



# PROGRAM

Workshop held by PhD students in Earth Sciences  
35-36-37-38 cycles presenting their lines of research  
January 30<sup>th</sup> – 31<sup>st</sup>, February 1<sup>st</sup>, 2023  
Classroom 1, Geology – Mineralogy  
CU005



## January 30<sup>th</sup>, 2023

### SESSION 1: Cycle XXXV

10 AM - 12.30 PM

**Conveners:** Bosi Adele; Vergelli Lisa;  
Mastrantoni Giandomenico;  
Moscarella Alfio

#### 10 - 10.20 AM: Intro

10.20 - 10.30 AM

Altieri Alessandra (GEO/06):  
"Towards a crystal-chemical model  
for revealing the origin and evolution  
of gem-quality tourmalines"

10.30 - 10.40 AM

Masci Lucrezia (BIO/02): "Landscape  
versus climate changes at lake Volvi  
(Macedonia, Greece) during the  
Holocene"

10.40 - 10.50 AM

Antonelli Matteo (GEO/01):  
"Cretaceous dinosaur tracks of  
Periadriatic carbonate platforms and  
their palaeogeographic significance"

10.50 - 11.00 AM

Sacco Enrico (GEO/01):  
"This **MUST** be the place:  
preservation, valorisation and  
dissemination of the "hidden  
heritage" of the **MUST**"

#### 11.00 - 11.20 AM: coffee break

11.20 - 11.30 AM

Bigaroni Nico (GEO/10): "Laboratory  
experiments of fluid injection-induced  
seismicity: insights on fault  
deformation using Vp/Vs, dilation and  
fluid pressure monitoring"

11.30 - 11.40 AM

Celata Beatrice (GEO/06):  
"The water and boron relay race: a  
breakthrough on deprotonation and  
breakdown of borosilicate minerals in  
subduction systems"

11.40 - 11.50 AM

Staccioli Maria Paola (CHIM/01):  
"Active and monitoring materials for  
the environmentally safe storage and  
exhibition of works of art"

11.50 AM - 12 PM

Gori Francesca (GEO/05):  
"Hydrogeological and  
hydrogeochemical monitoring to  
identify "hydrosensitive sites" in  
central-southern Italy"

12 - 12.10 PM

Moschini Piergiorgio (GEO/08):

"Modeling clinopyroxene and  
plagioclase growth kinetics at Mt.  
Etna and Stromboli: A time-  
integrated, polybaric and polythermal  
perspective"

12.10 - 12.20 PM

Stagno Valeria (FIS/07, CHIM/12):  
"Study of wood microstructures by  
multiparametric and diffusion Nuclear  
Magnetic Resonance"

12.20 - 12.30 PM

Tancredi Simone (GEO/02):  
"Depositional structure and  
paleogeographic evolution of the  
Salento Peninsula from the upper  
Cretaceous to the Pleistocene"

#### 12.30 AM - 2 PM: lunch break

### SESSION 2: Cycle XXXVI

2 - 4.40 PM

**Conveners:** Masciulli Claudia;  
Zaccagno Davide; Cavassini Chiara;  
Ridolfi Riccardo Maria; Ozsay Rengin

2 - 2.10 PM

Volpe Giuseppe (GEO/10):  
"Friction and permeability properties  
of basement faults for a better  
characterization of their seismogenic  
potential"

2.10 - 2.20 PM

Boccacini Francesca (CHIM/12):  
"Historical metals conservation:  
sacrificial alloys and high-performing  
systems for cleaning and protection"

2.20 - 2.30 PM

Schirripa Spagnolo Giulia (GEO/03):  
"Paleo-circulation of fluids along the  
Val d'Agri extensional fault systems"

2.30 - 2.40 PM

Cosentino Antonio (GEO/05): "A new  
photomonitoring approach for  
monitoring landslides by combining  
optical, thermal and hyperspectral  
data"

2.40 - 2.50 PM

Bosi Adele (CHIM/12): "HyBridGel: A  
Bridge Between In-situ and  
Laboratory Analyses - A New  
Methodology to Identify Natural  
Organic Colours on Inorganic  
Supports"

2.50 - 3 PM

Lorenzi Valeria (GEO/05):  
"The complex functioning of a kastic  
aquifer: integrated methods for the  
characterisation of the Gran Sasso  
aquifer"

3 - 3.10 PM

Calzolari Laura (GEO/09):  
"Unlocking the secrets of hydraulic  
Roman mortars for new applications"

3.10 - 3.20 PM

Mastrantoni Giandomenico (GEO/05):  
"Data driven geological multi-hazard  
analysis relying on open-source data  
sets"

#### 3.20 - 3.50 PM: coffee break

3.50 - 4 PM

Moscarella Alfio (GEO/01):  
"Paleoneurology and Paleocology of  
Plio-Pleistocene Large Carnivora from  
the Mediterranean Area"

4 - 4.10 PM

Moumeni Taromsari Mohammad  
(GEO/03-04):

"Active Tectonics and Post-Neogene  
Structural Architecture of Astara-  
Baneh Transverse Fault Zone,  
Northwest of Iranian Plateau"

4.10 - 4.20 PM

Hamza Nagmeldeen (BIO/02): "Study  
and analysis of plant remains and  
organic residues from Tutankhamun  
tomb"

4.20 - 4.30 PM

Zocchi Marta (GEO/04-05):  
"Geomorphological applications  
supported by Artificial Intelligence for  
integrating and updating regional  
landslide inventories"

4.30 - 4.50 PM

**Awarding of the Research  
Dissemination AWARD  
(RD AWARD)**

## January 31<sup>st</sup>, 2023

### SESSION 3: Cycle XXXVII

10 AM - 1.20 PM

**Conveners:** Giuliani Laura; Bartolucci  
Beatrice; Soleimani Dinani Pegah;  
Boccacci Giulia; Pioggia Marta

#### 9.50 - 10.00: Openings

10 - 10.10 AM

Innocenzi Francesca (GEO/07):  
"Origin of 'ultra'-rocks" (ONLINE)

10.10 - 10.20 AM

Fernandez Giada (GEO/08):  
"Tephrochronology, modelling and  
dynamics of large-magnitude  
eruptions in the Central  
Mediterranean area"



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10.20 – 10.30 AM

Locchi Maria Eugenia (GEO/10):  
*"Improve earthquake kinematic models on finite fault through dynamic constraints and uncertainty studies"*

10.30 – 10.40 AM

Masciulli Claudia (GEO/05, INF/02):  
*"Multisensor/Multifrequency remote sensing for the monitoring of deformation processes: advanced modelling with artificial intelligence"*

10.40 – 10.50 AM

Pignalberi Federico (GEO/10):  
*"Incorporating Fluid Pressure in Lab Studies of Earthquake Physics and Physical Processes in Machine Learning Forecasts of Lab Earthquakes"*

10.50 – 11.00 AM

Ruscitto Valeria (GEO/04)  
*"Quaternary alluvial terraces and their response to climatic, lithologic and tectonic controls in low-rate tectonically active regions: a case study from the Marche Apennines (central Italy)"*

11.00 – 11.10 AM

Santicchia Giacomo (GEO/05):  
*"Multi-sensor monitoring for the analyses and prediction of rockfalls in the Poggio Baldi Landslide Monitoring Lab"*

11.10 – 11.20 AM

Schiavon Beatrice (GEO/07-08):  
*"Petrological monitoring of magma-mush dynamics at Stromboli: Insights on the transition from mild to violent eruptive styles"*

11.20 – 11.30 AM

Zaccagnino Davide (FIS/06, GEO/10):  
*"An integrated approach to mid-term seismic prediction"*

**11.30 – 11.50 AM: coffee break**

11.50 AM – 12.00 PM

Vico Giuseppe (GEO/03):  
*"Analysis of deep carbonate platforms for the identification of geothermal potential systems in the Latina Valley (Internal Central Apennines)"*

12.00 – 12.10 PM

Ozsoy Rengin (GEO/07):  
*"Characterization of pyroclastic deposits within Central Anatolia Volcanic Province (CAVP) in order to reconstruct recent explosive volcanic eruptions"*

12.10 – 12.20 PM

Cavasinni Chiara (BIO/02):  
*"Vegetational markers of climatic and hydrological impact vs. human resilience in coastal subsiding plains: present pattern and historical trajectories for a future management"*

12.20 – 12.30 PM

Graziani Stefano (GEO/03):  
*"A new approach in surface geochemical monitoring of CO<sub>2</sub> storage sites"*

12.30 – 12.40 PM

Pardo Silvio (GEO/10):  
*"CO<sub>2</sub> storage for the energetic transition: geomechanical modeling and laboratory experiments"*

12.40 – 12.50 PM

Pascasio Alessandro (GEO/03):  
*"Evaluation of the Geothermal potential in central Italy"*

12.50 – 1 PM

Ridolfi Riccardo Maria (GEO/03):  
*"Evaluation of hydrogen storage potential in Italy"*

1 – 1.10 PM

Vera Polo Pablo (GEO/01):  
*"The study of a past interglacial vegetation changes as a tool to understand the human role in hydrological changes"*

1.10 – 1.20 PM

Hfaiedh Emna (GEO/05):  
*"Contribution of hydrochemistry and isotope geochemistry to the study of hydrodynamics and mineralization of the Mornag aquifer system, NorthEastern Tunisia"*

**1.20 – 2.30 PM: lunch break**

**SESSION 4: Cycle XXXVII**

2.30 – 4.50 PM

**Conveners:** Berardo Giorgia; Bianchini Marco; Felli Giulia; Fiorini Andrea; Gianchiglia Flaminia

2.30 – 2.40 PM

Giuliani Laura (CHIM/12, FIS/07):  
*"High viscosity polymer dispersion: an innovative versatile soft matter for cleaning stone materials"*

2.40 – 2.50 PM

Benedetti Francesca (CHIM/12, GEO/09):  
*"Protection and consolidation of stone Heritage: the role of carbonatogenic bacteria"*

2.50 – 3 PM

Bartolucci Beatrice (FIS/06):  
*"ENVISAGE - Conservative and sustainable methodologies for the energy requalification of historic buildings"*

3 – 3.10 PM

Trocchi Martina (BIO/08, FIS/07):  
*"Dental growth in Homo as an estimate of individual ontogeny: adaptive and evolutionary"*

3.10 – 3.20 PM

Sela Wiener Adi (CHIM/12, GEO/09):  
*"CSMs | City Scape Materials and Materiality - Redefining urban heritage materiality: a conceptual study of Jerusalem"*

**3.20 – 3.50 PM: coffee break**

3.50 – 4.00 PM

Pioggia Marta (GEO/01):  
*"SIGN ME IN accessibility and usability of MUST's explanatory panels for deaf visitors: an analysis"*

4.00 – 4.10 PM

Soleimani Dinani Pegah (GEO/03):  
*"Carbon Capture Storage in Lorestan area of Iran. Experimental and Numerical Analysis"*

4.10 – 4.20 PM

Biribicchi Chiara (CHIM/12):  
*"Sustainable Cultural Heritage Conservation: new green materials for the cleaning of artworks"*

4.20 – 4.30 PM

Kratter Matilde (CHIM/12, GEO/09):  
*"The use of bacteria for the conservation and restoration of cultural heritage. Study and development of new green techniques"*

4.30 – 4.40 PM

Vassallo Ylenia (AGR/12):  
*"From artefact to microbe and beyond: innovative biomolecular approaches applied to cultural heritage"*

4.40 – 4.50 PM

Vergelli Lisa (CHIM/12, FIS/06):  
*"Preventive Conservation of Heritage Collections in the era of Climate Change"*

4.50 – 5 PM

Marianelli Diego (GEO/02):  
*"The Oi-1 and Mi-1 events: insights from shallow and deep carbonate successions of the central and western Mediterranean" (ONLINE)*



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## February 1<sup>st</sup>, 2023

### **SESSION 5: Cycle XXXVIII**

10 AM – 1.30 PM

**Conveners:** Altieri Alessandra; Masci Lucrezia; Bigaroni Nico; Staccioli Maria Paola; Kratter Matilde

### **10.00 – 10.10 AM: Openings**

10.10 – 10.20 AM

Angellotti Antonio (GEO/07):

*"Investigation of mineral inclusions trapped in (sub)lithospheric diamonds with implications for their origin and ascent rate"*

10.20 – 10.30 AM

Berardo Giorgia (GEO/05):

*"Prevention and management of NaTech risk triggered by seismic and hydrogeological events, in Major-Hazard Industrial Plants"*

10.30 – 10.40 AM

Boccacci Giulia (FIS/06):

*"Towards a new vision for the immovable war heritage: preventive conservation and new uses"*

10.40 – 10.50 AM

Bianchini Marco (GEO/02):

*"Submarine landslides in Italian seas; statistical exploitation of geodatabase to identify controlfactors and their role in geohazarda assessment"*

10.50 – 11.00 AM

Di Carlo Maria Cristina (GEO/06):

*"Hazard assessment of fibrous antigorite in areas of the Calabrian-Lucanian Apennines (Italy)"*

11.00 – 11.10 AM

Selvaggi Mallorqui Mar (GEO/01):

*"Paleoenvironmental reconstruction based on benthic foraminiferal assemblages and geochemical tracers applied in the characterization of the Mediterranean Thermohaline Circulation since the last deglaciation"*

11.10 – 11.20 AM

Di Marcantonio Eduardo (GEO/08):

*"Isotopic techniques applied to the study of diffuse pollution by organochlorines in sediments and soils"*

### **11.20 – 11.30 AM: coffee break**

11.30 – 11.40 AM

Di Renzo Maria Elena (GEO/05):

*"Zonation of multi hazard interacting with linear infrastructures"*

11.40 AM – 11.50 PM

Feliziani Federico (GEO/05):

*"Influence of climate on landslide: an analysis based on coupled stress-strain and landscape evolution modelling"*

11.50 – 12.00 PM

Felli Giulia (GEO/05):

*"Development of an integrated 4.0 system for the management and remediation of a contaminated site"*

12.00 – 12.10 PM

Ferrarotti Matteo (GEO/05):

*"Quantitative scenarios of geo-multihazard as a function of time in relation to strategic infrastructures"*

12.10 – 12.20 PM

Fiorini Andrea (GEO/03):

*"Circulation of fluids within fold-and-thrust belts: the role of frontal thrusts and transverse zones"*

12.20 – 12.30 PM

Giacconi Matteo (BIO/08):

*"Life in the cradle of civilization: a multi-isotopic study on diet and mobility in ancient Southern Mesopotamia"*

12.30 – 12.40

Gianchiglia Flaminia (GEO/08, GEO/06):

*"Environmental and health risk assessment of volcanic ash in densely populated areas"*

12.40 – 12.50

Marras Giulia (GEO/07):

*"Geochemical and petrological investigation of Large Igneous Provinces (LIPs): implications for the redox state of the Earth's interior through time and its role on catastrophic volcanic events"*

12.50 – 1 PM

Moretto Vincenzo (GEO/03, GEO/02):

*"Reconstructing fluid circulation and temperature evolution in fault zones in space and time"*

1. – 1.10 PM

Petronelli Denise (GEO/02):

*"Multiscale geomorphological analysis of primary and erosive-depositional processes in submarine volcanic environments of the Aeolian Islands"*

1.10 – 1.20 PM

Ercoles Isabella (GEO/08):

*"Provenance study on coins minted at Elea/Velia: Pb-Sr isotopes and Archaeometallurgy" (ONLINE)*

### **1.20 PM: lunch**



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## ACKNOWLEDGEMENTS

The Coordinator of the PhD Programme in Earth Sciences of Sapienza - University of Rome, Prof. Silvio Mollo, acknowledges the Representatives of PhD Students Chiara Biribicchi, Beatrice Schiavon, Lisa Vergelli, and Giacomo Santicchia for their efforts in organizing this workshop. Prof. Marta Della Seta and Prof. Fabio Trippetta are also acknowledged for their valuable role as vice-Coordinator and Head of Multidisciplinary Education of the PhD Programme in Earth Sciences, respectively. The Coordinator is extremely grateful to the continuous support provided by all the Members of the PhD Board and Supervisors and co-Supervisors of PhD students. Special thanks go to the Secretary Office of the PhD Programme, Silvia Tabuani and Cristina Perinelli.

## COMMITTEE OF THE RESEARCH DISSEMINATION TRAVEL AWARD

Chair, Altieri Alessandra  
Member, Gori Francesca  
Member, Masci Lucrezia  
Member, Stagno Valeria  
Member, Tancredi Simone  
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Supplemental Member, Moschini Piergiorgio  
Supplemental Member, Antonelli Matteo

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