral geochemistry in the North Atlantic Ocean

**■ S6. Geosciences on display: the role of Natural History Museums in the future of our planet**

**► 6-16      Booth 21**

Barone G., Carbone C., Fugazzotto M., Mauro D., Merlini M., Nazzareni S.\* & Pratesi G.: The SIMP Commission on Museums: a network for sharing and promoting museum activities

**► 6-17      Booth 22**

Belmonte D.\* & Carbone C.: Development and valorization of the historical and modern mineral collections of the Department of Earth, Environment and Life Sciences (DISTAV), University of Genova

**► 6-18      Booth 23**

Bosi F., Lapaire J., Meisser N., Pasero M.\* & Rumsey M.: On the preservation and the availability of holotype minerals

**► 6-19      Booth 24**

Bruno F., Mollo F., Di Cuia P., Cozza M., Sardella R., Iurino D.A., Strani F., Franzese F. & Bellucci L.: Interactive exhibits, gamification and digital storytelling in Scientific Museums: the case of MUGEPA in Rotonda

**► 6-20      Booth 25**

Ciani F., Manca R., Lastrucci L., Costagliola P., Benvenuti M. & Rimondi V.: Enhancing the accessibility of the Herbaria of the University of Florence by reducing mercury contamination due to historical conservation treatments

**► 6-21      Booth 26**

D'Arpa C.\*, Di Patti C., Surdi G. & Incarbona A.: The Arab-Norman itinerary stones: where geological history meets the local artistic heritage

**► 6-22      Booth 27**

Mauro D., Biagiioni C. & Bonaccorsi E.: The Angelo Da Costa mineral collection: a new acquisition of the Natural History Museum of the University of Pisa

**► 6-23      Booth 28**

Merlini M.\* & Mangano C.: The mineralogical collections at the Earth's Science Department, University of Milano: history, conservation, digitization, and valorization

**► 6-24      Booth 29**

Moggi Cecchi V., Fabrizi L., Barbagli F. & Benvenuti M.: From the past to the future: the new exhibition of the Mineralogical collection of the Florence University Natural History Museum and its relocation to the "La Specola"

**► 6-25      Booth 30**

Petruzzelli M., Francescangeli R., Mesto E., Monno A., Sabato L., Scillitani G., Simone O., Spalluto L. & Tropeano M.\*: The late Cenomanian Aigialosaurus (Reptilia, Squamata) exposed in the Earth Science Museum of Bari University (Italy)

**■ S9. Advances in remote sensing for hazard monitoring and geo-resource management through multi-dimensional digital models**

**► 9-15      Booth 31**

Bellini F., Colacicco R., Marra M., Sabato L. & Tropeano M.: Digital geotourism: unveiling the geological heritage of Laterza (Puglia, Southern Italy)

**► 9-16      Booth 32**

Binetti M.S.\*, Massarelli C. & Uricchio V.F.: Monitoring and identification of environmental crimes: a satellite imagery and machine learning approach

**► 9-17      Booth 33**

Caso F., Piloni C.B., Filippi M., Pezzotta A., Fazio E., Visalli R., Ortolano G., Roda M.\* & Zucali M.: Combining traditional and quantitative multiscale structural analysis to reconstruct the tectono-metamorphic evolution of migmatitic basements: the case of the Valpelline Series, Dent-Blanche Tectonic System, Western Alps

**► 9-18      Booth 34**

Corradetti A.\*, Tavani S., Delogkos E. & Camanni G.: Structural characterization of a quarry showing normal faulting and bedding parallel slip: insight from virtual outcrop modeling

**► 9-19      Booth 35**

Fazio E.\* & Cirrincione R.: Improving geological understanding through the integration of UAV aerial survey and LiDAR scanning: advantages and limitations of a multiscale hybrid approach

**► 9-20      Booth 36**

Grita S.\*, Casu M., Sedda L., Asadzadeh S., Boccardo P., Melis M.T., Naitza S. & De Giudici G.: Characterization of Sardinian mine residues using Remote Sensing

**► 9-21      Booth 37**

Guerriero V., Sciortino A., Marini R., Mazzanti P. & Tallini M.: InSAR pattern recognition and data analysis in characterizing high-risk seismic areas: a case study from L'Aquila city, Italy

**► 9-22      Booth 38**

Ortolano G., Fazio E., Visalli R., D'Agostino A., Menta S., Portale S. & Cirrincione R.: The overturned nappe-like structure of the Peloritani Mountains Upper Complex in the light of the new multiscale structural investigations (Peloritani Mountains - Sicily): new insights for the western Mediterranean geodynamics

**► 9-23      Booth 39**

Pedone M. & Manzari P.\*: Insights on the geological characterization of Solfatara using data from PRISMA mission

**► 9-24      Booth 40**

Russo D., Fiannacca P., Fazio E., Portale S., Cirrincione R. & Mamiani M.A.: Macro-to micro-scale investigation of the relationships between granitoid magma emplacement and tectonics at Capo Vaticano Promontory (southern Calabria, Italy)

**■ S11. BACK TO THE FUTURE. History of geological studies and mapping as a key for sustainable development**

**► 11-17      Booth 41**

Argentieri A., Centamore E., Petti F.M.\* & Tavarnelli E.: Two forerunners of Northern Apennines tectonics: a tribute to Roberto Signorini and Carlo Ippolito Migliorini

**► 11-18      Booth 42**

Barale L., Console F., Mosca P.\* & Pantaloni M.: The problem of the age of "greenstones" in the Western Alps: the perspective of Carlo Bruno (1831-1916)

**► 11-19      Booth 43**

Bilotta A.M., Canali M.G., De Caterini G., Fiorelli C., Lucarini M.\*, Milighetti C., Nappo E. & Mattei A.: Children's Eco-Museum (I.C. Via Santo Savarino, Rome): history and memory of the Genius loci of the "Agro romano"

**► 11-20 Booth 44**

Capozzoli A.\* Paoletti V., Porfido S. & Nappi R.: Historical data revision of the 1688 Sannio-Matese earthquake: dataset of environmental effects for constraining the seismogenic source

**► 11-21 Booth 45**

De Ceglie R.\* & Petrocelli C.: On the burning earth: the fascination of Vesuvius and the origins of modern geology

**► 11-22 Booth 46**

Macini P.\* & Pantaloni M.: Geosciences and engineering of Lungro rock salt: unveiling Italy's longest-lived underground mining site in Calabria

**► 11-23 Booth 47**

Macini P., Pantalone M.\* & Console F.: Antonio Stoppani: a pioneer of petroleum geology and his activity in the Italian oil production industry

**► 11-24 Booth 48**

Musumeci D.\* & Furlani S.: The conquest of the submerged landscape: a neglected history

**► 11-25 Booth 49**

Romano M.\* & Carnevale G.: Early interpretations of the Eocene Bolca Fossil-Lagerstätte (Italy): three centuries of debates for the emerging Earth Sciences

**■ S12. Field and digital geological mapping: the numerous facets of CARG project from crystalline basement to sedimentary deposits****► 12-17 Booth 50**

Antonelli M., Caldara M.A., Sacco E. & Spalluto L.: Geological map of the Mesozoic and Cenozoic carbonate units cropping out in the southern Gargano Promontory: new stratigraphic constraints for the tectonic evolution of the area

**► 12-18 Booth 51**

Capotorti F.\* & Tomassetti L.: Paleotectonics imprint on the southern edge of the M. Morrone structure (Central Apennines)

**► 12-19 Booth 52**

Maino M., Perozzo M., Seno S., Niccolò M., Morelli D., Crispini L., Locatelli M., Corradi N., Federico L. & Notti D.: A geological dive from the western Alps into the Ligurian sea: the experience of the CARG 245 - Albenga sheet

**► 12-20 Booth 53**

Pieruccioni D.\* & Simonetti M.: The medium- to high-grade metamorphic basements of NW Sardinia: the example of the Sheet n. 425 "Isola Asinara"

**► 12-21 Booth 54**

Rizzo G.F., Maiorana M., Avellone G., Gennuso M., Bonfardeci A. & Gasparo Morticelli M.: 3D reconstruction of an integrated onshore/offshore geological model: the example of geological sheet 628 Sciacca (Southwestern Sicily)

**► 12-22 Booth 55**

Cerone D.\* Notaro A., Parente M. & Prosser G.: New geological map at a 1:10.000 scale and tectono-stratigraphic review of the NW Campania-Basilicata boundary (Southern Apennines, Southern Italy)

**► 12-23 Booth 56**

Cesarano M.\* Amodio S., Barattolo F., Bravi S., Angiolilli D., Auciello E., Bollati A., Boscaino M., Randisi A., Girardi G., De Matteis M., Grella M., Rosskopf C.M., Silvestri S., Cipriani A., Tomassetti L. & Pappone G.: Stratigraphic and structural relationships between the Matese Mts and the Montagnola di Frosolone: new field data from the Geological Sheets 404 "Isernia" and 418 "Piedimonte Matese" (CARG Project)

**► 12-24 Booth 57**

Cilumbriello A.\* Sabato L. & Tropeano M.: The highest regressive coastal deposits of the Bradanic Trough (Basilicata, Southern Italy): old vs new stratigraphic schemes in the official geological cartography

**► 12-25 Booth 58**

Colzada G.\* Arrigoni F., Marinoni A., Pigazzi E., Tantardini D., Apuani T. & Tartarotti P.: Recognition of a pre-LGM, km-wide collapsed DGSD in Bregaglia Valley (Italian Central Alps): a case study in the frame of the CARG Project sheet n. 038 "Chiavenna"

**► 12-26 Booth 59**

Fagioli G.\* Artegiani F., Pietrosante A., Parente M. & Putignano M.L.: The Mesozoic stratigraphic succession of Mt. Massico ridge in the southern Apennines (northern Campania, Italy): new data from geological mapping (Sheet 429 Mondragone - CARG Project)

**► 12-27 Booth 60**

Frezza V., Garzarella A., Notaro A., Pampaloni M.L., Berti D., Chiarini E., Marino M., Romagnoli G. & Silvestri S.: Biostratigraphic data in the Pliocene-Pleistocene sediments from the CARG Project surveys in the Central Apennines (Italy): new evidence from the Sheet n. 370 "Guardiagrele"

**► 12-28 Booth 61**

Gennuso M., Rizzo G.F., Bonfardeci A., Avellone G., Todaro S. & Gasparo Morticelli M.: Tectono-sedimentary evolution of a Meso-Cenozoic slope from south-western Sicily (Italy)

**► 12-29 Booth 62**

Marinoni A.\* Pezzotta A., Tantardini D., Arrigoni F., Pigazzi E., Colzada G., Apuani T., Zerboni A. & Tartarotti P.: Multi-scale landscape evolution of Central Alps: another side of the Valchiavenna CARG project

**► 12-30 Booth 63**

Parrino N., Srivastava E., Caldarer F., Burrato P., Gasparo Morticelli M., Di Maggio C., Agate M., Bonfardeci A. & Sulli A.: Tectonic imprints on Quaternary landscapes: insights from morphometric analysis and new luminescence dating in Southwestern Sicily

**► 12-31 Booth 64**

Pasqualone L.\* & Urbani M.: Digital structural analysis from outcrops and VOMs: case studies from Umbria turbiditic successions

**► 12-32 Booth 65**

Relvini A., Ascione A., De Luzio E., Artegiani F., Cascini L., Muraro C., Parente M., Ogata K., Di Donato V. & Iannace A.\*: Inheritance of pre-orogenic faults in Miocene foredeep evolution in Southern Apennines, Italy

**► 12-33 Booth 66**

Riva A., Caggiati M., Preto N., Fioraso M. & Crocito L.: Rosso Ammonitico Veronese (Bajocian - Tithonian, Jurassic) from the Trento Platform to the Belluno Basin: can we really map it?

**> 12-34 Booth 67**

Romagnoli G.\* & Muraro C.: Field preliminary data to reconstruct the tectono-stratigraphic evolution of the Mt. di Muccia-Mt. Val di Fibbia area (Northern Apennines, Italy)

**> 12-35 Booth 68**

Silvani F.\*, Mirabella F., Pazzaglia F.J. & Barchi M.R.: A previously unknown loess deposit in the Quaternary Gubbio basin (Umbria, central Italy): a stratigraphical record of the paleoenvironment of the area

**> 12-36 Booth 69**

Srivastava E.\*, Parrino N., Caldereri F., Morticelli M.G., Burrato P., Pucci S., Agate M. & Sulli A.: Late Pleistocene eustatic variations and fluvial terrace development in the Carboj River Catchment, Southern Sicily

**> 12-37 Booth 70**

Venezia V.\*, Festa V. & Tropeano M.: The small-scale problem: loss of significant geological features in small scale geological maps. The case of the northern sector of the Murgia Materana, South Italy

**> 12-38 Booth 71**

Zanellato N.\*, Dela Pierre F. & Festa A.: Sheet 158 "Casale Monferrato" of the Geological Map of Italy at 1:50.000 scale (CARG Project): preliminary results

**■ S15. Analysis and management of coastal areas, from risk assessment to perspectives arising from new technologies****> 15-17 Booth 72**

Bosman A., Tripanera D.\*, Anzidei M., Greco M., Vecchio A., Muccini F., Alberti T., Serpelloni E., Doumaz F., Charalampou G. & Raso E.: Relative sea level rise and storm surge scenarios along the coasts of Cinque Terre National Park (Liguria, Italy)

**> 15-18 Booth 73**

Faccini F.\*, Ferrando A., Picchio F. & Scannapieco A.: Analysis of coastal retreat and slope movements on rocky coastal cliff between Sori and Pieve Ligure (Eastern Liguria, Italy)

**> 15-19 Booth 74**

Musumeci R.E., Di Pietro G.\* & Ortolano G.: Methodology for the assessment of coastal morphodynamics due to storm surges in the Mediterranean area using machine learning and remote sensing data

**> 15-20 Booth 75**

Vitale A.\*, Sansò P. & Giacardi E.: The drowned physical landscape of Porto Cesareo coastal area (southern Apulia, Italy)

**■ S17. Advanced minero-chemical characterization and processing of waste for a conscious reuse****> 17-15 Booth 76**

Massa M.\*, Calce S., Pachaiappan P. & Bontempi E.: Sewage sludge ashes characterization and microwave thermochemical treatment for fertilizer production

**> 17-16 Booth 77**

Mureddu A.\*: Functional recovery of Provincial Road no. 2 and management of waste materials: from waste to by-products. Experiences of the Province of Southern Sardinia in the reuse and cold recycling of geomaterials

**> 17-17 Booth 78**

Ossoli E., Ercoli R.\*, Stabile P. & Paris E.: Recycling of surgical masks into green products for the building sector

**> 17-18 Booth 79**

Pandolfi Balbi E., Corradini A.\*, Cambi C., Fastelli M., Cerni G., Cotana F., Zucchini A. & Comodi P.: Wood biomass ash: a possible alternative to free lime and cement as stabilizing agent in clayey subgrade of road pavement

**> 17-19 Booth 80**

Radicchi A., Fastelli M., Zucchini A.\*, Vivani R., Corradini A., Cerni G. & Comodi P.: Recycling and reusing of construction and demolition waste from Umbria region: a second-generation binder

**> 17-20 Booth 81**

Stabile P.\*, Ercoli R., Paris E. & Carroll M.R.: Time-temperature-crystalline behavior of thermally treated MSW bottom ashes

**> 17-21 Booth 82**

Stabile P., Fornasini L.\*, Bersani D., Dominijanni S., Di Genova D., Romano C. & Paris E.: A DSC-derived viscosity and Raman spectroscopy study on waste-based glasses in the CAS system

**> 17-22 Booth 83**

Wehrung Q.\*, Pastero L., Bernasconi D., Cotellucci A., Bruno M., Destefanis E., Caviglia C. & Pavese A.: A novel in-situ method to continuously monitor the aqueous carbonation degree of high calcium (chloro)(hydr-)oxide content-industrial alkaline waste through gas flow sensors

**■ S22. The science of clays and zeolites: from genesis to sustainable applications****> 22-17 Booth 84**

Annibali Corona M.\*, Calcaterra D., Cappelletti P., Izzo F., Langella A., Mercurio M. & Guerriero L.: Mineralogical analysis of clayey earthflow materials and implications for assessing susceptibility to solid-to-fluid transition

**> 22-18 Booth 85**

Belviso C.\*, Abdolrahimi M., Lettino A., Cavalcante F. & Peddis D.: Magnetic properties of bauxites and pre-fused hydrothermal product (zeolite)

**> 22-19 Booth 86**

Boscia S.\*, Grifa C., Germinario C., Mercurio M., Langella A., Izzo F., Pauciulo A., Gliubizzi R. & Pappalardo D.: Mineralogical characterization and alkaline activation of commercial metakaolins: potential applications

**> 22-20 Booth 87**

Cavalcante F., Belviso C., Lettino A., Lando I.G. & Prosser G.\*: Relationships between mineralogical and microstructural features in low-T metapelites from the Pollino area

**> 22-21 Booth 88**

De Gregorio E., Ferone C., Izzo F., Langella A., Mercurio M., Migliaccio C.\*, Occhicone A., Roviello G. & Tarallo O.: Alkaline and acid Red mud-metakaolin based geopolymers: mineralogical and morphological characterization

**► 22-22 Booth 89**

Girardi G.\*, Clausi M., Petti R., Vitone C. & Pinto D.: Characterization and pre-treatment of low grade-clays for the preliminary evaluation of their suitability as precursor for alkali-activated binders

**► 22-23 Booth 90**

Krajišnik D.\*, Uskoković-Marković S., Pantić M., Lazić V., Daković A. & Marković M.: Chitosan-clay composite films: investigation of functional and antibacterial properties for potential biomedical application

**► 22-24 Booth 91**

Medini M., Clausi M., Cofano V.\*, El Chami D. & Pinto D.: Tailored porous geopolymers for efficient ammonium adsorption: towards sustainable agricultural nutrient recovery

**► 22-25 Booth 92**

Pinto D.\*, Lenaz D., Paronuzzi P. & Bolla A.: Application of Rietveld refinement for quantitative phase analysis of clays containing illite-smectite mixed-layer structures: the case study of Vajont bentonites

**► 22-26 Booth 93**

Salamè E., Cinelli C., Tonutti P., Brizzolara S., Panattoni F., Tardani M., Freitas Pio de Azevedo B.\* & Masini C.: Ethylene capture using natural and altered zeolites during the storage period of kiwifruits

**► 22-27 Booth 94**

Tsitsishvili V.\*, Panayotova M., Mirdzveli N. & Bish D.: Thermal stability of some natural zeolites from Georgia, Kazakhstan, and Armenia

**■ S23. Assessing and mitigating natural risks: a multidisciplinary path from Geosciences to Citizen Science****► 23-9 Booth 95**

Bonelli P.\*, Abbatangelo G., Becci G., Cardinale D., Conelli A., Liuzzi G. & Morigi M.: An early warning system experiment for landslides in Grassano (Matera, Basilicata, Italy) with the active participation of the local population and self-made open-source instruments

**► 23-10 Booth 96**

Clemente E.\*, Lapietra I., Colacicco R. & Rinaldi A.: Climate change adaptation and mitigation strategies in the Kenyan Rift Valley: the case of Baringo and Bogoria lakes

**► 23-11 Booth 97**

Lisco S.\*, Marangi M., Sini V. & Lapietra I.: Coastal and Marine hazard awareness through citizen science in School

**► 23-12 Booth 98**

Lisco S.\*, Rizzo A., de Luca A., Fracchiolla T., Sozio A., Bitetto F., Ravisato M., Trani R., Di coccia I., Schiavo A., Giannattasio L., Pierri D. & Tamma M.: Students' engagement in coastal monitoring activities: preliminary outcomes from the Marevivo NauticinBlu project

**► 23-13 Booth 99**

Lo Presti V., Agate M., Balsamo L., Bracci M., Cassataro R., Maiorana M.\* & Sulli A.: Submarine Fluid Escapes; their role on ground instabilities. Learning Examples of RETURN Project

**► 23-14 Booth 100**

Mureddu A.\*: Zoning of territorial hazard for the evaluation and mitigation of hydrogeological risk: morphometric, meteorological, climatic, geolithological and hydrogeological - hydraulic analysis of the Rio Cor'e Pruna basin (Sardinia – Italy)

**► 23-15 Booth 101**

Rinaldi A., Bonamassa G., Fracchiolla R.\*, Lapietra I., Liso I.S., Lollino P., Lorusso G. & Parise M.: Sinkhole risk perception in the urban area of Altamura (Southern Italy)

**► 23-16 Booth 102**

Tavecchio W.\*: Protects and heats

**■ S27. Caves, mines and other underground spaces as field laboratories in environmental geology****► 27-8 Booth 103**

Cossu Q.A., Arca B., Cinus D.\*, Ferrara R., Arca A., Ventura A. & Duce P.: Technological innovation and environmental monitoring for the evaluation of the bearing capacity in tourist caves

**► 27-9 Booth 104**

Didonna F., Liso I.S.\*, Fregola R.A., Messina F. & Serrone M.: Sustainable speleology and cave conservation

**► 27-10 Booth 105**

Fioraso M.\* & Riva A.: Speleogenesis and hydrostructure development in conglomerate-dominated sedimentary sequences: the "Castel Sotterra" Cave

**► 27-11 Booth 106**

Mastronuzzi G.\*, Fiore A., Parise M., Tropeano M. & Tarantini F.: Karst and cave environment conservation in the Alta Murgia National Park

**► 27-12 Booth 107**

Ruberti N.\* & Sanna L.: Teaching sustainable planning of show caves

**► 27-13 Booth 108**

Sanna L.\*: Moisture on underground walls in abandoned mines as source of acid drainage

**► 27-14 Booth 109**

Sanna L.\*, Pusceddu C., Sanna U. & Floris G.: Disentangling natural signal from anthropogenic contribution in the temperature dynamics within show caves

**► 27-15 Booth 110**

Tinagli L.\*, La Rosa A. & Paoli G.: A long-term analysis of mining-induced sinkhole activity in Gavorrano (Tuscany, Italy) by remote sensing and field data

**► 27-16 Booth 111**

Vigna B. & Balestra V.\*: Anthropogenic impact assessment in show caves through environmental parameters monitoring

**■ S30. Women in Geosciences: a journey through the social changes from the past to present and future scenarios****► 30-9 Booth 112**

De Lucia M.\*, Cafarella L. & Pignone M.: Engaging Women in Science: Harnessing Social Media for STEM and Geoscience Outreach

**> 30-10      Booth 113**

Donato P.\* & Lucà F.: Promoting the Geosciences among the young women: an example in the framework of the PLS program

**> 30-11      Booth 114**

Cofano A.\* & De Ceglie R.: Fossils, drawings and letters. Women's contribution to the development of early 19th century geosciences

**> 30-12      Booth 115**

Colacicco R.\*: The frontiers of the space and the sea: the records of Dr. Kathryn Sullivan

**> 30-13      Booth 116**

Contessi M.\*: Anna Fiori and the balance between teaching and research in the years between the Second World War

**> 30-14      Booth 117**

Fregola R.A., Maiorano P., Micheletti F., Sabato L. & Zucchi M.\*: Learning from the pioneer women in geoscience

**> 30-15      Booth 118**

Marinangeli L.\*, Garzarella A., La Torre V., Salerno V.M. & Shahini E.: Webinars of Ud'A ex-students to valorise the professional careers of women geologists

**> 30-16      Booth 119**

Montomoli C.\*: The Gender Equality Plan @ UniTo

**> 30-17      Booth 120**

Moretti M.\*, Bianco F., Castello B., Cocina O., Cultrera G., Graziani L., Latorre D., Margheriti L., Montone P., Nostro C., Pastori M., Pondrelli S., Scognamiglio L. & Valoroso L.: The role of women in the geosciences: the case of INGV in preparing and managing the emergencies

**> 30-18      Booth 121**

Amelio A., Doria S., Faieta D., Pagliaro S., Piacentini T., Pondrelli M.\*, Ranieri B. & Vessia G.: The challenge to promote equal opportunities in the daily life at university: searching for best practices

**■ S36. Challenges in the characterization of active faults: the contribution from seismology, geodesy, and structural analysis****> 36-16      Booth 122**

Cardello G.L., Barreca G., Monaco C.\*, De Michele M. & Antonioli F.: First Comparison of Instrumental European Ground Motion Service by Copernicus Data with Short and Long-term Geological Vertical Movements for the Italian Coasts

**> 36-17      Booth 123**

Esposito A., Pietrolungo F.\*, Pezzo G., Govoni A., Soldati G., Inannarelli M., Terribili A., Chiarabba C. & Palano M.: The continuous GNSS network of Salina Island in the framework of CAVEAT project

**> 36-18      Booth 124**

Palano M.\*, Billi A., Conti A., Cuffaro M., Orecchio B., Presti D., Scolaro S., Sparacino F. & Totaro C.: Geodetic and seismological constraints for the intra-orogenic normal Lakes Fault (Sila, Calabria, southern Italy)

**> 36-19      Booth 125**

Palano M.\*, Parrino N., MadarietaTxurruka A., Pietrolungo F., Sparacino F. & Sulli A.: Crustal deformation along the Dead Sea fault system

**> 36-20      Booth 126**

Perrucci F.\* & de Lorenzo S.: A method for the determination of the orientation of fault plane from the analysis of seismograms in the time domain

**> 36-21      Booth 127**

Sparacino F.\*, Galuzzi B.G., Palano M. & Azzaro R.: Analysis of the Seismic Coupling Coefficient for Italy: first results

**> 36-22      Booth 128**

Tavani S.\*, Petracchini L., Billi A., Carminati E., Chiarabba C., Conti A., Devoti R., Palano M., Pezzo G., Scognamiglio L. & Tinti E.: Unraveling the dynamics of the active frontal sector of the Northern Apennine thrust belt: a multidisciplinary investigation following the 2022 Mw 5.5 Adriatic earthquake

**■ S40. Source-to-sink processes and genesis of resources in sedimentary deposits: advances in understanding of geologic and environmental dynamics through a multidisciplinary perspective****> 40-9      Booth 129**

Tangari A.C.\*, Le Pera E., Andò S., Garzanti E., Piluso E., Marinangeli L. & Scarciglia F.: Weathering processes and soil formation in Sila Massif and Catena Costiera (Calabria, southern Italy): Insight from heavy minerals

**> 40-10      Booth 130**

De Cesare P.\* & Scarciglia F.: Integrated study of erosion rates using cosmogenic and fallout radionuclides ( $^{10}\text{Be}$  and  $^{239+240}\text{Pu}$ ) in a pilot stream catchment of Calabria, southern Italy

**> 40-11      Booth 131**

Andò S.\*, Barbarano M., Caruso P., Gambarotta O., Garzanti E., Limonta M., Malusà M., Paglia S., Pastore G., Resentini A. & Vezzoli G.: From the micro to the macro-scale: the contribution of the "Provenance Centre" (Unimib) in the study of sedimentary archives

**> 40-12      Booth 132**

Gallicchio S.\*, Fornelli A., Maiorano P., Fanelli G. & Micheletti F.: Late Paleogene syn-sedimentary volcanioclastic deep-sea succession of the Candela Gorges (Southern Italy). New constrains for the evolution of the Southern Apennines

**> 40-13      Booth 133**

Criniti S.\* & Costamagna L.G.: Detrital modes of the Pennsylvanian-Permian sandstones in Central-Eastern Sardinia (Italy)

**> 40-14      Booth 134**

Fornelli A.\*, Micheletti F., Acquafredda P. & Mangone A.: Crystallization of Mn-hydroxides for interaction between limestones and clay minerals in the Apulian karst (southern Italy)

**> 40-15      Booth 135**

Dimuccio L.A.\*, Pratas J., Ribeiro J., Rodrigues N., Cunha L., Micheletti F. & Acquafredda P.: Integrated paleoenvironmental multi-proxy analysis of Late Quaternary fluvial sediments in the Côa Valley (northeast Portugal)

**> 40-16      Booth 136**

de Luca A.\*, Lisco S., Fracchiolla T., D'Abbicco V., Trani R., Ravisato M., Lazic T. & Moretti M.: Sedimentological features of sandy sediments trapped in Sabellarian Bioconstructions along the Apulian Coastline (Southern Italy)

**> 40-17 Booth 137**

Kaiouani H., Micheletti F.\*, Borrelli M., Perri E., Zaghloul M.N. & Fornelli A.: Early Jurassic phosphatic sandstones (External Rif, Northern Morocco): evidence of mineralogical and biogeochemical processes related to the Early Toarcian Oceanic Anoxic Event

**> 40-18 Booth 138**

Kaiouani H., Abbassi A., Zaghloul M.N., El Mourabet M., Fornelli A., Mongelli G., Critelli S. & Micheletti F.\*: The Jurassic climate change in the northwest Gondwana (External Rif, Morocco): A probable control of successive mega-monsoons through the African Inter-Tropical Convergence Zone

**■ S43. Groundwater resources innovation and sustainability: from characterisation to management of saturated and unsaturated zone****> 43-17 Booth 139**

Brigida S.\*, De Giglio O., Bagordo F., Grassi T., De Carlo L., Savino A.F., Turturro A.C., Montagna M.T. & Caputo M.C.: Review of laboratory-scale studies to assess factors affecting the fate of microorganisms in porous media

**> 43-18 Booth 140**

Fuoco I.\*, Criscuoli A., Vespasiano G., Bloise A., De Rosa R., Apollaro C. & Figoli A.: From geochemistry to treatment: a multidisciplinary study for reuse of safe natural waters

**> 43-19 Booth 141**

Lapadula S., Balestra V.\*, Barzaghi B., Falaschi M., Ficetola G.F. & Manenti R.: Rhythmic response of cave animals to external cycles

**> 43-20 Booth 142**

Mainini A.\*, Sabattini M., Critelli V., Arosio D., Brozzo G., Panzani A., Droghieri E., Righetti S. & Ronchetti F.: River Magra aquifer system groundwater flow model, for correct water management in the perspective of climate change (Liguria Region, Italy)

**> 43-21 Booth 143**

Parisi A.\*, Di Gregorio S. & Gentini A.: BIOflushing technology for in situ applications of the Soil-Omic protocol. Operational scale prototype of a plant for the decontamination of soil in the saturated and unsaturated zone

**> 43-22 Booth 144**

Peruzzo L.\*, Werban U., Pohle M., Cassiani G., Consoli S. & Vanella D.: EMI and ERT characterization of plant-scale irrigation and ET: an orange orchard-case study and methodological challenges

**> 43-23 Booth 145**

Torres D., Zambrano M.\* & Baena J.G.: Use of GPR imaging for early detection of water leaks in pipelines

**> 43-24 Booth 146**

Volpe A.\*, De Carlo L., Masciale R. & Caputo M.C.: Groundwater - lake interaction in a mediterranean coastal aquifer: the Alimini lake case study (Southern Italy)

**■ S46. Sustainable raw material supply to boost the green and digital transition: the role of mineral waste recovery and recycling****> 46-9 Booth 147**

Baldassarre G.\*, Mori De Oliveira C. & Marini P.: Laboratory-scale reprocessing trials of historical mine waste from the Traversella mining district (Piedmont, Italy)

**> 46-10 Booth 148**

Dino G.A.\*, Mancini S., Casale M., Tazzini A., Faraudello A. & Rossi P.: Towards a Green transition: tools and protocols to help decision makers and companies to decide if and when applying extractive waste exploitation as an alternative to remediation

**> 46-11 Booth 149**

Graziano S.F.\*, Marone P., Trinchillo A., Di Benedetto C., Montesano G., Rispoli C. & Cappelletti P.: Processing waste of quartzite from Jaipur District (India) as secondary raw materials for cementitious adhesives

**> 46-12 Booth 150**

Jackson L., Parbhakar-Fox A., Colombi F. & Baldassarre G.\*: The role of secondary prospectivity of mine waste for enhancing critical metals recovery in South Australia

**> 46-13 Booth 151**

Khelifi F., Dino G.A., Zhao X., Tazzini A.\*, Passarella I. & Padoan E.: Geochemical and environmental evaluation of trace metals within newly constructed technosols: risks and potentials for large scale applications

**> 46-14 Booth 152**

Mancini S.\*, Pereira M.D., Lasagna M., Gambino F., Prego G., Gonçalves D., Jacinto A., Daud J., Loite J., Nganhane H., Rodrigues N., Dinis P. & Dino G.A.: Sustainability in geo-resource management through shared competence-building projects. The example of GEODES Erasmus Project

**> 46-15 Booth 153**

Nakhaeiashtari M., Rabee A., Reitano R., Funiciello F., Capitelli F. & Della Ventura G.\*: Toward novel strategies for consolidating earther cultural heritage manufacts

**> 46-16 Booth 154**

Scervini S.\*, Baldassarre G. & Bellopede R.: Sonic drilling: evaluation of the best techniques for tailings and mining waste exploration and valorization

**> 46-17 Booth 155**

Zhao X., Khelifi F., Casale M., Tazzini A., Cavallo A., Padoan E., Yang K. & Dino G.A.\*: Critical raw materials supply: challenges and potentialities to exploit REEs from siliceous stones and extractive waste

**■ S47. Evolution of the Variscan crust****> 47-8 Booth 156**

Carosi R.\*, Montomoli C., Iacopini D., Petroccia A., Simonetti M. & Oggiano G.: Geology of the Asinara Island (Sardinia, Italy)

**> 47-9 Booth 157**

Pieruccioni D.\* & Simonetti M.: Preliminary results from microstructural investigations of post-collisional granitoid from the Asinara Island (NW Sardinia)

**> 47-10 Booth 158**

Cruciani G.\*, Dulcetta L., Franceschelli M., Frassi C. & Musumeci G.: Late Variscan age of a metamorphic core complex in the foreland of the Variscan belt: insights from the Mt. Filau Orthogneiss (SW Sardinia, Italy)

**> 47-11 Booth 159**

Petroccia A., Carosi R., Montomoli C., Iaccarino S.\*, Forshaw J.B. & Petrelli M.: Constraining the deformation in transpressive shear zones: insights from the Monte Grighini Shear Zone in Sardinia and implications for the Southern European Variscan belt

**► 47-12 Booth 160**

Funedda A.\* Cocco F., Forci A., Baraille J., Salaun M., Caria I. & Piredda R.: Preliminary data from fieldwork in the framework of the CARG Project 546-Guspi (SW Sardinia)

**► 47-13 Booth 161**

Dore E.\* Cocco F., Ferrero S., Melis M.T., Rossignol C., Biddau R., Buttau C., Dessì F., Calia F., Pani M., Da Pelo S. & Funedda A.: Geological investigations at Einstein Telescope site of Sardinia (Italy): preliminary results

**► 47-14 Booth 162**

Caçador I., Dias da Silva I.\* & Pereira MF.: Syn-tectonic plutonism and extensional tectonics in the Variscan orogen: evidence from the Mississippian Reguengos de Monsaraz pluton (Ossa-Morena Zone, SW Iberian Massif)

**► 47-15 Booth 163**

Spahić D., Cocco F.\* & Tančić P.: Far-field interplay between the intra-Ordovician compressional tectonics along the northeastern Gondwana active margin and Gondwana interior: insights from the central Lybia Ordovician succession

**► 47-16 Booth 164**

Spahić D., Radović M., Blagojević D., Tanasković L., Jovanović D., Vuković S. & Cocco F.\*: Polyphase deformations and transposition cycles in the "Median Dacides" tectonic units

**■ S52. Open session on volcanic processes****► 52-9 Booth 165**

Carrazana A. & Gimeno D.\*: Volcano- and chemostratigraphy of the calc-alkaline and peralkaline succession of Sulcis region, SW Sardinia, Italy: new pyroclastic units, redefinition of others, and improvement of the mapping of volcanic units

**► 52-10 Booth 166**

Caruso E., Sulpizio R., Costa A., Petrelli M., Massaro S. & Fisauli G.: A novel approach to assess magma ascent times through crystal zonation analysis

**► 52-11 Booth 167**

Mele D.\* Knuever M., Dellino P., Costa A., Fornelli A., Massaro S. & Sulpizio R.: New evidence of syn-eruptive magma-carbonate interaction: the case study of the Pomice di Avellino eruption at Somma-Vesuvius (Italy)

**► 52-12 Booth 168**

Musu A., Caricchi L., Vetere F., Griffiths T., Petrelli M., Corsaro R.A., Peres S., Perugini D. & Pisello A.: Linking crystal textural and chemical features to pre-eruptive magmatic processes: insights from dynamic experiments on natural Mt. Etna trachybasalts

**► 52-13**

--- Withdrawn --- Neglia F.\* Caruso E., Dioguardi F., Mele D., Sarocchi D. & Sulpizio R.: Experimental analysis to calculate the coefficient of restitution of irregular volcanic particles

**► 52-14 Booth 170**

Novembre D.\* Carrazana A. & Gimeno D.: Solid-state synthesis of calcosilicates mimics pyroclastic rheomorphic rhyolitic-xenolith interaction in the Monte Ulmus peralkaline unit (SW Sardinia, Italy)

**► 52-15 Booth 171**

Sieber J., Arzilli F., Lo Monaco S. & Carroll M.R.: Alkali feldspar dissolution kinetics in trachytic melts

**► 52-16 Booth 172**

Tranquilino C.\* Dioguardi F., Gentile L., Caballero L. & Sarocchi D.: Finding the best protocol to characterize the rheological behavior of fine volcanic sediment suspensions

**■ S53. Open Poster Session****► 53-1 Booth 173**

Accettella D.\* Savini A., Cuffaro M., Diviacco P., Muccini F., Zgur F., Buca M., Cova A., Facchin L., Santulin M., Romeo R. & Viola A.: ISOBatA's contribution and strategy to Antarctic Seabed Exploration

**► 53-2 Booth 174**

Alisi C., Biddau R., Calandrelli T., De Giudici G., Dore E., Fancello D., Marras P.A., Medas D.\* Musu E., Paganin P., Pili S., Podda F., Siclari G. & Vacca S.: Investigation on bioaugmentation as a sustainable alternative to chemical fertilizers: preliminary results

**► 53-3 Booth 175**

Bindellini G.\* Benton M.J., Petti F.M., Bernardi M., Rubidge B., Hancox J. & Romano M.: Middle Triassic tetrapods: a triumphant faunal return after the Permo-Triassic Mass Extinction

**► 53-4 Booth 176**

Bonetto S., Caselle C., Frasca G. & Mosca P.\*: A geological and geotechnical modelling of Alpine sulphates: the SALT project

**► 53-5 Booth 177**

Borzi A.M.\* Cannata A., Panzera F., D'Amico S. & Aster R.C.: Exploring the relationship between the Microseism long-term Energy trend and Wave Power in the Mediterranean Sea during the period 1996-2023

**► 53-6 Booth 178**

Corradino M.\* Lo Presti V., Cassataro R., Agate M. & Sulli A.: Mapping of Posidonia oceanica meadows in the Capo San Marco offshore (Sciacca, Sicily): evaluation of the lower limit using geophysical methods

**► 53-7 Booth 179**

Corradino M.\* Faraci C., Monaco C. & Pepe F.: Coastal boulder production controlled by columnar joints of ignimbrite and extreme waves along the high-energy rocky coast of Pantelleria Island (Sicily Channel, Mediterranean Sea)

**► 53-8 Booth 180**

De Carlo C.\* Ferrante V., Longhitano S.G. & Gamberi F.: The evolution of the Mortorio submarine canyon (Eastern Sardinia Margin): preliminary ideas from a process-oriented morphologic interpretation of a shelf-indenting canyon

**► 53-9 Booth 181**

De Lucia V., Donati Sarti G., Protano G., Nannoni F. & Salvini R.: Drone remote sensing and geopedological analyses for precision farming viticulture in the area of Montalcino (Siena, Italy)

**► 53-10 Booth 182**

Fiore A., Sabato L., Simone O. & Tropeano M.: Natural sections of incised valleys partly filled by late Quaternary alluvial deposits perched on rocky sea-cliff of Gargano (Apulia, Southern Italy)

► **53-11**      **Booth 183**

Galamini G.\*, Malferrari D., Altimari F., Orlandi S. & Barbieri L.: From waste to resource: recovery of quarry by-products for zinc foliar fertilization

► **53-12**      **Booth 184**

Guerriero V.\*, Scorzini A.R., Di Lena B., Iulianella S., Di Bacco M. & Tallini M.: Climate variations and crop yields: a sustainability issue illustrated by a case study from the Abruzzo region, Italy

► **53-13**      **Booth 185**

Ibe C.U.\*, Perrini M., Caggianelli A., Brogi A., Langone A., Liotta D., Stuart F., Tursi F. & Zucchi M.: From emplacement to exhumation of a granitic intrusion in a highly extended continental crust: insights from the Pliocene Gavorrano granite (Northern Apennines, Italy)

► **53-14**      **Booth 186**

Lustrino M.\*: Miracles needed. Climate changes and the physical limits of the Earth

► **53-15**      **Booth 187**

Petrella F.\* & Todaro S.: Sedimentological analysis of the Jurassic pelagic "oolites" (Buccheri Formation, Western Sicily): paleoenvironmental and paleogeographic implications

► **53-16**      **Booth 188**

Raspi C.\*, Jobbagy Z., Minerva N., Folini T., Fagioli L., Mirandola D., Amadei P., Castro J., Moran J., Garcia O., Morrone L., Rotondi A., Martelli F., Coltorti M., Faccini B., Stefani E., Galamini G., Cavazzoni C., Kos T., Šimunac S., Baričevića M., Pipolo A., Pegoiani E. & Cerrato A.: LIFE MICROFIGHTER: innovative Zeo-Biopesticides, based on useful microorganisms, for eliminating the use of copper-based pesticides. Project presentation

► **53-17**      **Booth 189**

Servetto G.P.\*, Root C.M., Di Felice S., Passarella A., Ruiz-Zepeda F., Gieré R. & Vigliaturo R.: Magnetite nanoparticles dissolution in simulated biological fluids

► **53-18**      **Booth 190**

Smiljanic D., Dakovic A.\*, Markovic M., Ožegović M. & Obradović M.: Organobentonites as perspective adsorbents for nonsteroidal anti-inflammatory drug -diclofenac sodium

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## ■ S7. VIBRATIONAL SPECTROSCOPY STUDIES OF GEOMATERIALS: CASE STUDIES AND NEW PERSPECTIVES

Conveners and Chairpersons: Maria Cristina Caggiani (Università di Catania), Francesco Di Benedetto (Università di Ferrara), Laura Fornasini (Università di Parma), Laura Medeghini (Sapienza Università di Roma), Gioacchino Tempesta (Università di Bari)

Wednesday 4<sup>th</sup> September 2024 [08.30-10.30]

### Aula N

#### ► 7-1 08.30 - 09.00

[KEYNOTE] Conti C.\*: Advanced deep Raman Spectroscopy methods for the non-invasive investigation of materials subsurface: impact on Heritage Science

#### ► 7-2 09.00 - 09.15

Giustetto R.\*, Ricchiardi G., Bonino F. & Barbero N.: Novel hybrid materials inspired by ancient technologies: the case of 'PALY@DAPI'

#### ► 7-3 09.15 - 09.30

Coccato A.\*, Barone G., Mazzoleni P. & Prag J.: Raman spectroscopy reveals pigments on ancient Sicilian inscriptions

#### ► 7-4 09.30 - 09.45

Tempesta G.\*, Monno A., de Ceglia F.P. & Maraschi A.: On site analyses of geomaterials in Sansevero Chapel Museum (Naples)

#### ► 7-5 09.45 - 10.00

Lubraco G.\*, Ferrara V., Medici L., Sogliani F. & Di Leo P.: Answering archaeometric questions on technology and provenance relative to emblematic ancient ceramic productions in Basilicata by combining micro-Raman spectroscopy, micro X-ray fluorescence and micro X-ray diffraction to the study of pigments

#### ► 7-6 10.00 - 10.15

Martiniello S.\*, Capitanio A., Legnaioli S. & Raneri S.: Gemstone, treatments and imitations in medieval goldworking: a gemmological and spectroscopic combined approach

#### ► 7-7 10.15 - 10.30

Capriotti S.\*, Di Fazio M., Miele F., Mattia V. & Annoscia G.M.: An Archaeometric Investigation to analyze some medieval rings from Cencelle (Tarquinia, VT)

## ■ S8. GEODIVERSITY, GEOHERITAGE AND GEOTOURISM: WONDERING ABOUT AWARENESS FOR A SUSTAINABLE PLANET

Conveners and Chairpersons: Elisa Brustia (Dipartimento per il Servizio Geologico d'Italia, ISPRA), Vitantonio Venezia (Università degli Studi di Bari Aldo Moro), Roberto Pompili (ISPRA Roma), Annachiara Rosati (Università degli Studi di Bari Aldo Moro), Laura Melelli (Università degli Studi di Perugia), Alessia Pica (Sapienza Università di Roma)

Wednesday 4<sup>th</sup> September 2024 [08.30-10.30]

### Aula A

#### ► 8-1 08.30 - 09.00

[KEYNOTE] Dimuccio L.A.\*, Aubry T., Rodrigues N. & Cunha L.: Multidisciplinary scientific investigation supporting assessment, valorisation, and management of geoheritage: lessons from CLIMATE@COA project

#### ► 8-2 09.00 - 09.15

Lozar F., Gerbaudo A. & Tonon M.D.\*: Geosites as a tool for climate change education: a case study in Piedmont, IT

#### ► 8-3 09.15 - 09.30

(Invited) Youm C.I.\*, Doumbouya M.F., Gueye A., García-Villalba E., Sow I.S., Samba R., Thiao G., Errami E., Morales J.A. & Sow E.: Promotion and enhancement of the geoheritage of the Dindéfalo Geopark Project of the Dindéfalo Community Nature Reserve (Kédougou, Senegal)

#### ► 8-4 09.30 - 09.45

Delmonaco G.\*, Brustia E., Pompili R., Primerano P. & Traversa F.: The PanAfGeo Project: the role and experience of ISPRA, Geological Survey of Italy for the enhancement and protection of geological heritage

#### ► 8-5 09.45 - 10.00

Gianoglio F.\*, Caprioglio M.C., Castello G., Fiori C. & Marescotti P.: Geotourism as a tool for geoheritage promotion: a geotrail project in Beigua UNESCO Global Geopark (Liguria, Italy)

#### ► 8-6 10.00 - 10.15

Muscioni M.\*, Arbulla D. & Fanti F.: The relevance and current state of the Villaggio del Pescatore lagerstätte (Campanian, Italy)

#### ► 8-7 10.15 - 10.30

Negri A.\*, Storta E., Guerini M., Khoso R.B., Mantovani A. & Giardino M.: Geoheritage and cultural heritage in the Sesia Val Grande UNESCO Global Geopark (North-West Italy): new approach for monitoring and assessing geosites and cultural sites.

## ■ S16. GEOMATERIALS FOR A SUSTAINABLE DEVELOPMENT

Conveners and Chairpersons: Davide Comboni (Università di Milano), Marina Clausi (Università di Bari), Roberta Occhipinti (Università di Catania), Claudio Finocchiaro (Università di Catania), Stefano Columbu (Università di Cagliari), Concetta Rispoli (Università di Napoli Federico II)

Wednesday 4<sup>th</sup> September 2024 [08.30-10.30]

### Aula H

#### ► 16-1 08.30 - 09.00

[KEYNOTE] Arizzi A.\* & Cultrone G.: The use of raw materials and residues for the manufacturing of sustainable lime mortars

#### ► 16-2 09.00 - 09.15

Fastelli M.\*, Vivani R., Sassi P., Speranzini E., Schoubben A., Di Michele A., Zucchini A., Mortaro F. & Comodi P.: Effect of nano Mg-Al layered double hydroxides (LDHs) on chemical and physical properties of cement paste: preliminary results

#### ► 16-3 09.15 - 09.30

Brodu G.\*, Murgia S., Norio N., Arca M., Aragoni M.C. & Columbu S.: Role of the application method in the calcium phosphonate consolidation of pyroclastic rocks used in the environmental heritage

#### ► 16-4 09.30 - 09.45

Zafarana S.E.\*, Scanferla P., Finocchiaro C., Barone G., Mazzoleni P. & Kraxner J.: Alkali-Activated Materials based on volcanic ash and waste glass: sustainable and alternative geomaterials from waste to resource

#### ► 16-5 09.45 - 10.00

Ranellucci F.\*, Ulian G., Moro D., Sangiorgi C., Tataranni P. & Valdrè G.: Recovered silt filled geopolymers for low-strength concrete applications in road construction

#### ► 16-6 10.00 - 10.15

Bertino A.\*, Caggiani M.C., Fugazzotto M., Portale S., Starinieri S., Mazzoleni P. & Barone G.: Application of pigmented geopolymers in Cultural Heritage conservation and aging studies on a geopolymer mock-up

#### ► 16-7 10.15 - 10.30

Fugazzotto M.\*, Barone G. & Mazzoleni P.: "Cradle-to-cradle": waste geopolymers as precursors for new geopolymers in the restoration and construction sectors

## ■ S20. HIGH-RESOLUTION CHEMICAL AND TEXTURAL IMAGING TECHNIQUES AS ANALYTICAL TOOLS IN EARTH SCIENCES

Conveners and Chairpersons: Giancarlo Della Ventura (Università di Roma Tre), Simone Bernardini (Università di Roma Tre), Cecilia Viti (Università di Siena), Federico Lucci (Università di Bari), Giovanna Agrosì (Università di Bari)

Wednesday 4<sup>th</sup> September 2024 [08.30-10.30]

### Aula E

#### ► 20-1 08.30 - 08.45

Della Ventura G.\*, Bernardini S., Viti C., Agrosì G. & Lucci F.: Imaging techniques as analytical tools in Earth Sciences

#### ► 20-2 08.45 - 09.15

[KEYNOTE] Capitani G.\*: Transmission electron microscopy in Earth Sciences: conventional and advanced applications

#### ► 20-3 09.15 - 09.30

(Invited) Romani M.\*, Pronti L. & Cestelli Guidi M.: SINBAD-IR beamline at DAFNE-Light: application and developments of FT-IR spectroscopy in the field of Earth Sciences

#### ► 20-4 09.30 - 09.45

Pronti L.\*, Romani M., Balerna A. & Cestelli Guidi M.: Micro and macro mapping and imaging analyses for the identification of mineral pigments on paintings by using Fourier-transform infrared (FTIR) and energy dispersive X-ray spectroscopies

#### ► 20-5 09.45 - 10.00

Bernardini S.\*, Della Ventura G., Sodo A. & Jovane L.: Micro-Raman mapping of the oxidation state of Mn in deep-ocean polymetallic deposits

#### ► 20-6 10.00 - 10.15

Casarini A.\*, Radica F., Iezzi G., Galderisi A., Bravo M., de Brito J., Brando G., Nazzari M. & Scarlato P.: 2D image analysis of mortars: amount of cement paste and texture of the aggregates

#### ► 20-7 10.15 - 10.30

Vitrano A.\*, Viti C., Della Ventura G., Lucci F. & Vetere F.: A preliminary petrological study of refractory inclusions in NWAl2800 meteorite

## ■ S24. ASSESSMENT OF MULTIHAZARDS AND SEISMIC MICROZONATION IN URBAN AREAS

Conveners and Chairpersons: Vincenzo Del Gaudio (Università di Bari), Giancarlo Ciotoli (CNR), Iolanda Gaudiosi (CNR), Silvia Giallini (CNR), Federico Mori (CNR), Janusz Wasowski (CNR)

Wednesday 4<sup>th</sup> September 2024 [08.30-10.30]

### Aula M

#### ► 24-1 08.30 - 08.45

Livani M.\*, Petrachini L., Benetatos C., Marzano F., Billi A., Carminati E., Doglioni C., Petricca P., Maffucci R., Codegone G., Rocca V., Verga F. & Antoncecchi I.: A geological and geophysical database of the Po Plain and the northern Adriatic Sea (northern Italy) as potential tool for the assessment and mitigation of natural and anthropic hazards

#### ► 24-2 08.45 - 09.00

Lapietra L.\*, Colacicco R., Dellino P., Rizzo A. & Capolongo D.: Mapping social vulnerability to multi-hazard scenarios: a GIS-based approach at census track level

#### ► 24-3 09.00 - 09.15

Petrosante A.\*, Di Salvo C., Maffucci R. & Ciotoli G.: Multi-hazard map of the coastal area of Rome near the Fiumicino airport

#### ► 24-4 09.15 - 09.30

Ruggiero L.\*, Ciotoli G., Mori F., Varone C., Di Salvo C., Finoia M.G., Annunziatellis A., Moscatelli M. & Nisio S.: Exploring the relationship between anthropogenic sinkholes and pluvial flooding in the urban area of Rome: a comprehensive evaluation of multiple hazards

#### ► 24-5 09.30 - 09.45

Bausilio G., Tufano R.\*, Calcaterra D., Guerriero L. & Di Martire D.: Multirisk analysis of the city of Naples (Italy) using the Rock Engineering Systems (RES) method

#### ► 24-6 09.45 - 10.00

Bonorino L.\*, Beccaris G., Chiozzi P., Cogorno A., Filippi E., Narizzano R., Prandi S. & Verdoya M.: Lithological control on the indoor radon concentration: the case study of western Liguria

#### ► 24-7 10.00 - 10.15

Fontana C.\*, Tomassoni V. & Giuffrè M.: Why should we bother about risk reduction at the urban scale? A methodology to assess the effectiveness of seismic prevention measures on urban system functionality

#### ► 24-8 10.15 - 10.30

Ariano M.\*, Fantozzi P.L. & Albarello D.: A systematic analysis on Italian national territory to test the role of local topographic effects

## ■ S33. FOSSIL RECORD, PALEOENVIRONMENT AND CLIMATE CHANGE THROUGHOUT THE NEOGENE AND QUATERNARY EARTH HISTORY

Conveners and Chairpersons: Patrizia Maiorano (Università di Bari), Adele Bertini (Università di Firenze), Luca Forti (Università degli Studi di Milano), Angela Girone (Università di Bari), Maria Marino (Università di Bari), Raffaele Sardella (Sapienza Università di Roma)

Wednesday 4<sup>th</sup> September 2024 [08.30-10.30]

### Aula D

#### ► 33-1 08.30 - 08.45

[KEYNOTE] Caruso A.\*: Response of particular taxa to climatic and environmental variations during the evolution of the Mediterranean Sea: from the Messinian Salinity Crisis to Zanclean normal marine conditions

#### ► 33-2 08.45 - 09.00

Mancini A.M.\*, Gennari R., Lozar F. & Negri A.: The climatic and oceanographic setting during the Messinian: what can be learned for present and future deoxygenation dynamics?

#### ► 33-3 09.00 - 09.15

Iannucci A.\* & Sardella R.: Updates on the middle and late Villafranchian large mammal faunal turnovers

#### ► 33-4 09.15 - 09.30

Addante M.\*, Herbert T., Caruso A., Girone A., Marino M., Scopelliti G. & Maiorano P.: Calcareous plankton and bio-geochemical climate signals during the Pliocene-Pleistocene transition in the Mediterranean area

#### ► 33-5 09.30 - 09.45

Cervellieri M.\*, Scarponi D., Crippa G. & La Perna R.: Distribution pattern of macrobenthic assemblages along the Ideale Section of the Montalbano Jonico succession (southern Italy)

#### ► 33-6 09.45 - 10.00

Cheli G.\*, Zanchetta G., Isola I., Dong X., Pérez-Mejías C., Cheng H., Dallai L., De Waele J. & Columbu A.: Climate variability at around the 4.2 event based on novel  $\delta^{18}\text{O}$ - $\delta^{13}\text{C}$  speleothem data from Sardinia (Italy, Western Mediterranean)

#### ► 33-7 10.00 - 10.15

Parisi R.\*, Mazzini I. & Cronin T.M.: Ecosystem dynamics, climate change and glacial-interglacial cycles from Quaternary ostracod assemblages in the Corinth Gulf, Greece

#### ► 33-8 10.15 - 10.30

De Santis N.\*, Zanchetta G., Isola I., Columbu A., Vigna B., Regattieri E., Drysdale R., Hellstrom J. & Dallai L.: Paleohydrological changes during the early Holocene through the study of an isotope record from stalagmite of Bossea Cave (NW Italy)

**■ S38. FRONTIERS IN THE REGIONAL GEOLOGY OF THE APENNINES: A MULTIDISCIPLINARY PERSPECTIVE**

Conveners and Chairpersons: Sabatino Ciarcia (Università del Sannio), Giovanni Luca Cardello (Università di Sassari), Domenico Cosentino (Università RomaTre), Stefano Vitale (Università di Napoli Federico II), Andrea Artoni (Università di Parma)

Wednesday 4<sup>th</sup> September 2024 [08.30-10.30]

Aula C

**▷ 38-1 08.30 - 08.45**

(Invited) Brogi A.\*, Liotta D. & Zucchi M.: Neogene evolution of the inner northern Apennines and the related geothermal systems: insights from the Elba Island

**▷ 38-2 08.45 - 09.00**

Barbero E.\*, Festa A., Saccani E. & Catanzariti R.: The redefinition of the Ligurian Units at the Alps-Apennines junction (NW Italy) and their role in the evolution of the Ligurian accretionary wedge

**▷ 38-3 09.00 - 09.15**

Mainini A.\*, Conti S. & Serventi P.: Alternative origin for the middle Miocene mass transport deposits of the Marnoso Arenacea Formation

**▷ 38-4 09.15 - 09.30**

Pasqualone L.\*, Brozzetti F., Luchetti L., Tangari A.C., Barchi M.R. & Mirabella F.: Development of a foredeep basin in the Northern Apennines through a multidisciplinary approach: the example of the Miocene Marnoso-arenacea fm. (Umbria, Italy)

**▷ 38-5 09.30 - 09.45**

Degl'Innocenti N.\*, Spina A., Capezzuoli E., Brogi A., Liotta D. & Zucchi M.: Microfloristic evidence in metamorphosed rocks of Elba Island: new constraints and correlation of the early Palaeozoic

**▷ 38-6 09.45 - 10.00**

Brandano M.\*, Raffi I., Mancini A. & Marianelli D.: The Oligo-Miocene Carbonate ramp succession of Maiella Mountain, the record of changing oceanographic conditions in the Central Mediterranean

**▷ 38-7 10.00 - 10.15**

Gori F., Barberio M.D., Barbieri M., Boschetti T., Cardello G.L.\*, Damato A. & Petitta M.: Groundwater-rock interaction and mixing in fault-controlled karstic aquifers: a structural, hydrogeochemical and multi-isotopic review of the Pontina Plain (Central Italy)

**▷ 38-8 10.15 - 10.30**

Cosentino D.\*, Mondati G., Giacco B., Deino A., Arcangeli P., Bertini A., Huang H., Nocentini M., Iorio M., Angelino A., Cifelli F., Mattei M., Sagnotti L., Gliozi E., Marchegiano M., Petrelli M., Peral M., Claeys P., Regattieri E., Zanchetta G., Spadi M., Tallini M., Conte A.M., Conticelli S. & Casalini M.: Constraining the early stage of the post-orogenic extensional tectonics in central Italy: new evidence from a long sediment core from the tectonically active L'Aquila basin (Central Italy)

**■ S44. NEW CONCEPTS AND APPLICATIONS IN EXPLORATION, SUSTAINABLE EXPLOITATION, STORAGE AND MODELLING OF GEORESOURCES**

Conveners and Chairpersons: Mario Anselmi (INGV ), Mattia De Luca (Università degli Studi G. d'Annunzio di Chieti-Pescara), Domenico Liotta (Università di Bari Aldo Moro), David Iacopini (Università di Napoli Federico II), Cristina Pauselli (Università di Perugia), Vittorio Scisciani (Università degli Studi G. d'Annunzio di Chieti-Pescara)

Wednesday 4<sup>th</sup> September 2024 [08.30-10.30]

Aula G

**▷ 44-1 08.30 - 08.45**

(Invited) Fagiani A., Antoncecchi I.\*, Cornelì D., Sofia R. & Sterpa S.: National energy policy: a focus on georesources targets at 2050

**▷ 44-2 08.45 - 09.00**

Marchesini B.\*, Pozzi G., Collettini C., Carminati E. & Tesei T.: Caprock genesis in hydrothermal systems via alteration-controlled fault weakening and impermeabilization

**▷ 44-3 09.00 - 09.15**

Galionne M.R.\*, Criscuolo L., Manzella A. & Trumpp E.: Enhancing the Italian geothermal data infrastructure: integrating geothermal data and potential assessment tools

**▷ 44-4 09.15 - 09.30**

Nanni T.\*, Chiozzi P., Miola M., Verdoya M. & Vetuschi Zuccolini M.: Stochastic and thermophysical modelling for geothermal resource assessment: the case of the Po Basin

**▷ 44-5 09.30 - 09.45**

Zucchi M., Brogi A., Liotta D., Fregola R.A., Caggianelli A., Ventrucci G., Avanzinelli R. & Ruggieri G.\*: Tracing the palaeo-circulation of geothermal fluids in the shallow crust exposed in the eastern Elba Island (Tuscany, Italy)

**▷ 44-6 09.45 - 10.00**

Loreto M.F.\* & Exp. 402 Science Party: Sealing potential of the messiniaN SALT from IODP Expedition 402

**▷ 44-7 10.00 - 10.15**

Salvadori M.\*, Pennisi M., D'Orazio M. & Dini A.: Potential sources of Li-rich fluids in Northern Apennines (Italy): first results on lithium distribution in pelitic rocks

**▷ 44-8 10.15 - 10.30**

Summimo L.\*, Giorno M., Barale L., Bertok C., Frenzel M., Gasparini M. & Martire L.: Gorno and Piani Resinelli: genesis and correlations of two Alpine-type Pb-Zn districts

■ S51. UNVEILING THE LONG-LASTING EVOLUTION OF ACTIVE MARGINS  
FROM FIELD TO MICRO-SCALE

Conveners and Chairpersons: Lorenzo Dulcetta (Università di Cagliari), Chiara Montemagni (Università di Firenze), Vincenzo Festa (Università di Bari Aldo Moro), Constantino Zuccari (Università di Bologna), Matteo Simonetti (ISPRA), Manuel Roda (Università di Milano)

Wednesday 4<sup>th</sup> September 2024 [08.30-10.30]

Aula B

► 51-1 08.30 - 09.00

[KEYNOTE] Gómez-Barreiro J.\*: Textural footprint of orogenic processes: convergence, collision and reequilibration

► 51-2 09.00 - 09.15

(Invited) Zucali M.\*, Spalla M.I., Roda M., Zanoni D. & Piloni C.B.: The Sesia-Lanzo Zone in the Western Alps Subduction Complex: Alpine evolution and pre-Alpine remnants

► 51-3 09.15 - 09.30

Piloni C.B.\*, Orellana H.E., Gusmeo T., Assanelli M., Filippi M., Rebay G., Zanoni D., Roda M., Zucali M. & Spalla M.I.: Tectono-metamorphic evolution of continental and oceanic crustal slices in the Alpine Subduction Complex (Piemonte – Sesia-Lanzo Zone boundary, Western Italian Alps)

► 51-4 09.30 - 09.45

Dana D.\*, De Cesari F., Montomoli C., Iaccarino S., Lenci S., Corno A. & Carosi R.: Geology and petrology of the Northern Dora-Maira Massif in the Tredici Laghi – Conca Cialancia area (Germanasca - Pellice Valleys, Western Alps)

► 51-5 09.45 - 10.00

De Cesari F.\*, Dana D., Montomoli C., Iaccarino S., Corno A. & Carosi R.: Unveiling the tectono-metamorphic framework of northern Dora-Maira Massif (Western Alps): insights from Pellice and Chisone valley

► 51-6 10.00 - 10.15

Casoli L.\* & Giuntoli F.: Evidence of strain partitioning and localization in carpholite-bearing hybrid veins: a case study from the Piedmont Zone, Western Italian Alps

► 51-7 10.15 - 10.30

Montemagni C., Monti R., Malaspina N. & Zanchetta S.\*: Shearing at the top of the Adula nappe: syn-collisional exhumation of the San Bernardino eclogites

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## ■ S7. VIBRATIONAL SPECTROSCOPY STUDIES OF GEOMATERIALS: CASE STUDIES AND NEW PERSPECTIVES

Conveners and Chairpersons: Maria Cristina Caggiani (Università di Catania), Francesco Di Benedetto (Università di Ferrara), Laura Fornasini (Università di Parma), Laura Medeghini (Sapienza Università di Roma), Gioacchino Tempesta (Università di Bari)

Wednesday 4<sup>th</sup> September 2024 [11.00-13.00]

### Aula N

#### ► 7-8 11.00 - 11.30

(Invited) Ciccola A., Iolele M. & Postorino P.: The Deposition by Raffaello: a rediscovery of old cross-sections through vibrational spectroscopies

#### ► 7-9 11.30 - 11.45

Bernabale M., Cognigni F., Contessi S., Silvestri S., La Penna G., Spagnoli F., De Vito C. & Rossi M.: Investigating corrosion systems in archaeological artifacts from Motya (Sicily, Italy): a micro-Raman spectroscopy and correlative Imaging approach

#### ► 7-10 11.45 - 12.00

Di Fazio M., Chiarello F., Miele F., Melega A., Nastasi A., Annoscia G.M. & Mignardi S.: The evolution of the corrosion process of medieval objects through IR-spectroscopy

#### ► 7-11 12.00 - 12.15

Porcaro M., Cognigni F., La Penna G., Proietti A., Regoli C., Casi C., Carosi S., Rossi M., Brunetti A. & De Vito C.: Analyzing the structure and chemical composition of an Etruscan bronze fibula from Tomb Number 129 at Vulci (VT, Italy) through a non-destructive multi-analytical approach

#### ► 7-12 12.15 - 12.30

Calzolari L., Fernandez-Martinez A., Capriotti S., Di Fazio M. & Mignardi S.: Archaeological mortars under IR light: application of IR spectroscopic techniques for the study of hydraulic Roman mortars

#### ► 7-13 12.30 - 12.45

Stagno V., Di Fazio M., Giuliani L. & Capuani S.: Non-invasive combined FT-IR and NMR protocol to assess the cleaning action of a lignin-based hydrogel on stones

#### ► 7-14 12.45 - 13.00

Gadaleta E., Tempesta G., De Giorgi M., Neri E. & Scandale E.: Proposal of an interdisciplinary protocol for the archaeometric study of mosaics by spectroscopic methods and history of art

## ■ S8. GEODIVERSITY, GEOHERITAGE AND GEOTOURISM: WONDERING ABOUT AWARENESS FOR A SUSTAINABLE PLANET

Conveners and Chairpersons: Elisa Brustia (Dipartimento per il Servizio Geologico d'Italia, ISPRA), Vitantonio Venezia (Università degli Studi di Bari Aldo Moro), Roberto Pompili (ISPRA Roma), Annachiara Rosati (Università degli Studi di Bari Aldo Moro), Laura Melelli (Università degli Studi di Perugia), Alessia Pica (Sapienza Università di Roma)

Wednesday 4<sup>th</sup> September 2024 [11.00-13.00]

### Aula A

#### ► 8-8 11.00 - 11.30

[KEYNOTE] Giardino M., Negri A., Storta E., Mantovani A. & Guerini M.: The role of geosciences to activate the virtuous circle: awareness of geodiversity values - enhancement of geoheritage - growth of sustainable geotourism - public engagement

#### ► 8-9 11.30 - 11.45

Micheletti F., Fanelli G., Festa V., Fornelli A., Bruno G., Cjata I. & Tommasi F.: Geosites as natural scientific laboratory: investigating the links between geology, soil chemistry and botany

#### ► 8-10 11.45 - 12.00

Venezia V., Bellini F., Festa V., Sabato L. & Tropeano M.: The Water and the Rock: a geotouristic route through the geology of springs and fountains in Matera (Basilicata, Southern Italy)

#### ► 8-11 12.00 - 12.15

Adanti B., Corrado S., Cecili A. & Coppola D.: Virtual geological walk to discover the historical-artistic heritage of Rome and its lithoid resources: the Basilica di San Paolo fuori le mura

#### ► 8-12 12.15 - 12.30

Pirani G. & Mengarelli M.: Eastern side of Monte San Vicino: discovering its geo-environmental and architectural heritage

#### ► 8-13 12.30 - 12.45

Urban I., Bridi E., Cesare B., Mazzoli C. & Preto N.: Heritage stones: the case of Aurisina Limestone to promote geodiversity in the Classical Karst cross-border area

#### ► 8-14 12.45 - 13.00

Casale M., Gambino F., Borghi A., Beltramo R., Vesce E., Varì C., Giardino M. & Dino G.A.: Unveiling the interplay of mining activities and geo-tourism: an analysis in the Northern Italian region

## ■ S16. GEOMATERIALS FOR A SUSTAINABLE DEVELOPMENT

Conveners and Chairpersons: Davide Comboni (Università di Milano), Marina Clausi (Università di Bari), Roberta Occhipinti (Università di Catania), Claudio Finocchiaro (Università di Catania), Stefano Columbu (Università di Cagliari), Concetta Rispoli (Università di Napoli Federico II)

Wednesday 4<sup>th</sup> September 2024 [11.00-13.00]

### Aula H

#### ► 16-8 11.00 - 11.15

Massa M.\*, Vola G., Ardit M., Bresciani P. & Colombari V.: Hydration processes of geomaterials for green and sustainable applications

#### ► 16-9 11.15 - 11.30

Di Chiara G.\*, Farina I., Fraternali F. & Petrillo A.: New materials for civil engineering through solidification and stabilization processes

#### ► 16-10 11.30 - 11.45

D'Alessio D.\*, Corti M., Campione M., Giuntoli F., Ceccato A. & Malaspina N.: From field to laboratory: geo-inspired strategies for the enhancement of the water-mediated mineral carbonation for the reduction of its energy and environmental impacts

#### ► 16-11 11.45 - 12.00

Animali L.\*, Corrado S., Bartoli M., Mitillo N., Tuccimei P. & Giorcelli M.: Characterization and use of biochar, a sustainable material, for water purification and carbon storage

#### ► 16-12 12.00 - 12.15

Cofano V.\*, Clausi M., Pannu D.S., Mathew J., Barkhordari D., Khorshidi Nazloo E., Santoro D. & Pinto D.: The use of olive oil-modified geopolymers for municipal wastewater treatment

#### ► 16-13 12.15 - 12.30

Coticelli S.\*, Abad I., Balassone G., Cappelletti P., Rispoli C., Granitzio F., Farenzena M. & Mondillo N.: Geology and mineralogy of the Sa Pigada Bianca bentonite deposit (Sardinia, Italy): preliminary data

#### ► 16-14 12.30 - 12.45

Dore E.\*, Biddau R., Fancello D., Frau F., Medas D., Musu E. & Podda F.: Investigations on simultaneous Sb and As removal from mining drainages by Layered Double Hydroxides (LDHs)

#### ► 16-15 12.45 - 13.00

Mancinelli M.\*, Spagnoli E., di Benedetto F., Cristina V., Montegrossi G., Vola G., Barion L., Martucci A. & Ardit M.: New insights in the optimization of sulfur dioxide flue gas desulfurization (FGD) using porous materials in a semi-dryer system

## ■ S21. MINERALOGY BEHIND EARTH PROCESSES: INSIGHTS FROM THE ATOMIC TO THE MACROSCOPIC SCALE

Conveners and Chairpersons: Sabrina Nazzareni (Università di Parma), Maria Lacalamita (Università di Bari), Matteo Ardit (Università di Ferrara), Giorgia Confalonieri (Sapienza Università di Roma), Marta Morana (Università di Firenze)

Wednesday 4<sup>th</sup> September 2024 [11.00-13.00]

### Aula E

#### ► 21-1 11.00 - 11.15

(Invited) Bindi L.\*: The strange case of a mineral with pyroxene chemistry and HP-olivine structure

#### ► 21-2 11.15 - 11.30

Biagioli C., Pasero M.\*, Sejkora J. & Števko M.: "Carbonato-apatite" is not a fake: the first reliable SCXRD proof of the incorporation of  $[CO_3]$  groups within the apatite framework

#### ► 21-3 11.30 - 11.45

Conconi R.\*, Fumagalli P. & Capitani G.: Micro- and nano-scale investigation of (Ca-REE) fluorcarbonates: clues for REE partitioning and mobility

#### ► 21-4 11.45 - 12.00

Cotellucci A.\*, Garcia-Ruiz J.M., Otálora F., Bruno M. & Pastero L.: Gypsum crystals experimentally grown near the equilibrium conditions: the laboratory counterpart of large gypsum crystals discovered in Pulpi cave

#### ► 21-5 12.00 - 12.15

Monico S.\*, Marinoni N., Gatta G.D., Adamo I., Prosperi L., Máková P. & Ševčík R.: Partially crystalline silica varieties in gemmology: the case study of the blue Andean opal

#### ► 21-6 12.15 - 12.30

Mesto E.\*, Lacalamita M., Kaneva E., Shendrik R., Bogdanov A., Merli M. & Schingaro E.: High temperature study of fluorcarletonite from Murun alkaline complex (Russia): a synergic experimental and theoretical approach

#### ► 21-7 12.30 - 12.45

Chrappan Soldavini B.\*, Merlini M., Gemmi M., Fumagalli P., Joseph B., Bais G. & Polentarutti M.: New thermo-elastic and crystal-chemical insights on 11.5 Å phase: a major water carrier to the mantle transition zone

#### ► 21-8 12.45 - 13.00

[KEYNOTE] Pavese A.\*: Interpreting mineral transformations

## ■ S24. ASSESSMENT OF MULTIHAZARDS AND SEISMIC MICROZONATION IN URBAN AREAS

Conveners and Chairpersons: Vincenzo Del Gaudio (Università di Bari), Giancarlo Ciotoli (CNR), Iolanda Gaudiosi (CNR), Silvia Giannini (CNR), Federico Mori (CNR), Janusz Wasowski (CNR)

Wednesday 4<sup>th</sup> September 2024 [11.00-13.00]

### Aula M

#### ► 24-9 11.00 - 11.15

Fantozzi P.L., Ariano M.\*, Moscatelli M. & Albarello D.: Realization of the database of geometries and characteristic parameters of "Microzone Omogenee in Prospettiva Sismica" (MOPS) throughout the National territory

#### ► 24-10 11.15 - 11.30

Cacioli M.G., Mancini M.\*, Cosentino G., Carfagna N., Coltell M., Francescone M., Pacitti P., Albarello D., Motti A., Natali N., Simone G., Ogna M., Stigliano F. & Moscatelli M.: Update of the Level 2 Seismic Microzonation in Umbria Region: methodology and perspectives

#### ► 24-11 11.30 - 11.45

Carfagna N.\*, Pieruccini P., Fantozzi P. & Albarello D.: Mapping seismostratigraphical amplification effects at regional scale from geological data

#### ► 24-12 11.45 - 12.00

D'Agostino A.\*, Porchia A., Tortorici G., Pavano F., Ortolano G., Cavuoto G., Moscatelli M. & Catalano S.: Automated tools for the reconstruction and spatialization of stratigraphic successions to support seismic site effects analysis

#### ► 24-13 12.00 - 12.15

Capone P.\*, Pierri P., Romeo A., Casarano D. & Del Gaudio V.: Accelerogram selection for site response modelling in seismic microzonation

#### ► 24-14 12.15 - 12.30

Andriani G.F.\*, Diprizio G., Liso I.S., Lollino P., Milella D., Morelli P. & Parise M.: Dynamic properties of soils obtained by means of combined resonant column and cyclic torsional shear tests for the Seismic Microzonation studies of Apulia (SE Italy)

#### ► 24-15 12.30 - 12.45

Ciaglia S.\*, Francescone M., Pagliaroli A., Amoroso S., Salvatore N., Giannini S., Milana G., Di Giulio G., Vassallo M., Cara F., Lanzo G., Basi M. & Pizzi A.: First results from level 3 Seismic Microzonation of Sulmona (AQ), Central Italy

#### ► 24-16 12.45 - 13.00

Licata V.\*: Uncertainties of soil profiles for seismic response analyses

## ■ S33. FOSSIL RECORD, PALEOENVIRONMENT AND CLIMATE CHANGE THROUGHOUT THE NEOGENE AND QUATERNARY EARTH HISTORY

Conveners and Chairpersons: Patrizia Maiorano (Università di Bari), Adele Bertini (Università di Firenze), Luca Forti (Università degli Studi di Milano), Angela Girone (Università di Bari), Maria Marino (Università di Bari), Raffaele Sardella (Sapienza Università di Roma)

Wednesday 4<sup>th</sup> September 2024 [11.00-13.00]

### Aula D

#### ► 33-9 11.00 - 11.15

Zanchetta G.\*, Bini M., Chuan-Chou S., Columbu A., Drysdale R., Hsun-Ming Hu H., Isola I., Luppichini M., Milevski I., Natali S., Regattieri E., Hellstrom J., Pennos C. & Izdebski A.: Hydrological variability during the Roman and Medieval periods in the Balkan Peninsula using speleothems

#### ► 33-10 11.15 - 11.30

Mecozzi B.\*, Bona F., Conti J., Lembo G., Mazzini I., Muttillo B., Pieruccini P. & Sardella R.: Palaeoenvironmental reconstruction of the lower levels of Grotta Romanelli (Apulia, southern Italy) based on the mammal record

#### ► 33-11 11.30 - 11.45

Argenio C.\*, Balestra B., Flores J.A. & Amore F.O.: Palaeoceanographic and paleoclimatic changes during the Marine Isotope Stage 5 at IODP Site 1385

#### ► 33-12 11.45 - 12.00

Pepe F., Corradino M., Cirelli C.\*, Casalbore D., Di Donato V., Incarbona A., Melini D., Molisso F. & Spada G.: The interplay between sedimentary supply, sea-level rise and tectonics from the Last Glacial Maximum onwards: insights from the Sant'Eufemia continental shelf (Offshore Calabria, Italy)

#### ► 33-13 12.00 - 12.15

Bronzo L., Cascella A.\*, Bonomo S., Morigi C., Cacho I., Margaritelli G., Frigola J., Pena L.D. & Lirer F.: Calcareous nannofossil response to Holocene climatic events in the North Ionian Sea

#### ► 33-14 12.15 - 12.30

Scarpioni D.\*, Fitzgerald E., Nawrot R., Huntley J.W., Tomasovich A., Zuschin M. & Kowalewski M.: Late Holocene breakdown of antagonistic interspecific interactions in the western Adriatic Sea

#### ► 33-15 12.30 - 12.45

Bini M.\*, Caroti A., Cantini F., Fabiani F., Fornaciari A., Isola I., Lazzarotti M., Luppichini M., Mensing S., Palli J., Piovesan G. & Zanchetta G.: The last 2000 years of floods from Arno and Serchio rivers (Tuscany) from historical, geoarchaeological and stratigraphic data

#### ► 33-16 12.45 - 13.00

Cosentino C.\*, Guastella R., Mancin N. & Caruso A.: Impact of the genus Amphistegina on the benthic foraminiferal association of the Pelagian Islands, an example of invasion in the Central Mediterranean Sea

## ■ S38. FRONTIERS IN THE REGIONAL GEOLOGY OF THE APENNINES: A MULTIDISCIPLINARY PERSPECTIVE

Conveners and Chairpersons: Sabatino Ciarcia (Università del Sannio), Giovanni Luca Cardello (Università di Sassari), Domenico Cosentino (Università RomaTre), Stefano Vitale (Università di Napoli Federico II), Andrea Artoni (Università di Parma)

Wednesday 4<sup>th</sup> September 2024 [11.00-13.00]

### Aula C

#### ► 38-9 11.00 - 11.15

Artoni A., Chizzini N.\*, Bassi J., Torelli L., Polonia A., Gasperini L. & Qadir A.: Oblique plate collision remnants of the Southern Apennines-Calabrian Arc boundary revealed in the offshore Bradano Basin (Ionian Sea - Central Mediterranean)

#### ► 38-10 11.15 - 11.30

Corrado G.\*, Gioia D., Minervino Amodio A. & Schiattarella M.: New morphotectonic and stratigraphic data on the Quaternary evolution of the Vallo di Diano basin, southern Italy

#### ► 38-11 11.30 - 11.45

Amore F.O., Argenio C., Faranda C., Ferraro L., Gliozi E., Magri D., Michelangeli F., Russo B., Siciliano J., Vallefouco M., Mauro A., Meo A.\* & Senatore M.R.: Multi-proxy analyses to reconstruct the environmental evolution through the composite section cropping out at San Giuliano Lake area (Matera, Southern Italy)

#### ► 38-12 11.45 - 12.00

Ciarcia S.\*, Vitale S., Aiello G., Barra D., Di Donato V. & Morabito S.: Sedimentary evolution of the Pliocene wedge-top basins in the southern Apennines: a review

#### ► 38-13 12.00 - 12.15

Gambino S.\*, Conigliello E., Monaco C. & Barreca G.: 3D Structural architecture of the front of the Sicilian Apennine (Southern Italy) as derived from well-calibrated seismic reflection profiles interpretation

#### ► 38-14 12.15 - 12.30

Commis L.\*, Barbagallo V., Brandano M., Cornacchia I., Distefano S., Mancini A., Marianelli D., Salerno A., Tortorici G., Di Stefano A. & Catalano S.: The impact of an integrated stratigraphic and structural analysis on the updating of the regional tectonic scheme: an example from the Hyblean Plateau (SE Sicily)

#### ► 38-15 12.30 - 12.45

Bonfardeci A.\*, Agate M., Gasparo Morticelli M., Incarbona A., Avellone G., Gennuso M., Rizzo G.F., Moscariello A., Muraro C., Bonomo R., Parrino N., Pucci S. & Sulli A.: Late Pliocene - Pleistocene stratigraphic evolution of the Menfi wedge-top basin (Southwestern Sicily - Italy)

#### ► 38-16 12.45 - 13.00

[KEYNOTE] Remitti F.\*, Festa A., Nirta G., Barbero E. & Mittempergher S.: The External Ligurian Units of the Northern Apennines: a glimpse in the deformation of shallow accretionary prisms and implications for seismicity

## ■ S44. NEW CONCEPTS AND APPLICATIONS IN EXPLORATION, SUSTAINABLE EXPLOITATION, STORAGE AND MODELLING OF GEORESOURCES

Conveners and Chairpersons: Mario Anselmi (INGV ), Mattia De Luca (Università degli Studi G. d'Annunzio di Chieti-Pescara), Domenico Liotta (Università di Bari Aldo Moro), David Iacopini (Università di Napoli Federico II), Cristina Pauselli (Università di Perugia), Vittorio Scisciani (Università degli Studi G. d'Annunzio di Chieti-Pescara)

Wednesday 4<sup>th</sup> September 2024 [11.00-13.00]

### Aula G

#### ► 44-9 11.00 - 11.15

(Invited) Mattioni L.\*, Armitage J., Christ A.-B., Granjeon D., Lemgruber-Traby A., Pujol A. & Bourgeois F.: Why it is important to perform a fully integrated basin-scale modeling of CO<sub>2</sub> storage in saline aquifers? Insights from the Paris Basin (France)

#### ► 44-10 11.15 - 11.30

Maiorana M.\*, Rizzo G.F., Todaro S., Gasparo Morticelli M., Agate M. & Sulli A.: Linking an outcrop analogue to a deep potential CO<sub>2</sub> storage site with 3D geological model: an example from southwestern Sicily

#### ► 44-11 11.30 - 11.45

Dinani P.\*, Bigi S., Conti A. & Moallemi A.: Carbon sequestration potential of abandoned fractured reservoirs in Northwest Zagros, Iran

#### ► 44-12 11.45 - 12.00

Pierozzi A.\*, Rateau R., Orlando A., Borrini D., Tassi F. & Rodriguez Blanco J.D.: A mineralogical and geochemical approach to evaluate the redox capacity of basaltic glass and crystals via experiments

#### ► 44-13 12.00 - 12.15

Giorgetti C.\*, Scuderi M.M., Bourgeois F., Wibberley C. & Collettini C.: Evolution of hydromechanical coupling from quartz to shale rich faults and implications for fault parallel vs. fault perpendicular permeability

#### ► 44-14 12.15 - 12.30

Ridolfi R.M.\*, Azzaro S., Beaubien S.E., Da Pra A., Pontiggia M. & Bigi S.: Development of a site-screening method for hydrogen storage purposes and its application to an industrial dataset of Italian reservoirs

#### ► 44-15 12.30 - 12.45

Morelli A.\*, Saccorotti G., Anderlini L., Anselmi M., Braun T., Caciagli M., Carannante S., Errico M., Famiani D., Garcia A., Molinari I., Salimbeni S., Vassallo M., Zaccarelli L. & Zerbino P.: CMS@INGV: An operational monitoring center for risk mitigation related to anthropic underground operations in Italy

#### ► 44-16 12.45 - 13.00

Romanò M.A.\*, Bernardi P., Diez E., Franceschini F., Garbin M., Guidarelli M., Klin P., Laurenzano G., Magrin A., Moratto L., Peruzzi L., Pettenati F., Plasencia M., Priolo E., Rebez A., Romanelli M., Sandron D., Santolin M., Saraò A., Tammaro A., Tunini L., Zuliani D., Bonano M., De Luca C., Lanari R. & Zinno I.: Seismic and geodetic monitoring of two underground gas storages in Northern Italy

■ S51. UNVEILING THE LONG-LASTING EVOLUTION OF ACTIVE MARGINS  
FROM FIELD TO MICRO-SCALE

Convenors and Chairpersons: Lorenzo Dulcetta (Università di Cagliari), Chiara Montemagni (Università di Firenze), Vincenzo Festa (Università di Bari Aldo Moro), Constantino Zuccari (Università di Bologna), Matteo Simonetti (ISPRA), Manuel Roda (Università di Milano)

Wednesday 4<sup>th</sup> September 2024 [11.00-13.00]

Aula B

► 51-8 11.00 - 11.15

(Invited) Montomoli C.\*, Iaccarino S., Montemagni C., Nania L. & Carosi R.: Multistage evolution of a regional shear zone: constraints from the South Tibetan Detachment System

► 51-9 11.15 - 11.30

Zuccari C.\*, Tavarnelli E., Mazzarini F., Viola G., Aldega L., Moretto V., van der Lelij R. & Musumeci G.: Fault architecture, age and deformation localisation history of the Mykonos Detachment, Cyclades, Greece

► 51-10 11.30 - 11.45

Rocca M.\*, Zanchetta S., Montemagni C., Aldega L., Fiorini A., Carminati E., Kylander-Clark A. & Zanchi A.: New insights on the Late Cretaceous S-verging thrusting in the central Southern Alps: clues from structural, geochemical, and geochronological analyses

► 51-11 11.45 - 12.00

Del Sole L.\*, Vignaroli G., Moretto V., Curzi M., Aldega L., van der Lelij R. & Viola G.: Unveiling complex fault architecture evolution through (micro)structural, geochronological and petrophysical investigations: the case of the Carboneras Fault (SE Spain)

► 51-12 12.00 - 12.15

Ballato P.\*, Balestrieri M.L., Dunkl I., Balling P., Paknia M., Biralvand M., Heidarzadeh G., Zeilinger G., Ghasemi M., Faccenna C. & Strecker M.R.: Tectonic evolution of the northern sectors of the Iranian Plateau: insights from thermo-kinematic modelling into Neogene plateau building processes

► 51-13 12.15 - 12.30

Cattò S., Ballato P., Bagheri S., Zattin M. & Cavazza W.\*: Limited Neogene dip-slip tectonics in the northwestern Iranian Plateau: evidence from low-temperature thermochronology

► 51-14 12.30 - 12.45

Viola G.\*, Zuccari C., Giuntoli F., Degl'Innocenti S., Sanguettoli T., Callegari I. & Vignaroli G.: Orogenic wedge formation during obduction: insights, implications and new perspectives from the Oman Mountains

► 51-15 12.45 - 13.00

Feriozzi F.\*, Siravo G. & Speranza F.: The heritage of Tethyan oceanic transform faults within Alpine orogens: The Shkoder-Peja transverse zone (SPTZ) of Northern Albania

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## ■ S2. THE GLOBAL CHALLENGE OF PLASTIC POLLUTION: CAUSES, IMPACTS AND SOLUTIONS

Conveners and Chairpersons: Nicoletta Mancin (Università di Pavia), Maya Musa (Università di Pavia), Giuseppe Suaia (CNR- Lerici), Stefania Lisco (Università di Bari), Angela Rizzo (Università di Bari)

Wednesday 4<sup>th</sup> September 2024 [17.30-19.30]

### Aula D

#### ► 2-1 17.30 - 18.00

[KEYNOTE] Pierdomenico M.\*, Casalbore D., Morgana S., Ridente D. & Chiocci F.L.: Source-to-sink propagation of marine plastic and accumulation in seafloor sediments: the role of sedimentary gravity flows

#### ► 2-2 18.00 - 18.15

Monnanni A.\*, Rimondi V., Morelli G., Nannoni A., Sforzi L., Martellini T., Cincinelli A., Chelazzi D., Laurati M., Lattanzi P. & Costagliola P.: Microplastics characterisation in shallow waters of the Arno River (Central Italy) and its discharge into the Mediterranean Sea: the main impacting role of the smallest size particles

#### ► 2-3 18.15 - 18.30

Lo Bue G.\*, Musa M., Lisco S., Marchini A., Riccardi M.P. & Mancin N.: Microplastic dynamics in the littoral reefs created by Sabellariid Polychaetes in the Southern Adriatic Sea

#### ► 2-4 18.30 - 18.45

Merlino S.\*, Locritani M., Morigi C., Gerard N., Bianucci M., Muccini F., Lombardi C., Bronco S., Ricci L., De Monte C., Granata U. & Cucco A.: Plastic accumulation on a marine protected area: the case study of the Giannutri Island in Tuscan Archipelago

#### ► 2-5 18.45 - 19.00

Pellegrini C.\*, Saliu F., Bosman A., Sammartino I., Raguso C., Mercorella A., Galvez D., Petrizzo A., Madricardo F., Lasagni M., Clemenza M., Trincardi F. & Rovere M.: Hotspots of microplastic accumulation at the land-sea transition and their spatial heterogeneity: the Po river prodelta (Adriatic Sea)

#### ► 2-6 19.00 - 19.15

Sozio A.\*, Rizzo A., Aucelli P.P.C., Anfuso G., Barracane G., Dimuccio L., La Salandra M., Scarrica V.M., Staiano A., Tarantino M.P. & Scicchitano G.: Multidisciplinary approaches for the analysis of Beach Litter distribution in coastal environments

#### ► 2-7 19.15 - 19.30

Canovi C.\*, Siligardi C. & Cedillo-González E.I.: Investigation of the efficiency of several TiO<sub>2</sub> microstructures for the photocatalytic degradation of nanoplastics

## ■ S8. GEODIVERSITY, GEOHERITAGE AND GEOTOURISM: WONDERING ABOUT AWARENESS FOR A SUSTAINABLE PLANET

Conveners and Chairpersons: Elisa Brustia (Dipartimento per il Servizio Geologico d'Italia, ISPRA), Vitantonio Venezia (Università degli Studi di Bari Aldo Moro), Roberto Pompili (ISPRA Roma), Annachiara Rosati (Università degli Studi di Bari Aldo Moro), Laura Melelli (Università degli Studi di Perugia), Alessia Pica (Sapienza Università di Roma)

Wednesday 4<sup>th</sup> September 2024 [17.30-19.30]

### Aula A

#### ► 8-15 17.30 - 17.45

Alvioli M.\* & Melelli L.: URGERE: URban GEodiversity for a Resilient Environment

#### ► 8-16 17.45 - 18.00

Primerano P.\*, Brustia E., Funaro M., Gerardi M., Lucarini M., Olivetta L. & Pompili R.: The Italian Geosites Inventory: making travellers aware through knowledge of geodiversity

#### ► 8-17 18.00 - 18.15

Ferrando A.\*, Faccini F., Coratza P., Vandelli V. & Reynard E.: Degradation risk and sensitivity to climate change of geosites: a methodology for quantitative assessment

#### ► 8-18 18.15 - 18.30

Morsilli M.\*: Urban geology and geoheritage conservation: enhancing aspiring UNESCO geopark development in the Gargano promontory

#### ► 8-19 18.30 - 18.45

Lozar F.\*, Gerbaudo A., Giardino M., Perona S. & Zambrotta M.: Dynamic geodiversity and environmental sustainability within alpine glacial areas: educational values for the secondary schools

#### ► 8-20 18.45 - 19.00

Bellini F.\*, Sabato S. & Tropeano M.: Exploring geodiversity through historical fountains and ancient springs: geotouristic paths in the Premurgia Region for sustainable development (Puglia, Southern Italy)

#### ► 8-21 19.00 - 19.15

Tropeano M., Caldara M.A., De Santis V., Festa V.\*, Parise M., Sabato L., Spalluto L., Francescangeli R., Iurilli V., Mastronuzzi G.A., Petruzzelli M., Bellini F., Cicala M., Lippolis E., Petti F.M., Antonelli M., Cardia S., Conti J., La Perna R., Marino M., Marsico A., Sacco E., Fiore A., Simone O., Valletta S., D'Ettorre U.S., De Giorgio V., Liso I.S., Rosati A., Stigliano E. & Venezia V.: Evidences of geodiversity in Murge and Premurge territories (Southern Italy), potential training grounds for geotouristic experiences

#### ► 8-22 19.15 - 19.30

Burnelli M.\*, Melelli L. & Alvioli M.: High-resolution geomorphodiversity and anthropization indices of Italy for urban geomorphology

**■ S13. GEOMORPHOLOGY IN THE ANTHROPOCENE: FROM HUMAN-LANDSCAPE INTERACTION TO GEOHERITAGE AND GEHAZARD MANAGEMENT ISSUES**

Conveners and Chairpersons: Roberto Sergio Azzoni (Università degli Studi di Milano), Pierluigi Brandolini (Università degli Studi di Genova), Francesco Faccini (Università degli Studi di Genova), Fabio Luino (CNR Torino)

Wednesday 4<sup>th</sup> September 2024 [17.30-19.30]

**Aula E**

**► 13-1 17.30 - 17.45**

Annibali Corona M.\*, Guerriero L. & Calcaterra D.: Geomorphological evolution and activity of some large earthflows in southern Italy

**► 13-2 17.45 - 18.00**

Azzoni R.S.\*, Forti L., Pezzotta A. & Zerboni A.: The Derna dam collapse erased a century of urban sprawl

**► 13-3 18.00 - 18.15**

Brenna A.\*, Poletto G. & Surian N.: Evaluating the effectiveness of "River Morphodynamic Corridors" for flood hazard mapping: insights from an application in the Cordevole River catchment (Italy)

**► 13-4 18.15 - 18.30**

Ferrando A.\*, Facciolo M., Mandarino A., Faccini F. & Brandolini P.: Ancient slate quarries as geosites: degradation risk and enhancement issues

**► 13-5 18.30 - 18.45**

Forti L.\*, Degli Esposti M., Cremaschi M., Borgi F., Azzoni R.S. & Zerboni A.: Geomorphological reconstruction of the Umm al-Qувain (UAE) coastal-lagoon system and effects of the present-day human impact

**► 13-6 18.45 - 19.00**

Natale J., Ilacqua S., D'Aniello M., Terlizzi F., Lämmle L., Borges Moreira V., Conversano F., Brandolini P., Randazzo G., Perez Filho A., Stanislao C. & Donadio C.\*: Urban geomorphology and geostructural aspects of Pozzuoli, southern Italy

**► 13-7 19.00 - 19.15**

Pittau S.\*, Rinaldi M., Simonelli T. & Scorpio V.: Historical and remote sensing analysis as an instrument for the delineation of erodible corridor area in the Serio River: a case study aimed to its sustainable and integrated management

**► 13-8 19.15 - 19.30**

Turconi L., Coratza P., Faccini F.\*, Ferrando A., Luino F., Palmieri W., Soldati M. & Gizzi F.: The contribution of toponyms to geomorphological hazard: hillslope processes and landslides highlighted by the Italian Military Geographical Institute maps at 1:25.000 scale

**■ S19. ENVIRONMENTAL MINERALOGY AND SUSTAINABLE DEVELOPMENT**

Conveners and Chairpersons: Roberto Buccione (Università della Basilicata), Sonia Conte (CNR), Riccardo Fantini (Università di Modena e Reggio Emilia), Giancarlo Capitani (Università di Milano Bicocca), Michela Sturini (Università di Pavia), Maura Mancinelli (Università di Ferrara)

Wednesday 4<sup>th</sup> September 2024 [17.30-19.30]

**Aula H**

**► 19-1 17.30 - 17.45**

Sisti M.\*, Andreola F., Barbieri L., Guidetti D., Gualtieri A.F., Fantini R., Colombo F. & Arletti R.: Sustainable development in traditional ceramic glazes: harnessing MMVF waste for environmental innovation

**► 19-2 17.45 - 18.00**

Molinari C.\*, Conte S., Zanelli C., Ardit M., Mantovani L., Cruciani G., Tribaudino M. & Dondi M.: Mobility of hazardous elements in ceramic bodies

**► 19-3 18.00 - 18.15**

Indelicato V.\*, Punturo R., Visalli R., Pistorio A., Cirrincione R., Cantaro C. & Pinizzotto M.R.: Approaching knowledge of naturally occurring asbestos in volcanic geological contexts of southern Italy

**► 19-4 18.15 - 18.30**

Ouladmansour A.\*, Mesto E., Lacalamita M., Mongelli G., Mamelì P., Cerri G., Capitani G., Conconi R., Agrosì G. & Schingaro E.: Mineralogical and geochemical characterization of red muds from Portovesme (SW Sardinia, Italy)

**► 19-5 18.30 - 18.45**

Belviso C.\*, Mancinelli M., Abdolrahimi M., Sturini M., Cavalcante F., Lettino A. & Peddis D.: Red mud treated with KOH: from disposal material to new resource

**► 19-6 18.45 - 19.00**

Di Carlo M.C.\*, Ballirano P., Bloise A., Campopiano A., Fantauzzi M., Montereali M.R., Nardi E., Petriglieri J.R., Rossi A., Tomatis M., Turci F. & Pacella A.: Understanding the behaviour of fibrous antigorite in artificial lysosomal fluid: evidence for toxicity assessment

**► 19-7 19.00 - 19.15**

Capitani G.\*, Bernasconi A., Bianchi A., Bizjan B., Conconi R., Ferrario S., Ferrini S., Lavagna L., Marian M., Mauri M., Dalpiaz M., Pavese M., Squitieri L., Tarantino S.C., Vergani F. & Viti C.: Recycling detoxified asbestos cement in several commodities

**► 19-8 19.15 - 19.30**

Colombo F.\*, Fantini R., Di Renzo F., Malavasi G., Malferrari D. & Arletti R.: Advancements in zeolite-based recovery of Rare Earth Elements: a step towards resource security and sustainability

## ■ S25. LANDSLIDE MONITORING, MODELLING, AND PREDICTION: BRIDGING NEW TOOLS AND DATA TO THE 'SLOPE-FAILURE MODEL' PERSPECTIVE

Conveners and Chairpersons: Edoardo Rotigliano (Università di Palermo), Margherita Bufalini (Università di Camerino), Stefano Luigi Gariano (CNR), Luigi Guerriero (Università di Napoli Federico II), Claudia Meisina (Università di Pavia), Mario Parise (Università di Bari)

Wednesday 4<sup>th</sup> September 2024 [17.30-19.30]

### Aula M

#### ► 25-1 17.30 - 17.45

Argentieri A.\* De Ritis R., Fabiani M., Fittante L., Fubelli G., Lafavia C., Liggio F., Rotella G., Scaroni C., Seitone F. & Vitali P.: Landslides monitoring for the protection of the territory: the San Vito Romano study case (Rome metropolitan area, central Italy)

#### ► 25-2 17.45 - 18.00

De Simone A.\* Guerriero L., Cevasco A., Pepe G., Tufano R., Raso E. & Calcaterra D.: Stability of terraced slopes accounting for potential hydrological scenarios in the UNESCO World Heritage Site of Cinque Terre, Northern Italy

#### ► 25-3 18.00 - 18.15

Doglioni A.\*: Large-scale landslide mapping based on deep-learning paradigms

#### ► 25-4 18.15 - 18.30

Ferrarotti M., Chicco J.M.\* Marmoni G.M., Fiorucci M., Tufano R., Di Martire D., Esposito C., Mandrone G. & Martino S.: Multidisciplinary approach on the preparatory effect of wildfires in shallow landslides

#### ► 25-5 18.30 - 18.45

Francioni M.\* Ottaviani F. & Ahmed M.: Survey, data visualization and numerical modelling: an overview about how the new tools and methods of analysis can influence landslide studies

#### ► 25-6 18.45 - 19.00

Hu L., Donati D.\* Landi G., Zama F. & Borgatti L.: Development and application of an enhanced inversion algorithm for the reconstruction of the basal surface of landslides

#### ► 25-7 19.00 - 19.15

Martinello C.\* Di Frisco G., Conte A., Mineo G., Bellomo V., Azzara G., Mercurio C., Albo S., Calderón-Cucunuba L.P., Conoscenti C., Cappadonia C., Agnesi V. & Rotigliano E.: Biased landslide inventories and illusory susceptibility model high performances: a test in western Sicily

#### ► 25-8 19.15 - 19.30

Nava L.\* Mondini A., Bhuyan K., Fang C., Monserrat O., Novellino A. & Catani F.: Sentinel-1 SAR-based globally distributed landslide detection by deep neural networks

## ■ S37. CARBONATE PLATFORM SYSTEMS: RECORDS OF PALAEOENVIRONMENTAL CHANGE

Conveners and Chairpersons: Nereo Preto (Università di Padova), Marcello Caggia-  
ti (Università di Ferrara), Giovanna Della Porta (Università di Milano Statale), Marco  
Franceschi (Università di Trieste), Michele Morsilli (Università di Ferrara)

Wednesday 4<sup>th</sup> September 2024 [17.30-19.30]

### Aula C

#### ► 37-1 17.30 - 17.45

Berra F.\*: Soft-sediment deformation structures and Neptunian dykes across a carbonate system: Evidence for an earthquake-related origin (Norian, Dolomia Principale, Southern Alps, Italy)

#### ► 37-2 17.45 - 18.00

Santone S.\* Franceschi M., Franceschi P. & Rusciadelli G.: Exploring shallow-water carbonate precipitation rates through geological time

#### ► 37-3 18.00 - 18.15

Spalluto L.\* Petruzzelli M., Sabato L. & Tropeano M.: Cretaceous cyclic peritidal carbonates of the Apulia Carbonate Platform (Apulia, southern Italy) in a hierarchical sequence-stratigraphic perspective: a case study from the Murge area (the Giovinazzo sea-cliff section)

#### ► 37-4 18.15 - 18.30

Morsilli M.\*: Unraveling the evolution of the Apulia Carbonate Platform and its sedimentary dynamics

#### ► 37-5 18.30 - 18.45

Španiček J.\* & Korbar T.: Open questions on the Likva locality K-Pg boundary bed on the Adriatic carbonate platform

#### ► 37-6 18.45 - 19.00

Morabito C.\* & Morsilli M.: The Eocene carbonate deposits of the Gargano Promontory and Tremiti Islands (southern Italy)

#### ► 37-7 19.00 - 19.15

Passaseo C.\* & Morsilli M.: Lower Messinian Halimeda bioherms from the Mediterranean area: new insights on the controlling factors

#### ► 37-8 19.15 - 19.30

de Luca A.\* Lisco S., De Giosa F., Gimenez G.A., Pierri C., Acquafredda P., Corriero G. & Moretti M.: Unveiling the architecture and geological significance of mesophotic oyster reefs on the Apulian Continental Shelf: a multiscale approach

## ■ S45. RECENT ADVANCES IN KARST RESEARCH, WITH PARTICULAR FOCUS ON UNDERGROUND WATERS

Conveners and Chairpersons: Isabella Serena Liso (Università di Bari Aldo Moro), Alberto Riva (Università di Ferrara), Daniela Valigi (Università di Perugia), Alberto Tazioli (Università Politecnica delle Marche), Guido Leone (Università degli Studi del Sannio)

Wednesday 4<sup>th</sup> September 2024 [17.30-19.30]

### Aula G

#### ► 45-1 17.30 - 17.45

Vigna B.\* & Fiorucci A.: The Bossea Karst Hydrogeology Laboratory

#### ► 45-2 17.45 - 18.00

Onorato M.\* Di Capua I., Liso I.S., Onorato R., Congedo M., Poto M., Palmisano G., Puglia G., Zini L. & Parise M.: Palude del Capitano (Apulia, Italy): a natural coastal laboratory to monitor biological diversity and dynamics of karst hydrogeology

#### ► 45-3 18.00 - 18.15

Zini L., Calligaris C., Finocchiaro F., Ponton M. & Potleca M.: A karst area shared between carbonate megabeds and siliciclastic units: the example of Mt. Bernadia (NE Italy)

#### ► 45-4 18.15 - 18.30

Manucci A.\* Cambi C., Fronzi D., Liso I.S., Mazzocca M., Mirabella F., Parise M., Casadei S., Tazioli A. & Valigi D.: Estimation of recharge to the karst Scirca spring (Central Italy) by using conventional and modified APLIS methods: a comparison

#### ► 45-5 18.30 - 18.45

Tieri M., Liso I.S., Parise M., Cardellini C., Chiodini G., Palmisano G., Gambini R., Caliro S. & Santi A.: Springs water geochemistry in central-southern Albania

#### ► 45-6 18.45 - 19.00

Mostafa M.F., Liso I.S. & Parise M.: Seawater intrusion and coastal karst aquifers in Apulia: status, challenges and future scenarios

#### ► 45-7 19.00 - 19.15

D'Ettorre U.S., Liso I.S. & Parise M.: Desertification risk assessment using the modified MEDALUS model in the Alta Murgia karst plateau (Apulia, Southern Italy)

#### ► 45-8 19.15 - 19.30

Riva A., Longanesi G. & Ghirotti M.: Preliminary insights on hydrogeology of Mount Toc from 3D modeling

## ■ S50. UNVEILING EARTHQUAKE MECHANICS, FROM FIELD TO LABORATORY BASED APPROACH

Conveners and Chairpersons: Simone Masoch (Università di Padova), Rocco Novellino (INGV), Giovanni Toffol (Università di Padova), Mattia Pizzati (Università di Parma), Barbara Marchesini (Sapienza Università di Roma), Stefano Aretusini (INGV)

Wednesday 4<sup>th</sup> September 2024 [17.30-19.30]

### Aula B

#### ► 50-1 17.30 - 18.00

[KEYNOTE] Pozzi G., Volpe G., Ruggieri R., Scuderi M., Tesei T., Marone C., Collettini C. & Cocco M.: Friction, mineralogy, and microstructures: how complex is the brittle deformation of faults?

#### ► 50-2 18.00 - 18.15

Bigaroni N., Trippetta F., Noel C., Giorgetti C., Pozzi G. & Collettini C.: Evolution of the Vp/Vs ratio during deformation tests at high fluid pressure: implications for earthquake mechanics

#### ► 50-3 18.15 - 18.30

Mauro M., Volpe G., De Solda M., Magnani M.B., Collettini C. & Scuderi M.M.: Probing the micromechanics of laboratory faults using ultrasonic waves: insights from borehole samples from Delaware Basin, Texas

#### ► 50-4 18.30 - 18.45

Guglielmi G., De Paola N., Giorgetti C., Collettini C. & Trippetta F.: Rheology of Triassic Evaporites and implications for seismicity of the Apennines: insights from triaxial laboratory experiments

#### ► 50-5 18.45 - 19.00

Chinello M., Schito A., Bowden S.A., Tesei T., Spagnuolo E., Aretusini S. & Di Toro G.: Origin of mirror-like fault surfaces in bituminous dolostones (Central Apennines, Italy)

#### ► 50-6 19.00 - 19.15

Tesei T., Molli G., Remitti F., Mittempergher S. & Pozzi G.: The structural geology of fault healing: a preliminary view

#### ► 50-7 19.15 - 19.30

Di Toro G., Gomila R., Feng W., Salvadori L., Wu W.-H., Guglielmi G., Tesei T., Yao L., Sciarra A., Cantucci B., Grassa F., Piochi M. & Ma S.: Frictional fault healing under hydrothermal conditions



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## POSTER SESSION

Wednesday 4<sup>th</sup> September 2024

### ■ S2. The global challenge of plastic pollution: causes, impacts and solutions

#### ► 2-8      Booth 1

Birarda G., Bonanni V., Buosi C.\*, Caridi F., Casu M.A., Costanzi E., De Giudici G., Gianoncelli A., Longo E., Marras P.A., Medas D., Meneghini C., Onnis P., Pili S., Pivotto T., Sabbatini A., Tromba G., Vaccari L. & Zizic M.: Response of benthic foraminifera to plastic pollution

#### ► 2-9      Booth 2

Buoninsegni J.\*, Tessari U., Marrocchino E. & Vaccaro C.: Integration of microplastic gravimetric separation protocol considering sediment texture and composition

#### ► 2-10      Booth 3

Croce A.\*, Bertolotti M., Roveta A., Ugo F., Bertolina C., Farotto M., Bellis D., Quaglia M., Carratta L. & Maconi A.: Identification of microplastics in human tissues and fluids: a pilot study

#### ► 2-11      Booth 4

Festa R.M.\*, Lo Bue G., Musa M., Marchini A., Riccardi M.P. & Mancin N.: Extraction of microplastics from marine environmental matrices: density separation protocol validation

#### ► 2-12      Booth 5

Fracciolla T.\*, Veneziano F., de Luca A., D'Abbicco V., Trani R., Moretti M. & Lisco S.: Evaluation of microplastics in coastal and marine sediments of the Ionian Sea (Southern Italy)

#### ► 2-13      Booth 6

Lo Bue G.\*, Musa M., Kaestner A., Di Martino D., Busi M., Shakoorioskooie M., Riccardi M.P. & Mancin N.: Imaging of microplastics in bio-engineered marine substrates: a neutron tomography approach

#### ► 2-14      Booth 7

Rizzo A.\*, Barracane G., Bonifazi G., Capobianco G., Cucuzza P., Gorga E., Mele D., Scardino G., De Santis V., Lapietra I., La Salandra M., Lisco S., Liso S., Marsico A., Mastronuzzi G., Parise M., Serranti S., Scicchitano G. & Sozio A.: Litter distribution in marine and coastal environments: highlights from ongoing research projects

#### ► 2-15      Booth 8

Sabbatini A., Birarda G., Buosi C., Caridi F.\*, De Giudici G., Medas D. & Vaccari L.: Effect of plastics on marine ecosystem: preliminary findings of Phthalates (PAEs) on Gromiids

#### ► 2-16      Booth 9

Sasso C.\*, Lapietra I., Liso I.S., Marsico A. & Rizzo A.: Microplastics analysis from sediment samples collected at Capitolo Beach (Apulia, Italy)

#### ► 2-17      Booth 10

Valdrè G.\*, Moro D., Moro L., Helal K.M. & Fragasso J.: Autonomous underwater vehicles (AUVs including gliders) for the characterization and monitoring of environmental conditions in fresh and marine waters

**■ S7. Vibrational spectroscopy studies of geomaterials: case studies and new perspectives**

**► 7-15      Booth 11**

Corrente G.\*, Caggiani M.C., Eramo G., Lanzafame G., Mazzoleni P., Militello P.M. & Barone G.: Characterization of chert raw material using a non-invasive approach: the case of Hyblean foreland (South-Eastern Sicily)

**► 7-16      Booth 12**

Di Fazio M.\*, Calzolari L., Rea C., Capriotti S. & Medeghini L.: Evaluation of an IR multi-methods protocol for the study of Cultural Heritage

**► 7-17      Booth 13**

Fornasini L.\*, Achilli A., Mantovani L., Barone G., Mazzoleni P. & Bersani D.: Pros and cons on the investigation of geopolymers through micro-Raman spectroscopy

**► 7-18      Booth 14**

Fornasini L.\*, Bersani D., Saviane L., Mantovani L., Iacumin P. & Villicich R.: A multi-technique investigation for provenance determination of white marbles from the Roman villa in Fiumana (Forlì-Cesena, Italy)

**► 7-19      Booth 15**

Moricca C., Ciccola A.\*, Matassa R., Favero G., Nottola S., Nigro L., Spagnoli F., Nucara A. & Sadori L.: Phoenician seeds are rich in minerals: a multi-analytical study of mineralised archaeobotanical remains from the archaeological site of Motya

**► 7-20      Booth 16**

Porcaro M.\*, Mazzotta G., Michetti L.M., Conti A., De Caro T., Brunetti A. & De Vito C.: Microstructure, chemistry and corrosion products of copper and copper alloys of artefacts from Pyrgi (Italy) through a multi-analytical approach

**► 7-21      Booth 17**

Rea C.\*, Calzolari L., Capriotti S., De Vito C., Aurisicchio C., Mignardi S. & Medeghini L.: Application of infrared external reflection spectroscopy in the identification of emerald provenance

**► 7-22      Booth 18**

Spironello M.Y.\*, Barone G., Mazzoleni P., Caggiani M.C. & Fugazzotto M.: Precious votive offerings in 17<sup>th</sup>- and 18<sup>th</sup>-century Sicilian production: non-invasive gemmological analyses

**► 7-23      Booth 19**

Tempesta G.\*, Calvano C.D. & Rigante E.C.L.: Spectroscopic studies of white and black pigments in a Dalí painting

**■ S8. Geodiversity, Geoheritage and Geotourism: wondering about awareness for a sustainable planet**

**► 8-23      Booth 20**

Calderón-Cucunuba L.P.\*, Melelli L., Burnelli M., Pica A., Vergari F. & Del Monte M.: Geomorphodiversity in urban areas and the role of geomorphological maps: the study case of Perugia (Central Italy)

**► 8-24      Booth 21**

Delmonaco G.\*, Pompili R., Puzzilli L.M. & Traversa F.: Geology and cultural heritage in Petra (Jordan): evolution and degradation in relation with tourism management

**► 8-25      Booth 22**

Festa V.\*, Sabato L. & Tropeano M.: In search for a key area for geotourism? The example of "Sassi", the old town of Matera (Southern Italy)

**► 8-26      Booth 23**

Lucarini M.\*, Brustia E., Olivetta L., Pompili R. & Primerano P.: Geosites inventory and territorial planning

**► 8-27      Booth 24**

Motti A.\*, Berti F. & Natali N.: The new geosites identified by the Sezione Geologica regionale and the geological forms of the landscape in Umbria

**► 8-28      Booth 25**

Motti A.\*, Berti F., Natali N. & Ogna M.: Geotourism: empowering geologists or engaging the masses?

**► 8-29      Booth 26**

Pica A.\*, Montaldi A., Capotorti G. & Del Monte M.: Geodiversity - biodiversity relationship for the identification and conservation of priority natural areas in urban ecosystems. The case study of the city of Rome

**► 8-30      Booth 27**

Punturo R., La Rosa A., Maniscalco R. & Cirrincione R.\*: Gabara Park: a magic place to recall sicilian mining history

**► 8-31      Booth 28**

Sabato L.\* & Tropeano M.\*: Paintings and writings by Carlo Levi: an unlikely combination with geology?

**■ S13. Geomorphology in the Anthropocene: from human-landscape interaction to geoheritage and geohazard management issues**

**► 13-9      Booth 29**

Borzi A.M.\*, Minio V., De Plaen R., Lecocq T., Cannavò F., Ciraolo G., D'Amico S., Lo Re C., Monaco C., Picone M., Scardino G., Scicchitano G. & Cannata A.: Distinguishing between Medicane and common seasonal storms using microseism

**► 13-10      Booth 30**

Brandolini P.\*, Faccini F., Ferrando A., Bollati I., Pelfini M. & Azzoni R.S.: Geoheritage along the high rocky coast of Eastern Liguria: an emblematic case of interaction between natural hazard and human impact

**► 13-11      Booth 31**

Contillo L.\*, Dimola G., Giannandrea P. & Schiattarella M.: How the interplay among geological and geomorphological factors, land use, and changing climate can bias very short-term landscape evolution: an example from Basilicata, southern Italy

**► 13-12      Booth 32**

Gioia D., Bloise L., Casella V., Corrado G., Minervino Amodio A.\*, Muto F., Sfacteria M., Capozzoli L., De Martino G., Romano G. & Mollo F.: Relationships between fluvio-lacustrine landscape, human occupation and historical earthquakes: a multidisciplinary study of the Santa Gada archaeological site (Pollino Geopark, southern Italy)

**► 13-13      Booth 33**

Lämmle L., Moreira V.B., D'Aniello M.\*, Ilacqua S., Brandolini P., Perez Filho A. & Donadio C.: Coastal erosion in urban areas and socio-environmental challenges: the case of São João da Barra, Rio de Janeiro, Brazil

**► 13-14 Booth 34**

Pelfini M., Bollati I., Brandolini P., Faccini F. & Azzoni R.S.\*: Hiking trails for discovering the geomorphological heritage: fruition and related hazard, risk and impact scenarios

**► 13-15 Booth 35**

Pietrogrande S.\*, Brandolini P., Bollati I.M., Pelfini M., Faccini F., Ferrando A., Forti L. & Azzoni R.S.: GEOTRes – Geoheritage threats and resilience: mapping the impact of geomorphological and anthropic processes in sensitive morphoclimatic environments

**► 13-16 Booth 36**

Turconi L., Luino F. & Faccini F.\*: Geotoponyms as indicators of hydrogeomorphological features in the Portofino Promontory

**■ S16. Geomaterials for a Sustainable Development****► 16-16 Booth 37**

Mameli P.\*, Martucci A., Alberti A., Mancinelli M. & Oggiano G.: First insights on the synthesis of cordierite from Sardinian raw materials

**► 16-17 Booth 38**

Clausi M.\*, Girardi G., Savino S., Manica M., Attrotto R., D'Accolti L. & Pinto D.: Metakaolin – Blast furnace slag geopolymers as catalyst support for water treatment

**► 16-18 Booth 39**

Zafarana S.E.\*, Achilli A., Barone G., Bersani D., Finocchiaro C., Fornasini L., Mantovani L., Portale S. & Mazzoleni P.: Valorisation of sawing sludge from Cuasso al Monte (Italy) in alkali-activation process: feasibility study

**► 16-19 Booth 40**

Finocchiaro C.\*, Occhipinti R., Barone G., Mazzoleni P., Andreola F., Romagnoli M. & Leonelli C.: Optimization with slaked lime of alkali-activated pastes based on Mt. Etna's volcanic ash: rheological and physical-mechanical assessment

**► 16-20 Booth 41**

Meloni P., Columbu S.\*, Cocco O., Carcangiu G. & Palomba M.: Lime and high zeolitic geomaterials content in mixtures: perspectives in hydraulicized eco-mortars production

**► 16-21 Booth 42**

Gatta G.D., Comboni D.\*, Chiappella L., Battiston T. & Lotti P.: The role of temperature on the pressure-mediated adsorption in natural zeolites: the case of leonhardite

**► 16-22 Booth 43**

Corti M.\*, D'Alessio D., Campione M., Yivlialin R., Bussetti G., Lucotti A., Tommasini M. & Malaspina N.: Incipient carbonate phases formation on brucite  $[Mg(OH)_2]$  single crystals surfaces during microwave-driven carbonation

**► 16-23 Booth 44**

d'Aniello F., Arizzi A., Cappelletti P., Cultrone G., Di Benedetto C., Izzo F., Langella A., Rispoli C. & De Bonis A.\*: Optimizing traditional materials: a systematic approach to formulate restoration mortars for improved substrate compatibility

**► 16-24 Booth 45**

Gambino F.\*, Longhitano N., Tazzini A., Mancini S., Ghignone S. & Dino G.: Tadelakt: a thousand-year-old technique for the production of special plasters with unique properties

**► 16-25 Booth 46**

Lezzerini M.\*, Aquino A. & Pagnotta S.: Investigation on geopolymeric mortar production by using clay bricks waste

**► 16-26 Booth 47**

Piepoli L.\*, Grieco G., Della Porta G., Marinoni N., Govoni D. & Fumagalli L.: Comparative trace element concentrations in carbonate lithologies used for the production of lime and their washing muds

**► 16-27 Booth 48**

Ulian G.\* & Valdrè G.: Multi-methodological analysis of orpiment  $As_2S_3$  and related possible applications in bidimensional optoelectronics

**► 16-28 Booth 49**

Comboni D., Lotti P.\*, Gatta G.D., Battiston T. & Pagliaro F.: Hydrated borates at non ambient conditions: pivotal experiments in the production of neutron-shielding concretes

**► 16-29 Booth 50**

Comboni D.\*, Lotti P., Gatta G.D., Battiston T. & Pagliaro F.: Inderborite: a comprehensive reinvestigation of its technological features

**► 16-30 Booth 51**

Occhipinti R.\*, Bertino A., Barone G. & Mazzoleni P.: Tripoli Formation rocks as new resources in alkaline-activation technology: a feasibility study

**► 16-31 Booth 52**

Parlapiano F.\*: New method to quantify fluorite in geo-complex material: the case of Pianciano mine (Central Italy)

**■ S19. Environmental mineralogy and sustainable development****► 19-9 Booth 53**

Ameur-Zaimeche O., Kechiched R., Mameli P., Mesto E., Mongelli G., Ouladmansour A.\* & Schingaro E.: Critical metals distribution in bauxite residues: a multivariate statistical analysis approach

**► 19-10 Booth 54**

Bloise A., Fuoco I.\*, Vespucciano G., Pacella A., Villella S., Piersante C., Malvasi G., Campopiano A., Ballirano P., Bruno M.R., Bruni B.M., Sinopoli F., Di Carlo M.C. & Apollaro C.: Evaluating mineralogical and geochemical characteristics for understanding groundwater quality and secondary asbestos exposure risks: the case of Calabria Region

**► 19-11 Booth 55**

Caggiano J., Cisullo C.\*, Buccione R., Rizzo G. & Mongelli G.: Mineralogical and petrographic assessment of asbestiform minerals in the Timpone Seluci metabasites (Pollino Massif, Southern Italy)

**► 19-12 Booth 56**

D'Alessio D.\*, Secchi V., Campione M., Malaspina N. & Monguzzi A.: Synthesis and surface functionalization of geo-inspired nanotubes for Alzheimer's Disease treatment with increased tolerability

**► 19-13 Booth 57**

Mancinelli M.\*, Adami L., Gigli L., Sousa N.C.O., Pedrotti J.J., Plaisier J., Pasti L., Stevanin C. & Martucci A.: Structural behaviour of graphene and silver functionalized graphene oxide loaded with perfluorinated compounds during thermal heating

**> 19-14 Booth 58**

Mancinelli M.\*, Ardit M., Chenet T., Pasti L. & Martucci A.: Thermogravimetric and High-Temperature X-ray Diffraction study on the desorption of humic monomers from Y zeolites

**> 19-15 Booth 59**

Morelli G., Ciani F.\*, Costagliola P., Fagotti C., Lattanzi P., Manca R., Monnanni A., Nannoni A. & Rimondi V.: Mercury (Hg) pollution in riparian vegetation along the Paglia River in the Monte Amiata Hg mining district (Italy): implications for a sustainable environmental management and risks

**> 19-16 Booth 60**

Punturo R.\*, Rizzo G., Buccione R., Visalli R., Indelicato V. & Cirrincione R.: Petrography, geochemistry and mineralogy of serpentinite rocks in the ophiolite units at the Calabria and Basilicata regions, Southern Apennine (Italy): state of the art and ongoing research

**■ S20. High-resolution chemical and textural imaging techniques as analytical tools in Earth Sciences****> 20-8 Booth 61**

Agrosi G.\*: From Earth's mantle to Cosmo: case studies by imaging techniques

**> 20-9 Booth 62**

Barni L.\*, Marras G., Morana M., Angellotti A., Cinque G., Mikhailenko D.S., Bindi L. & Stagno V.: Heterogeneity of N distribution into diamond single crystal: a closer look into the role of inclusions in the distribution of N aggregation state

**> 20-10 Booth 63**

Conconi R.\*, Capitani G., Cossio R., Pastero L., Berretti E. & Lavacchi A.: Micro-chemical and micro-structural studies of minerals and clues on the associated geological processes

**> 20-11 Booth 64**

Elettivo G.S., Tempesta G.\*, Bernardini S., Vadrucci M. & Agrosi G.: Color changes in topaz treated via irradiation and heat

**> 20-12 Booth 65**

Moro D.\*, Ulian G. & Valdrè G.: SPM of layer silicates and interaction with single biomolecules at the nano-atomic scale

**> 20-13 Booth 66**

Moro D.\*, Ulian G. & Valdrè G.: Atomic force, Kelvin probe, electric force microscopy and nanolithography of clinochlore

**> 20-14 Booth 67**

Palazzo Q.\*, Raaijmakers S., Belleman R.G., Prada F., Hammel J.U., Kaandorp J.A., Goffredo S., Falini G. & Valdrè G.: Unveiling the acoustic-morphological features of fish otolith structures by multiscale imaging investigations

**> 20-15 Booth 68**

Ranellucci F.\*, Ulian G., Moro D. & Valdrè G.: Theoretical and experimental study of structural, vibrational, and electronic properties of dolomite

**> 20-16 Booth 69**

Rizzo F.\*: Study of color zoning in tourmalines from different localities before and after treatments using chemical analysis and high-resolution images

**> 20-17 Booth 70**

Visalli R.\*, Ortolano G., D'Agostino A., Fiannacca P., Rebay G. & Cirrincione R.: Unraveling symplectite development during granulite/amphibolite facies retrogression through X-ray quantitative image analyses

**> 20-18 Booth 71**

Vitrano A.\*, Viti C., Della Ventura G., Lucci F. & Vetere F.: A preliminary petrological study of chondrules in NWA12800 meteorite

**■ S21. Mineralogy behind Earth processes: insights from the atomic to the macroscopic scale****> 21-9 Booth 72**

Cotellucci A.\*, Otálora F., Canals A., Garcia-Ruiz J.M., Criado-Reyes J., Bruno M. & Pastero L.: Gypsum twinning laws and habits: an unexplored tool as a proxy for the chemistry of the original brine

**> 21-10 Booth 73**

Fregola R.A.\*, Ciccolella A., Ruggieri G., Ventrucci G. & Schingaro E.: Sphalerite from Longobucco and Fonte Argentila mineralization (Sila Massif, Calabria, southern Italy): crystal chemistry and genetic implications

**> 21-11 Booth 74**

Mesto E.\*, Lacalamita M., Zucchi M., Iaccarino S., Vezzoni S., Pieruccioni D., Brogi A. & Schingaro E.: Crystal chemistry of carpholite of the Middle Tuscan Ridge (inner Northern Apennines)

**> 21-12 Booth 75**

Mauro D.\*, Sejkora J., Biagioni C. & Dolníček Z.: Second world occurrence of badalovite,  $\text{Na}_2\text{Mg}_2\text{Fe}(\text{AsO}_4)_3$ , from the Etna volcanic complex, Sicily

**> 21-13 Booth 76**

Mancinelli M., Precisvalle N., Ardit M., Beltrami G., Gigli L., Catizzone E., Migliori M., Giordano G. & Martucci A.\*: An in-situ synchrotron X-ray powder diffraction study of the thermal stability of templated ZSM-5 zeolites

**> 21-14 Booth 77**

Guagliano M.\*, Mostoni S., Dotelli C., Finocchio E., Mesto E., Schingaro E., Scotti R., Bellotto M., Cristiani C. & Lacalamita M.: Spectroscopic study of the interaction mechanism of heavy metals and clay and organo-clays as sorbents in wastewater treatment

**> 21-15 Booth 78**

Giuli G., Nazzareni S.\* & Skogby H.: Dellen crater impact melt rock: pyroxenes as a proxy for melt thermal history and water content

**> 21-16 Booth 79**

Campomenosi N.\* & Mihailova B.: Atomic dynamics of chalcedony under non ambient conditions: a Raman spectroscopy study

**> 21-17 Booth 80**

Sist E.\*, Parisi F. & Princivalle F.: Crystal chemistry of clinopyroxenes and spinels enclosed in mantle xenoliths (Mandakh-Mandal-Gobi area, Mongolia)

**> 21-18 Booth 81**

D'Angeli I.M.\*, Rilievo G., Magro M., Molinari S., Favero M., Barbaro A., Brenker F., Singerling S.A., Vianello F. & Salvilù G.: A new synthetic strategy to produce hollandite-type nanocrystals, useful for environmental application

**► 21-19 Booth 82**

Lepore G.Q.\*, Bindi L., d'Acapito F., Landi A.I. & Bonazzi P.: Twinning and superstructure in janchevite,  $Pb_9VO_{10.25}Cl_{2.5}$

**► 21-20 Booth 83**

Rizzo F.\*, Bosi F., Tempesta G., Skogby H., Bernardini S., Vadrucci M. & Agrosì G.: Causes of color changes in tourmalines after thermal and irradiation treatments

**► 21-21 Booth 84**

Ulian G.\* & Valdrè G.: Graphene-brucite 2D heterojunctions: an ab initio crystal-chemical investigation

**■ S24. Assessment of multihazards and seismic microzonation in urban areas****► 24-17 Booth 85**

Argentieri A., Ballarini V., Bordoni P., Cara F., Culturra G., Doglioni C., Naso G., Orsini G., Perniola B., Pischutta M., Puglia R., Rotella G.\*, Spina D. & Stecchiotti R.: From top to bottom: characterizing the strategic site of Palazzo Valentini (Rome)

**► 24-18 Booth 86**

Benigni M.S., Catalano C., Giuffrè M.\*, Endreny T. & Rugani B.: The neglected side of post-disaster temporary settlements: how to manage it with NbS for sustainable urban development

**► 24-19 Booth 87**

Calamita G.\*, Stabile T.A., Falabella F., Pepe A., Gallipoli M.R., Bellanova J., Serlenga V., Piscitelli S., Gueguen E. & Perrone A.: Integrating remote sensing and geophysical techniques for assessing landslide hazard in an Italian Apennine town

**► 24-20 Booth 88**

Nisio S., Madonna S.\*, Ruggiero L. & Gentili F.: Natural and anthropogenic sinkhole in Italy: the importance of an interdisciplinary approach

**► 24-21 Booth 89**

Proietti Scopetta A.\* & Piagiamore G.L.: Places reborn. Two cases of regenerated historic villages in Liguria and Umbria (Italy)

**► 24-22 Booth 90**

Gallicchio S., Pepe M.\*, Zucchi M., Brogi A., Del Gaudio V., Wasowski J. & Venisti N.: Geological mapping and structural analyses in seismic microzonation for Jv-based subunit discrimination: preliminary results from Gravina in Puglia (Southern Italy)

**► 24-23 Booth 91**

Lovati S.\*, Massa M., Maraio S., Puglia R., Ferrari E., Rizzo AL., Brunelli G., Varchetta F., Villani F., Figlioli A., Mascandola C. & Luzi L.: Geological and stratigraphic setting of the metropolitan area of Milan (Italy): implications for site-dependent seismic hazard assessment through high-resolution geophysical investigation

**► 24-24 Booth 92**

Zaragoza Alonso A.D.\* & Zambrano M.: Advancing seismic microzonation: integration of deep learning for high-resolution Vs30 mapping in the Central Italy

**► 24-25 Booth 93**

Licata V.\* & Conti R.: A new soil constitutive model for nonlinear 1D seismic site response analyses

**► 24-26 Booth 94**

Acunzo G., Pagliaroli A. & Giallini S.\*: P4Quad a Pre- and Post-Processor for QUAD4M 2D site response analyses

**► 24-27 Booth 95**

Fredella F.\*, Del Gaudio V., Wasowski J., Venisti N. & Capone P.: Modelling site amplification as factor of slope susceptibility to co-seismic failures in hill-top towns

**► 24-28 Booth 96**

Romagnoli G.\*, Muraro C., Niceforo D., Puzzilli L.M. & Ruscito V.: Geological complexity vs. seismic risk reduction strategies: preliminary results from Level III Seismic Microzonation studies of Etnean municipalities (eastern Sicily, Italy)

**■ S25. Landslide monitoring, modelling, and prediction: bridging new tools and data to the 'slope-failure model' perspective****► 25-9 Booth 97**

De Guidi G.\*, Cassaniti C., Carnemolla F., Prisco M., Polvirenti A.D., Polvirenti G., Brightenti F., Giuffrida S. & Fardella A.: Geodetic-topographical monitoring of landslide affecting the urban area of Motta Sant'Anastasia (CT) Sicily

**► 25-10 Booth 98**

Di Muro C.\*, Calcaterra D., Di Martire D. & Guerriero L.: A combination of deep learning and InSAR techniques for landslide hazard assessment

**► 25-11 Booth 99**

Doglioni A.\*, Di Taranto L., Fiorentino A., Guerricchio A. & Simeone V.: Nutcracker-like masonry bridges deformation and failure due to slow gravitational deformation

**► 25-12 Booth 100**

Hameed A.\*, Confuorto P., Parise M., Lollino P., Ishfaq M. & Alias Aamir Soomro M.H.: Landslide susceptibility, vulnerability, and risk assessment based on remote sensing and GIS data models: a case study at the eastern Hindu Kush Mountain ranges, Pakistan

**► 25-13 Booth 101**

Minervino Amadio A., Gioia D., Corrado G.\* & Schiattarella M.: Multi-temporal geomorphological analysis and seismic surveys as tools for the investigation of a complex slow-moving landslide: an example from the southern Apennines

**► 25-14 Booth 102**

Niaz J.\*, Lollino P. & Niaz A.: Integrated geophysical and geotechnical investigations of Upper Sarbala Landslide: a case study of Himalayas Mountain ranges, Pakistan

**► 25-15 Booth 103**

Patera A.\* & Fabbri A.G.: Assessing landslide hazards in the Volcanic Crater of Lake Albano, Rome, Italy: feasibility and challenges

**► 25-16 Booth 104**

Yurdakul E.\*, Arnone E., Nardi F. & Capolongo D.: Assessment of the risk of shallow landslides integrating InSAR and optical data with a distributed eco-hydrological model

**■ S33. Fossil record, paleoenvironment and climate change throughout the Neogene and Quaternary Earth history**

**► 33-17      Booth 105**

Argiridis E.\*, Denniston R.F. & Columbu A.: Trace organic compounds in speleothems as a pioneering approach to high-resolution paleofire reconstruction

**► 33-18      Booth 106**

Baio M., Violanti D., Pezzotta A.\*, Tantardini D., Zerboni A. & Crippa G.: Pliocene-Pleistocene evolution of the upper central Po Plain (Northern Italy)

**► 33-19      Booth 107**

Capotondi L.\*, Correggiari A., Gennari R., Corino L., Maiorano P., Martinelli P., Remia A., Zonno E. & Riminucci R.: Benthic Foraminiferal response to anthropogenic impact in the North Adriatic Sea during the last two centuries

**► 33-20      Booth 108**

Degl'Innocenti N.\*, Niccolini G. & Bertini A.: Terrestrial and marine palynomorphs from Holocene deposits and mosses samples in the Mar Piccolo semi-enclosed marine basin (Taranto, Southern Italy)

**► 33-21      Booth 109**

Isola I.\*, Bini M., Columbu A., Di Vito M.A., Giaccio B., Hu H-M., Martini F., Pasquetti F., Sarti L., Mule F., Mazzoleni A., Shen C.C. & Zanchetta G.: New insights on MIS 9e and MIS 5e sea-level highstands from Infreschi Cave and Cilento Coast (Central Italy)

**► 33-22      Booth 110**

Isola I.\*, De Santis N., Zanchetta G., Columbu A., Regattieri E., Drysdale R. & Hellstrom J.: Last glaciation Dansgaard-Oeschger events in speleothems from Central Italy

**► 33-23      Booth 111**

Logreco A.\*, De Santis V., Ortiz J.E., Palencia Y.S., Mastrototaro F., Chimineti G., Sozio A. & Caldara M.: Survey on *Pinna nobilis* associated benthic biocoenosis with a paleoenvironmental approach in terraced marine deposits of the Last Interglacial period (Taranto, Italy)

**► 33-24      Booth 112**

Marino M.\*, Maiorano P., Girone A., Gallicchio S., Bassinot F., Nomade N., Simon Q., Bertini A., Herbert T., Petrosino P., Addante M., La Perna R., Trotta S. & Ciaranfi N.: Climatostratigraphy through a standard auxiliary boundary stratotype for the Middle Pleistocene subseries of the Quaternary System (Montalbano Jonico, southern Italy)

**► 33-25      Booth 113**

Milaneschi L.\*, Cornamusini G., Maffei J., Martini I., Cifelli F., Corti V., Mattei M., Zurli L. & Foresi L.M.: Portable X-ray fluorescence and Milankovitch cycles in coeval marine and continental Upper Pliocene deposits from the Valdelsa Neogene Basin (Southern Tuscany, Italy)

**► 33-26      Booth 114**

Parisi R.\*, Aiello G., Barra D., Vitolo J.P. & Mazzini I.: Messinian, Pliocene and Pleistocene ostracod events in the Atlantic-Mediterranean area

**► 33-27      Booth 115**

Sari S.\*, Cipollari P., Cosentino D., Gliozi E., Lirer F., Cornacchia I., Marchegiano M., Öğretmen N., Kanbur S., Mattei M. & Cifelli F.: The Mid-Pleistocene transition in the Eastern Mediterranean: a multi-proxy approach to reconstruct its impact at the southern margin of the Central Anatolian Plateau (CAP)

**► 33-28      Booth 116**

Stefanelli D.\*, Mecozi B., Marino M. & Sardella R.: Paleoenvironmental remarks on the early middle Pleistocene site of Contrada Monticelli (Apulia, Southern Italy)

**► 33-29      Booth 117**

Zanchi A.\*, Ravazzi C., Chiesa S., Crosta G.B., Fascetta S. & Fusi N.: The deformational mega-structures of the Pianico-Sellere Basin (Iseo Lake, Lombardy) which evidence for their origin?

**■ S37. Carbonate platform systems: records of palaeoenvironmental change**

**► 37-9      Booth 118**

Artegiani F.\*, Cipollari P., Cosentino D., Rabiee A., Rossetti F., Cipriani A. & Fabbi S.: The record of the Early Cretaceous Oceanic Anoxic Events (OAE) in the Apennine carbonate platform: insight from the geological mapping of the Sheet 390 – Frosinone (CARG project)

**► 37-10      Booth 119**

Coccia N.\*, Della Porta G., Berra F. & Marini M.: The drowning of the Trento Platform: facies characterization and depositional changes across the San Vigilio Oolite - Rosso Ammonitico Veronese transition (Lower-Middle Jurassic, Venetian Southern Alps, N Italy)

**► 37-11      Booth 120**

Della Porta G.\*, Wright V.P., Samankassou E., Preto N. & Morsilli M.: Carbonate platforms: what can still be learned from outcrops?

**► 37-12      Booth 121**

Fracciolla T.\*, Lisco S., Ravisato M., Pierri C., de Luca A., D'Abbicco V., Lazio T., Acquafrredda P. & Moretti M.: An unusual rhodolith bed as a record of human activities in Mar Piccolo (Taranto)

**► 37-13      Booth 122**

Gianolla P.\*, Caggiati M., Alverà G., Dal Corso J., Riva A. & Aldrigatti E.: The Cassian Dolomite demise: basinal insights on the carbonate platforms' agony (Dolomites, Late Triassic)

**► 37-14      Booth 123**

Lippolis E.\*, Spalluto L. & Tropeano M.: Facies analysis of a Cretaceous peritidal carbonate succession cropping out at Cava Porcili (Minervino Murge, southern Italy)

**► 37-15      Booth 124**

Peng S.Y.\*, Wu K., Shi Z.Q., Qiao D. & Wang M.L.: Marlstone pseudo-desiccation cracks: an enigmatic sedimentary structure in the Early Triassic Feixianguan Formation in South China

**► 37-16      Booth 125**

Preto N.\*, Caggiati M., Della Porta G., Franceschi M. & Morsilli M.: The record of paleoenvironmental change in Mesozoic carbonate platforms of Western Tethys: some half-baked ideas

**► 37-17      Booth 126**

Španiček J.\*, Korbar T., Fuček L. & Steuber T.: Diversity of Early Cretaceous carbonate facies around the OAE1a on Adriatic carbonate platform

**> 37-18      Booth 127**

Randazzo V., Berra F., Todaro S. & Di Stefano P.: Diagenetic and tectonic history of the Upper Triassic, Dachstein-type margin of the Panormide Carbonate Platform (Sicily, Southern Italy)

**> 37-19      Booth 128**

Todaro S.\*, Petrella F., Rigo M. & Sulli A.: The recovery of carbonate platforms after the End Triassic Mass Extinction: new data of a Lower Jurassic succession from southwestern Sicily

**> 37-20      Booth 129**

Vidi C.\*, Roghi G., Preto N. & Breda A.: Response of a carbonate platform to the Cenomanian-Turonian Boundary Event: the Akrabou Formation of Southern Morocco

**■ S38. Frontiers in the regional geology of the Apennines: a multidisciplinary perspective****> 38-17      Booth 130**

Abbassi A.\*, Cipollari P. & Cosentino D.: A new proposal for the stratigraphy of the "Tolfa unit" (CARG project, 364-Bracciano)

**> 38-18      Booth 131**

Ambrosino M.\*, Palarea-Albaladejo J., Albanese S. & Cicchella D.: The geochemical domains map of the Volturno river basin (South Italy): usefulness and comparison with the geological map

**> 38-19      Booth 132**

Amore F.O.\*, Argenio C., Di Vito M.A., Fistola R., La Rocca R.A., Messina M. Y., Panarello A., Rastelli A. & Zingariello I.: The paleontological heritage and innovative communication modalities for the territorial development

**> 38-20      Booth 133**

Bellotti P.\*, Barrera Acosta D., Stendardi F., Pezzoli S., Toscani G. & Di Giulio A.: Linking the exposed belt to the buried one: preliminary data and results in the framework of the project CARG 160 Pavia

**> 38-21      Booth 134**

Brandano M.\*, Cornacchia I., Catanzariti R., Mancini A. & Marianelli D.: Bioclastic intercalations in the Tortonian hemipelagic marls of the Latium-Abruzzi carbonate platform domain (Central Apennines): the link between oceanography and climate

**> 38-22      Booth 135**

Capezzuoli E.\*, Spina A., Molli G., Brogi A., Liotta D., Zucchi M. & Degl'Innocenti N.: Chronostratigraphy of Palaeozoic formations by means of palynological studies: the case of the Filladi e Quarziti di Buti Formation (Northwestern Tuscany)

**> 38-23      Booth 136**

Chizzini N.\*, Artoni A., Torelli L., Quadir A., Polonia A. & Gasperini L.: Tectono-stratigraphic evolution of the Apulia plate and the role of the advancing Southern Apennine/Calabrian Arc wedge on its present-day structural and stratigraphic architecture

**> 38-24      Booth 137**

Ciarcia S.\* & Vitale S.: Orogenic evolution of the northern Calabria-southern Apennines System: stratigraphy

**> 38-25      Booth 138**

Consorti L.\*, Cardello G.L., D'Onofrio R. & Garzarella A.: New biostratigraphic data on the hemipelagic succession at the western escarpment of the Apennine Carbonate Platform: insights from the Volsci Range

**> 38-26      Booth 139**

Fabozzi C.\*: pH soil measurements of the Sant'Antuono CO<sub>2</sub> gas vent in the Sannio area (southern Apennines, Italy): insights on the active Southern Matese Fault system

**> 38-27      Booth 140**

Fabozzi C.\*, Albanese S., Ambrosino M., Cicchella D., De Paola C., Di Giuseppe M.G., Isaia R., Natale J., Pagliara F., Prinzi E.P., Troiano A., Ciarcia S. & Vitale S.: New data about Irpinian mud volcanoes: a multidisciplinary approach to understanding the relationship between fluid leakage and faults

**> 38-28      Booth 141**

Iorio M., Meo A.\*, Aiello G. & Senatore M.R.: Seismo-stratigraphy architecture of the transgressive and highstand systems tracts during the Last Glacial-Holocene and the NYT reflector in the Gulf of Gaeta ((Eastern Tyrrhenian margin, Italy)

**> 38-29      Booth 142**

Massa B., Famiglietti N.A.\*, Memmolo A. & Miele P.: Use of low-frequency GPR to refine stratigraphy and tectonics in the Ofanto River Valley (Southern Apennines)

**> 38-30      Booth 143**

Pedini M.\*, Cella F., Mazzoli S., Pierantoni P.P. & Di Celma C.: 3D Structural model of the Messinian Umbria-Marche Foredeep basin: insights from the Ascoli Piceno sector, southern Marche (Italy)

**> 38-31      Booth 144**

Pizzati V.\* & Tinterri R.: Turbidite lobe deposits in a tectonically confined foredeep basin (Firenzuola turbidite system, Marnoso-arenacea Formation, Northern Apennines, Italy)

**> 38-32      Booth 145**

Qadir A.\*, Maiorana M., Chizzini N., Artoni A., Torelli L., Le Breton E. & Sulli A.: New insights into the structural setting of North-Western offshore Sicily, Central Mediterranean

**> 38-33      Booth 146**

Santoro V.P.\*, Brozzetti F. & Cirillo D.: Tectono-Stratigraphic setting of the Abruzzo Sub-Apennines along the Colledara-Montefino transect (Abruzzo-Italy)

**> 38-34      Booth 147**

Spina A., Brogi A.\*, Capezzuoli E., Caggianelli A., Zucchi M., Langone A., Tursi F., Chinedu I. & Liotta D.: The Palaeozoic succession of the Giglio Island (Tuscan Archipelago)

**> 38-35      Booth 148**

Vitale S.\* & Ciarcia S.: Orogenic evolution of the northern Calabria-southern Apennines System: Tectonics

**> 38-36      Booth 149**

Vitale S.\*, Di Giuseppe M.G., Ciarcia S., Albanese S., Isaia R., Cicchella D., Troiano A., Iezzi F., Natale J., Fabozzi C., Ambrosino M. & De Paola C.: Multidisciplinary study of non-volcanic CO<sub>2</sub> degassing vents in Oliveto Citra area (southern Apennines)

**■ S44. New concepts and applications in exploration, sustainable exploitation, storage and modelling of georesources**

**► 44-17      Booth 150**

Chiozzi P., Bonorino L. & Verdoya M.\*: Lithosphere heat flow and subsidence of the Tyrrhenian back-arc basin

**► 44-18      Booth 151**

De Luca M.\*, Mackay E.J., Good T.R., Scisciani V., MacBeth C. & Patruno S.: Geological modelling and CO<sub>2</sub> flow simulation: an integrated approach for basin scale storage in a saline aquifer

**► 44-19      Booth 152**

Lorenzet R., Corradetti A., Del Ben A., Franceschi M. & Bonini L.\*: A potential site to store Hydrogen in the subsurface in Northeast Italy

**► 44-20      Booth 153**

Marchesini B.\*, Rossetti F., Ruggieri G., Cavallo A., Moretto V., Castorina F., Trippetta F., Aldega L., Novella D., Caracausi A., Billi A. & Carminati E.: Alteration-controlled repeated breakage of hydrothermally altered marly-limestones seals, Fenice-Capanne mining area (Tuscany, Italy)

**► 44-21      Booth 154**

Anderlini L.\*, Anselmi M., Braun T., Errico M., Garcia A., Morelli A., Pezzo G., Saccorotti G., Serpelloni E. & Zaccarelli L.: What we learned from geodetic monitoring of subsurface industrial activities

**► 44-22      Booth 155**

Ruospo D.\*, Brogi A., Liotta D., Lucci F. & Zucchi M.: Syn-tectonic emplacement of late-magmatic granitic dyke swarms in the Capo Focardo area (Exhumed geothermal system of eastern Elba island, Italy)

**► 44-23      Booth 156**

Scrocca D.\* & Alimonti C.: Assessment of the geothermal conversion potential of depleted hydrocarbon wells in Italy

**► 44-24      Booth 157**

Semprebello A.\*, Lazzaro G., Caruso C., Scirè Scappuzzo S., Morici S., Gattuso A. & Longo M.: Inverse modelling for estimating gas flow emission rate on stationary vents

**► 44-25      Booth 158**

Tommassone M.A.\*, Di Domenico G., Bortolotti V., Cruciani G., Chiarella D., Nagmutdinova A. & Frijia G.: Characterization of dual porosity in bioturbated carbonates: A case study of Cenomanian-Turonian platform carbonates from the Southern Apennines (Italy)

**► 44-26      Booth 159**

Urso S.\* & Viccaro M.: New paradigms for an energetic independence and sustainable development of minor volcanic islands in Sicily: opportunities from the geothermal resources

**► 44-27      Booth 160**

Vespasiano G.\*, Floridia G., De Rosa R., Viccaro M., Cacace M., Bloise A., Fuoco I., Muto F., Guido A., Cipriani M., Maruca G. & Apollaro C.: 3D lithospheric thermal model of the Calabria region (Southern Italy): a supporting tool for new exploration campaigns for geothermal resources

**► 44-28      Booth 161**

Vidal-Reyes M.\*, Tesauro M., Amadori C., Nader F., Marini M., Reguzzi S. & Maino M.: Geothermal potential of the Tertiary Piedmont Basin: structural and lithological controls

**► 44-29      Booth 162**

Yakiski O.\*, Geloni C., Tamburelli S., Ruggieri G., Orlando A., Borrini D., Gherardi F. & Toscani G.: Laboratory experiments and geochemical models for CO<sub>2</sub> mineralization in basalts

**■ S45. Recent advances in karst research, with particular focus on underground waters**

**► 45-9      Booth 163**

D'Ettorre U.S.\*, Liso I.S. & Parise M.: A global overview of desertification in karstlands

**► 45-10      Booth 164**

Fregola R.A.\*, Liso I.S., Parise M., Lacalamita M., Cardellini C., Tieri M., Caliro S., Palmisano G., Gambini R. & Chiodini G.: Mineralization of the Kozan-8 thermal well (Kruja Province, central Albania): a mineralogical and water geochemical study

**► 45-11      Booth 165**

Leone G.\*, Esposito L., Ginolfi M. & Fiorillo F.: Terzaghi's effective stress principle and hydrological deformation of karst aquifers detected by GNSS and inSAR measurements

**► 45-12      Booth 166**

Leone G., Jourde H., Ginolfi M.\*, Esposito L., Ventafridda G. & Fiorillo F.: Short- and long-term changes in the discharge of the Caposele karst spring (Southern Apennines, Italy): statistics and modeling to understand their causes

**► 45-13      Booth 167**

Leone G., Liso I.S., Michele G.\*, Esposito L., Parise M. & Fiorillo F.: Karst hydrology and geomorphology of the Matese and Alburni Massifs, (Southern Italy), focusing on dolines and endorheic areas

**► 45-14      Booth 168**

Liso I.S.\*, D'Ettorre U., Benedetto L., Ladisa V., Lorusso F. & Parise M.: Open window on water table: examples from Apulia Region

**► 45-15      Booth 169**

Lorusso F., Liso I.S., Mastronuzzi G. & Parise M.\*: A flank margin cave along the Adriatic side of Apulia, Southern Italy

**► 45-16      Booth 170**

Mammoliti E.\*, Fronzi D., Rapazzetti M., Domizi J. & Tazioli A.: Integrating fracture analysis and X-ray tomography with permeability tests for rock fracture hydraulic conductivity assessment at laboratory-scale

**► 45-17      Booth 171**

Mostafa M.F.\*, D'Ettorre U.S., Liso I.S. & Parise M.: On the hydraulic role of dolines

**► 45-18      Booth 172**

Rinaldi N., Marenghi L., Mittempergher S., Brozzo G., Longoni L., Papini M., Sabattini M., Mainini A. & Ronchetti F.\*: New groundwater chemistry and isotope evidence on the La Spezia karst aquifer (western promontory, Gulf of La Spezia)

**■ S50. Unveiling earthquake mechanics, from field to laboratory based approach**

**► 50-8      Booth 173**

Abdallah IB.\* Dastoli S., Corradetti A., Taddeo C., Mercuri M., Curzi M. & Agosta F.: Fault roughness associated to fault growth mechanisms along high-angle normal faults, first results from the field-based structural analysis of the Monte Capo di Serre Fault, Abruzzo, Italy

**► 50-9      Booth 174**

Aldighetti S.\* Di Toro G. & Pennacchioni G.: Asymmetric microfracture pattern associated to seismic rupture (Gole Larghe Fault, Italy)

**► 50-10     Booth 175**

Manna L., Maino M.\* Dabrowski M. & Casini L.: A study on how the damage geometry governs the stress distribution within a fault zone

**► 50-11     Booth 176**

Masoch S., Fondriest M., Preto N., Prando F., Di Toro G., Pennacchioni G. & Molli G.: Deformation processes and origin of fluids during Miocene exhumation of Alpine Corsica

**► 50-12     Booth 177**

Novellino R.\* Prosser G., Lettino A., Costa S. & Agosta F.: From fault weakening to re-strengthening, new insights on fluidization in carbonate-hosted normal fault

**► 50-13     Booth 178**

Pizzati M., Aretusini S., Spagnuolo E., Aldega L., Torabi A., Storti F. & Balsamo F.: Shallow earthquakes affecting high-porosity rocks in forearc basin settings: a combined meso-microstructural, mineralogical, and experimental approach

**► 50-14     Booth 179**

Salvadori L.\* Tesei T. & Di Toro G.: Frictional strength, healing behaviour and deformation mechanism of low-grade serpentinites at hydrothermal conditions

**► 50-15     Booth 180**

Sciarra A.\* Di Toro G., Cantucci B., Gomila R., Grassa F., Piochi M., Brusca L., Bellomo S. & Ricci T.: The study of the seismic cycle in hydrothermal conditions through experiments, analysis and modeling in the SCHOTTA project

**► 50-16     Booth 181**

Toffoli G.\* Pennacchioni G., Scambelluri M. & Morales L.F.G.: Microstructural record of seismic brittle failure at intermediate-depth conditions

**■ S51. Unveiling the long-lasting evolution of active margins from field to micro-scale**

**► 51-16     Booth 182**

Cruciani G.\* Fancello D., Ferrari M., Bragagni A., Tommasini S. & Franceschelli M.: Petrological constraints and geodynamic significance of a Triassic lamprophyre dyke crosscutting the Palaeozoic basement of NE Sardinia, Italy

**► 51-17     Booth 183**

Carosi R.\* Simonetti M., Montomoli C., Iaccarino S. & Petroccia A.: The importance of regional-scale shear zones in paleogeographic reconstructions: the case study of the Variscan belt in the Mediterranean area

**► 51-18      Booth 184**

Caso F., Filippi M., Piloni C.B., Farina F., Roda M., Piazolo S. & Zucali M.\*: A journey into the Permian lower continental crust: a multidisciplinary approach to reconstruct migmatization in the Valpelline Series (Dent-Blanche Nappe, Western Alps)

**► 51-19      Booth 185**

Cicala M.\* De Giosa F., Lisco S., Moretti M. & Festa V.: Evolution of active margins? A link with the tectonic reactivation in foreland area

**► 51-20      Booth 186**

Corvò S., Montemagni C., Zanchetta S.\* & Langone A.: Reconciling the onset of Tethyan rifting in the Ivrea Verbano Zone (European Southern Alps)

**► 51-21      Booth 187**

Montemagni C.\* Rocca M., Zanchi A., Favaro S., Viola G., Aldega L. & Zanchetta S.: Long-lived activity of a regional thrust-system in a pre-collisional setting: the Orobic Thrust (Southern Alps, N Italy)

**► 51-22      Booth 188**

Petroccia A.\* Giuntoli F., Viola G. & Callegari I.: Heterogeneous rock response to deformation in subduction-related continental shear zones: a possible record of episodic tremors and slow slip events from the Saih Hatah window, Oman

**► 51-23      Booth 189**

Simonetti M.\* Langone A., Bonazzi M., Corvò S. & Maino M.: Evolution of a rift-related mid-crustal shear zone: the case study of the Forno-Rosarolo shear zone (Ivrea-Verbano Zone, Southern Alps)



# GE05

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## ■ S3. ANTARCTICA AND THE ARCTIC: UNVEILING THE GEOLOGICAL PAST AND FUTURE EVOLUTION OF POLAR REGIONS

Conveners and Chairpersons: Luca Zurli (Università di Siena), Laura De Santis (Istituto Nazionale di Oceanografia e Geofisica Sperimentale), Fabio Florindo (INGV), Caterina Morigi (Università di Pisa), Valerio Olivetti (Università di Padova)

Thursday 5<sup>th</sup> September 2024 [08.30-10.30]

### Aula G

#### ► 3-1 08.30 - 09.00

[KEYNOTE] Lucchi R.G.\* St. John K., Ronge T. & IODP Exp-403 Science Party: IODP Expedition 403 Eastern Fram Strait Paleo-Archive: preliminary results from the last expedition of the International Ocean Discovery Program

#### ► 3-2 09.00 - 09.15

Caridi F.\*, Sabbatini A., Howa H., Mouret A., Nardelli M.P. & Pusceddu A.: Soft- and hard-shelled foraminiferal assemblages to assess the vulnerability of Foraminifera to climate change in Kongsfjorden, Svalbard

#### ► 3-3 09.15 - 09.30

Olivetti O.\*, Cattò S. & Zattin M.: The topography of the high latitude mountain chain and the enigma of high-standing plateau

#### ► 3-4 09.30 - 09.45

(Invited) Ferraccioli F.\* Ebbing J., Wiens D., Eagles G., Gohl K., Forsberg R., Armadillo E., Young D., Blankenship D.D., Aitken A.R.A., Jordan T.J., Mather B., Ford J., Verdoya M. & Jacobs J.: 4D heterogeneity in geological boundary conditions beneath the West and East Antarctic ice sheets: what have we learnt and what do we need to know?

#### ► 3-5 09.45 - 10.00

Tomassini A.\*, Rocchi I., Masotta M., Petrelli M., Ágreda-López M., Ubide T. & Rocchi S.: Ice load modulation of plumbing system dynamics: insights from intracrystalline texture and chemistry at The Pleiades Volcanic Field, Antarctica

#### ► 3-6 10.00 - 10.15

Corti V.\*, Spina A. & Cornamusini G.: Stratigraphic constraints on the Beacon Succession of the Transantarctic Mountains through palynological data

#### ► 3-7 10.15 - 10.30

Fioraso M.\*, Olivetti V., Balsamo F., Rossetti F., Zattin M. & Cornamusini G.: Oligocene-Miocene structurally-controlled hydrothermal activity along the Transantarctic Mountains: evidence from apatite thermochronology

## ■ S5. GEOSCIENCES FOR CULTURAL HERITAGES

Conveners and Chairpersons: Mauro Francesco La Russa (Università della Calabria), Simona Raneri (Università di Firenze), Michele Secco (Università Padova), Maria Verde (Università di Napoli)

Thursday 5<sup>th</sup> September 2024 [08.30-10.30]

### Aula A

#### ► 5-1 08.30 - 09.00

[KEYNOTE] Torok A.\*: Air pollution related deterioration of limestone heritage: an overview

#### ► 5-2 09.00 - 09.15

Rovella N.\*, Cirone M., Belfiore C.M., Török Á., Figoli A. & La Russa M.F.: Inside the stone: new elements for targeted conservation of Sicilian Baroque Monuments

#### ► 5-3 09.15 - 09.30

Comite V.\*, Formenti M., Bergomi A., Lombardi C.A., Borelli M., Morale D., Ugolini S., Fermo P., Cavaterra C., Castellano C. & Della Pina C.: Exploring the role of heavy metals in sulphation processes and black crust formation on outdoor exposed monuments

#### ► 5-4 09.30 - 09.45

Calia A., Melica D., Pellegrino E. & Quarta G.\*: Surface degradation and conservation strategies in the marine environment: the case of the church of S. Salvatore, in Monopoli (Bari)

#### ► 5-5 09.45 - 10.00

Luconi I.\*, Ercoli R. & Paris E.: Artificial weathering and surficial consolidation techniques applied to the 'Peperino' from the Alban Hills volcano (Latium, Italy)

#### ► 5-6 10.00 - 10.15

Macchia A.\*, Diliberto Cascio C., Zicarelli M.A., Alisi C., Catania V., Schillaci D., La Russa M.F. & Ruffolo S.A.: Evaluating biosurfactants as eco-friendly biocides (TEch4YOU Project)

#### ► 5-7 10.15 - 10.30

Mastrorilli M.\*, De Felice G., Turchiano M. & Eramo G.: The POW camp 65 (Altamura, Southern Italy) as a case study for archeometry and contemporary archaeology

**S18. GEOSCIENCES FOR THE CHARACTERIZATION, EXPLORATION AND EXPLOITATION OF PRIMARY AND SECONDARY MINERAL RESOURCES**

Conveners and Chairpersons: Simone Vezzoni (CNR), Matteo Deidda (Università di Cagliari), Rosa Anna Fregola (Università di Bari), Giovanni Grieco (Università di Milano Statale), Nicola Mondillo (Università di Napoli Federico II), Valentina Rimondi (Università di Firenze)

Thursday 5<sup>th</sup> September 2024 [08.30-10.30]

Aula H

**► 18-1 08.30 - 09.00**

[KEYNOTE] Chiaradia M.\*: Distinct magma evolution processes control the formation, endowments and metal ratios of porphyry Cu-Au deposits in thin and thick arcs

**► 18-16 09.00 - 09.15**

Filimon D.I.\*, Boschi C., Fulignati P., Gioncada A. & Rielli A.: The carbonate-hosted Sb(±Au) mineralization of Southern Tuscany: insights from stibnite and pyrite trace element composition and stable isotope geochemistry

**► 18-3 09.15 - 09.30**

De Leo A.\*, Pedrosa-Soares A.C., Lana C. & Farina F.: On the origin of spodumene-rich pegmatites in the Araçuaí Pegmatite District, Minas Gerais, Brazil: insights from mica and apatite mineral chemistry

**► 18-4 09.30 - 09.45**

Corrado F.\*, Sorrentino A., Chirico R., Casarotto B., Massironi M. & Mondillo N.: Hyperspectral analysis of vanadium-bearing ore deposits in the Mibladen district (Morocco) and the Otavi Mountainland (Namibia)

**► 18-5 09.45 - 10.00**

Sorrentino A.\*, Asadzadeh S., Gleeson S., Chabrilat S., Boni M. & Mondillo N.: Alteration mineral mapping of Zn mineralization using EnMAP hyperspectral satellite data: a comparative study of the Skorpion-Rosh Pinah (Namibia) and Beltana (Australia) deposits

**► 18-6 10.00 - 10.15**

Natali F.\*, Quaranta S., Agostini M., Latini A., Miranda Figueira B.A. & Valdrè G.: "Low cost/low end" birnessite-like MnO<sub>2</sub> recovered from Amazon mining tailings as conversion anode for Li-batteries

**► 18-7 10.15 - 10.30**

Piepoli L.\*, Della Porta G., Grieco G., Sinojmeri A. & Fociro A.: Multi analytical approach to the study of Albanian phosphorite deposits in Jurassic and Cretaceous marine carbonates successions

**S26. SINKHOLES VS. LAND SUBSIDENCE: ASSESSMENT OF THE GEOLOGICAL HAZARDS AND IMPACTS ON ENVIRONMENT AND SOCIETY**

Conveners and Chairpersons: Mario Parise (Università Aldo Moro, Bari), Daniela Ruberti (Università L. Vanvitelli, Aversa), Luigi Bruno (Università di Modena), Luca Zini (Università di Trieste), Diego Di Martire (Università Federico II, Napoli), Isabella Serena Liso (Università Aldo Moro, Bari)

Thursday 5<sup>th</sup> September 2024 [08.30-10.30]

Aula M

**► 26-1 08.30 - 09.00**

(Invited) Teatini P.\*, Baldan S., Cosma M., Da Lio C., Donnici S., Ferronato M., Mazzia A., Minderhoud P., Tosi L. & Zoccarato C.: Autocompaction as a main driver of coastal depositional environments

**► 26-2 09.00 - 09.15**

Ruberti D.\*, Buffardi C., Da Lio C., Donnici S. & Tosi L.: Land subsidence in the Italian coastal plains: an overview

**► 26-3 09.15 - 09.30**

Demurtas L.\*, Bruno L. & Amorosi A.: Subsidence in the Po Plain (Northern Italy) during the last 500 ky

**► 26-4 09.30 - 09.45**

Coda S.\*, Davino S., Abagnale G., Di Martire D. & Allocca V.: Ground deformation induced by piezometric levels fluctuations in the plain of the Sarno River (southern Italy)

**► 26-5 09.45 - 10.00**

Esposito L., Fiorillo F., Leone G., Caputo M.C.\*, De Carlo L., Masciale R., Passarella G., Turturro A.C., Andriani G.F., De Santis V., Lollino P. & Parise M.: Sinkhole development along the Apulian coastlines, within the framework of the project Fu.Co.Ka. (Future scenarios in Coastal Karst)

**► 26-6 10.00 - 10.15**

Ruberti D.\*, Fabozzi M.A., Liso I.S., Lollino P., Vennari C., Vigliotti M., Capasso G., Corbelli V. & Parise M.: Artificial cavities and sinkholes in the hydrographic district of the Southern Apennines of Italy: findings, architectural variability and risk assessment

**► 26-7 10.15 - 10.30**

Guarino P.M.\*, Belvederi G., Licata V., Perrotti M. & Roma M.: GNCA database for stability assessment of artificial cavities

## ■ S31. THE ART OF GEOSCIENCES COMMUNICATION

Conveners and Chairpersons: Valeria Giampaolo (CNR), Ortensia Amoroso (Università degli Studi di Salerno), Rosa Coluzzi (CNR), Giacomo Eramo (Università di Bari Aldo Moro), Marco Romano (Sapienza, Università di Roma), Anna Giamborino (APPI, Associazione Paleontologica e Paleoartistica Italiana)

Thursday 5<sup>th</sup> September 2024 [08.30-10.30]

### Aula N

#### ► 31-1 08.30 - 09.00

[KEYNOTE] Bonadonna D.\*: Depicting the unknown

#### ► 31-2 09.00 - 09.15

Bindellini G.\*, Manucci F. & Romano M.: From bones to bulk: a 3D volumetric approach to estimating theropod dinosaur body mass

#### ► 31-3 09.15 - 09.30

Argentieri A.\* & Tortonesi E.: The world in 2D: Alfonso Di Pasquale, between paintings and geological maps

#### ► 31-4 09.30 - 09.45

Maganuco S.\*, Ambrogi L., Capuccella E., Figus C. & Gambini I.: Echoes of extinction: how an exhibition can unveil the lost world of dinosaurs through science and art

#### ► 31-5 09.45 - 10.00

Giamborino A.\*, Petti F.M., Innamorati G. & Zuccari A.: The Time Machine Project – a travel into Deep Time

#### ► 31-6 10.00 - 10.15

Mazzini I.\* & CNR ECORD-IODP and ICDP commission: How do comics help to learn about marine geology?

#### ► 31-7 10.15 - 10.30

De Caterini G.\*, Argentieri A., Delfini C., Galetto G. & Monaco V.: "The Fountain of the Four Rivers" (Rome, Piazza Navona) as a representation of the sense of wonder in Baroque art and science

## ■ S34. A PETROLOGIC JOURNEY THROUGH THE LITHOSPHERE

Conveners and Chairpersons: Roberto Braga (Università di Bologna), Micol Bussolei (Università di Milano-Bicocca), Federico Casetta (Università di Vienna), Giulia Marras (Università di Roma La Sapienza), Alessandra Montanini (Università di Parma), Arianna Secchiarì (Università di Milano)

Thursday 5<sup>th</sup> September 2024 [08.30-10.30]

### Aula E

#### ► 34-1 08.30 - 08.45

(Invited) Guarino V.\*, Bonazzi M., Nimis P., Guitarrari Azzone R., Cariddi B. & Zanetti A.: Subcontinental lithospheric mantle stratigraphy in the SW margin of São Francisco Craton: insights from xenocrysts and xenoliths trapped in the Três Ranchos kimberlite (APIP, Brazil)

#### ► 34-2 08.45 - 09.00

Malaspina N.\*, Langenhorst F., Pollok K., Cerantola V., Murri M., Longa C., Bersani D. & Montanini A.: The redox state of heterogeneous mantle: clues from C-S-bearing clinopyroxenites

#### ► 34-3 09.00 - 09.15

(Invited) Ziberna L.\*, Beltrame M., De Min A., McCammon C., Masotta M., Del Rio M., Narduzzi F., Černok A., Terranova K. & Venier M.: The continental Moho from a geobarometric perspective

#### ► 34-4 09.15 - 09.30

Del Rio M.\*, Corradetti A., Černok A., Narduzzi F., Venier M. & Ziberna L.: Petrographic and structural study of a lower crustal mafic-ultramafic sequence from the Sesia Valley (Ivrea-Verbano zone, Italy)

#### ► 34-5 09.30 - 09.45

Bonadiman C.\*, Bianchini G., Braga R., Tagliacollo L. & Tassinari R.: Geochemical and petrological study of eastern limb of Rustenburg Layered Suite (Bushveld mafic complex)

#### ► 34-6 09.45 - 10.00

Innocenzi F., Martino L., Ronca S., Agostini S. & Lustrino M.\*: Carbonatitic and related alkaline to ultralkaline melts in the Quaternary Eifel Volcanic Province, Germany

#### ► 34-7 10.00 - 10.15

Poli S.\* & Melluso L.: The origin of melilitites: an experimental study

#### ► 34-8 10.15 - 10.30

Tumiati S.\*, Faucher G., Monzillo A., Ferrari E., Toffolo L., Erba E. & Poli S.: Investigating isotopic signatures of CO<sub>2</sub> produced by coccolithophore algae in subduction zones: Experimental insights and modeling approach

## ■ S35. NEW FRONTIERS OF PLANETARY GEOLOGY

Conveners and Chairpersons: Fulvio Franchi (Università di Bari), Giovanna Agrosi (Università di Bari), Barbara Cavalazzi (Università di Bologna), Lucia Marinangeli (Università di Chieti-Pescara), Giovanni Pratesi (Università di Firenze)

Thursday 5<sup>th</sup> September 2024 [08.30-10.30]

### Aula D

#### ► 35-1 08.30 - 09.00

[KEYNOTE] Bindi L.\*: Are there more out there? The possible prevalence of quasicrystals in the universe

#### ► 35-2 09.00 - 09.15

Shehaj X., Ammannito E. & Pratesi G.: "Chirfa" Meteorite: The Largest Specimen From Mars

#### ► 35-3 09.15 - 09.30

Agrosi G.\*, Manzari P., Mele D., Tempesta T., Rizzo F., Catelani T. & Bindi L.: A second AlCu-bearing micrometeorite from Monte Gariglione (Italy): Insights on the origin and growth conditions

#### ► 35-4 09.30 - 09.45

Agrosi G., Mele D. & Manzari P.\*: A preliminary non-destructive characterization of Tarda meteorite

#### ► 35-5 09.45 - 10.00

Landi A.I.\*, Carli C., Capaccioni F. & Pratesi G.: Highly reduced meteorites: a comparison with Mercury's surface through minero-petrological and spectroscopic investigation

#### ► 35-6 10.00 - 10.15

Pratesi G.\*: Mankind cannot stay in the cradle forever. The Space It Up project

#### ► 35-7 10.15 - 10.30

Pisello A.\*, Fastelli M., Baroni M., Schmitt B., Beck P., Zucchini A., Petrelli M., Comodi P. & Perugini D.: Reflectance spectra of synthetic Nakhritic rocks as lab-made analogues for Martian terrains: influence of mineralogy, glass content and acquisition geometry

## ■ S39. OPEN SESSION ON STRATIGRAPHY AND SEDIMENTOLOGY

Conveners and Chairpersons: Cristina Muraro (ISPRA), Luisa Sabato (Università di Bari), Luca Capraro (Università di Padova), Claudio Pellegrini (ISMAR-CNR), Luigi Spalluto (Università di Bari), Piero Gianolla (Università di Ferrara)

Thursday 5<sup>th</sup> September 2024 [08.30-10.30]

### Aula C

#### ► 39-1 08.30 - 09.00

[KEYNOTE] Di Stefano A.\*, Foresi L.M., Lirer F., Barbagallo V., Catania G., Cacho Lascor I., D'Andrea N.M., Cornacchia I., Sagnotti L., Raffi I., Turco E. & Hilgen F.J.: A potential Mediterranean reference section for the GCSP of the Burdigalian Stage: St. Thomas section (Delimara Peninsula, Malta Island)

#### ► 39-2 09.00 - 09.15

Zanola E.\*, Bonomo S., Ferretti P., Fornaciari E., Incarbona A., Rodrigues T. & Capraro L.: High-resolution multi proxy records across the Plio-Pleistocene boundary: a central Mediterranean perspective

#### ► 39-3 09.15 - 09.30

Sarti G.\*, Capitani M., Cascella A., Collareta A., Da Prato S., Nocentini M., Pappalardo M., Ragaini L., Baneschi I., Casati S., Bertoni D., Bosio G., Martella A., Merella M. & Sacchelli T.: Multi-proxy Investigation of Pliocene transgressive-regressive high-frequency cycles in Geological Sheet 274 Empoli (Tuscany, Italy): insights from the CARG Project

#### ► 39-4 09.30 - 09.45

Caggiati M.\*, Gianolla P., Riva A., Alverà G. & Aldighetti E.: The stratigraphic signature of the Carnian Pluvial Episode in the northern Greater Adria

#### ► 39-5 09.45 - 10.00

Spina A.\*, Rettori G., Cirilli S., Mansour G. & Rettori R.: How did the plant ecosystem adapt to climatic variations (shifts) during the middle to the late Permian? A case study from Northern Gondwana

#### ► 39-6 10.00 - 10.15

Mancini A.\*, Brandano M. & Ferrández-Cañadell C.: Coralgal buildup in a mixed carbonate-siliciclastic succession of the Upper Eocene San Martí Xic Formation (Orís, Vic, SE Ebro basin, Spain)

#### ► 39-7 10.15 - 10.30

Abbassi A.\*, Cipollari P., Zaghloul M.N. & Cosentino D.: The mesorif unconformity in the external rif (Morocco): new insights from stratigraphical and biostratigraphical constraints

## ■ S49. MULTIDISCIPLINARY APPROACHES TO THE GEOMETRIC AND KINEMATIC DEFINITION OF SEISMOGENIC FAULTS

Conveners and Chairpersons: Ada De Matteo (Università di Pavia), Francesco Emanuele Maesano (INGV Roma), Simone Bello (Università di Chieti-Pescara G. d'Annunzio), Daniele Maestrelli (Università di Firenze)

Thursday 5<sup>th</sup> September 2024 [08.30-10.30]

### Aula B

#### ► 49-1 08.30 - 09.00

(Invited) Valensise G.\*: From active faults to seismogenic sources: understanding their geometry, hierarchy, and earthquake potential through a fully multidisciplinary approach

#### ► 49-2 09.00 - 09.15

Lipparini L., Forzese M.\*, Chiacchieri D., Cavallaro D., Firetto Carlino M., Scarfì L., Molinari I., Maniscalco R. & Catalano S.: 3D imaging and modelling of a complex regional fault system: the Scicli Line (Sicily, Italy)

#### ► 49-4 09.15 - 09.30

Loreto M.F.\*, Ferrante V., Argnani A., Conti A., Cuffaro M., Ganas A., Lampidou D., Ligi M., Merino I., Muccini F., Elisavet N., Palmiotto C., Petracchini L., Poulos S., Ranero R.C., Romano S. & Nomikou P.: Anatomy of strike-slip Kefalonia fault to Hellenic frontal thrust transitional zone, western Hellenic Arc

#### ► 49-5 09.30 - 09.45

Francesconi M.\*, Ciaglia S., Giannini S., Pagliaroli A. & Pizzi A.: New insights on the Mt. Morrone (Central Apennines) active normal fault and related basin through passive seismic methods

#### ► 49-6 09.45 - 10.00

Battistelli M.\*, Ferrarini F., Carafa M.M.C., Cardinali M., Bucci F., Merryman Boncori J.P. & Brozzetti F.: Do faults play hide-and-seek? New hints on the relationship between active deformation and surface faulting in a seismic gap zone of central-southern Apennines – A multidisciplinary approach

#### ► 49-7 10.00 - 10.15

Alessandrini M. & Menichetti M.\*: The geology of Mt.Vettore area in the Sibillini Mountains, Northern Apennines of Italy

#### ► 49-8 10.15 - 10.30

Tiberti M.M.\*, Maesano F.E., Buttinelli M., De Gori P., Ferri F., Minelli L. & Di Nezza M.: A multidisciplinary geophysical approach as help to validate 3D models and investigate the seismotectonics of the Central Apennines (Italy)

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Eventi  
Musealizzazione  
Applicazioni di Realtà aumentata

### ■ S3. ANTARCTICA AND THE ARCTIC: UNVEILING THE GEOLOGICAL PAST AND FUTURE EVOLUTION OF POLAR REGIONS

Conveners and Chairpersons: Luca Zurli (Università di Siena), Laura De Santis (Istituto Nazionale di Oceanografia e Geofisica Sperimentale), Fabio Florindo (INGV), Caterina Morigi (Università di Pisa), Valerio Olivetti (Università di Padova)

Thursday 5<sup>th</sup> September 2024 [11.00-13.00]

#### Aula G

##### ► 3-8 11.00 - 11.15

Balestrieri M.L.\*, Olivetti V., Chew D., Zurli L., Zattin M., Drakou F., Cornamusini G. & Perotti M.: Multi-proxy single-grain provenance analysis to tackle growth and retreat of West Antarctic Ice Sheet: insights from apatite and zircon U-Pb dating coupled with fission-track age and geochemical analysis of apatite

##### ► 3-9 11.15 - 11.30

Perotti M., Zurli L.\*, Marschalek J., Mallery C., van de Flierdt T., Licht K., De Santis L., McKay R., Kulhanek D. & Expedition 374 Scientists: Clast petrography from IODP 374 cores in the central Ross Sea (Antarctica): implications for sediment provenance and source terranes

##### ► 3-10 11.30 - 11.45

Pastore G.\*, Marschalek J., van de Flierdt T., Andò S., Vermeesch P. & Carter A.: Contrasting provenance signals during Pleistocene interglacial periods influenced by West Antarctic Ice Sheet climatic response recorded at IODP Site U1524 exp. 37

##### ► 3-11 11.45 - 12.00

Sciarra A.\*, Ruggiero L., Mazzini A., Florindo F., Wilson G., Mazzoli C., Anderson J.T.H., Olivetti V., Romano V., Sassi R., Bigi S. & Ciotoli G.: A multidisciplinary investigation into the source and impact of greenhouse gases in the Dry Valleys, Antarctica

##### ► 3-12 12.00 - 12.15

Dumon Steenssens L.\*, d'Elia M., Quarta G. & Mastronuzzi G.: 14C age determination of beach ridges from Terra Nova Bay, Antarctica

##### ► 3-13 12.15 - 12.30

Langone L.\*, Bensi M., Aulicino G., Battaglia F., Caridi F., Carotenuto A., Cerino F., Diociaiuti T., Gallerani A., Giglio F., Kovacevic V., Kralj M., Mangoni O., Mansutti P., Monti M., Morigi C., Patrolecco L., Rauseo J., Relitti F., Retelletti Brogi S., Sabbatini A., Serino E., Tesi T., Ursella L., Greggio N. & Giordano P.: Mechanisms driving formation and preservation of the laminated sediments of Edisto Inlet, western Ross Sea (Antarctica): the sub-seasonal variability of particle composition and fluxes

##### ► 3-14 12.30 - 12.45

Sabbatini A.\*, Morigi C., Bartolini A.C., Bardin J., Caridi F. & Monti M.: Assessing planktonic foraminiferal species from Antarctic sea-ice as a paleoceanographic proxy: preliminary insights

##### ► 3-15 12.45 - 13.00

Andò S.\*, Perotti M., Zurli L., Torricella F., Colizza E., Ferrante G.M. & De Santis L.: High-resolution mineralogical and petrographic analysis of marine sediments in Antarctica: from silt to gravel

### ■ S5. GEOSCIENCES FOR CULTURAL HERITAGES

Conveners and Chairpersons: Mauro Francesco La Russa (Università della Calabria), Simona Raneri (Università di Firenze), Michele Secco (Università Padova), Maria Verde (Università di Napoli)

Thursday 5<sup>th</sup> September 2024 [11.00-13.00]

#### Aula A

##### ► 5-8 11.00 - 11.30

(Invited) Eramo G.\*, Bertola S., Carletti E., Conati Barbaro C., Conforti J., Ferrero A., Fioretti G., Moscone D., Pizziolo G., Santo A.P., Spalluto L. & Lo Vetro D.: The Openlit Project: a first step for an open access lithothèque of Italian knappable rocks

##### ► 5-9 11.30 - 11.45

Annese C., Bellopede R.\*, Intini P.C., Intini P., Lamanna L.M., Marini M., Merico A., Quartulli A. & Sivilli S.: Itria Valley limestone: a multidisciplinary study on the use of the Apulian georesources in the Cultural Heritage

##### ► 5-10 11.45 - 12.00

Indelicato V.\*, Punturo R., Mineo S., Pappalardo G., Lanzafame G., Visalli R. & Cirrincione R.: Multi-analytical characterization of main lithotypes employed in the Val di Noto UNESCO sites (south-eastern Sicily)

##### ► 5-11 12.00 - 12.15

Conforti J.\*, Allegretta I., Muntoni I.M., Dell'università E., Terzano R., Angeli L. & Eramo G.: Chert supplies in Early Neolithic of Matera area: new data from Giavarra, Murgia Timone and Trasanello

##### ► 5-12 12.15 - 12.30

Lepore A.\*, Arzarello M., Germinario C., Mercurio M. & Grifa C.: Multianalytical study of lithic materials from the prehistorical site of Pirro Nord: preliminary results

##### ► 5-13 12.30 - 12.45

Rea C.\*, Di Fazio M., Mercuri L., Calzolari L., Capriotti S., Mignardi S., Dallai L., Stasolla F.R. & Medeghini L.: Archaeometric investigation of lithic materials from the archaeological site of the Holy Sepulchre (Jerusalem)

##### ► 5-48 12.45 - 13.00

Ravasi T., Haynes I., Vagnuzzi S., Rispoli C., Randazzo L.\* & La Russa M.F.: Assessing construction techniques through minero-petrographic analysis of Roman mortars: insights into Imperial economic investments in building projects

**■ S18. GEOSCIENCES FOR THE CHARACTERIZATION, EXPLORATION AND EXPLOITATION OF PRIMARY AND SECONDARY MINERAL RESOURCES**

Conveners and Chairpersons: Simone Vezzoni (CNR), Matteo Deidda (Università di Cagliari), Rosa Anna Fregola (Università di Bari), Giovanni Grieco (Università di Milano Statale), Nicola Mondillo (Università di Napoli Federico II), Valentina Rimondi (Università di Firenze)

Thursday 5<sup>th</sup> September 2024 [11.00-13.00]

**Aula H**

**► 18-8 11.00 - 11.30**

(Invited) Dini A.\*: The supergiant epithermal Hg district of Mt. Amiata (Italy): metal source and genesis

**► 18-9 11.30 - 11.45**

Di Giuseppe P.\*, Agostini S., Rielli A., Vezzoni S. & Dini A.: Iron isotope systematics and ore forming processes: first results from the ophiolite-hosted, Tuscan Cu-Zn VMS deposits

**► 18-10 11.45 - 12.00**

Velicogna M., Beltrame M., Barago N., De Min A., Lenaz D., Nimis P.\*, Chiaradì M., Venier M., Chelle-Michou C. & Tavazzani L.: Age and evolution of the Raibl carbonate-hosted Zn-Pb deposit (NE Italy)

**► 18-11 12.00 - 12.15**

Ciccolella A.\*, Festa V., Ruggieri G., Schingaro E., Tursi F., Ventrucci G. & Fregola R.A.: Trace elements and REYs signature of ore and gangue minerals in the Zn-Pb(-Cu-Fe) mineralization of Longobucco and Fonte Argentila (Sila Massif, Calabria, southern Italy)

**► 18-12 12.15 - 12.30**

Coticelli S.\*, Abad I., Balassone G., Cappelletti P., Rispoli C., Granitzio F., Farenzena M. & Mondillo N.: Geology and mineralogy of the S'Aliderru bentonite deposit (Sardinia, Italy)

**► 18-13 12.30 - 12.45**

Tazzini A.\*, Gambino F., Mancini S. & Dino G.A.: Circular economy in the dimension stone industry: problems and challenges related to fine fractions generated during marble exploitation

**► 18-14 12.45 - 13.00**

Fumanti F.\*, De Corso S., De Caterini G., Andrisani M.G., Dacquino C., De Benedetti A.A., Carta R., Ferrigno F., Guerra M., Guerrieri L., Leoni G., Lucarini M., Olivetta L., Pantaloni M., Patanè R.A., Pieruccioni D., Serra M., Spizzichino D. & Amanti M.: National databases, starting point for compliance with the Critical Raw Materials Act obligations

**■ S26. SINKHOLES VS. LAND SUBSIDENCE: ASSESSMENT OF THE GEOLOGICAL HAZARDS AND IMPACTS ON ENVIRONMENT AND SOCIETY**

Conveners and Chairpersons: Mario Parise (Università Aldo Moro, Bari), Daniela Ruberti (Università L. Vanvitelli, Aversa), Luigi Bruno (Università di Modena), Luca Zini (Università di Trieste), Diego Di Martire (Università Federico II, Napoli), Isabella Serena Liso (Università Aldo Moro, Bari)

Thursday 5<sup>th</sup> September 2024 [11.00-13.00]

**Aula M**

**► 26-8 11.00 - 11.15**

Fracchiolla R.\*, Bonamassa G., Liso I.S., Lollino P., Lorusso G. & Parise M.: Building a database for the analysis of sinkholes related to artificial cavities: the case study of Altamura (Apulia, Southern Italy)

**► 26-9 11.15 - 11.30**

Bausilio G.\*, Di Martire D. & Calcaterra D.: Anthropogenic sinkholes' susceptibility assessment in Palermo, Italy, using a machine learning algorithm

**► 26-10 11.30 - 11.45**

Fabozzi M.A.\* & Moliterno E.: Artificial cavities and risk assessment: the case study of the Cloister of Sant'Agostino (Caserta, Italy)

**► 26-11 11.45 - 12.00**

Busetti A., Corradetti A., Leone C., Rai P., Zini L. & Calligaris C.\*: Storm-induced coastline sinkholes monitored by means of uncrewed aerial systems (UAS) in the gulf of Trieste (NE Italy)

**► 26-12 12.00 - 12.15**

Piscitelli A.\*, Liso I.S., Parise M. & Mastronuzzi G.: Coastal sinkhole mapping and evolution along the Taranto coastline

**► 26-13 12.15 - 12.30**

De Ritis R.\*, Rotella G., Argentieri A., Calderoni G., Chiappini M., Ciotoli G., Doglioni C., Fabiani M., Marra F., Nisio S., Tolomei C. & Vitali P.: Natural risks and protection of the territory: the San Martino Valley case history (Capena, Rome metropolitan area)

**► 26-14 12.30 - 12.45**

Yaqoob I.\*, Zini L., Forte E., Ciotoli G. & Calligaris C.: Quinis: a small hamlet in the Alta Val Tagliamento valley (NE Italy), example of resilience to sinkhole geohazard

**► 26-15 12.45 - 13.00**

Mastrobattista P., Guarino P.M.\*, D'Angiò D., Fiano V. & Pompili R.: Sinkholes in the Campo Soriano karst plain (Central Italy)

## ■ S31. THE ART OF GEOSCIENCES COMMUNICATION

Conveners and Chairpersons: Valeria Giampaolo (CNR), Ortensia Amoroso (Università degli Studi di Salerno), Rosa Coluzzi (CNR), Giacomo Eramo (Università di Bari Aldo Moro), Marco Romano (Sapienza, Università di Roma), Anna Giamborino (APPI, Associazione Paleontologica e Paleoartistica Italiana)

Thursday 5<sup>th</sup> September 2024 [11.00-13.00]

### Aula N

#### ► 31-8 11.00 - 11.30

(Invited) De Novellis V.<sup>\*</sup>, Ascione V., Somma R. & Zoccola M.: Science and Art in the dissemination of volcanic risk

#### ► 31-9 11.30 - 11.45

Amoroso O.<sup>\*</sup>, Gargiulo M.V., Napolitano F., Russo R. & Capuano P.: An educational escape room experience for teaching younger generations about seismic risk

#### ► 31-10 11.45 - 12.00

Erba E.<sup>\*</sup>, Mariani L. & Poli S.: Geoscience communication through videos

#### ► 31-11 12.00 - 12.15

Cannone E.<sup>\*</sup>, Manzella A., Galione M.R. & Criscuolo L.: Challenges and strategies in geothermal communication

#### ► 31-12 12.15 - 12.30

Lupi C.<sup>\*</sup>, Marchini A., Brioschi S.A., Crenca E., Gazzola F. & Innocenti Malini G.: "Can You See?": an aerial and acrobatic performance to involve people in marine biogeoscience researches

#### ► 31-13 12.30 - 12.45

Monno A.<sup>\*</sup>, Iurilli V. & Eramo G.: Earth Sciences in the Divine Comedy: a hidden story

#### ► 31-14 12.45 - 13.00

Eramo G., De Tullio M.<sup>\*</sup>, Monno A. & Mesto E.: Ever played a phase diagram? Thermodynamic graphs as musical scores for educational live performance

## ■ S34. A PETROLOGIC JOURNEY THROUGH THE LITHOSPHERE

Conveners and Chairpersons: Roberto Braga (Università di Bologna), Micol Bussolesi (Università di Milano-Bicocca), Federico Casetta (Università di Vienna), Giulia Marras (Università di Roma La Sapienza), Alessandra Montanini (Università di Parma), Arianna Secchiarì (Università di Milano)

Thursday 5<sup>th</sup> September 2024 [11.00-13.00]

### Aula E

#### ► 34-9 11.00 - 11.30

[KEYNOTE] Spiess R.<sup>\*</sup>, Festa V. & Tursi F.: When modern petrology meets advanced microstructural analysis

#### ► 34-10 11.30 - 11.45

Tursi F.<sup>\*</sup>, Godard G., Braga R. & Piluso E.: It's getting hot, depleted, dense and dry: evolution of garnet-sillimanite restites from Catena Costiera (northern Calabria, Italy)

#### ► 34-11 11.45 - 12.00

Groppi C.<sup>\*</sup>, Ferrando S., Tursi F. & Rolfo F.: Serendipity-driven discovery of a new UHP slice in the southern Dora-Maira Massif

#### ► 34-12 12.00 - 12.15

Nerone S.<sup>\*</sup>, Lanari P., Forshaw J.B., Groppo C. & Rolfo F.: Quantitative isopleth thermobarometry for determination of optimal P-T conditions from Perple\_X models

#### ► 34-13 12.15 - 12.30

Petroccia A.<sup>\*</sup>, Caso F., Nerone S., Maffei A., Corno A. & Zucali M.: 2D vs. 3D rock investigation comparison and possible influences for thermodynamic modelling estimates

#### ► 34-14 12.30 - 12.45

(Invited) Soltanmohammadi A.<sup>\*</sup>, Rabinowicz M. & Fontaine JF.: From Cold to Hot Mantle: Exploring new concepts for migration of alkaline melts and perspective on critical minerals

#### ► 34-15 12.45 - 13.00

Tagliacollo L.<sup>\*</sup>, Bonadiman C., Saccani E., Bianchini G., Brombin V. & Tassinari R.: Potential mineral resources in historically dismissed Volcanogenic Massive Sulfide (VMS) deposits of the Emilia Romagna region (Italy): petrological and geochemical study for Critical Raw Materials (CRMs) exploration and exploitation

## ■ S35. NEW FRONTIERS OF PLANETARY GEOLOGY

Conveners and Chairpersons: Fulvio Franchi (Università di Bari), Giovanna Agrosi (Università di Bari), Barbara Cavalazzi (Università di Bologna), Lucia Marinangeli (Università di Chieti-Pescara), Giovanni Pratesi (Università di Firenze)

Thursday 5<sup>th</sup> September 2024 [11.00-13.00]

### Aula D

#### ► 35-8 11.00 - 11.15

Pozzobon R.\*, Rossi A. P., Massironi M., Marinangeli L., Pondrelli M., Carli C., Zambon F., vander Bogert C., Baschetti B., Penasa L., Frigeri A., Rossi C., Alemano G., Chirico R., Heyer T., Lopez I., Stephan K. & Wagner R.: EUROPLANET GMAP: the Geology and Planetary Mapping Winter School

#### ► 35-9 11.15 - 11.30

Pondrelli M.\*, Di Pietro I., Le Deit L., Marinangeli L., Pantaloni M. & Rossi A.P.: Geological map, depositional processes, environments, and evolution of the Eberswalde delta (Mars)

#### ► 35-10 11.30 - 11.45

Pascucci V.\*, Stelletti M., Sechi D., Cossu G. & Andreucci S.: Lanzarote as suitable mars analogue to test if recent mars deposits could be dataed using luminescence

#### ► 35-11 11.45 - 12.00

Verdecchia M.\*, Pedone M., Tomasetti B., Manzari P., Lombardi A. & Colaiuda V.: Application of CHyM hydrological model on Mars surface: clues of drainage patterns on Jezero crater

#### ► 35-12 12.00 - 12.15

D'Aniello M.\*, Zampella M., Dosi A., Rownok A., Delli Veneri M., Ettari A., Cavuoti S., Sannino L., Brescia M., Donadio C. & Longo G.: Interplanetary river classification: a geomorphological approach utilizing subjective and objective analysis through advanced statistical methods

#### ► 35-13 12.15 - 12.30

Brunetti M.T.\* & Peruccacci S.: Landslides on solid bodies in the Solar System

#### ► 35-14 12.30 - 12.45

Ermini A.\* & Salvini R.: Three-dimensional probabilistic slope stability analysis in lunar south pole region

#### ► 35-15 12.45 - 13.00

Bokanda F., Cavalazzi B. & Franchi F.\*: Geomicrobiology of the concretions of the Makgadikgadi pans (Botswana): An astrobiological perspective

## ■ S39. OPEN SESSION ON STRATIGRAPHY AND SEDIMENTOLOGY

Conveners and Chairpersons: Cristina Muraro (ISPRA), Luisa Sabato (Università di Bari), Luca Capraro (Università di Padova), Claudio Pellegrini (ISMAR-CNR), Luigi Spalluto (Università di Bari), Piero Gianolla (Università di Ferrara)

Thursday 5<sup>th</sup> September 2024 [11.00-13.00]

### Aula C

#### ► 39-14 11.00 - 11.30

[KEYNOTE] Longhitano S.G.\*: Deflected deltas: what are they?

#### ► 39-9 11.30 - 11.45

Ezeh S.C.\*, Bhattacharya J.P., Dellapenna T.M. & Carlin J.A.: Sediment distribution in the Brazos Delta: Estimation and numerical modelling of sedimentation rates and the effect of bioturbation in event beds preservation

#### ► 39-10 11.45 - 12.00

Gaspari R.\*, Rusciadelli G., Ricci C. & Cestari R.: The Orfento formation of the Maiella Mountain (Central Apennines, Italy): depositional facies model of an Upper Cretaceous bioclastic wedge

#### ► 39-11 12.00 - 12.15

Agate M.\*, Todaro S., Maiorana M.G., Calderari F., Lombardo C., Severini A. & Sulli A.: Seismo-stratigraphic analysis of middle-late Quaternary shelf margin prograding deposits in the Western Sicily offshore (central Mediterranean Sea)

#### ► 39-12 12.15 - 12.30

Distefano S.\*, Di Stefano A. & Gamberi F.: Deltaic processes and depositional canyon-heads in a narrow continental shelf: examples from the north-eastern Sicilian margin

#### ► 39-21 12.30 - 12.45

Salvador C.\*, Fanti F. & Catuneanu O.: Depositional architecture and provenance analysis of the non-marine deposits of the Oldman Formation (Campanian, Belly River Group) at the U.S.-Canada border

#### ► 39-13 12.45 - 13.00

Pellegrini C.\*, Sammartino I., Schieber J., Tesi T., Paladini de Mendoza F., Rossi V., Chiggiato J., Schroeder K., Gallerani A., Langone L., Trincardi F. & Amorosi A.: On depositional processes governing along-strike facies variations of fine-grained subaqueous deltas in the Adriatic Sea

■ S49. MULTIDISCIPLINARY APPROACHES TO THE GEOMETRIC AND KINEMATIC DEFINITION OF SEISMOGENIC FAULTS

Convenors and Chairpersons: Ada De Matteo (Università di Pavia), Francesco Emanuele Maesano (INGV Roma), Simone Bello (Università di Chieti-Pescara G. d'Annunzio), Daniele Maestrelli (Università di Firenze)

Thursday 5<sup>th</sup> September 2024 [11.00-13.00]

Aula B

► 49-9 11.00 - 11.15

Safarzadeh E., Barchi M.R.\* Ercoli M., Carboni F., Akimbekova A., Mirabella F. & Porreca M.: Structural style and seismicity: a geological focus on the 2022 Mw5.5 Northern Adriatic off-shore earthquake

► 49-10 11.15 - 11.30

Lenci S.\* Keir D., Molli G., Vannucchi P., Del Ventisette C. & Pagli C.: Seismological Study of Transverse Faults in a Highly Segmented Extensional Front in the Northern Apennines: The Case of Sant'Anna Pelago

► 49-11 11.30 - 11.45

Bonini L.\* Basili R., Burrato P., Abbate A., Areggi G., Bertone N., Del Ben A., Maesano F.E. & Ponton M.: Geometric and kinematic assessment of the seismogenic sources of Northeast Italy

► 49-12 11.45 - 12.00

Adinolfi G.M.\* Carducci A., De Matteis R., de Nardis R. & Romano M.A.: Advanced tool for fault plane solution reliability assessment

► 49-13 12.00 - 12.15

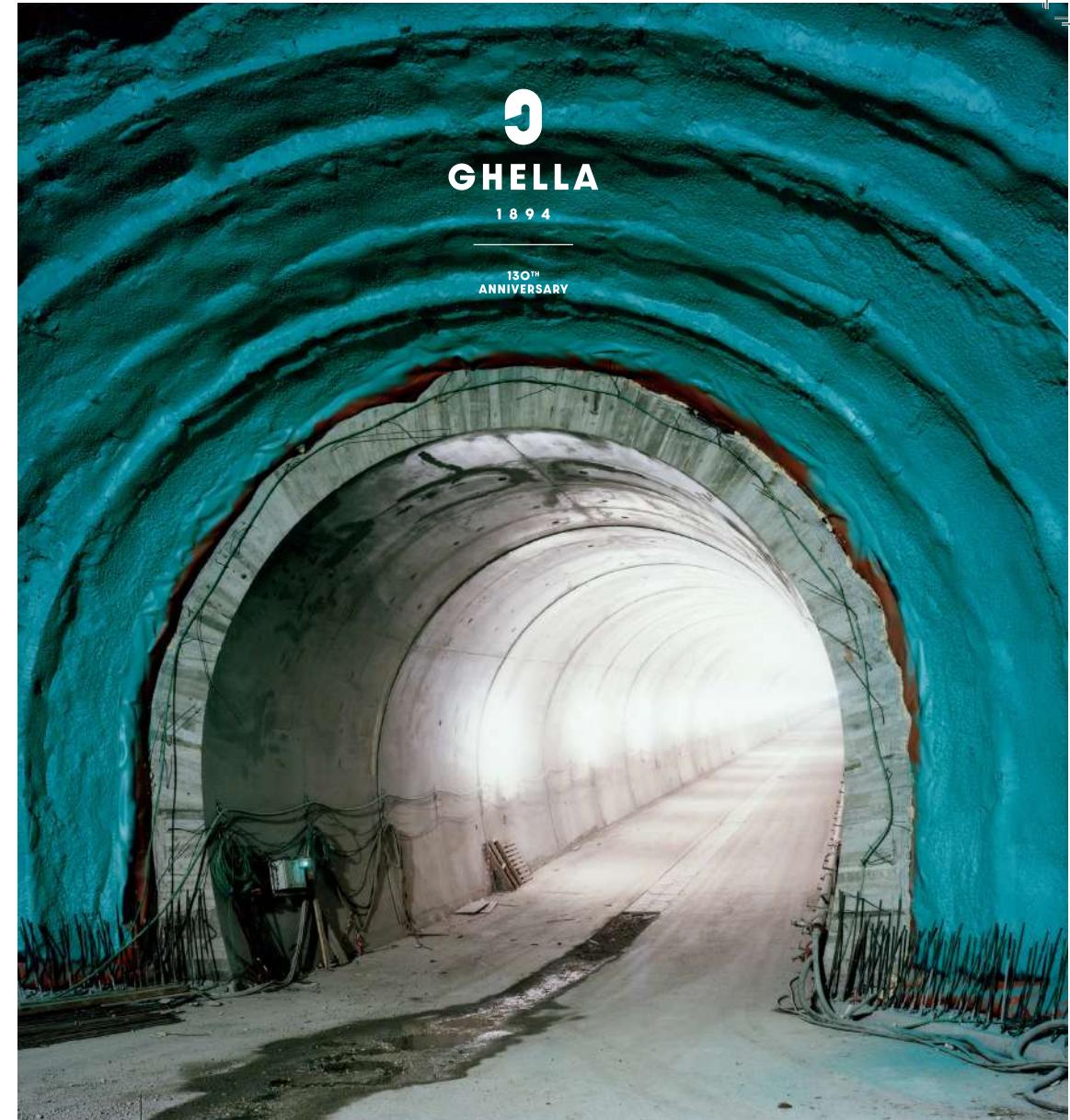
Parnas M.\* Pagli C., Keir D., La Rosa A. & McNeill L.: New analysis of InSAR and seismology for kinematic reconstruction of the 1995 offshore Aigion M6.5 earthquake (Greece)

► 49-14 12.15 - 12.30

Pietrolungo F.\* Palano M., MadarietaTxurruka A., Srivastava E., Sparacino F., Sulli A., Parrino N., Andrenacci C., Cirillo D., Bello S. & Lavecchia G.: Strain-rate estimation and focal mechanism stress inversion in Himalaya-Tibet region

► 49-15 12.30 - 13.00

Lavecchia G.\* & de Nardis R.: Exploring the significance of fault-earthquake data pairs in unveiling structural and seismotectonic complexities - Case studies across different tectonic regimes in Central Italy



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## ■ S5. GEOSCIENCES FOR CULTURAL HERITAGES

Conveners and Chairpersons: Mauro Francesco La Russa (Università della Calabria), Simona Raneri (Università di Firenze), Michele Secco (Università Padova), Maria Verde (Università di Napoli)

Thursday 5<sup>th</sup> September 2024 [15.30-17.30]

### Aula A

#### ► 5-15 15.30 - 16.00

(Invited) Maritan L.\* Filippou V., Renson V., Pasqual D., Cattò S., Koutovaki E., Nodarou E., Cantisani E., Dikomitou Eliadou M. & Zomeni Z.: Influence of clay processing on bulk chemistry signature in ancient pottery productions

#### ► 5-16 16.00 - 16.15

Di Leo P.\* Lubraco G., Corrado G., Ferrara V. & Vita C.: A multidisciplinary approach to understand exploitation of ancient georesources for the matt painted pottery production from Basilicata: technology and provenance in the north-Lucanian district

#### ► 5-17 16.15 - 16.30

Eramo G., Tema E. & Muntoni I.M.\*: Archaometric study of two Hellenistic pottery kilns in Ascoli Satriano (FG): a combined minero-petrographic and archaeomagnetic approach

#### ► 5-18 16.30 - 16.45

Mascaro M.E.\* Auriemma R., Mazzoli C. & Maritan L.: Investigating post-depositional alterations in underwater ceramics. The case of the archaeological site of Torre Santa Sabina (south-eastern Italy)

#### ► 5-19 16.45 - 17.00

Morabito G.\* Gatta G.D., Marinoni N., Colombo C., Catrambone M., Botto M. & Pedrazzi T.: Investigating the past: a multi-analytical approach for the analysis of Phoenician pottery from the archaeological site of Pani Loriga

#### ► 5-20 17.00 - 17.15

Scana M.\* Capaldi C., Cirola A., D'Uva F., Morra V., Verde M. & De Bonis A.: African amphorae from Cumae: archaeometric study for provenance and technological features

#### ► 5-21 17.15 - 17.30

Bruzzone L.\* Gaggero L., Zucchiatti A. & Molera J.: Evaluating erythrite as a potential source for arsenic-free cobalt blue pigment production: replication of historical recipes and thermal treatments

## ■ S14. INTEROPERABLE AND MULTISCALE GEOLOGICAL DATA-ANALYSIS FOR LANDSCAPE EVOLUTION MONITORING BY APPLYING INNOVATIVE REMOTE SENSING TECHNOLOGIES

Conveners and Chairpersons: Marina Zingaro (Università di Bari), Vincenzo Massimi (Planetek Srl), Domenico Capolongo (Università di Bari), Gaetano Ortolano (Università di Catania)

Thursday 5<sup>th</sup> September 2024 [15.30-17.30]

### Aula M

#### ► 14-1 15.30 - 15.45

Kushabaha A.\* Scicchitano G., Refice A., Marsico A., Tapete D., Ursi A., Capolongo D. & Zingaro M.: Integrating multispectral normalized difference vegetation index (NDVI) to analyze land cover changes in sediment connectivity analysis

#### ► 14-2 15.45 - 16.00

Sblano A.\* Mancino S., Lovergne F.P., Massimi V., Capolongo D. & Amatulli D.: Unified Global Landslide Catalog - A single global-scale standardized landslide dataset

#### ► 14-3 16.00 - 16.15

Argentiero I.\* Bovenga F., Borrelli R., Massimi V., Nutricato R. & Nitti D.O.: Analysis tools for supporting the exploitation of MTInSAR products in monitoring landscape evolution

#### ► 14-4 16.15 - 16.30

Pirulli G., Mancino S.\* Sabato G., Parise M., Scardino G. & Scicchitano G.: Landslide body segmentation from satellite imagery using artificial intelligence model: case studies Ischia island and Forlì - Cesena area

#### ► 14-5 16.30 - 16.45

Vanzani F.\* Carboneau P. & Fontana A.: Deep learning to automatically map braided palaeochannels from optical traces in the Venetian - Friulian Plain (NE Italy)

#### ► 14-6 16.45 - 17.00

Bozzolan E.\* Cecchetto M., Doolaege D., Taffetani E., Brenna A., Surian N. & Buzzi S.: Systematic monitoring of river landform evolution across scales: from localized change detection to catchment connectivity

#### ► 14-7 17.00 - 17.15

(Invited) Vance G.\* Clementucci R., Picotti V. & Willett S.D.: Catchment-averaged denudation rates in the Northern Apennines and Ligurian Alps and implications for landscape dynamics

#### ► 14-8 17.15 - 17.30

Silvani F.\* Melelli L., Mirabella F., Cardinali M., Bucci F., Santangelo M., Pazzaglia F.J. & Barchi M.R.: Geomorphic signature of the eastward marching of Quaternary extensional tectonics in the Northern Apennines (central Italy): the Colfiorito intermontane basins key area

## ■ S28. EXPERIENCES OF DATA SHARING AND USE IN THE FRAME OF RESEARCH DATA INFRASTRUCTURES

Conveners and Chairpersons: Maria Pia Congi (ISPRA Roma), Mario Locati (INGV Milano)

Thursday 5<sup>th</sup> September 2024 [15.30-17.30]

### Aula G

#### ► 28-1 15.30 - 15.45

Paciello R.\*, Bailo R. & Freda C.: The EPOS Research Infrastructure and its FAIR Data Management approach

#### ► 28-2 15.45 - 16.00

Guerrieri L.\*, Battistoni P., Cipolloni C., Passaquieti R., Rizzo M. & Sebillo M.: GeoSciences IR: a cloud research infrastructure for regional geological surveys

#### ► 28-3 16.00 - 16.15

Gennaro S.\*, Di Giuseppe P., Perrone E., Agostini S., Trumpp E., Assante M., Candela L., Pagano P., Procaccini M., Coro G. & Provenzale A.: New Tools for Geo-scientific Data Management in the framework of the ITINERIS Project Leveraging D4Science e-Infrastructure capabilities

#### ► 28-4 16.15 - 16.30

Maceroni D.\*, Castorina C., Blumetti A.M., Bonadeo L., Comerci V., Di Manna P., Guerrieri L. & Congi M.P.: The new version of ITHACA Catalogue supported by GeoSciences IR and MEET projects

#### ► 28-5 16.30 - 16.45

Cataldi L., Zuliani D., Barnaba C.\*, Magrin E., Di Bartolomeo P., Bernardi P., Galvi S., Moratto L., Tunini L., Saraò A., Poggi V., Comelli P., Rossi G. & Picozzi M.: Advancing seismological and geodetic data management at the OGS

#### ► 28-6 16.45 - 17.00

Corsaro R.A.\*, D'Oriano C., Di Muro A., Geyer A., Gurioli L., Pappalardo L., Pennisi M., Principe C., Pompilio M. & Re G.: How to organise a rock repository of volcanic samples: a proposal of metadata model

#### ► 28-7 17.00 - 17.15

Congi M.P., Petricca P., Castorina G.\*, Tomassetti L., Roccatello E. & D'Ambrogi C.: The CARG project towards 3D geology: definition of standards for the construction, consultation, and distribution of three-dimensional geological models

#### ► 28-8 17.15 - 17.30

Indovina E.\*, Cacciola L., Domínguez-Cerdeña I., Geyer A., Guehenneux Y., Júlíusdóttir R., Komorowski J-CJ, Labazuy P., Nave R., Puglisi G., Reitano D., Saurel JM., Spampinato L. & Vogfjörd K.: Fostering the Open Science paradigm and strengthening the European volcanology community: contributions of the Volcano Observations Thematic Core Service to EPOS ERIC

## ■ S29. MULTIDISCIPLINARITY AND NUMERICAL MODELLING: A COMPREHENSIVE APPROACH FOR UPCOMING GEOSCIENCES

Conveners and Chairpersons: Bruno Campo (Università di Bologna), Silvia Massaro (Università di Bari), Beatrice Maria Sole Giambastiani (Università di Bologna), Nunzio Luciano Fazio (CNR), Sonia Silvestri (Università di Bologna), Manuel Stocchi (Università di Bari)

Thursday 5<sup>th</sup> September 2024 [15.30-17.30]

### Aula D

#### ► 29-1 15.30 - 15.45

Purri F.\*, Di Martino A. & Amorosi A.: 3D stratigraphic architecture of the late Quaternary Pescara paleovalley and seismic site characterization

#### ► 29-2 15.45 - 16.00

Sobbe A.\*, Bianchini G., Rizzo E. & Brombin V.: Geophysical and geochemical data integration for agricultural soil monitoring and prevention of the effects of salinity, organic matter, and climate change in the Province of Ferrara (Northern Italy)

#### ► 29-3 16.00 - 16.15

Tranfa P.\*, Di Renzo V., Izzo F., Langella A., Mercurio M., Mercurio V., Cappelletti P. & D'Antonio M.: A multidisciplinary approach used for winemaking process investigation: the Cantina di Solopaca (Benevento, Italy) case study

#### ► 29-4 16.15 - 16.30

Schiavo M., Giambastiani B.M.S.\*, Greggio N., Colombani N. & Mastrocicco M.: Integrated approach for Arsenic contamination assessment in the entire Padana Plain (Italy)

#### ► 29-5 16.30 - 16.45

Lucci G.\*, Bruno L., Purri F., Di Martino A. & Amorosi A.: Shallow subsurface stratigraphy of the Mirandola Area (central Po Plain) reconstructed through combined sedimentological and geotechnical analysis

#### ► 29-6 16.45 - 17.00

Watanabe D.\*, Bruno L. & Amorosi A.: Holocene sedimentary and geomorphological evolution of the Po Plain between Po, Secchia and Panaro rivers, reconstructed through a morpho-stratigraphic approach

#### ► 29-7 17.00 - 17.15

Leoni G., De Caterini G., Vizzini G.\*, Assennato F., Bianco P.M., Decoro C., Delfini C., Ferrigno F., Finocchiaro G., Fumanti F., Guerrieri L., Lucarini M., Roggero F., Tria N.G. & Spizzichino D.: Giasone: a method to assess sustainability of georesources cultivation

#### ► 29-8 17.15 - 17.30

Castronuovo R.\*, Borghetti M., Ferrara A.M.S., Spatola M.F. & Nolè A.: Vegetation cover dynamics in the Mediterranean region: a spectral-based assessment of the riparian vegetation patterns

## ■ S32. GEOSCIENCES AT SCHOOL 2024

Conveners and Chairpersons: Francesca Cifelli (Università di Roma 3), Anna Gioncada (Università di Pisa), Claudia Lupi (Università di Pavia), Eleonora Paris (Università di Camerino), Elena Bonaccorsi (Università di Pisa)

Thursday 5<sup>th</sup> September 2024 [15.30-17.30]

### Aula N

#### ► 32-1 15.30 - 15.45

Barone A.\*; Madonia G. & Rotigliano E.: An experimental approach to improving the teaching-learning process in the geosciences

#### ► 32-2 15.45 - 16.00

Lupi C.\*; Pelfini M. & Pettinari C.: Geology in down town: easy fieldtrips for learning Earth sciences out of school

#### ► 32-3 16.00 - 16.15

Cattafi I., Sticchi A. & Braga R.\*: Teaching geosciences with ChatGPT during the first year of an upper secondary school

#### ► 32-4 16.15 - 16.30

D'Addezio G.\* & Besker N.: Geosciences through the eyes of primary school students: a visual journey

#### ► 32-5 16.30 - 16.45

Alvisi F.\*; Cheimonopoulou M., Koulouri P., Mogias A. & Mokos M.: The dissemination of marine geosciences in schools as a contribution to the Ocean Literacy process: from teachers' training to hands-on activities

#### ► 32-6 16.45 - 17.00

Loricrani M.\*; Garvani S., Melini D., Merlini S., Grezio A., Cianetti S., Bianucci M., Danesi S., Muscari G., Lo Bue N., Alberti T., Rouwet D., Pollicchio M., Magnaneschi M., Saragosa M., Maccarrone M., Martinicchio G., Saladino F., Sanfilippo S.R.D., Genitili A., Belloni V., Grandi D., Rossi L. & Guarneri A.: MACMAP: a student-designed game to simulate multidisciplinary climate change project

#### ► 32-7 17.00 - 17.15

Maramai A.\*; Lombardo V. & Piangiamore G.L.: Two virtual reality tools to enhance earthquake and tsunami awarness

#### ► 32-8 17.15 - 17.30

Occhipinti S.\*: The learning process in Geosciences: analysis, evaluations, and proposals

## ■ S34. A PETROLOGIC JOURNEY THROUGH THE LITHOSPHERE

Conveners and Chairpersons: Roberto Braga (Università di Bologna), Micol Bussolesi (Università di Milano-Bicocca), Federico Casetta (Università di Vienna), Giulia Marras (Università di Roma La Sapienza), Alessandra Montanini (Università di Parma), Arianna Secchiarì (Università di Milano)

Thursday 5<sup>th</sup> September 2024 [15.30-17.30]

### Aula E

#### ► 34-16 15.30 - 15.45

Bussolesi M.\*; Grieco G., Cavallo A. & Sinojmeri A.: Variability in Platinum Group Elements enrichments in supra- and sub-Moho ophiolite chromitites: case studies from the Dinarides-Hellenides belt

#### ► 34-17 15.45 - 16.00

Grieco G.\*; Bussolesi M., Comboni D. & Gjoca G.: Tests for implementing ophiolitic chromite concentrates from Albania mines to chromite foundry sands quality parameters

#### ► 34-18 16.00 - 16.15

Freitas V.A.\*; Montanini A., Etiope G., Segadelli S., Artoni A. & Moretti I.: Exploration of natural hydrogen in the Northern Apennines, Italy

#### ► 34-19 16.15 - 16.30

Scarani S.\*; Sanfilippo A., Basch V., Genske F. & Stracke A.: Compositional variability of the oceanic crust as a function of spreading rates: insights from the ultra-slow spreading Gakkel Ridge (Arctic Ocean)

#### ► 34-20 16.30 - 16.45

Brunelli D.\*; Cipriani A., Verhoest L., Michailow M., Hemond C., Maia M. & Soltanmohammadi A.: Alkaline MORBs mark low-T domains along Mid Ocean Ridges

#### ► 34-21 16.45 - 17.00

Crotti C.F.\*; Borghini G., Fumagalli P., Tiepolo M., Rampone E. & Stephan K.: Melt-Harzburgite interaction at 1-2 GPa: experimental constraints on oceanic mantle refertilization

#### ► 34-22 17.00 - 17.15

Battifora C.\*; Ferrando C., Crispini L. & Rampone E.: Reactive melt percolation in spinel mantle harzburgites from the Wadi Tayin Massif (Oman ophiolite)

#### ► 34-23 17.15 - 17.30

Montanini A.\*; Cluzel D., Secchiarì A., Ferrari E., Heizler M., Jourdan F., Meffre S., Zhou R. & Teyssier C.: New geochemical and age constraints on forearc intrusive rocks from the New Caledonia ophiolite (SW Pacific): diversity of melts generated at hot subduction inception

## ■ S41. THE EVOLUTION OF SEDIMENTARY BASINS: FROM SOURCE TO COMPLEX BASIN ARCHITECTURE

Conveners and Chairpersons: Luca Aldega (La Sapienza, Università di Roma), Paola Cipollari (Università Roma TRE), Salvatore Gallicchio (Università di Bari Aldo Moro), Lorenzo Gemignani (Università di Bologna), Andrea Schito (Universidad de Barcelona), Francesca Stendardi (Università di Pavia)

Thursday 5<sup>th</sup> September 2024 [15.30-17.30]

### Aula C

#### ► 41-1 15.30 - 16.00

[KEYNOTE] Ballato P.\* Brune S. & Strecker M.R.: Linking sedimentary loading-unloading cycles and faulting in intermontane basins of the broken foreland of NW Argentine Andes: new prospective from numerical modeling and field observations

#### ► 41-2 16.00 - 16.15

Montano D.\*, Gasparrini M., Vergara Sassarini N.A., Michel P., Teles V., Corrado S., Lasseur E., Berra F., Decarlis A. & Ceriani A.: Paleo-fluid characterization of the Upper Triassic siliciclastic reservoirs from the Paris Basin depocenter (France)

#### ► 41-3 16.15 - 16.30

Moretto V.\*, Del Sole L., Curzi M., Dallai L., Vignaroli G., Viola G. & Aldega L.: Paleothermal indicators and H, O stable isotopes for constraining temperature and fluid evolutionary models of complex fault zones: a new approach

#### ► 41-22 16.30 - 16.45

Weert A., Vinci F., Ogata K. & Tavani S.\*: Unlocking geothermal potential: syn-rift fluvial deposits in the West Netherlands Basin

#### ► 41-5 16.45 - 17.00

Maniscalco R.\*, Nadudvari A., Forzese M., Barbagallo V., Distefano S., Giustolisi C., Pellegrino A.G. & Di Stefano A.: Correlation of biomarker, foraminiferal and nannofossil records to unravel past environments: new insight from pre-evaporitic Torrente Vaccarizzo section (Sicily)

#### ► 41-6 17.00 - 17.15

Abbassi A., Cipollari P.\*, Rabiee A., Rossetti F. & Cosentino D.: The Upper Cretaceous Pietraforte formation (Monti della Tolfa, Northern Latium, Italy) in a source-to-sink perspective

#### ► 41-7 17.15 - 17.30

Cerone D.\*, Notaro A. & Prosser G.: Detailed field mapping and revised lithostratigraphy of the Castelvetere Formation cropping out at the NW Campania-Basilicata border (Southern Apennines, Southern Italy)

## ■ S42. GEOPHYSICS FOR TECTONICS AND ENERGY RESOURCES

Conveners and Chairpersons: Sabina Bigi (Università di Roma La Sapienza), Agata Siniscalchi (Università di Bari Aldo Moro), Valentina Volpi (OGS Trieste), Luca de Siena (Università di Bologna), Andrea Tallarico (Università di Bari Aldo Moro)

Thursday 5<sup>th</sup> September 2024 [15.30-17.30]

### Aula H

#### ► 42-1 15.30 - 15.45

Amoroso O., Giampaolo V.\*, Baccaro A., Balasco M., Blasone M., Bubbico D., Capuano P., De Martino G., Gargiulo M.V., Napolitano F., Perrone A., Panebianco S., Russo R., Serlenga V. & Stabile T.A.: A multi-messenger geophysical approach for geothermal resource evaluation and sustainable energy exploitation: two case studies in Southern Italy

#### ► 42-2 15.45 - 16.00

Biondini E.\*, D'Orazio F., Lolli B. & Gasperini P.: Comparative analysis of alarm-based earthquake forecasting models in Italy

#### ► 42-3 16.00 - 16.15

Ferreri A.\*, Romeo A., Giannuzzi R., Cecere G., Falco L., Filippucci M., Michele M., Serlenga V., Panebianco S., Stabile T., Selvaggi G. & Tallarico A.: OTRIONS seismic network during ten years of analyses: the new microseismicity catalog of the Gargano area (Southern Italy)

#### ► 42-4 16.15 - 16.30

Gasperini P.\* & Lolli B.: A comparison between moment magnitude scales

#### ► 42-5 16.30 - 16.45

Lavecchia A.\*, Serlenga V., Filippucci M., Stabile T.A., Prosser G. & Tallarico A.: Fault (re) activation and fluid-induced seismicity: an example from the Val d'Agri intermontane basin (Southern Italy)

#### ► 42-6 16.45 - 17.00

Napolitano F.\*, Amoroso O., De Siena L., Convertito V., De Matteis R., La Rocca M., De Novellis V. & Capuano P.: Multidisciplinary study to characterize seismic gap crustal properties

#### ► 42-7 17.00 - 17.15

Pignatiello G.\*, Coco I., De Girolamo M., Di Persio M., Giannattasio F., Gizzi C., Materni V., Miconi L., Miconi M., Piangiamore G.M., Romano G., Romano V., Santarelli L., Sapia V., Spadoni S., Tozzi R., Tripaldi S., Siniscalchi A., De Michelis P. & Balasco M.: Geoelectromagnetic map for central Italy: preliminary results of the MARGE project

#### ► 42-8 17.15 - 17.30

Romeo A.\*, Cecere G., Filippucci M., Selvaggi G. & Tallarico A.: GNSS CORS network of the University of Bari: an open infrastructure for research and educational

■ **S48. MULTIDISCIPLINARY APPROACHES TO 3D GEOLOGICAL MODELLING: UNCERTAINTY MITIGATION FOR BASIN ANALYSIS AND GEOLOGICAL APPLICATIONS**

Convenors and Chairpersons: Sara Ciattoni (Università di Urbino), Daniel Tentori (CNR Montelibretti, Roma), Edoardo Barbero (CNR Torino), Fabio Feriozzi (Università di Roma Tre), Matteo Pedini (Università di Camerino), Chiara Zuffetti (Università degli Studi di Milano Statale)

Thursday 5<sup>th</sup> September 2024 [15.30-17.30]

Aula C

► **48-1** 15.30 - 16.00

(Invited) Bigi S.\*: Examples of multidisciplinary approach as a strategy to reduce uncertainties in geological models

► **48-2** 16.00 - 16.15

Canzoneri A.\*, Martorana R., Agate M., Capizzi P., Gasparo Morticelli M., Carollo A. & Sulli A.: A subsoils model reconstructed integrating geological and geophysical data in the area of the town of Palermo

► **48-3** 16.15 - 16.30

Tentori D.\*, Mancini M., Livani M., Stigliano F., Milli S. & Moscatelli M.: Stratigraphic constraints for the 3D modeling of the Tevere Alluvial Valley beneath Rome (Italy)

► **48-4** 16.30 - 16.45

Petricca P.\*, Castorina G., Congi M.P. & D'Ambrogi C.: A proposal for simple accuracy evaluation of geological surfaces based on spatial autocorrelation

► **48-5** 16.45 - 17.00

Zambrano M.\*: Preliminary findings from deep 3D electrical resistivity tomography in active faults

► **48-6** 17.00 - 17.15

Labry C.\*, Duque C., Blanco-Coronas A., Da Pelo S., Funedda A. & Marcia L.: Groundwater modelling in faulted siliciclastic-carbonate sequences

► **48-7** 17.15 - 17.30

Demurtas M.\*, Sharp I., Pasqualetto L., Krüger Y., Drost K., Meckler A.N. & Rotevatn A.: Fluid flow history and paragenesis along a syn-rift basin bounding fault: the Helmsdale Fault (NE Scotland)



**IL TUO RIFERIMENTO PER  
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## ■ S5. GEOSCIENCES FOR CULTURAL HERITAGES

Conveners and Chairpersons: Mauro Francesco La Russa (Università della Calabria), Simona Raneri (Università di Firenze), Michele Secco (Università Padova), Maria Verde (Università di Napoli)

Thursday 5<sup>th</sup> September 2024 [17.30-19.30]

### Aula A

#### ► 5-22 17.30 - 17.45

Verde M., De Bonis A., Di Benedetto C.\*, Izzo F., Picone R. & Morra V.: Arianna's Palette: a diagnostic study of the painting walls of the house of Arianna in Pompeii

#### ► 5-23 17.45 - 18.00

Eroğlu M.\*, Barba L., Crisci G.M., Cura M., De Luca R., Kadioğlu Y.K., Pecci A., Taranto M. & Miriello D.: Provenance of the raw materials used in the mortars and bricks taken from Hagia Sophia (Istanbul, Turkey): preliminary results

#### ► 5-24 18.00 - 18.15

Franceschini M.M.N.\*, Calandra S., Vettori S., Ismaelli T., Scardozzi G., Caggia M.P. & Cantisani E.: Mortars in the archaeological site of Hierapolis of Phrygia (Denizli, Turkey) from Imperial to Byzantine age

#### ► 5-25 18.15 - 18.30

Mancini S.\*, Dino G.A., Tazzini A. & Gambino F.: The Mg/Ca ratio in mortars used in ancient rural buildings in the north-Eastern Piedmont plain: a methodology to support archaeological studies

#### ► 5-26 18.30 - 18.45

Menta S.\*, Stroscio A., Mazzoleni P. & Belfiore C.M.: Reproduction of ancient lime mortars from the Baroque built heritage of Catania (Sicily): an experimental study

#### ► 5-27 18.45 - 19.00

Occhipinti R.\*, Belfiore C. M., Fugazzotto M., Barone G. & Mazzoleni P.: The mortars as a marker of the evolution over time of materials and construction techniques in the Benedictine Monastery of Catania

#### ► 5-28 19.00 - 19.15

Pagano S.\*, Germinario C., Giorgi E., Mercurio M. & Grifa C.: Preliminary diagnostic analyses of the wall painting materials of the Vignale's villa (Tuscany region, central Italy)

#### ► 5-29 19.15 - 19.30

Spadavecchia S.\*, Cappelletti P., Rispoli C., Montesano G. & Cesarano M.: Mineralogical and technological characterization of pozzolan mortars from the Brick Amphitheater in Nola (NA)

## ■ S10. THE ROLE OF MULTIDISCIPLINARY APPROACH IN THE GEOCHEMICAL STUDY OF NATURAL SYSTEMS

Conveners and Chairpersons: Lorenzo Chemeri (Università di Urbino), Evelina Dallara (Università di Pisa), Teresa Scolamacchia (A.S.S.E.T.- Regione Puglia), Marco Tausi (Università di Urbino), Daniele Tardani (Universidad de O'Higgins), Andrea Brogi (Università di Bari)

Thursday 5<sup>th</sup> September 2024 [17.30-19.30]

### Aula E

#### ► 10-1 17.30 - 17.45

Franchini S.\*, De Filippi F.M., Ferranti F., Barbieri M. & Sappa G.: Comparison of the isotope based early warning model application to two different municipal solid wastes landfills in Central Italy

#### ► 10-2 17.45 - 18.00

Natali S.\*, Doveri M., Franceschi L., Giannecchini R., Menichini M., Nigro M., Delgado-Huertas A., D'Orazio M. & Zanchetta G.: Isotope composition of dissolved sulfates reveals solutes origin and groundwater flows: insights from aquifer systems in Tuscany

#### ► 10-3 18.00 - 18.15

Tardani D.\*, Álvarez-Amado F., Taucare M., Sánchez J., Taussi M. & Daniele L.: The effect of anthropogenic pressure on the coastal groundwater resources: the case of Toro Bayo aquifer, Southern Chile

#### ► 10-4 18.15 - 18.30

Scolamacchia T.\*: Variations in elemental sulfur viscosity and volcanic hazard assessment implications

#### ► 10-5 18.30 - 18.45

Schito A.\*, Muirhead D., Bowden S. & Parnell J.: Hydrothermal hydrocarbons generation and migration into the basement rocks of Southern Tuscany

#### ► 10-6 18.45 - 19.00

Dallara E.\*, Chelle-Michou C., Fulignati P., Gioncada A., Tavazzani L., Tattitch B. & Lelli M.: Fluid evolution in the deep reservoir of the Larderello geothermal system: insights from microthermometry and LA-ICP-MS analyses of quartz-hosted fluid inclusions

#### ► 10-7 19.00 - 19.15

Hernández De la Cruz A., Benet D., Carrazana di Lucia A., Novembre D. & Gimeno D.\*: S behavior, sulfate and SO<sub>2</sub> emissions during a basaltic eruption in Central America: the case-study of the December 29<sup>th</sup>, 2013 eruption of the San Miguel volcano, El Salvador

#### ► 10-8 19.15 - 19.30

Inguaggiato S.\*, Vita F., Inguaggiato C., Mazot A., Schiavo B. & Cangemi M.: Decadal geochemical monitoring of CO<sub>2</sub> and SO<sub>2</sub> outgassing activity of Vulcano Island, Aeolian Archipelago, Italy

**■ S14. INTEROPERABLE AND MULTISCALE GEOLOGICAL DATA-ANALYSIS FOR LANDSCAPE EVOLUTION MONITORING BY APPLYING INNOVATIVE REMOTE SENSING TECHNOLOGIES**

Conveners and Chairpersons: Marina Zingaro (Università di Bari), Vincenzo Massimi (Planetek Srl), Domenico Capolongo (Università di Bari), Gaetano Ortolano (Università di Catania)

Thursday 5<sup>th</sup> September 2024 [17.30-19.30]

**Aula M**

**► 14-9            17.30 - 18.00**

[KEYNOTE] Piana F.\*, Mantovani A. & Lombardo V.: Geological Data and the concept of Quality. Theory and application

**► 14-10            18.00 - 18.15**

Salerno A.\*, Commis L. & Catalano S.: Rock outcrops classification by Sentinel-2 images: a new gis-based toolbox proposal

**► 14-11            18.15 - 18.30**

Yaaqoub A.\*, Essaifi A., Clementucci R., Ballato P., Zayane R., Faccenna C. & Pagli C.: Incision rates into Quaternary lava flows of the Middle Atlas and Western Mesta (Morocco): implications for landscape evolution

**► 14-12            18.30 - 18.45**

Malusà M.G.\*, Resentini A. & Wittmann H.: A two-stage river capture event in Corsica and its impact on erosion rates and offshore sedimentation revealed by geological and in situ <sup>10</sup>Be cosmogenic data

**► 14-13            18.45 - 19.00**

Pezzotta A.\*, Marinoni A., Al Kindi M., Zucali M. & Zerboni A.: How long does the signature of tectonic events last in the landscape? Topographical analysis of Jebel Akhdar dome and surrounding Semail Ophiolite in the Al-Hajar Mountains (northern Sultanate of Oman)

**► 14-14            19.00 - 19.15**

Di Pietro G.\*, D'Agostino A., Ortolano G., Fazio E., Visalli R., Musumeci R.E. & Cirrincione R.: Web publication of multiscale geological data, methodology and processes

**► 14-15            19.15 - 19.30**

Ruscitto V.\*, Delchiaro M., Della Seta M., Gribenski N., Richard M., Iacobucci G., Piacentini D., Zocchi M. & Troiani F.: Fluvial record interpretation for the extraction of climatic and tectonic signals in the Adriatic Piedmont Zone of the Apennines (central Italy, Marche region)

**■ S29. MULTIDISCIPLINARITY AND NUMERICAL MODELLING: A COMPREHENSIVE APPROACH FOR UPCOMING GEOSCIENCES**

Conveners and Chairpersons: Bruno Campo (Università di Bologna), Silvia Massaro (Università di Bari), Beatrice Maria Sole Giambastiani (Università di Bologna), Nunzio Luciano Fazio (CNR), Sonia Silvestri (Università di Bologna), Manuel Stocchi (Università di Bari)

Thursday 5<sup>th</sup> September 2024 [17.30-19.30]

**Aula D**

**► 29-9            17.30 - 17.45**

Stocchi M.\*, Houzeaux G., Costa A., Folch A., Massaro S. & Sulpizio R.: Modeling the priming mechanism of phreatic and geothermal eruptions: physical model and preliminary integration results

**► 29-10            17.45 - 18.00**

Srivastava E.\*, Parrino N., Kumar P.C., Calderari F., Maiorana M., Palano M. & Sulli A.: Fluid migration along fault and fracture systems in the Sicily straits: high-resolution mapping reveals connections

**► 29-11            18.00 - 18.15**

Salone R.\*, Troiano A., Di Giuseppe M.G., Isaia R. & Di Maio R.: A new insight into the dynamics of the Pisciarelli hydrothermal system (Campi Flegrei, Southern Italy) based on the integration of geophysical and numerical modelling

**► 29-12            18.15 - 18.30**

Roseto R.\*, Lollino P., Parise M., Spalluto L., Festa V. & Fazio L.: Analysis of possible failure mechanisms of a coastal rocky cliff by means of a three-dimensional discrete element model

**► 29-13            18.30 - 18.45**

Fazio N.L.\*, Lollino P., Mevoli F., de Lucia D. & Urgenti A.: 3D limit equilibrium analyses for landslide susceptibility analyses at the urban area scale

**► 29-14            18.45 - 19.00**

Fazio N.L.\*, Sollecito F., Lollino P. & Fazio V.: Enhancing the assessment of underground cave stability through machine learning-driven mechanically-based methods

**► 29-15            19.00 - 19.15**

Perrini M.\*, Gola G., Tizzani P., Fedi F., Brahimi M. & Castaldo R.: Thermo-rheological modelling of the Yellowstone caldera: insights into volcanic processes

**► 29-16            19.15 - 19.30**

Parrino N.\*, Calderari F., Palano M., Burrato P., Lo Presti V., Agate M., Gasparo M. & Sulli A.: Eroding edges: exploring the tectonic forcing on submarine canyon evolution

## ■ S32. GEOSCIENCES AT SCHOOL 2024

Conveners and Chairpersons: Francesca Cifelli (Università di Roma 3), Anna Gioncada (Università di Pisa), Claudia Lupi (Università di Pavia), Eleonora Paris (Università di Camerino), Elena Bonaccorsi (Università di Pisa)

Thursday 5<sup>th</sup> September 2024 [17.30-19.30]

### Aula N

#### ► 32-9 17.30 - 17.45

Paterni M., Alvisi F., Bianucci M.\*, Bini M., Casanova E., Caselli L., Castagnetti T., Castiglioni G., Ferdeghini F., Gigantesco P., Godani M., Locritani M., Luppichini M., Perfetti A., Rossi A. & Merlini S.: Adopt-a-Dune project: use of 'virtual adoption' and citizen science approach to increase knowledge and raise student awareness on coastal systems management

#### ► 32-10 17.45 - 18.00

Realdon G.\*, Gallo M.T. & Occhioni M.: Ocean Literacy beyond knowledge: investigating ocean connections among a sample of children in Friuli Venezia Giulia (N-E Italy)

#### ► 32-11 18.00 - 18.15

Ronca S., Berra F.\*, Crippa G., Fumagalli P., Garavaglia A., Lustrino M., Mosconi A., Saracino G. & Sottile G.: Disaggregation of geological dissemination activities in focused initiatives: "hands-on" approach for stimulating geological curiosity and knowledge

#### ► 32-12 18.15 - 18.30

Benedetto S., Genchi L. & Valletta S.\*: Caving and hiking activities for promoting knowledge and landscape preservation

#### ► 32-13 18.30 - 18.45

Bussolesi M.\*, Battiston T., Comboni D., Cavallo A. & Grieco G.: Georesources: finding the perfect mixture between science and dissemination in PCTO activities

#### ► 32-14 18.45 - 19.00

Roberto R., De Tullio M., Liso S., Rizzo A.\* & Mastronuzzi G.: Education and training activities in the frame of the ecological transition: insights from the Earth and Geoenvironmental Sciences context

#### ► 32-15 19.00 - 19.15

Furfori L.\*, Albertarelli N., Bonaccorsi E., Colotti C. & Gioncada A.: Can the interdisciplinary approach be an asset for teaching geosciences in natural sciences?

#### ► 32-16 19.15 - 19.30

Occhioni M.\* & Paris E.: A web virtual world activity on critical minerals in smartphones for 14-years old students

## ■ S41. THE EVOLUTION OF SEDIMENTARY BASINS: FROM SOURCE TO COMPLEX BASIN ARCHITECTURE

Conveners and Chairpersons: Luca Aldega (La Sapienza, Università di Roma), Paola Cipollari (Università Roma TRE), Salvatore Gallicchio (Università di Bari Aldo Moro), Lorenzo Gemignani (Università di Bologna), Andrea Schito (Universidad de Barcelona), Francesca Stendardi (Università di Pavia)

Thursday 5<sup>th</sup> September 2024 [17.30-19.30]

### Aula C

#### ► 41-8 17.30 - 18.00

[KEYNOTE] Critelli S.\*: Assembling and dismantling the supercontinent Pangaea recorded from provenance relations of Phanerozoic sandstones of the circum-Mediterranean Region

#### ► 41-9 18.00 - 18.15

(Invited) Fabbi S.\* & Cipriani A.: Tectonic activity recorded by deep basin deposits: a sedimentological approach to unravel synsedimentary tectonics

#### ► 41-10 18.15 - 18.30

Micheletti F.\*, Fornelli A., Gallicchio S., Tursi F., Criniti S. & Critelli S.: Petrographic and geochronological records from turbidite successions of the Lucanian external chain: new insights for the tectono-sedimentary evolution of the Southern Apennines, Italy

#### ► 41-11 18.30 - 18.45

Zuffetti C.\*, Felletti F. & Marini M.: Architecture of migrating channel belts in a foreland basin: insights from the Tortonian Tachrift turbidite system, Taza-Guercef basin, NE Morocco

#### ► 41-12 18.45 - 19.00

Catto B.\*, Muzzi Magalhães P. & Tinterri R.: Control of the synsedimentary tectonics on turbidite channels dynamics: an integrated study between field and subsurface data

#### ► 41-13 19.00 - 19.15

Patacci M.\* & Marini M.: The stratigraphic record of the Ventimiglia Flysch Fm, north-west Italy (western Alps foreland basin, Grès d'Annot turbidite system)

#### ► 41-14 19.15 - 19.30

Cerone D., Gallicchio S.\*, Patacci M. & Tinterri R.: Turbidite systems in tectonically-confined foredeep and trench-slope basins: a comparison between Serra Palazzo Fm. and tufiti delle Gole Candela succession (Lucanian Apennines, Italy)

**S48. MULTIDISCIPLINARY APPROACHES TO 3D GEOLOGICAL MODELLING: UNCERTAINTY MITIGATION FOR BASIN ANALYSIS AND GEOLOGICAL APPLICATIONS**

Conveners and Chairpersons: Sara Ciattoni (Università di Urbino), Daniel Tentori (CNR Montelibretti, Roma), Edoardo Barbero (CNR Torino), Fabio Feriozzi (Università di Roma Tre), Matteo Pedini (Università di Camerino), Chiara Zuffetti (Università degli Studi di Milano Statale)

Thursday 5<sup>th</sup> September 2024 [17.30-19.30]

Aula C

► 48-8 17.30 - 18.00

[KEYNOTE] D'Ambrogi C.\*: Geological 3D modeling is the new geological mapping

► 48-9 18.00 - 18.15

Anzelmo G.\*, Forzese M., Iacopini D., Carbone S., Catalano S., Montalbano S. & Maniscalco R.: Building a 3D model of CARG Ragusa Sheet 648 (Hyblean Plateau, SE Sicily, Italy): evaluating/mitigating uncertainty through the integration of structural data at different scales

► 48-10 18.15 - 18.30

Rizzo G.F.\*, Maiorana M. & Gasparo Morticelli M.: Multidisciplinary approach for 3D geological model reconstruction: the example of Mt. San Calogero (Sciacca, Southwestern Sicily)

► 48-11 18.30 - 18.45

Olita F.\*, Giampaolo V., Rizzo E., Giano S.I., Capozzoli L., De Martino G. & Prosser G.: Interpretation of subsurface data for the 3D static model of the High Agri intermontane basin: inferences for Quaternary tectonic evolution of the Southern Apennines

► 48-12 18.45 - 19.00

Pace P.\*, Scisciani V. & Mancinelli P.: 3D Subsurface structural-geological modelling at the Central-Southern Apennines boundary: the 379-Capracotta geological sheet

► 48-13 19.00 - 19.15

Barrera Acosta D.\*, Toscani G., Amadori C., Colombera L. & Di Giulio A.: 3D reconstruction of regional-scale unconformities in the Po Basin: integrating well data and seismic profiles to improve the understanding of Plio-Pleistocene evolution

► 48-14 19.15 - 19.30

Norini G.\*, Caielli G., De Franco R., Rusconi D., Aghib F., Schirolli P., Zerboni A., Piccin A., D'Ambrogi C. & the CARG sheet 121 Brescia research group: Approach and methodologies for the 3D geological modelling of the CARG 121 Brescia 1:50.000 sheet



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## POSTER SESSION

Thursday 5<sup>th</sup> September 2024

### ■ S3. Antarctica and the Arctic: unveiling the geological past and future evolution of polar regions

#### ► 3-16      Booth 1

Battaglia F., Torricella F., Belt S., Capotondi L.\*, Colizza E., Colleoni F., Di Roberto A., Langone L., Giordano P., Mollenhauer G., Pochini E. & Tesi T.: GRETA (GReatTice oveR thE VicToria LAAnd (GRETA)): resolving the Ross Sea response to continental climate change during the last two millenia

#### ► 3-17      Booth 2

Bronzo L., Morigi C.\*, Carbonara K., Caricchi C., Musco M.E., Douss N., Gois Smith F.S., Villa G., Cascella A. & Lucchi R.G.: Paleoclimatic reconstruction of the past 30.000 years through analysis on calcareous nannofossil assemblages on the west Spitsbergen margin

#### ► 3-18      Booth 3

Cornamusini G., Zurli L., Liberato G.P., Corti V.\*, Gulbranson E.L., Perotti M. & Sandroni S.: A lithostratigraphic reappraisal of a Permian-Triassic fluvial succession at Allan Hills (Antarctica) and implications for the terrestrial end-Permian extinction event

#### ► 3-19      Booth 4

Crispini L.\*, Civile D., Ferrante G.M., Locatelli M., Morelli D., Volpi V., Accettella D., Accaino F., Busetti M., Läufer A., Armadillo E., Colizza E., Salvini F. & Ruppel A.: Geodynamic processes at the Pacific margin of North Victoria Land (Antarctica): new evidence from offshore geophysical data on the crustal structure and seabed morphology (PNRA\_BOOST Project)

#### ► 3-20      Booth 5

Dumon Steenssens L.\*, Lisco S., Micheletti F. & Mastronuzzi G.: Sedimentologic and petrographic characteristics of beach ridges in Terra Nova Bay (Antarctica)

#### ► 3-21      Booth 6

Galli G.\*, Morigi C., Thuy B. & Gariboldi K.: The use of macrofaunal microfossils to unveil past Holocene changes: a case study from Edisto Inlet (Ross Sea, Antarctica)

#### ► 3-22      Booth 7

Gamboa Sojo V.M., Morigi C.\*, Langone L. & Lucchi R.G.: Paleoceanographic changes suggested by planktic and benthic foraminifera in the Western Svalbard Slope (Bellsund Drift) during the last century

#### ► 3-23      Booth 8

Simonetti M.\*, Montomoli C., Capponi G., Salvatore M.C., Casale S., Musumeci G., Cox S., Lyttle B.S., Pertusati P.C. & Läufer A.: Geological map of the Convoy Range and Franklin Island quadrangles (Victoria Land, Antarctica)

### ■ S5. Geosciences for Cultural Heritages

#### ► 5-30      Booth 9

La Russa M.\*, Ricca M., Barbieri L., Bruno F., Baika K., Raxis P., Silion M., Nunes C., Padovan R. & Ferreira F.: Bridging gaps in blue expertise through a triple transition training model for the UCH field: new challenges in uBlueTec project

#### ► 5-31      Booth 10

Ricca M.\*, La Russa M., Lagudi A., Bruno F., Chronakis A., Davidde B., Emde B., Kyprouli V., Krebs P., Krinidis S., Manglis A., Michailidis T.I., Mizaikoff B., Podvorica L., Perasso Sacco C., Rajpal S., Rieck M., Tamburino S. & Kotsidis E.: Advancing in underwater cultural heritage monitoring: the case of NERITES Project

#### ► 5-32      Booth 11

Ricca M., La Russa M.F., Sfravara F., Catania V., Montana G. & Randazzo L.\*: SOUTH - Safeguard Of sUbmerged culTural Heritage: project presentation

#### ► 5-33      Booth 12

Pantuso A.\*, Apollaro C., Fuoco I., La Russa M.F. & Ricca M.: New application prospectives of reaction path modelling for the conservation of cultural heritage: preliminary presentation of a novel research project

#### ► 5-34      Booth 13

Santarsiere C.\*, Palladino G. & Bentivenga M.: The "Cantine di Sant'Angelo Le Fratte" geosite and the historical-cultural heritage used as a growth driver for an inland area of Basilicata

#### ► 5-35      Booth 14

Krizova B.\*, Zini L., Calligaris C., Busetti A., Corradetti A., Černok A., Consorti L., Bensi S., Piano C. & Franceschi M.: Kras-Carso II Interreg European project. Multidisciplinary research towards promoting the geological heritage of the Classical Karst

#### ► 5-36      Booth 15

Bruzzone L.\*, Gaggero L. & Pallecchi S.: Reconstructing Pompeii's past: insights from fossilized archaeological remains in reused amphorae from Civic Building 3, Via dell'Abbondanza

#### ► 5-37      Booth 16

Capriotti S.\*, Mignardi S., Stasolla F.R., Scardapane S. & Medeghini L.: Deep Learning as new approach for the classification of Holy Sepulchre ceramics

#### ► 5-38      Booth 17

Franceschini M.\*, Cantisani E., Vettori S., Chelazzi L., Di Benedetto F. & Ismaelli T.: Further insight into the provenancing of terracottas from the Athenaion in Castro (Apulia, Italy)

#### ► 5-39      Booth 18

Lo Riso M., Buccione R., Rizzo G.\*, De Bonis A. & Teghil R.: Preliminary results of the petrographic and mineralogical study of the Oenotria ceramic artifact (Southern Italy)

#### ► 5-40      Booth 19

d'Aniello F., Germinario C., Izzo F., Pagano S., Scanu M.\*, Sernicola L., Verde M. & De Bonis A.: De-faience. Unveiling ancient craftsmanship: egyptian faience technique in Early Ethiopian beads

#### ► 5-41      Booth 20

Cantisani E., Cappuccini L., Gauci A., Legnaioli S., Mangani S.M.E.\*, Menchelli S., Rosselli L. & Volpe L.: APENNINESCAPE: a transdisciplinary approach to investigate the relationship between settlement dynamics and material exploitation in the northern Apennines during the 1st millennium BC. Preliminary archaeometric results

**► 5-42 Booth 21**

Balassone G.\* Serritella A., Rizzo M.L., De Bonis A., Valente E. & Boni P.: Archaeometric investigations on iron slags from the metallurgical workshop of Caselle in Pittari settlement (Campania region, southern Italy): a first look

**► 5-43 Booth 22**

Calzolari L.\* Fernandez-Martinez A., Magnin V., Medeghini L. & Mignardi S.: Ancient Roman mortars under synchrotron light: unravelling the nature of disordered phases

**► 5-44 Booth 23**

Di Benedetto C.\* Graziano S.F., Naso A. & Rispoli C.: The Etruscan necropolis of Sasso Pinzuto (Tuscania, VT): preliminary mineralogical characterization of geomaterials

**► 5-45 Booth 24**

Dimuccio L.A., Micheletti F., Amaral D.\* Vicente S., Mendes A.L., Simões F., Duarte M. & Acquafrredda P.: Provenance analysis of stone tesserae and mortars used in the mosaic pavements of São Simão Roman Villa (Penela, central Portugal): preliminary data

**► 5-46 Booth 25**

Lezzerini M.\* Aquino A. & Pagnotta S.: Lime mortar production: the case of Panchina calcarenite from Tyrrhenian coast

**► 5-47 Booth 26**

Muntoni I. M.\* Eramo G., Ruggiero G. & Clemens L.: Sand slaking in the lime mortars of Tertiveri (Foggia, 12<sup>th</sup>-15<sup>th</sup> century)

**► 5-48 Booth 27**

Ravasi T., Haynes I., Vagnuzzi S., Rispoli C., Randazzo L.\* & La Russa M.F.: Assessing construction techniques through minero-petrographic analysis of Roman mortars: insights into Imperial economic investments in building projects

**► 5-49 Booth 28**

Rea C., Bastida Armesto M., Calzolari L., Di Fazio M., Capriotti S., Mignardi S., Stasolla F.R. & Medeghini L.\*: Statistical analysis of IR spectra of mortar for studying the relationship between building phases

**► 5-50 Booth 29**

Valdrè G.\* Grillini G.C., Moro D. & Ulian G.: Finishes in architectural elements: "Domus Pasolini" of Faenza

**► 5-51 Booth 30**

Collina C., D'Aniello M., Izzo F.\* Langella A., Repola L. & Donadio C.: Geomineralogical and geoarchaeological findings in Roccia San Sebastiano cave at Mondragone, central Italy

**■ S10. The role of multidisciplinary approach in the geochemical study of natural systems****► 10-9 Booth 31**

Chemeri L.\* Nisi B., Pierozzi A., Cabassi J., Taussi M., Venturi S., Delgado-Huertas A. & Vaselli O.: Assessing the origin of N-bearing species in the surface waters from the Arno River Basin (Tuscany, central Italy): insights from nitrogen and oxygen isotopes in dissolved nitrate and nitrite

**► 10-10 Booth 32**

Chicco J.M.\* Giordano N., Mandrone G. & Comina C.: Geothermal energy as an integration of existing district heating and cooling grids: evaluation of the thermal performance of the system and of thermal disturbance on the ground from a real case study in NW Italy

**► 10-11**

--- Withdrawn --- De Leo A.\* Pedrosa-Soares A. C., Lana C. & Farina F.: Dating a pegmatitic lithium ore deposit: a critical thinking geochronology

**► 10-12**

--- Withdrawn --- Della Porta G.\*: Micro-scale carbonate precipitates associated with microbial mats in hydrothermal travertines

**► 10-13 Booth 35**

Funari V.\* Toller S., Nestola Y., Riminucci F., Iorio M., Mercadante A., Angelino A., Ape F., Greggio N., Dinelli E., Varola G., Graziano L., Coppola D., Vitale L., Tedesco P., de Pascale D. & Mantovani L.: Geochemical characterization and biotechnology potential of marine sediments from a small maritime area around Elba-Argentario Basin (Tyrrhenian Sea, Italy)

**► 10-14 Booth 36**

Mammoliti E.\* Fronzi D., Ruggeri P., Magi Galluzzi L. & Tazioli A.: Unravel the groundwater dynamics in a landfill with water isotopes: the peculiar case of Corinaldo Municipality landfill

**► 10-15 Booth 37**

Tardani D.\* Álvarez-Amado F., Poblete-González C., Godfrey L. & Matte-Estrada D.: Decoding the processes that lead to the extraordinary enrichment of lithium in the Salar de Atacama (northern Chile): new insights from Li, B and Sr isotopes in surface and groundwater

**► 10-16 Booth 38**

Taussi M.\* Vespasiano G., Tardani D., Chemeri L., Nisi B., Vaselli O., Gozzi C., Delgado-Huertas A., Agostini S., Apollaro C. & Renzulli A.: Synergic application of stable isotopes (N-O, B, C) to recognize nitrates sources and processes in the shallow phreatic aquifer of the Metauro River Basin (Central Italy)

**■ S14. Interoperable and multiscale geological data-analysis for landscape evolution monitoring by applying innovative remote sensing technologies****► 14-16 Booth 39**

Zahabnazouri S.\* Capolongo D., Wigand P., Shahbazid S. & Dimotta A.: Soil erosion assessment using the Revised Universal Soil Loss Equation (RUSLE) in Google Earth Engine in Bradano Basin

**► 14-17 Booth 40**

Balsamo L.\* Calderari F., Parrino N., Maltese A. & Sulli A.: The isoradiometric shoreline extraction method as a proxy for Medicane impact quantification: a case study of Bals event along the Sciacca coast (southern Sicily)

**► 14-18 Booth 41**

Calderari F.\* Parrino N., Balsamo L., Dardanelli G., Todaro S., Maltese A. & Sulli A.: A newly developed Shoreline Extraction tool from satellite imagery: case studies in Sicily (Central Mediterranean region)

**► 14-19 Booth 42**

De Bellis M.\*, Capolongo D., Marsico A. & Scicchitano G.: Application of morphometric indexes aimed to the monitoring of surface processes within the hydrographic basin of the Ofanto river

**► 14-20 Booth 43**

Clementucci R.\*, Uchusov E., Willett S. & Wang Y.: External forcing on drainage divide evolution in rifted margins: case of Madagascar

**► 14-21 Booth 44**

La Gioia A.\*, Scicchitano G. & Nuzzo D.: Experimental application of the Sediment Flow Connectivity Index (SfCI) in surface archaeological inter-site survey

**► 14-22 Booth 45**

Remi M.\*, La Salandra M., Zingaro M., Mancino S., Palombella M., Mastronuzzi G. & Capolongo D.: Full-coverage geomorphological mapping using opensource software: a tool for geomorphological risk analysis, management, and mitigation

**■ S18. Geosciences for the characterization, exploration and exploitation of primary and secondary mineral resources****► 18-15 Booth 46**

Attardi A.\*, Cossu D., Deidda M.L., Fancello D., Sedda L. & Naitza S.: The Mo-LREE-(W) greisen and F-LREE-(Mo) hydrothermal mineralisation in the Oschiri - Alà dei Sardi area (N Sardinia)

**► 18-2**

--- Withdrawn --- Putzolu F.\*, Armstrong R., Benson T., Emproto C., Ball R., Abad I., Boyce A., Hepburn L., Bompard N. & Herrington R.: Lithium clays in volcano-sedimentary deposits

**► 18-17 Booth 48**

Gioiello S., Santoro L.\* & Cazzaniga A.: Re-use of granite quarry waste for REEs-recovery along the industrial production chain: results from pre-concentration tests

**► 18-18 Booth 49**

Grieco G.\*, Naitza S. & Bussolesi M.: Preliminary evaluation of the antimony potential for different waste materials at abandoned mines of Villasalto and Ballao, Sardinia

**► 18-19 Booth 50**

Morelli G.\*, Chmes H., Costagliola P., Dore E., Frau F., Gonelli C., Lattanzi P., Medas D., Nannoni A., Regini G., Ruggieri G., Trumpy E., Vezzoni S. & Rimondi V.: The antimony resource in Italy: evaluation of environmental impact and ore exploration of a Critical Raw Material under the MOLIERE project

**► 18-20 Booth 51**

Naitza S.\*, Conte A.M., Petrelli M., Giovanardi T. & Secchi F.: Petrogenetic and metallogenetic constraints from dark micas compositions of late-Variscan post-collisional granite suites from southern Sardinia (Italy)

**► 18-21 Booth 52**

Natali F.\*, Quaranta S., Agostini M., De Giorgio F., Latini A., Miranda Figueira B.A. & Valdrè G.: An old material for a new application: hydrous manganese dioxide from mining tailings as supercapacitor electrode

**► 18-22 Booth 53**

Santoro L.\* & Domenighini G.: Punta Corna five-element vein system (Italy): Late-Alpine hydrothermal circulation and metallogenesis

**► 18-23 Booth 54**

Scano I.\*, Moroni M., Frau F. & Naitza S.: Ore variability in five-element (Ni-Co-As-Ag-Bi) vein systems: insights from the As/S vs. S binary plot

**► 18-24 Booth 55**

Sedda L.\*, Attardi A., Deidda M.L., De Giudici G., Fancello D., Naitza S. & Scano I.: Critical raw materials (CRMs) in the Fluminèse-Arburèse districts (SW Sardinia): guidelines for regional-scale mineral exploration

**■ S26. Sinkholes vs. land subsidence: assessment of the geological hazards and impacts on environment and society****► 26-16 Booth 56**

Buffardi C.\*: A geological-geotechnical approach to analyze the causes of subsidence in the Volturno River plain (northern Campania, Italy)

**► 26-17 Booth 57**

Campanale F., Liso I.S., Parise M. & Spalluto L.\*: Anatomy of a small sinkhole near the Adriatic coast

**► 26-18 Booth 58**

Lapietra I.\*, Liso I.S., Lollino P., Fracchiolla R., Parise M. & Rinaldi A.: A multidisciplinary approach for sinkhole mitigation strategies: the case of the urban area of Altamura (southern Italy)

**► 26-19 Booth 59**

Mevoli F.A., Fazio N.L., Perrotti M., Parise M. & Lollino P.\*: A user-friendly and mechanically-based method to assess the stability of underground caves: the iSUMM abaci

**► 26-20 Booth 60**

Nisio S., Madonna S.\*, Ruggiero L. & Gentili F.: Natural and anthropogenic sinkholes in volcanic areas an underestimated hazard

**► 26-21 Booth 61**

Onorato M.\*, Liso I.S., Parise M., Zini L., Onorato R., Congedo M., Poto M., Palmisano G. & Puglia G.: Collapse sinkholes at Palude del Capitano (Nardò, Italy)

**► 26-22 Booth 62**

Pérez-Villar G., Bausilio G.\*, Calcaterra D., Di Martire D. & Gutiérrez F.: Diapiric uplift and ground-instability processes in the Cardona salt extrusion (NE Spain) analysed by geomorphological mapping and satellite interferometry

**► 26-23 Booth 63**

Ruggiero L.\*, Ciotoli G., Mori F., Varone C., Moscatelli M. & Nisio S.: Mapping sinkhole susceptibility in Italy: a machine-learning approach for risk assessment and management

**► 26-24 Booth 64**

Tufano R.\*, Bausilio G., Di Martire D., Guerriero L., Annibali Corona M., Nisio S. & Calcaterra D.: Updated inventory of anthropogenic sinkholes in Naples (Italy) Updated inventory of anthropogenic sinkholes in Naples (Italy)

**S28. Experiences of data sharing and use in the frame of Research Data Infrastructures**

**> 28-9      Booth 65**

Antonucci A.\* Rovida A. & Locati M.: Sharing seismological data related to historical earthquakes in Italy

**> 28-10      Booth 66**

Cacciola L.\* Corsaro R.A., Reitano D., Federico C. & Messina G.: GeoChem: structure and tools of a database for geochemical data of volcanic areas

**> 28-11      Booth 67**

Carta R.\* Battaglini L., Clemente F., Lo Faro S., Petricca P. & Schvarcz T.: The CARG Project's experience in sharing geological data

**> 28-12      Booth 68**

Castorina G., Manganelli P.L.\* Blumetti A.M., Guerrieri L. & Congi M.P.: Harmonization of the new release of Earthquake Environmental Effects Catalogue (EEE Catalogue) in the context of Research Data Infrastructures

**> 28-13      Booth 69**

Di Giuseppe P.\* Perrone E., Gennaro S., Agostini S., Trumpy E., Baneschi I., Boschi C., Cornacchia I., Pennisi M., Regattieri E., Rielli A., Salvadori M., Vezzoni S. & Provenzale A.: The Isotope Virtual Research Environment developed within ITINERIS Project: example of mixing modelling

**> 28-14      Booth 70**

Fares M.\* Carluccio I., Danecek P., Della Bina E., Franceschi D., Mandiello A., Maniscalco M., Pintore S. & Tavani F.: EIDA Italian node: seismic data curation preservation e dissemination

**> 28-15      Booth 71**

Ferrari E., Massa M., Rizzo A.L., Lovati S.\* Scafidi D., Puglia R., Varchetta F., Figlioli A., D'Alema E., Mirella S. & Luzi L.: MUDA: the dynamic geophysical and geochemical MULTiparametric DAtabase

**> 28-16      Booth 72**

Funaro M.\* Congi M.P., Campo V. & Manganelli P.: The Research Infrastructure of GeoSciences: from datasets analysis to harmonization process

**> 28-17      Booth 73**

Paolillo A.\* Orefice S. & Fiorentino A.: Geological data from submerged areas: a national standardised and harmonised database

**> 28-18      Booth 74**

Pennisi M.\* Baneschi I., Vivaldo G., D'Incecco S., Raco B., Donato A., Lelli M., Berton A., Pieracci D., Puglisi G. & Provenzale A.: Instrumental enhancement to study Mt Etna ecosystem: Carbon dioxide measurements using Eddy Covariance and flux chambers (PON-GRINT project)

**> 28-19      Booth 75**

Perrone E.\* Di Giuseppe P., Gennaro S., Agostini S., Trumpy E., Baneschi I., Boschi C., Cornacchia I., Pennisi M., Regattieri E., Rielli A., Salvadori M., Vezzoni S. & Provenzale A.: The ISOTOPE Virtual Research Environment (ITINERIS project, PNRR)

**> 28-20      Booth 76**

Vallone R.\* & Basili R.: Sharing data on seismogenic faulting in Europe: the EDSF platform

**S29. Multidisciplinarity and numerical modelling: a comprehensive approach for upcoming Geosciences**

**> 29-17      Booth 77**

Califano C.\* Salone R., Troiano A., Di Giuseppe M.G., Isaia R. & Di Maio R.: Integrating geophysical models and numerical simulations to study the dynamics of the active geothermal system of Vulcano island (Italy)

**> 29-18      Booth 78**

Dioguardi F.\* Chiodini G. & Costa A.: Probabilistic hazard modelling of the non-volcanic gas emissions of Mefite d'Ansanto, Southern Italy

**> 29-19      Booth 79**

Ferroni L.\* Tassinari R., Martina A. & Marrocchino E.: Comparative soil-to-plant fractionation of rare earth elements in chlorophyll-deficient wheat mutants

**> 29-20      Booth 80**

Martina A.\* Aliprandi E., Ferroni L., Tassinari R. & Marrocchino E.: Multiparameter markers of territoriality: geochemical-isotopic and fluorometric analysis for asparagus characterization

**> 29-21      Booth 81**

Massaro S.\* Costa A., Macedonio G., Dioguardi F., Tamburello G., Bini G., Rufino F., Caliro S., Chiodini G., Sandri L., Selva J., Stocchi M., Santi A. & Avino R.: Model calibration and validation of carbon dioxide dispersion in the Atmospheric Surface Layer using data from La Solfatara crater (Campi Flegrei, Italy)

**> 29-22      Booth 82**

Silvestri S.\* Giambastiani B.M.S., Costantini F., Pezzolesi L., Guerrini F., Turicchia E., Merloni N., Archetti R., Guerrero M., Gaeta M.G., Zanuttta A., Girelli V.A., Tini M.A., Lambertini A., Giordano C.M., Boninsegni A., Casadei I., Costa M., Cavalieri E., Del Bianco F., Stanghellini G., Ravaioli S., Nannini S., Bonaccorso E., Cerrano C., Scottà F.C. & Ponti M.: Past and recent evolution of the submerged beach, shoreline, and dune-beach morphology as baseline to monitor a nature-based reef solution for coastal protection and marine biodiversity enhancement

**S31. The art of Geosciences communication**

**> 31-15      Booth 83**

Alberghina M.F.\* Ricca M., Ruffolo S.A. & La Russa M.F.: The valorisation of Cultural Heritage and the archaeometric studies as effective tools for disseminating scientific culture: the experience of the ADELE-RS project

**> 31-16      Booth 84**

Argentieri A., De Caterini G., De Ritis R.\* Romano M. & Rotella G.: Science in the Riviera dei Fiori: 'traces elements' of geology in Italo Calvino's literary output

**> 31-17      Booth 85**

Campo V.\* Antonietti D., Attanasio A., Coiro A. & Congi M.P.: GeoSciences IR: 'Thematic geological content disseminat\*ion' web system to support users

**> 31-18      Booth 86**

Colizza E.\* Geniram A., Protopsalti I. & Salvi G.: The National Antarctic Museum-Section of Trieste: integrated educational approaches for understanding environmental and climate changes

**► 31-19 Booth 87**

Coluzzi R.\* Imbrenda V. & Fanti L.: Satellites, or the Big Eye at the time of the Anthropocene: Remote Sensing for capturing landscape changes

**► 31-20 Booth 88**

Eramo G., Monno A., Tempesta G., Mesto E. & De Tullio M.\*: Gem Session: aural logos of gemstones by sonification

**► 31-21 Booth 89**

Facchino E., Mazzei S., Locchi L. & Giamborino A.\*: The Italian Paleoart Award

**► 31-22 Booth 90**

Giampaolo V.\* Calamita G., Corbo D., Fanti L. & Imbrenda V.: Land degradation: an unconventional tale

**► 31-23 Booth 91**

Pioggia M.\* & Sardella R.: SIGN ME IN - accessibility and usability of MUST (University Museum of Earth Sciences) explanatory panels for deaf visitors: an analysis

**► 31-24 Booth 92**

Troco E., Manucci F., Maganuco S.\* & Ambasciano L.: Through the pages of the ages: conveying the unfathomable depth of time in an illustrated book

**► 31-25 Booth 93**

Zuccari C.\* Artegiani F., Fagioli G., Tancredi S. & Romano M.: From 'Gerusalemme Liberata' to Dante's Divina Commedia: the seismogenic hypothesis of earthquakes linked to underground winds

**■ S32. Geosciences at school 2024****► 32-17 Booth 94**

Barbarito L., Lillo A.\* Marzolla M., Menga H. & Ricco G.: The sea: life's source

**► 32-18 Booth 95**

Barletta M.L., Benedetto S., Genchi L., Ippolito M.P., Lillo A.\* Longano D., Ratti L. & Valletta S.: Science Nights at the High School Complex in Monopoli (BA)

**► 32-19 Booth 96**

Bianchini G.\* Brombin V., Tagliacollo L., Bonadiman C. & Tassinari R.: Outdoor science experiments, hands-on learning in nature: the Nirano Mud Volcano (NMV, Fiorano Modenese, Italy) open-field laboratory

**► 32-20 Booth 97**

Bini M.\* Zanchetta G., Lazzarotti M., Luppichini M., Gemignani G. & Tarantino I.: The didactical experience of the "Laboratory of climatology and environment" of the Master Course in Environmental Science of the University of Pisa

**► 32-21 Booth 98**

Braga R.\* Ballato P., Barani S., Bentivenga M., Bordoni M., Buosi C., Ciarcia S., Donato P., Fanti R., Forni F., Francese R., Giovanardi T., Invernizzi C., Lozar F., Morsilli M., Pondrelli M., Punturo R., Ragaini L., Renzulli A., Rigo M., Saldi G., Sciascia L., Sottile G., Tavarrelli E., Tropeano M., Vezzoli G., Vitale S. & Zini L.: A nationwide effort to engage secondary school students in geology - The new Progetto Nazionale Geologia of the Piano Lauree Scientifiche

**► 32-22 Booth 99**

Brustia E., Lucarini M., Pompili R.\* & Primerano P.: A journey in the Caput Mundi geodiversity

**► 32-23 Booth 100**

Comino E.\* Balestra V., Bellopede R., Fazli M., Tamietto M., Treves A. & Zambrotta M.: Building bridges between academia and high school: the experience of "Open river Laboratory" project (in the framework of Percorsi per le Competenze Trasversali e l'Orientamento)

**► 32-24 Booth 101**

D'Amato M.\* & Stornelli C.: STEAM project to raise young people's awareness of land protection

**► 32-25 Booth 102**

Della Seta M.\* & Medeghini L.: REKHOVER-Science: REalizing Kits for HOspitals to Visualize EaRth Sciences

**► 32-26 Booth 103**

Faedda G.L.\* & Pascucci V.: Interdisciplinary approaches in geoscience education: exploring the application of entomology in ichnoentomology

**► 32-27 Booth 104**

Franza A.\* & Pratesi G.: Geoscientific school heritage: from the past to the future

**► 32-28 Booth 105**

Eurfori I.\* Bonaccorsi E., Chicco J.M., Gioncada A., Greco R., Occhipinti S., Piangiamore G.L. & Realdon G.: Didactics and dissemination in the field of georesources: the experience of the GeothermiX 2023 conference

**► 32-29 Booth 106**

Gallo Maresca M.\*: Geological narratives, a new approach to assessing skills

**► 32-30 Booth 107**

Gravina T.\* & Iannace A.: Fostering inquiry and engagement in Earth Science: designing and testing a specialized curriculum for Italian liceo students

**► 32-31 Booth 108**

Gravina T.\* Funiciello F., Realdon G. & Cifelli F.: Advancing geoscience education in Italy through teacher professional development: insights from the EGU-GEOF field officer initiative

**► 32-32 Booth 109**

Onida M.C.\* Fusì N. & Bonomi T.: Soil ecosystem: STEM approach for developing scientific thinking

**► 32-33 Booth 110**

Panza M.O., Parentini L., Pomarici R.L.\* & Serinelli M.L.: #Io sono ambiente, a laboratory path on education for sustainable development in the "I.I.S. Duni-Levi", a secondary school at Matera (Southern Italy)

**► 32-34 Booth 111**

Pioggia M., Della Seta M. & Medeghini L.\*: IN-MUST: for an inclusive earth sciences museum

**► 32-35 Booth 112**

Pioggia M.\* Sardella R., Della Seta M. & Medeghini L.: European Museums' Night 2024: understanding radiometric dating through a scavenger hunt inside the MUST (Museo Universitario di Scienze della Terra, Sapienza)

**► 32-36 Booth 113**

Punturo R.\*, Visalli R., Sturiale G., Maniscalco R. & Cirrincione R.: Raising environmental awareness in the students through geosciences: the educational importance of geotrails

**► 32-37 Booth 114**

Tosetti V.\* & Giamborino A.: "Nella fucina di Efesto": a new teaching project to promote meaningful geological learning. Peer tutoring from high school to primary school

**► 32-38 Booth 115**

Vitale S., Izzo F.\*, Piegaro E. & Riccardi U.: The GEOLAB experience at the DiSTAR (University of Naples Federico II, Italy)

**■ S34. A petrologic journey through the lithosphere****► 34-24 Booth 116**

Borghini G.\*, Crotti C.F. & Fumagalli P.: Pyroxenite generation via high-pressure crystallization of a MORB-type basalt: an experimental study at 1-2.5 GPa

**► 34-25 Booth 117**

Dini A.\*, Rielli A., Di Giuseppe P., Ruggieri G. & Boschi C.: The Se-Te-bearing VMS deposits of Tuscan ophiolites

**► 34-26 Booth 118**

Iaccarino S.\*, Montomoli C., Pippo E., Carosi R., Cottle J. & Lanari P.: HT-LP extensional shear zones in the GHS (E Nepal): preliminary data on P-T-D conditions and timing

**► 34-27 Booth 119**

Maroni A.\*, Miccoli A., Balestro G., Groppo C. & Castelli D.: The Monte Pagliano Unit in the southern Dora-Maira Massif (Western Alps): a preliminary petrologic study

**► 34-28 Booth 120**

Marras G.\* & Stagno V.: Chemistry of sulfides in the Earth's mantle: insights from magmas, mantle xenoliths and inclusions in diamonds

**► 34-29 Booth 121**

Nerone S.\*, Groppo C., Ágreda-López M., Petrelli M. & Rolfo F.: Kyanite trace element zoning as a method for unravelling migmatite petrological evolution

**► 34-30 Booth 122**

Secchiari A.\*, Toffolo L. & Tumiati S.: Quantitative analysis of sulfur volatile species generated from HP-HT experiments: a novel approach

**► 34-31 Booth 123**

Soltanmohammadi A.\*, Bedard J.H. & Hinchev A.: Sulfide mineralization in the Lower Crust of the Bay of Islands Ophiolite, Canada

**► 34-32 Booth 124**

Terranova K.G.\*, Narduzzi F., Venier M., Del Rio M., Černok A. & Ziberna L.: Exploring a Garnet-bearing Pegmatoid Pyroxenite in the Ivrea Verbania Zone (northwestern Italy): Petrography and Phase Equilibrium Modelling

**► 34-33 Booth 125**

Wafik A., Visalli R.\*, Punturo R., Conte A.M., Guglietta D., Ben Massoude M., El Aouad N., Mabika N.N. & Cirrincione R.: Neoproterozoic serpentinites from the Bou Azzer ophiolite (Central Anti-Atlas – Morocco): exploring the geodynamic changes and mantle processes beneath the boundaries of the West African Craton

**► 34-34 Booth 126**

Casetta F.\*, Aulbach S., Faccincani L., Ashchepkov I., Abart R. & Ntaflos T.: Using olivine trace elements content as a tool to reconstruct the chemical log of the sub-cratonic lithospheric mantle and the evolution of kimberlite melts

**■ S35. New frontiers of Planetary Geology****► 35-16 Booth 127**

Baroni M.\*, Baschetti B., Pisello A., Massironi M. & Petrelli M.: FRESCO, a Python open source tool to democratize CRISM spectral data management, analysis, and mapping

**► 35-17 Booth 128**

Caramanico A.\*, Lanci L. & Francioni M.: Comparative studies on Martian Landslides found in Craters of Noachian highlands: new Perspectives for Mass Wasting phenomena

**► 35-18 Booth 129**

Tangari A.C.\*, Marinangeli L., Scarciglia F., Pompilio L. & Piluso E.: Experimental alteration of volcanic bedrock: a terrestrial analogue for Mars

**► 35-19 Booth 130**

Agrosi G., Mele D.\* & Manzari P.: Identification and characterization of Martian chips by non-destructive analyses

**► 35-20 Booth 131**

Cuppone T., Palomba E. & Pratesi G.\*: Mineralogical analysis and preliminary physical property results on Didymos/Dimorphos meteorite analogues

**► 35-21 Booth 132**

Manzari P.\*, Marzo C., Giunta A. & Petropoulou V.: Supporting the characterization of Atira surfaces with synthetic photometry of meteorites

**► 35-22 Booth 133**

Melchiori G.\*, Pozzobon R., Massironi M. & Mazzarini F.: Structural analysis of wrinkle ridges in the region between Aristarchus plateau and Marius Hills in Oceanus Procellarum (Moon)

**► 35-23 Booth 134**

Permunian G., Tagliacollo L.\*, Bonadiman C., Nodari L., Brombin V. & Tassinari R.: Geochemical characteristics of a newly discovered Vigarano chondrite fragment (CV3) - Study of redox conditions with unconventional Mössbauer spectroscopy

**► 35-24 Booth 135**

Fastelli M.\*, Schmitt B., Beck P., Poch O., Zucchini A. & Comodi P.: Reflectance spectra of mascagnite and salammoniac minerals with varying viewing geometry

**■ S39. Open session on Stratigraphy and Sedimentology****► 39-15 Booth 136**

Addante M.\*, Maiorano P., Girone A., Herbert T., Marino M., Scopelliti G. & Caruso A.: Improving climatostratigraphic signals at the Gelasian GSSP type-section

**► 39-16 Booth 137**

Cipriani A., Consorti L.\*, Fabbi S., Barattolo F. & Pampaloni M.L.: Ratifying the upper Campanian to Paleogene shallow-water carbonate unit to fill a lithostratigraphic "gap" within the Apennine Carbonate Platform succession

**► 39-17 Booth 138**

Lauria A.\* Longhitano S.G., Sabato L. & Tropeano M.: Stratigraphic patterns of shelf-type deltas in the Lower Pleistocene of the Sant'Arcangelo Basin, Basilicata, southern Italy

**► 39-18 Booth 139**

Mancini A., Brandano M., Cardello G.L. & Ronca S.\*: Vertebrate pits recorded in carbonate sedimentary succession: the case study of the Pliocene Macco formation (Tarquinia – Central Italy)

**► 39-19 Booth 140**

Martella A.\* Sarti G. & Baneschi I.: Environmental and human control factors on the Holocene evolution of Venice lagoon: sedimentological and geochemical approach

**► 39-20 Booth 141**

Spina A.\* Yilmaz I.O., Capezzuoli E., Cirilli S. & Bengul N.: The end-Guadalupian anoxic event in Northern Anatolia: new constraints and correlation through palynological data

**► 39-8**

--- Withdrawn --- Patruno S.\*: Deltaic clinoforms and the stratigraphic architecture of clastic wedges: implications for the prediction of reservoir and seal facies

**► 39-22 Booth 143**

Spina A., Capezzuoli E., Gretter N., Marchetti L., Corradini C., Degl'Innocenti N., Scarani R.\* & Ronchi A.: Onset of the Permian 2nd tectono-sedimentary cycle from the Southern Alps: new constraints from palynological assemblages and regional-global inferences

**■ S41. The evolution of sedimentary basins: from source to complex basin architecture****► 41-15 Booth 144**

Barbagallo V.\* Brandano M., Borzì L., Catania G., Cornacchia I., Distefano S., Pellegrino A., Macri P., Mancini A., Marianelli D., Maniscalco R. & Di Stefano A.: Integrated stratigraphy reveals Oligo-Miocene paleoclimatic phases: a Central Mediterranean insight from the western Hyblean sedimentary succession

**► 41-16 Booth 145**

Tinterri R.\* Lima D.F. & Civa A.: Low efficiency turbidite systems controlled by the geometry of structurally-confined mini-basins (Valla and Fraschetto Systems, Oligocene, Tertiary Piedmont Basin, NW Italy)

**► 41-17 Booth 146**

Marini M., Patacci M.\* Cifelli F., Cipollari P., Mattei M. & Muttoni G.: Magnetostratigraphy and calcareous nannofossil biostratigraphy of upper Eocene turbidites (Ventimiglia Flysch Fm) from the western Alps foreland basin

**► 41-18 Booth 147**

Bellinvia L., Gasparrini M., Montano D.\* Mangenot X., Berra F., Decarlis A. & Ceriani A.: Diagenesis and paleo-fluid characterization of the Bathonian-Callovian platform carbonates from the southern Paris Basin sub-surface

**► 41-19 Booth 148**

Kim D.\* Relvini A., Forzese M., Parente M., Iannace A., Punturo R., Maniscalco R. & Ogata K.: Introducing TOOLS: climatic-tectonic modulation in the Langhian-Tortonian "megaturbidites" of the S. Mauro Formation (Cilento Group, Southern Apennines)

**► 41-20 Booth 149**

Mangenot X., Gasparrini M.\* Bonifacie M., Rouchon V., Deschamps P. & Ceriani A.: Low-temperature  $\Delta 47$ /(U-Pb) carbonate thermochronology reveals the exhumation history of the Paris Basin southern margin

**► 41-21 Booth 150**

Standardi F.\* Viola G., Carrapa B. & Vignaroli G.: Oligocene-Miocene exhumation history of the Epiligurian wedge-top basins (Northern Apennines) constrained by low-temperature thermochronology

**► 41-4**

--- Withdrawn --- Nádudvari Á.\* Maniscalco R., Forzese M., Staneczek D., Marynowski L., Cassarino G.S. & Więcław D.: Geochemical characterization of natural superficial seeps and their subsequent evolution: the case of Sicily

**■ S42. Geophysics for Tectonics and Energy Resources****► 42-9 Booth 152**

Kashi R.\* Balasco M., De Girolamo M., Graziano M., Improta L., Patella D., Pignatiello G., Siniscalchi A., Tripaldi S., Ventola I., Villani F. & Romano G.: New insights on the deep electrical structure of the Molise-Sannio region: preliminary outcomes of a Magnetotelluric survey

**► 42-10 Booth 153**

De Luca M.\* Mancinelli P., Patruno S. & Scisciani V.: Exploring the Greater East Shetland Platform (Northern North Sea, UK): integration and modelling of wellbore, seismic, gravity and magnetic data to evaluate its storage potential

**► 42-11 Booth 154**

Lolli B.\* Vannucci G. & Gasperini P.: What is in the INGV ISIDe online database before 16 April 2005?

**► 42-12 Booth 155**

Maffucci R.\* Pascazio A., Vico G., Bonamico A., Corrado S., Giordano G. & Bigi S.: Elaboration of new regional temperature-at-depth maps, aiding in the assessment of the geothermal potential in the Southern Latium

**► 42-13 Booth 156**

Pedini M.\* Cella F., Invernizzi C., Mazzoli S., Viramonte J.G. & Filipovich R.: New insights in Andean geothermal exploration: preliminary results from the Tocomar geothermal system case study (Puna, Argentina)

**► 42-14 Booth 157**

Tesauro M.\* Cortassa V., Gola G., Galgaro A. & Manzella A.: New insights from analyses of geophysical data in the Northern Apennine buried structures for evaluation of their geothermal potential

**► 42-15 Booth 158**

Tinivella U.\* Giustiniani M., Castellani B., Giovannetti R., Zannotti M., Nicolini A. & Rossi F.: Reliable long-term  $\text{CO}_2$  storage as clathrate hydrates in seawater and marine sediments: the  $\text{CO}_2$ -RESTO project

**► 42-16 Booth 159**

Ventola I.\*: Seismic-electromagnetic effect in the Pollino area: measurements, analysis and numerical modelling

**■ S48. Multidisciplinary Approaches to 3D Geological Modelling: Uncertainty mitigation for basin analysis and geological applications**

**► 48-15      Booth 160**

Abdallah IB.\*<sup>\*</sup>, Hollis C., Healy D., Prosser G. & Agosta F.: Multidimensional structural analysis of reservoir-scale fault damage zones flanking the eastern side of the High Agri Valley Basin, Southern Italy

**► 48-16      Booth 161**

Artoni A.\*<sup>\*</sup>, Cioce S., Campana D., Martini A., Calabrese L., Lambertini L. & Tinterri R.: Unexpected results from 3D geological modelling in already extensively investigated area: the SE termination of the Salsomaggiore Terme tectonic window (Northern Apennines foothills, Parma province, Italy)

**► 48-17      Booth 162**

Barbero E.\*<sup>\*</sup>, Marcelli I., Irace A., Festa A., Catanzariti R., Da Prato S., Livio F. & Fioraso G.: From geological map to 3D model: integrating surface and subsurface datasets from Sheet 177 Tortona of the Geological Map of Italy at 1:50.000 scale (CARG Project)

**► 48-18      Booth 163**

Canzoneri A.\*<sup>\*</sup>, Martorana R., Capizzi P., Bonfardeci A. & Favara R.: Characterization of the sedimentary basins in coastal plain sectors through the integration of geological and geophysical data: the case study of the North-Eastern Sicily

**► 48-19      Booth 164**

Cortassa V.\*<sup>\*</sup>, Tesauro M., Gola G., Galgaro A. & Manzella A.: Geological reconstruction of the Romagna and Ferrara folds area to evaluate its geothermal potential

**► 48-20      Booth 165**

Fonzetti R.\*<sup>\*</sup>, Buttinelli M., Valoroso L., De Gori P. & Chiarabba C.: How high-resolution tomographic imaging can provide new information on fault interaction: the case of the 2009 L'Aquila seismic sequence

**► 48-21      Booth 166**

Forzese M.\*<sup>\*</sup>, Lipparini L., Chiacchieri D., Cavallaro D., Firetto Carlino M., Scarfi L., Faenza L. & Molinari I.: Regional subsurface 3D model of southern Sicily for potential seismogenic fault characterization and seismic scenarios: the INGV SPIN project

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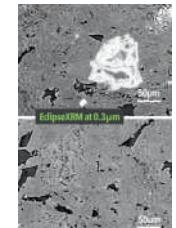
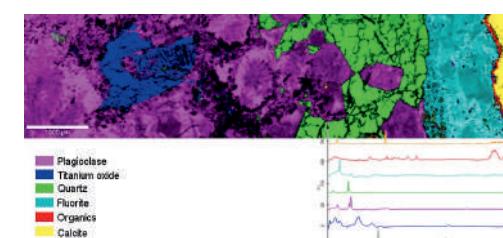
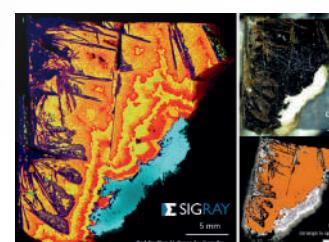
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# LA NOSTRA SOSTENIBILITÀ

L'ambizione di Ferrarelle S.B. è quella di essere un **punto di riferimento** per il business in cui opera, nel pieno rispetto dell'ambiente, delle persone, del territorio e dei più alti standard qualitativi che sono parte integrante del modello di sviluppo societario.

Per Ferrarelle S.B. la sostenibilità si declina in un impegno costante ed un approccio gestionale improntato al conseguimento di uno **sviluppo sostenibile**, capace di creare valore aggiunto per tutti gli attori coinvolti.

La ricetta della sostenibilità si compone di una costante **attenzione e cura del prodotto** e della **conservazione delle caratteristiche uniche e naturali** che conferiscono al prodotto Ferrarelle S.B. la sua straordinarietà.

Fin dai primi passi sotto la guida della famiglia Pontecorvo Ricciardi, la direzione è stata quella di adottare comportamenti ed azioni connesse ad iniziative legate alla valorizzazione del patrimonio ambientale, alla tutela delle persone e degli aspetti sociali, nonché ad aspetti economici e di governance.

Dal 2021 inoltre Ferrarelle è divenuta **Società Benefit**, rafforzando l'impegno per rendere sempre più sostenibile e trasparente il proprio impatto ambientale, sociale ed economico.



## VERSO LA NATURA: GLI ASPETTI AMBIENTALI

Ferrarelle S.B. e l'acqua hanno un legame naturale, che si traduce nella **tutela delle acque minerali e nel rispetto della risorsa idrica**. L'azienda si impegna costantemente a preservare la purezza della risorsa idrominera e conservarne le caratteristiche che la rendono unica ed inconfondibile.

Oltre alla tutela dell'acqua, l'impegno verso l'ambiente si concretizza nella **riduzione del consumo di materie prime**, in particolare della plastica (PET incluso nelle preforme e HDPE dei tappi), **nella corretta gestione e smaltimento dei rifiuti**, nonché **nella riduzione delle emissioni di gas ad effetto serra** per litri di prodotto imbottigliato, grazie soprattutto alle iniziative di risparmio energetico e all'utilizzo di energia proveniente dagli impianti fotovoltaici.

## FOCUS: DA PET A R-PET

Il **PET, polietilene tereftalato**, è una particolare tipologia di plastica adatta al contenimento degli alimenti, ideale per la produzione delle bottiglie per l'acqua. Grazie alle sue particolari caratteristiche, rappresenta un materiale riciclabile infinite volte, grazie al quale ogni bottiglia gode di nuova vita una volta riciclata.

Questo ha permesso a Ferrarelle S.B. di sviluppare delle soluzioni in bottiglie in plastica riciclata R-PET:



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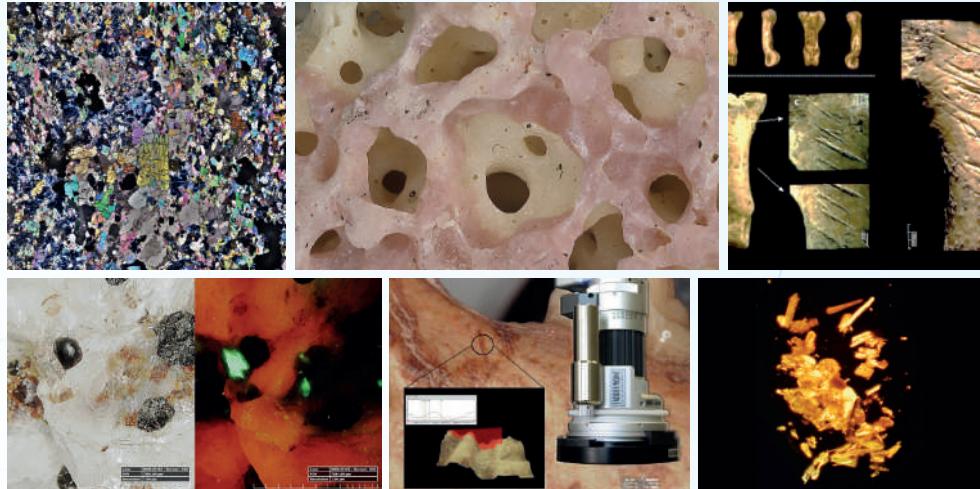
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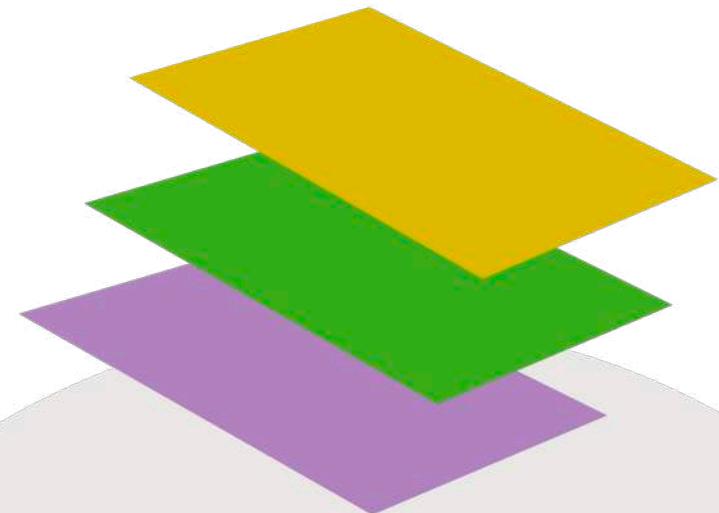
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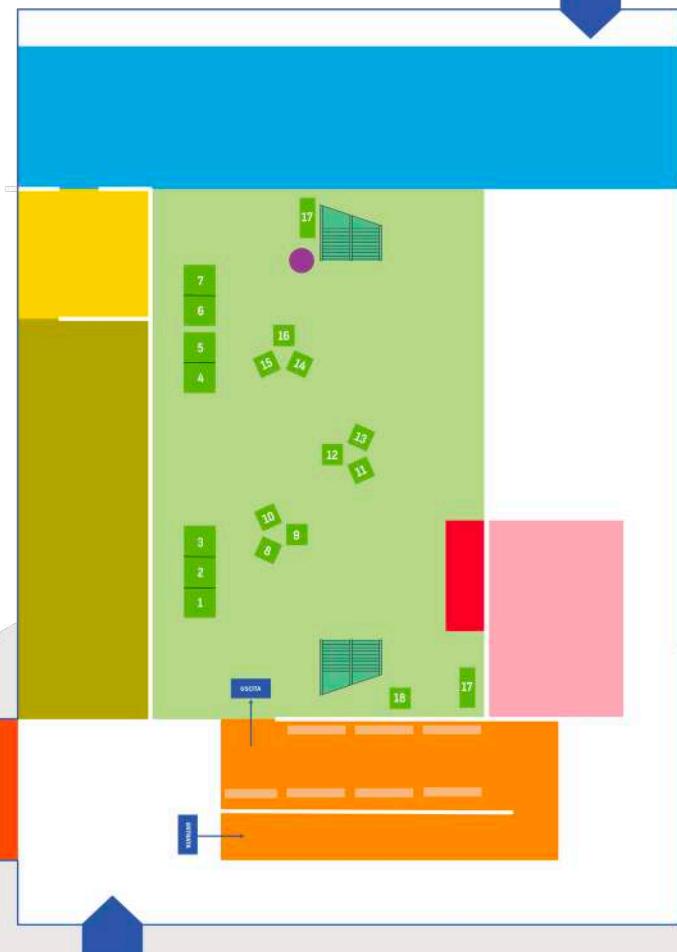


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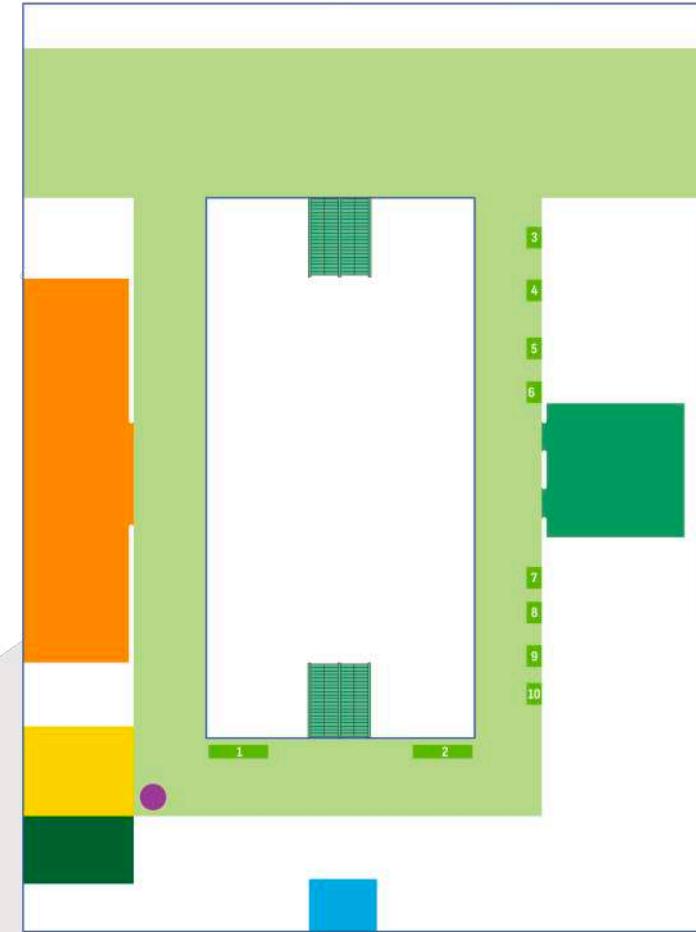


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- 18 OXFAM ITALIA
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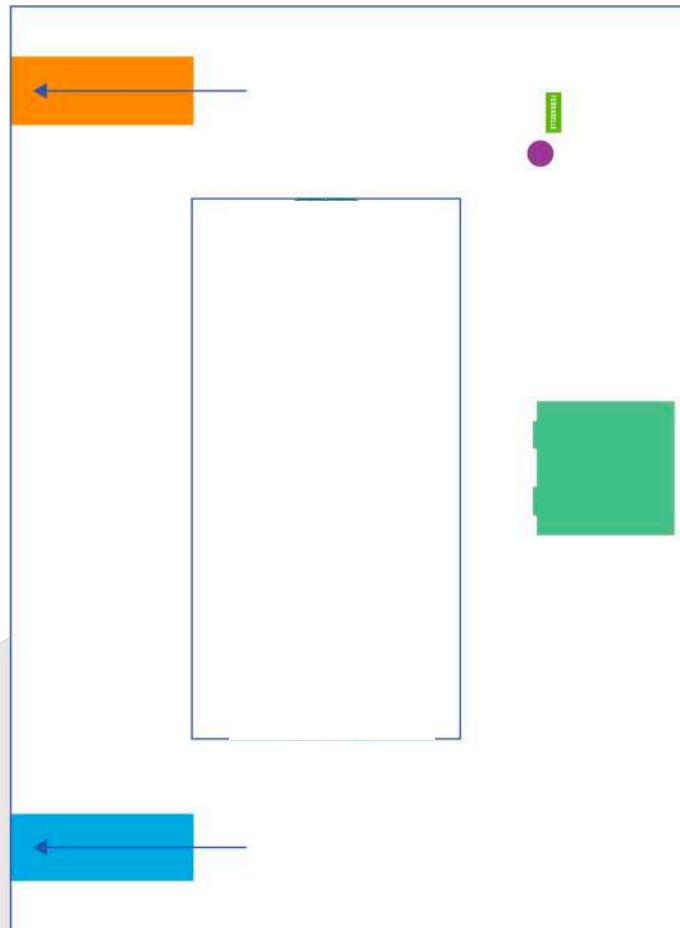
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Bari, 2 settembre 2024 (Cerimonia di apertura)

3-5 settembre 2024 (Congresso)

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Al Consiglio Nazionale dei Geologi  
Via Vittoria Colonna, 40  
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email: [segreteriaapc@cngeologi.it](mailto:segreteriaapc@cngeologi.it)

**OGGETTO:** Integrazione richiesta di accreditamento per l'aggiornamento professionale continuo dell'evento Congresso congiunto SGI-SIMP "Geology for a sustainable management of our Planet" - Bari 2 - 5 settembre 2024

Come da vostra richiesta del 6 agosto 2024, in riferimento alla richiesta di accreditamento per il Congresso congiunto SGI-SIMP "Geology for a sustainable management of our Planet" trasmessa in data 2 agosto 2024 si specifica che:

- la cerimonia inaugurale consistente nell'evento divulgativo a cura di Luigi Bignami inizierà alle ore 17 e terminerà alle ore 20;
- è possibile partecipare all'evento anche per una sola giornata;
- "Town Hall Meeting", del 03/09/2024 previsto dalle ore 17,30 alle ore 19,30 è un evento interno al congresso è da considerarsi come una sessione scientifica;

Cordiali saluti

**SOCIETÀ GEOLOGICA ITALIANA**  
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**IL SEGRETARIO GENERALE**  
**(Dott. Alessandro Zuccari)**