

**Mercoledì 8 luglio 2026
AULA AUDITORIUM (09.00 - 11.00)**

S03 - TRACKING MAGMA ASCENT FROM RESERVOIRS TO SURFACE: BRIDGING EXPERIMENTS, MODELLING AND OBSERVATIONS TO INVESTIGATE PRE- AND SYN-ERUPTIVE PROCESSES

Conveners: *Barbara Bonechi (University of Manchester), Emily C. Bamber (ISSMC CNR), Elisa Biagioli (University of Manchester), Giuseppe La Spina (INGV-OE)*

09.00 – 09.15

Tracing magma emplacement with surface and subsurface imaging

Lanari Riccardo, Smith Adam, Stumpp Douglas, Bonini Marco, Del Ventisette Chiara, Fox Matthew, Cabrera-Pérez Iván, Montanari Domenico

09.15 – 09.30

Olivine zoning and diffusion chronometry track the reawakening of the Voragine crater at Etna during the summer 2024

Cardone Massimiliano, Costa Giorgio, Giuffrida Marisa, Viccaro Marco

09.30 – 09.45

Multidisciplinary constraints on magma dynamics fueling the 2022-23 volcanic activity at Mt. Etna

Giuffrida Marisa, Miggiano Alessandro, Cannata Andrea, Di Grazia Giuseppe, Salerno Giuseppe, Viccaro Marco

09.45 – 10.00

Dynamics of fumarole emissions during the eruptive activity of Mount Etna, 2019-2021

Sortino Francesco, Calderone Lorenzo, Giammanco Salvatore, Ferlito Carmelo

10.00 – 10.15

New insight into the plumbing system dynamics of the present-days activity of Stromboli from a clinopyroxene-only geothermobarometer

Francalanci Lorella, Avanzinelli Riccardo, Bagnoli Emma, Braschi Eleonora, Orlando Andrea, Casalini Martina, Paternostro Simone, Tommasini Simone

10.15 – 10.30

Bullet eruptions and crustal assimilation in fast-ascending magmas (Logudoro Volcanic Field, Italy)

Di Rollo Edoardo, Perinelli Cristina, Cardello Giovanni Luca, Palladino Danilo Mauro, Sottili Gianluca, Stagno Vincenzo, Gaeta Mario

10.30 – 10.45

Protracted magma fragmentation during mafic explosive eruptions

Taddeucci Jacopo, Del Bello Elisabetta, Andronico Daniele, Rodríguez Fatima, Martín-Lorenzo Alba, Pennacchia Francesco, Pontesilli Alessio, Mangiacapre Antonio, Buono Gianmarco, Pappalardo Lucia, Nazzari Manuela, D'Auria Luca, Palladino Danilo M., Scarlato Piergiorgio

10.45 – 11.00

DISCUSSIONE

Mercoledì 8 luglio 2026
AULA 1 (09.00 - 11.00)

S05 - TRANSDISCIPLINARY APPROACHES TO VOLCANO MONITORING AND HAZARD ASSESSMENT: AI, SEISMOLOGY, GEODESY, AND REMOTE SENSING

Conveners: *Roberto Manzo (INGV-OV), Umberto Tammaro (INGV-OV), Claudio Martino (INGV-OV), Marius Isken (GFZ)*

09.00 – 09.15

The Application of Remote Sensing Data (SAR, Thermal and Optical) and Geodetic Modeling to Investigate the Volcanic Activity at Semeru Volcano (Indonesia)

Galetto Federico, Reale Diego, Coppola Diego, Sansosti Eugenio, Pritchard Matthew

09.15 – 09.30

Rethinking volcanic heat from space: a new thermal framework for global heat budget revision, activity classification, and eruption precursor detection

Aveni Simone, Coppola Diego, Laiolo Marco

09.30 – 09.45

Understanding of Strong Coupling Between Land-Ocean-Atmosphere-Meteorological Parameters Associated to the Volcanic Eruptions Using Multi Satellite Data

Singh Ramesh P, Mehadi Waseem, Raju Ashwani

09.45 – 10.00

Monitoring the 27 December 2025 Mount Etna Volcanic Cloud Using SEVIRI and FCI: A Detection and Quantification Cross-Comparison Experiment

Naranjo Camilo, Guerrieri Lorenzo, Corradini Stefano, Picchiani Matteo, Merucci Luca, Stelitano Dario

10.00 – 10.15

Towards automatic high-resolution earthquake analysis of the Campi Flegrei caldera using a data-driven approach

Manzo Roberto, Isken Marius Paul, Cantiello Pasquale, Cesca Simone, Hainzl Sebastian, Galluzzo Danilo, Bianco Francesca, Di Vito Mauro Antonio, Dahm Torsten

10.15 – 10.30

IT infrastructure as a scientific instrument for Real-Time volcano monitoring and crisis governance during Campi Flegrei unrest

Di Filippo Alessandro, Cantiello Pasquale, Martino Claudio, Peluso Rosario, Scarpato Giovanni

10.30 – 10.45

Real-Time Multidisciplinary Volcano Monitoring with a Scalable Data-Driven Computing Architecture

Cantiello Pasquale, De Cesare Walter, Di Filippo Alessandro, Peluso Rosario

10.45 – 11.00

DISCUSSIONE

Mercoledì 8 luglio 2026
AULA 2 (09.00 - 11.00)

S12 - RECONSTRUCTING SUBAERIAL AND SUBMARINE VOLCANIC SYSTEM EVOLUTION AND CHANGING LANDSCAPES THROUGH GEOLOGICAL MAPPING, STRATIGRAPHY, GEOCHRONOLOGY, VOLCANO-TECTONICS AND ADVANCED TECHNOLOGIES

Conveners: *Jacopo Natale (UniBA), Arianna Beatrice Malaguti (INGV-OE), Alessandra Cinquegrani (UniPA), Eugenio Nicotra (UniCAL)*

09.00 – 09.15

Central Mediterranean tephrochronology and explosive volcanism over the 240-190 ka interval: a highly-detailed record from Castiglione Maar, central Italy

Scateni Bianca, Re Giuseppe, Di Vincenzo Gianfranco, Giaccio Biagio, Macrì Patrizia, Petrelli Maurizio, Di Roberto Alessio

09.15 – 09.30

Why Marsili Seamount? An example of unexpected super-inflated seamount along a bounded Back-Arc Ridge

Cocchi Luca, Muccini Filippo, Nicotra Eugenio, Passaro Salvatore, Ventura Guido

09.30 – 09.45

Investigating volcanoclastic turbidites from Stromboli: implications for landslide frequency and tsunami generation in the last 10,000 years

Da Mommio Serena, Di Roberto Alessio, Voloschina Marija, Bertagnini Antonella, Rosi Mauro, Freundt Armin, Kutterolf Steffen, De Rosa Rosanna, Donato Paola, Marani Michael, Pistolesi Marco

09.45 – 10.00

Assessment of the tsunamigenic potential of seamounts in the Tyrrhenian sea

Albano Giovanna, Sánchez-Linares Carlos, Macías Jorge, Selva Jacopo

10.00 – 10.15

Assessing flank instability and lateral collapse stories in volcanoes from the Southern Volcanic Zone of the Andes

Romero Jorge

10.15 – 10.30

Constraints on magma ascent dynamics beneath Marsili Seamount (Tyrrhenian Sea) from plagioclase textures and geochemical records

Giuffrida Marisa, Cannà Enrico, Forni Francesca, Marani Michael, Nicotra Eugenio, Trua Teresa, Viccaro Marco

10.30 – 10.45

A catalogue of data from the MAR98 and TIR2000 oceanographic campaigns (ISMAR-CNR): the “Marsili” section of the “Tyrrhenian Rocks” website

Cavozzi Cristian, Marani Michael, Trua Teresa, Gamberi Fabiano, Ferrante Valentina, Nicotra Eugenio, Donato Paola, Viccaro Marco, Giuffrida Marisa, Cannà Enrico, Forni Francesca

10.45 - 11.00

Constraining the Youngest Volcanic Phase in Saudi Arabia: Eruption Distribution and Mantle Petrogenesis

Garcia-Paredes Evelyn R, van der Zwan Froukje, Thomaidis Konstantinos, Pandey Om Prakash, Hansteen Thor H, Akgac Alican, Hauff Folkmar, Hoernle Kaj

**Mercoledì 8 luglio 2026
AULA AUDITORIUM (11.30 - 13.30)**

**[Continua] S03 - TRACKING MAGMA ASCENT FROM RESERVOIRS TO SURFACE:
BRIDGING EXPERIMENTS, MODELLING AND OBSERVATIONS TO INVESTIGATE PRE-
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11.30 – 12.00 (KEYNOTE)

The role of crystal-bubble interactions, outgassing and magma composition in the ascent dynamics of alkaline magmas: Implications for eruptions at Vesuvius

Arzilli Fabio, La Spina Giuseppe, Bamber Emily C., Morgavi Daniele, Fedele Lorenzo, Mancini Lucia, Prasek Marko, Santangelo Ileana, Chiominto Giulia, Perrotta Annamaria, Lemaire Thomas, Balcone-Boissard Hélène, Giordano Daniele, Scarpati Claudio

12.00 – 12.15

Conduit dynamics during the 726 CE Santorini submarine explosive eruption revealed by 3D pumice textures

Cappelli Lorenzo, Buono Gianmarco, Pappalardo Lucia, Fontijn Karen, Pyle David

12.15 – 12.30

Pre- and syn-eruptive conditions of the 1631 eruption of Mt. Vesuvius: Implications for eruptive style transitions

Cavallera Rebecca, Arzilli Fabio, Arienzo Ilenia, Bondar Dmitry, Bamber Emily Charlotte, Di Genova Danilo, Sparice Domenico, Pappalardo Lucia, Buono Gianmarco, Pelullo Carlo, Carroll Michael Robert

12.30 – 12.45

Pre- to post-eruptive crystallization of trachybasaltic melts and related timescales: clues from the 1651-1654 CE lavas of Mount Etna (Sicily, Italy)

Casetta Federico, Lanzafame Gabriele, Peres Stefano, Abart Rainer, Kudrna Prašek Marko, Portale Silvia, Giacomoni Pier Paolo, Libowitzky Eugen, Ferlito Carmelo

12.45 – 13.00

3D visualisation of nanolite aggregation in basaltic magmas using X-ray ptychography

Bamber Emily C., Arzilli Fabio, Cipiccia Silvia, Batey Darren J., La Spina Giuseppe, Polacci Margherita, Gholinia Ali, Bagshaw Heath, Di Genova Danilo, Brooker Richard, Giordano Daniele, Valdivia Pedro, Burton Mike R.

13.00 – 13.15

Quantifying the effect of vesiculation, crystallization and magma mixing on eruptive behaviour using X-ray microtomography: Insights from the Cuicuiltic eruption, Mexico

Vásquez-Montoya Matías, Arzilli Fabio, Torres-Orozco Rafael, Bamber Emily C., La Spina Giuseppe, Di Fiore Fabrizio, Carrasco-Nuñez Gerardo, Carroll Michael R.

13.15 – 13.30

DISCUSSIONE

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AULA 1 (11.30 - 13.30)

[Continua] S05 - TRANSDISCIPLINARY APPROACHES TO VOLCANO MONITORING AND HAZARD ASSESSMENT: AI, SEISMOLOGY, GEODESY, AND REMOTE SENSING

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11.30 – 11.45

CarLOS: a real-time microservice-based operating system for seismic data acquisition, processing and AI-ready volcano monitoring

Liguoro Francesco, Di Filippo Alessandro, Peluso Rosario, Gaudiosi Guido

11.45 – 12.00

On the tilt measurements to tectonic earthquakes in Neapolitan Volcanic District

Falanga Mariarosaria, Rea Raffaele, Godano Cataldo, Ricco Ciro

12.00 – 12.15

Analysis and modelling of non-stationary components of the gravity field at Campi Flegrei caldera from nearly two years of superconducting gravity recording

Casolaro Raffaella, Riccardi Umberto, Pivetta Tommaso, Hinderer Jacques, Carlino Stefano

12.15 – 12.30

A Multi-Parametric Approach for Real-Time Monitoring of Seafloor Deformation in shallow water environment

Riccio Rosario, Guardato Sergio, Chierici Francesco, Macedonio Giovanni, Dupuis Marco, De Martino Prospero, Iannaccone Giovanni

12.30 – 12.45

Unveiling the volcanic breath through seismic ambient noise polarization on Piton de La Fournaise, La Réunion

Pischiutta Marta, Puglia Rodolfo, Petrosino Simona, Savage Martha, Peltier Aline, Duputel Zacharie, Ferrazzini Valerie, Peluso Gabriele

12.45 – 13.00

Interdisciplinary, Multidisciplinary or Transdisciplinary approach building resilient societies: Insights for DRR from the CORE Project

Capuano Paolo, Gargiulo Maria Vittoria, Russo Raffaella, Napolitano Ferdinando, Amoroso Ortensia

13.00 – 13.30

DISCUSSIONE

Mercoledì 8 luglio 2026
AULA 2 (11.30 - 13.30)

[Continua] S12 - RECONSTRUCTING SUBAERIAL AND SUBMARINE VOLCANIC SYSTEM EVOLUTION AND CHANGING LANDSCAPES THROUGH GEOLOGICAL MAPPING, STRATIGRAPHY, GEOCHRONOLOGY, VOLCANO-TECTONICS AND ADVANCED TECHNOLOGIES

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11.30 – 11.45

Field and petrological studies on the last remnants of an explosive eruption at Yali (Greece) to understand the feeding system architecture

Piccoli Alberto, Braschi Eleonora, Vougioukalakis Georges E., Francalanci Lorella

11.45 – 12.00

Lava Mineralogy on Venus: Experimental and Thermodynamic Constraints

Mari Nicola, Hammer Julia, Nelson William, Ostorero Lea, Donato Paola, Filiberto Justin, D'Incecco Piero, Dolci Mauro

12.00 – 12.15

Rheology of Lunar Basalt Analogues

Scognamiglio Gabriele, Pisello Alessandro, Tiraboschi Carla, Fastelli Maximiliano, Zinzi Angelo, Perugini Diego

12.15 – 12.30

A new catalogue of eruptive events at Vulcano Island, Italy, reveals decades-long macro-cycles of open-conduit activity

Li Castri Emanuele, Branca Stefano, Ciuccarelli Cecilia, Lucchi Federico, Panelli Giulia, Costa Antonio, Selva Jacopo

12.30 – 12.45

Geological mapping of the Eocene Lessini Mountains volcanic district (Veneto, Italy) within the CARG project

Magli Andrea, Lucchi Federico, Roverato Matteo, Zuccari Costantino, Cavallina Chiara, Viola Giulio

12.45 – 13.00

160 years of Etna Summit Craters through a photogrammetry-based time machine

Proietti Cristina, Bonali Fabio Luca, Cantarero Massimo, Palano Mimmo, Paratore Mario, De Beni Emanuela

13.00 – 13.15

Tracking the growth and deformation of fissure phreatomagmatic eruptions: Insights from the ca. 3.9 ka Nisida eruption at Campi Flegrei caldera, southern Italy

Natale Jacopo, Cascella Enrico, Vitale Stefano

13.15 – 13.30

Persistent dual source magmatic system beneath Campi Flegrei (Italy) inferred from 5,000 years of deformation

Clark Jamie, Trasatti Elisa, Vona Alessandro, Di Vito Mauro Antonio, Acocella Valerio

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14.30 – 14.45

Rise of bubble-like cavity in saturated granular media: a new mechanism for subsurface fluid ascent and explosive release

Sánchez Álvarez Claudia Paz, Rivalta Eleonora, Vidal Valérie

14.45 – 15.00

Rheological constraints on mantle derived volatile bearing magmas from high pressure and temperature experiments: advances and limitations

Stagno Vincenzo

15.00 – 15.15

Pressure-temperature-H₂O controls on the crystallization of tephri-phonolitic magmas: Experimental insights from the Ventotene volcanic system

Pavese Raffaella, Perinelli Cristina, Palladino Danilo Mauro, Fabbrizio Alessandro, Masotta Matteo, Colle Fabio, Monaco Lorenzo, Gaeta Mario

15.15 – 15.30

Role of superheating and clinopyroxene nucleation delay in mafic magmas: implications for ascent dynamics and eruptive style

Bonechi Barbara, Arzilli Fabio, Polacci Margherita, Fabbrizio Alessandro, La Spina Giuseppe, Michailidou Eleni, Biagioli Elisa, Brooker Richard, Hazemann Jean-Louis, Atwood Robert, Di Genova Danilo, Abeykoon Sumith, Neave David, Almeev Renat, Burton Mike

15.30 – 15.45

Insights from the TUBES Project: New Approaches to Lava Tube Formation and Preservation

Morgavi Daniele, Calvari Sonia, Barile Paola, Petrosino Paola, Di Martire Diego, Valente Ettore, Repola Leopoldo, Spampinato Letizia, Miraglia Lucia, Giudicepietro Flora, Macedonio Giovanni, Pappalètera Giovanni, Mpoyi Dany Katamba

15.45 – 16.00

DISCUSSIONE

**Mercoledì 8 luglio 2026
AULA 1 (14.30 - 16.00)**

S13 - VOLCANO SEISMOLOGY AND ACOUSTIC: DYNAMICS, IMAGING AND NUMERICAL SIMULATIONS OF VOLCANIC PROCESSES.

Conveners: *Laura Spina (INGV-Roma1), Francesco Rappisi (ECGS), Mariangela Sciotto (INGV-OE), Rosalia Lo Bue (INGV-OE)*

14.30 - 14.45

Constraining Vp/Vs ratios beneath Mt. Etna with probabilistic imaging - insights from anisotropic S-wave tomography and remaining challenges

van Helden Kira, Vanderbeek Brandon, Del Piccolo Gianmarco, Faccenda Manuele, Lo Bue Rosalia, Giampiccolo Elisabetta, Cocina Ornella, Firetto Carlino Marco

14.45 - 15.00

Tracking stress and fluid changes at Mount Etna with 4-D transdimensional anisotropic seismic imaging

Del Piccolo Gianmarco, Lo Bue Rosalia, Faccenda Manuele, Giampiccolo Elisabetta, Firetto Carlino Marco, Cocina Ornella, Cannavò Flavio

15.00 - 15.15

Deep Seismic Imaging of Mount Etna: Architecture of a Stratovolcano

Giacomuzzi Genny, De Gori Pasquale, Chiarabba Claudio

15.15 - 15.30

Constraining magmatic pressurization at Mt. Etna through thermomechanical modeling of transient deformation

Bensing Michelle, Vinciguerra Sergio, Puglisi Giuseppe, De Siena Luca

15.30 - 15.45

Seismic anisotropy reveals deep magmatic pressurization beneath the Campi Flegrei caldera

Rappisi Francesco, Oth Adrien, Barrière Julien, Faccenda Manuele, Del Piccolo Gianmarco, Lo Bue Rosalia

15.45 - 16.00

Crustal stress state of Tenerife (Canary Islands) from P-wave anisotropic seismic tomography and geodynamic modelling

Faccenda Manuele, Del Piccolo Gianmarco

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AULA 2 (14.30 - 16.00)

[Continua] S12 - RECONSTRUCTING SUBAERIAL AND SUBMARINE VOLCANIC SYSTEM EVOLUTION AND CHANGING LANDSCAPES THROUGH GEOLOGICAL MAPPING, STRATIGRAPHY, GEOCHRONOLOGY, VOLCANO-TECTONICS AND ADVANCED TECHNOLOGIES

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14.30 – 14.45

Field and InSAR ground deformation evidence in the southern sector of Catania: active tectonic thrust or Etna's lateral spreading?

Guglielmino Francesco, Azzaro Raffaele, Brooks Steven Jeffrey

14.45 – 15.00

Spatio-temporal geodynamic evolution related to the February 2025 subterminal eruption at Mt. Etna

Tringali Giorgio, Alparone Salvatore, De Beni Emanuela, Livio Franz A., Mariani Alberto, Ursino Andrea, Bella Domenico, Michetti Alessandro M.

15.00 – 15.15

Fluid-Induced Fault Reactivations in Strike-Slip Regimes: Geodetic and Seismic Evidence from the Peloritani-Aeolian Sector

Messina Danilo, Corradino Marta, Barberi Graziella, Bruno Valentina, Mattia Mario, Patanè Domenico, Rossi Massimo, Scarfi Luciano, Pepe Fabrizio

15.15 – 15.30

Pulsed dike emplacement and lava tube formation during the 1971 Etna eruption

Calvari Sonia, Giudice Gaetano, Messina Danilo, Self Stephen, Puglisi Giuseppe, De Beni Emanuela, Cantarero Massimo, Cavallaro Danilo, Cannavò Flavio, Maugeri Roberto, Morgavi Daniele

15.30 – 16.00

DISCUSSIONE