

**Giovedì 9 luglio 2026
AULA AUDITORIUM (10.30 - 13.15)**

S04 - REVEALING THE DYNAMICS OF MAGMA ASCENT IN OPEN-VENT AND DORMANT VOLCANOES

Conveners: *Flora Giudicepietro (INGV-OV), Lucia Pappalardo (INGV-OV)*

10.30 – 10.45

Long-term magma output rate at Stromboli volcano from satellite-derived thermal data

Coppola Diego, Laiolo Marco

10.45 – 11.00

Volcanic ash erupted from Stromboli volcano during "normal activity" can help in anticipate eruptive style transitions: implications for petrologic monitoring

D'Oriano Claudia, Andronico Daniele, Cristaldi Antonino, Costa Simone, Landi Patrizia

11.00 – 11.15

Seismic data analysis for the characterization of landslide and spattering signals at Stromboli volcano (Italy)

Calabria Pierfrancesco, Calvari Sonia, Esposito Antonietta, Giudicepietro Flora, Macedonio Giovanni

11.15 – 11.30

A new conceptual model for Stromboli's magma dynamics

Burton Mike, Johnson Chris, Arzilli Fabio, Polacci Margherita, Salerno Giuseppe, Esse Benjamin, La Spina Alessandro, La Spina Giuseppe, Smith Katherine

11.30 – 11.45

From micro-scale bubble dynamics to large-scale volcanic processes

Graziani Elena, Sottili Gianluca, Colucci Simone

11.45 – 12.00

Coseismic displacement in the Campi Flegrei caldera (Italy): the 1 September 2025 earthquake swarm in the Mt. Olibano–Accademia area

Giudicepietro Flora, Casu Francesco, Bonano Manuela, Brandi Giuseppe, De Luca Claudio, De Martino Prospero, Di Vito Mauro A., Dolce Mario, Iorio Antonio, Macedonio Giovanni, Manunta Michele, Monterroso Fernando, Pappalardo Lucia, Ricciolino Patrizia, Roa Yenni Lorena Belen, Scarpato Giovanni, Striano Pasquale, Lanari Riccardo

12.00 – 12.15

Modeling surface deformation at Campi Flegrei induced by dike ascent

Macedonio Giovanni, De Martino Prospero, Brandi Giuseppe, Dolce Mario, Giudicepietro Flora, Iorio Antonio, Scarpato Giovanni

12.15 – 12.30

Relationships between the Vesuvius and Campi Flegrei volcanic systems in the 16th–17th centuries as evidenced by artistic and literary sources

Giudicepietro Flora, Calabria Pierfrancesco, Cubellis Elena, Giacomelli Lisetta, Macedonio Giovanni, Martini Chiara, Pappalardo Lucia, Pirovano Donato, Priolo Calogero Giorgio, Scandone Roberto, Leone de Castris Pierluigi

12.30 - 12.45

Decoding the Plumbing System, Pre-Eruptive Conditions and Timescales of the 1906 Mount Vesuvius Eruption: Constraints from Petrological and Geochemical data, and modeling

Torrese Francesco, Arienzo Ilenia, Buono Gianmarco, Cariddi Bruna, Cubellis Elena, De Vita Sandro, Di Vito Mauro Antonio, Pappalardo Lucia, Pelullo Carlo, Petrosino Paola, Sparice Domenico

12.45 - 13.00

Machine Learning-Based Applications on Stromboli Volcano Data for Monitoring Purposes: A Review

Esposito Antonietta M., Calabria Pierfrancesco, De Cesare Walter, Macedonio Giovanni, Giudicepietro Flora

13.00 - 13.15

DISCUSSIONE

Giovedì 9 luglio 2026
AULA 1 (10.30 - 13.15)

S06 - HUMANS AND VOLCANOES: A LONG HISTORY OF INTERACTION

Conveners: *Daniele Musumeci (UniCT), Stefano Branca (INGV-OE), Sandro de Vita (INGV-OV), Franco Foresta Martin (INGV-PA)*

10.30 – 10.45

Power and gaze: the human experience of volcanoes across myth, philosophy, literature, and geoethics

Gabrielli Fabio, Topazio Sonia, Peppoloni Silvia, Giordano Guido

10.45 – 11.00

Polynesian Geomyths as Early Records of Volcanic Processes

Mari Nicola, Lancini Loredana, Musumeci Daniele

11.00 – 11.15

Emilia Poli Marchese's Research on Volcanic Environments: A Comparison between Mount Etna and Mount Fuji in the History of Botany

Musumeci Daniele, Giusso del Galdo Gian Pietro, Ingaliso Luigi, Branca Stefano

11.15 – 11.30

Mount Etna through Emily Lowe's eyes: perception of volcanic risk between wonder and danger

Alabiso Chiara

11.30 – 11.45

The affective afterlives of volcanic eruptions through the geopoetics of music: Geology, emotion, and song in more-than-human worlds

Vergara-Pinto Francisca

11.45 – 12.00

The 1776 and 1790 landslides in the Niscemi town (Caltanissetta, Italy): historical evolution and spatial reconstruction

Branca Stefano, Ciuccarelli Cecilia, Marino Christian, Mattia Mario, Militello Paolo

12.00 – 12.15

The long reconstruction of the Val di Noto following the 1693 earthquake: new towns, reconfigurations, and continuities

Marino Christian, Mattia Mario

12.15 – 12.30

The Etna landscape in Sicily and the socio-spatial construction of "disaster"

Pantaleo Valentina

12.30 – 12.45

Volcanic Forcing and Climate Impact: analysis of time series of meteorological data in the last two centuries in Italy

Mattia Mario, Messina Danilo, Strano Gioacchino

12.45 – 13.00

Risk Faults: Relocation, Displacement, and Homemaking on the Slopes of Mount Etna

Benadusi Mara, Mattia Mario, Ciccaglione Rita, Lo Bartolo Vincenzo

13.00 – 13.15

DISCUSSIONE

Giovedì 9 luglio 2026
AULA 2 (10.30 - 13.15)

S09 - ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING FOR NEW DISCOVERIES IN VOLCANOLOGY

Conveners: *Claudia Corradino (INGV-OE), Flavio Cannavò (INGV-OE)*

10.30 – 10.45

From DAS Data to Earthquake Localization: An AI-Based Processing Pipeline for Seismic Monitoring at Campi Flegrei

Corsaro Miriana, Currenti Gilda, Cannavò Flavio, Palazzo Simone, Allegra Martina, Jousset Philippe, Prestifilippo Michele, Spampinato Concetto

10.45 – 11.00

A deep learning-based inversion model for instantly imaging the three-dimensional distribution of volcanic deformation sources

Allegra Martina, Cannavò Flavio, Currenti Gilda, Jousset Philippe, Corsaro Miriana, Spampinato Concetto, Palazzo Simone

11.00 – 11.15

A cluster-based framework for groundmass glasses: toward near-real-time petrological monitoring at frequently erupting volcanoes

Costa Simone, D'Oriano Claudia, Corsaro Rosa Anna, Petrelli Maurizio

11.15 – 11.30

Detecting volcanic phenomena through QCNN and Satellite Multispectral Imagery

Torrìsi Federica, Corradino Claudia, Catuogno Tommaso, Grilli Alessandro, Verducci Mattia, Sebastianelli Alessandro, Giannelli Luigi, Paladino Elisabetta, Del Negro Ciro

11.30 – 11.45

High-Resolution Thermal and Gas Monitoring of Volcanoes Using Multi-Sensor Super-Resolution and Cross-Modal Learning

Di Bella Giovanni Salvatore, Corradino Claudia, Cariello Simona, Torrìsi Federica, La Spina Alessandro, Del Negro Ciro

11.45 – 12.00

Predicting Volcanic Thermal Conditions via LSTM-SGAN Modeling from Multi-Sensor Satellite Time Series: Insights from the Vulcano Case Study (2016–2024)

Spina Francesco, Battiato Sebastiano, Bilotta Giuseppe, Ortis Alessandro, Diliberto Iole Serena, Nastasi Danilo, Ganci Gaetana

12.00 – 12.15

Enhancing Volcanic SO₂ Plume Quantification Using Sentinel-5P TROPOMI and Vision Foundation Model

Cariello Simona, Corradino Claudia, La Spina Alessandro, Del Negro Ciro

12.15 – 12.30

On the use of the ACE Climate Model Emulator to investigate the climatic impact of volcanic activity

Basile Lorenzo, Amato Eleonora, Zago Vito, Del Negro Ciro

12.30 - 12.45

Advanced AI-based downscaling approaches, including emerging quantum-inspired methods, to study volcanic systems and their impacts on climate

Amato Eleonora, Basile Lorenzo, Zago Vito, Del Negro Ciro

12.45 - 13.15

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Giovedì 9 luglio 2026
AULA AUDITORIUM (14.15 - 15.45)

[Continua] S04 - REVEALING THE DYNAMICS OF MAGMA ASCENT IN OPEN-VENT AND DORMANT VOLCANOES

Conveners: *Flora Giudicepietro (INGV-OV), Lucia Pappalardo (INGV-OV)*

14.15 – 14.30

Deciphering Volcanic Unrest: Ground and Satellite Insights into Hydrothermal Buffering and Sealing at Vulcano Island (2018–2024)

Tamburello Giancarlo, Aveni Simone, Bini Giulio, Calabrese Sergio, Coppola Diego, Inguaggiato Salvatore, Pecoraino Giovannella, Rouwet Dmitri, Vita Fabio

14.30 – 14.45

Unraveling post-unrest instability phases in long-lived hydrothermal systems: A multiparametric analysis of cyclical reactivation episodes in 2024–2025 at La Fossa Cone (Vulcano, Italy)

Indovina Enrico, Spampinato Letizia, Pailot-Bonnetat Sophie, Sciotto Mariangela, Harris Andrew, Cannata Andrea, Salerno Giuseppe, Pagano Matteo

14.45 – 15.00

Unravelling the reactivation of long dormant magmatic reservoirs using petrological and experimental constraints: the case of La Palma 2021 eruption

Andújar Joan, Di Carlo Ida, Frascerra Diletta, Slodczyk Aneta, Núñez-Guerrero Elena, Casillas Ramón, Suárez Eduardo D., Domínguez-Cerdeña Itahiza, Meletlidis Stavros, López Carmen, Martí Joan

15.00 – 15.15

Investigation on the dynamics of paroxysmal eruptions through a joint analysis of high-precision deformation data and video recordings during 2012–2022 Etna lava fountains

Carleo Luigi, Amadio Francesco, Andronico Daniele, Bonaccorso Alessandro, Currenti Gilda, Prestifilippo Michele

15.15 – 15.45

DISCUSSIONE

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AULA 1 (14.15 - 16.15)

[Continua] S06 - HUMANS AND VOLCANOES: A LONG HISTORY OF INTERACTION

Conveners: *Daniele Musumeci (UniCT), Stefano Branca (INGV-OE), Sandro de Vita (INGV-OV), Franco Foresta Martin (INGV-PA)*

14.15 – 14.30

Preserving Volcanic Structures and Eruptive Effects for Educational, Tourism, and Scientific Purposes

Giacomelli Lisetta, Scandone Roberto

14.30 – 14.45

Life and Diet in Late Antique Puteoli: Preliminary Isotopic Insights from the Early Christian Necropolis of San Vito (Phlegraean Fields, Pozzuoli, Italy)

Russolillo Anna, Tykot Robert, Tardugno Maria Luisa, Abbate Anna, de Vita Sandro, Di Vito Mauro A., Foresta Martin Franco

14.45 – 15.00

The puzzling case of the tuff maiden sculpture from the Bronze Age village of Ustica (Italy): joke, hoax or sensational discovery?

de Vita Sandro, Russolillo Anna, Montana Giuseppe, Randazzo Luciana, Targia Domenico, Foresta Martin Franco

15.00 – 15.15

Campi Flegrei: integrating marine and onland geo-archaeological data to reconstruct the evolutionary processes of the caldera

Di Vito Mauro Antonio, Tardugno Maria Luisa, Madonna Serena, Silani Michele, Agizza Salvatore, de Vita Sandro

15.15 – 15.30

Distinguishing obsidian from obsidian-like glass: an archaeometric study of black-appearing fragments from Ustica (Italy)

Foresta Martin Franco

15.30 – 15.45

Socio-territorial approach for studying vulnerability and opportunities: the cases of Catania and the Strait of Messina

Lipari Licia

15.45 – 16.00

The use of hawynofiro lavas as aggregate in the mortars of the city walls of Melfi (Potenza) Basilicata Region - Italy

Barca Donatella

16.00 – 16.15

DISCUSSIONE

Giovedì 9 luglio 2026
AULA 2 (14.15 - 16.15)

S02 - VOLATILES IN MOTION: GEOCHEMICAL INSIGHTS INTO MAGMA DEGASSING, VOLATILE TRANSFER, AND SURFACE GAS EMISSIONS

Conveners: *Andrea Ricci (UniPI), Pierangelo Romano (INGV-PI)*

14.15 – 14.30

Magma from the crust-mantle transition zone driving the 2023-2024 Sundhnúksgrágar eruptions, Iceland

Caracciolo Alberto, Bali Enikö, Matthews Simon, Merrill Heini, Halldórsson Sæmundur Ari, Prašek Marko, Hanyu Takeshi, Shimizu Kenji, Chang Qing, Ushikubo Takayuki

14.30 – 14.45

Partitioning of mercury between picritic melts, silicate minerals and Fe-Ni(-S) metals under high pressure and temperature conditions

Benedetti Federica, Marras Giulia, Shang Lei, Morelli Tommaso Maria Gabriele, Lin Yanhao, Stagno Vincenzo

14.45 – 15.00

Distribution and concentrations of magmatic mercury from the earliest submarine activity of Mt. Etna: the case of Aci Castello pillow lavas

Benedetti Federica, Morelli Tommaso Maria Gabriele, Marras Giulia, Angellotti Antonio, Corsaro Rosa Anna, Stagno Vincenzo

15.00 – 15.15

A decade of SO₂ flux and thermal observations at Mount Etna: Insights into magma supply, storage and eruptive activity

Lo Bue Trisciuzzi Giovanni, Aiuppa Alessandro, Bitetto Marcello, Coltelli Mauro, Ciancitto Francesco, Ganci Gaetana, Palano Mimmo, Bilotta Giuseppe, Pecora Emilio, Principato Paolo, Vitale Angelo, Delle Donne Dario

15.15 – 15.30

Volcanic Sulfur Dioxide estimates through Machine Learning using MSG-SEVIRI and Sentinel-5P TROPOMI

Dozzo Maddalena, Aiuppa Alessandro, Lo Bue Trisciuzzi Giovanni, Ganci Gaetana

15.30 – 15.45

Impact of volcanic emissions on atmospheric deposition: the cycle of mercury and other volatile elements at Mount Etna and Vulcano island (Sicily, Italy)

Tripodi Francesco, Brugnone Filippo, D'Alessandro Walter, Pecoraino Giovannella, Brusca Lorenzo, Meloni Federica, Cabassi Jacopo, Stagno Vincenzo, Calabrese Sergio

15.45 – 16.00

Diffuse emission of CO₂ and geochemical survey from El Hoyon Volcano, El Salvador

Martínez Hernández Emerson, Solano Melara Norbis Salvador, Li Vigni Lorenza, Sandoval-Velásquez Andrés, D'Alessandro Walter, Conoscenti Christian, Calabrese Sergio

16.00 – 16.15

An integrated framework for quantifying gas emissions and heat flux in hydrothermal systems:
Insights from Le Biancane geothermal area (Larderello field, Italy)

*Granieri Domenico, Cerminara Matteo, Mazzarini Francesco, Novellino Rocco, Trolese Matteo, Dallara
Evelina, Lelli Matteo*