

# 4<sup>a</sup> CONFERENZA “A. RITTMANN” GIOVANI RICERCATORI

*April 6-9, 2021*

**PROGRAMME**



**TUESDAY APRIL 6<sup>th</sup>, 2021**

10.00-10.30	<b>Conference Opening</b>
10.30-11.00	Plenary Lecture: <i>Dott.ssa Simona Scollo</i>

**TUESDAY APRIL 6<sup>th</sup>, 2021**

**SESSION 1 : MAGMAS AND FEEDING SYSTEM**

*Conveners: Marisa Giuffrida (UniCt), Giuseppe Re (INGV-Pisa)*

**POSTER SESSION (11.30-12.30)**

Room 1	<b><u>De Giorgio G.</u></b> , Cirrincione R., Fiannacca P., Romano P., Romengo N., Rotolo S.G, Vaccaro E.	Cuddia Attalora volcano, Pantelleria island: petrographic and geochemical characterization of a pantellerite explosive/effusive inter-ignimbrite centre
Room 2	<b><u>Langone F.</u></b> , Franceschini Z., Scaillet B., Proteau G., Scaillet S., Sani F., Corti G., Abate A., Cioni R.	Stratigraphy, textural and compositional features of the Golja Ignimbrite (Main Ethiopian Rift)
Room 3	<b><u>Relvini A.</u></b>	Composite magmatic evolution in Eastern Adamello plutons
Room 4	<b><u>Tenuta S.</u></b> , Ridolfi F., Donato P., Holtz F.	Reconstruction of the feeding system of 1991-95 Unzen eruption by amphibole and feldspar-melt thermobarometry
Room 5	<b><u>Tortelli G.</u></b> , Gioncada A., Pagli C., Keir D., Braschi E., Gebru E.	Recent volcanism in central and southern Afar: a geochemical focus on the Stratoid Formation

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**SESSION 1 : MAGMAS AND FEEDING SYSTEM**

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**ORAL SESSION**

14.30-14.45	<b><u>Pelullo C.</u></b> , Arienzo I., Chakraborty S., D'Antonio M., Dohmen R., Nazzari M., Pappalardo L., Petrosino P.	Zoned clinopyroxene crystals as tracers of magmatic components involved in mixing/mingling processes occurred in the plumbing system of Zaro (Ischia island, Italy)
14.45-15.00	<b><u>Costa G.</u></b> , Giuffrida M., Scandura M., Zuccarello F., Sciotto M., Cannata A., Viccaro M.	A petrological and geophysical study of the Mt. Etna summit activity between July 2019 and January 2020
15.00-15.15	<b><u>Minniti M.</u></b> , Nicotra E., Donato P., De Rosa R.	Violent Strombolian activity vs. caldera forming episodes: the case study of the Spiaggia Lunga welded scoriae at Vulcano (Aeolian Island, Italy)
15.15-15.30	<b><u>Mastroianni F.</u></b> , Fantozzi I., Petrone C.M., Vougioukalakis G.E., Braschi E., Francalanci L.	Magmatic processes prior to the 1650 CE explosive eruption at the Kolumbo submarine volcano, Greece
15.30-15.45	<b><u>Vilanova O.</u></b> , Polo A., Aulinas M., Geyer A., Martí J., Álvarez-Valero A., Albert H., Gisbert G.	Petrological and geochemical characterization of the Outer Coast Tuff Formation: Unravelling the magmatic processes preceding and triggering Deception Island's caldera - forming eruption (Antarctica).
15.45-16.00	<b><u>Paternostro S.</u></b> , Casalini M., Braschi E., Avanzinelli R., Conticelli S.	Crystallisation and equilibrium conditions of Mount Amiata volcanic rocks, and their significance in the frame of magma evolution: in-situ chemical, mineral chemistry, major, trace elements and Sr-isotopic data.
16.00-16.30	<b>BREAK TIME</b>	

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ORAL SESSION

16.30-16.45	<b><u>Carnevale G.</u></b> , Caracausi A., Correale A., Italiano L., Rotolo S.G.	An Overview of the Geochemical Characteristics of Oceanic Carbonatites: New Insights from Fuerteventura Carbonatites (Canary Islands)
16.45-17.00	<b><u>Knuever M.</u></b> , Sulpizio R., Mele D., Perugini D., Vetere F., Costa A.	Rapid CO <sup>2</sup> -release from magma-carbonate interactions: Why is it important?
17.00-17.15	<b><u>Costa S.</u></b> , Fulignati P., Gioncada A., Pistolesi M., Bosch D., Bruguier O.	Tracking metal evolution in arc magmas: Insights from the active volcano of La Fossa, Italy
17.15-17.30	<b><u>Zuccarello F.</u></b> , Schiavi F., Viccaro M.	Magma volatile loss drives the energy of eruptions at Mt. Etna volcano
17.30-17.45	<b><u>Spallanzani R.</u></b> , Cichy S. B., Koga K., Oelze M., Wilke M., Fanara S., Wiedenbeck M., Schmidt B.	Experimental insights on Lithium and Boron behaviour during magma degassing
17.45-18.00	<b><u>Romano P.</u></b> , Rotolo S.G.	Phase relationships and water solubility in trachytes and pantellerites from Pantelleria island: an experimental study

WEDNESDAY APRIL 7<sup>th</sup>, 2021

**SESSION 2 : ERUPTIVE DYNAMICS AND EMPLACEMENT MECHANISMS**

*Conveners: Laura Spina (INGV-Roma), Matteo Trolese (University of Texas)*

POSTER SESSION (11.30-12.30)

Room 1	<b><u>Arasanz R.</u></b> , Vilanova O., Geyer A.	3D sample modeling from difficult access samples applying Agisoft Metashape Standard
Room 2	<b><u>Billotta E.</u></b> , Sulpizio R., Selva J., A. Costa	Construction of a chronostratigraphic database for the study of the eruptive periodicities of the volcanic districts of the Mediterranean area from the Pleistocene to the present.
Room 3	Di Roberto A., <b><u>Scateni B.</u></b> , Di Vincenzo G., Petrelli M., Fisauli G., Barker S.J., Del Carlo P., McKay R., De Santis L., IODP Expedition 374 Scientific Party	Tephrochronology and provenance of an early Pleistocene (Calabrian) tephra from IODP Expedition 374 site U1524, Ross Sea.
Room 4	<b><u>Polo Sánchez A.</u></b> , Hopfenblatt J., Geyer A., Aulinas M., Ercilla G., Álvarez-Valero A.	Completing the eruptive record of Deception Island (South Shetland Islands, Antarctica) by describing the ash layers located in proximal marine sediment cores
Room 5	<b><u>Rondinelli F. D.</u></b>	Stratigraphy of the volcanoclastic succession of the “Spiaggia di Pollara Formation” at Salina (Aeolian Islands, Italy)
Room 6	<b><u>Simionato R.</u></b> , Bonadonna C., Jarvis P., Rossi E., Marzoli A.	High-resolution video characterisation of Vulcanian eruption plumes at Sabancaya volcano, Peru
Room 7	<b><u>Spina L.</u></b> , Del Bello E., Ricci T., Taddeucci J., Scarlato P.	Multi-parametric characterization of intermediate-size ash/gas-rich explosive activity at Batu Tara Volcano (Flores Sea, Indonesia)

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ORAL SESSION

14.30-14.45	<b>Key Note: <u>Silleni A.</u>, Giordano G., Ort M. H., Isaia R.</b> "From the deposits to the transport and deposition of pyroclastic density currents: the case of the 39.8 ka Campanian Ignimbrite flow, Italy"	
14.45-15.00	<b><u>Tomasi I.</u></b> , Massironi M., Meyzen C.M., Sauro F., Pozzobon R., Penasa L., Santagata T., Martínez-Frías J. Mateo Mederos E.	Formation mechanisms of inflated lava tubes: the case of La Corona (Lanzarote, Canary Islands)
15.00-15.15	<b><u>Magli A.</u></b> , Branca S., Speranza F., Risica G., Siravo G., Giordano G.	Paleomagnetic dating of pre-historic lava flows from the urban district of Catania (Etna volcano, Italy)
15.15-15.30	<b><u>Falasconi A.</u></b> , Cioni R., Pistolesi M., Bernard B., Samaniego P.	Physical and compositional magma gradients into the conduit during the 1st February 2014 eruption at Tungurahua volcano (Ecuador): insights from volcanic bombs
15.30-15.45	<b><u>Monaco L.</u></b> , Leicher N., Palladino D.M., Gaeta M., Sottili G., Marra F., Fabbrizio A., Zanchetta G., Wagner B., Petrelli M., Nomade S., Pereira A., Arienzo I., D'Antonio M., Petrosino P., Giaccio B.	Central Mediterranean volcanism during marine isotope stages 7 and 6 (250-170 ka): a new tephra record from Fucino Basin, central Italy
15.45-16.00	<b><u>Meschiari S.</u></b> , Lucchi F., Sulpizio R., Sarocchi D., Rodriguez-Sedano L.A., Albert P.G., Tranne C.A.	Syn-depositional erosion and clast incorporation from ash-rich PDCs: an integrated sedimentological and geochemical analysis with laboratory experiments on the Brown Tuffs eruptions (Vulcano, Italy)
16.00-16.30	<b>BREAK TIME</b>	

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ORAL SESSION

16.30-16.45	<b><u>Gabellini P.</u></b> , Cioni R., Hantusch M., Lacanna G., Ripepe M., Montenegro V., Valderrama O., Farias C., Caselli A.	Mechanisms of ash production and recycling during low-energy, mid-intensity eruptions at Copahue volcano (Argentina)
16.45-17.00	<b><u>Panunzi S.</u></b> , Taddeucci V., Cigala V., Kueppers U., Palladino D.M., Peña Fernández J.J., Scarlato P., Sesterhenn J.	Volcanic supersonic jets: an experimental study of the effect of particles on the shock cell structure and acoustic emissions.
17.00-17.15	<b><u>Stabile P.</u></b> , Arzilli F., Carroll M.R.	Crystallization of peralkaline rhyolitic magmas: rheological implications for the Pantelleria system
17.15-17.30	<b><u>Scarani A.</u></b> , Vona A., Al-Mukadam R., Di Genova D., Deubener J.	Estimating cooling rates recorded by glass-forming melts: a DSC calibration
17.30-17.45	<b><u>Frontoni A.</u></b> , Vona A., Romano C.	The Volcanological In-Situ Deformational Instrument (VIDI)
17.45-18.00	<b><u>Di Fiore F.</u></b> , Vona A., Kolzenburg S., Mollo S., Romano C.	An extended rheological map of pāhoehoe - 'a'ā transition

THURSDAY APRIL 8<sup>th</sup>, 2021

**SESSION 3 : GEOLOGY AND STRUCTURE OF VOLCANOES**

*Conveners: Federico Galetto (Cornell University), Mariangela Sciotto (INGV-Catania)*

POSTER SESSION (11.30-12.30)

Room 1	<i>De Guidi G., Cannavò F., <b>Figlioli A.</b>, Giuffrida S., Russo D., Carnemolla F., Brighenti F.</i>	Field GPS data inversion to model Fiandaca tectonic lineament that caused seismic event on 26th December 2018 (Mt. Etna Volcano, Sicily)
Room 2	<i><b>De Paolo E.</b>, Trasatti E., Tolomei C., Montgomery-Brown E.K.</i>	The 2011-2020 long-term sustained inflation at Long Valley Caldera: investigation of the magmatic system dynamics and evolution
Room 3	<i><b>Ghiotto M.</b>, Natali C., Conticelli S.</i>	Petrogenesis and geochemical characteristics of the Lar alkaline igneous complex, south-east of Iran



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ORAL SESSION

15.00-15.15	<b>Key Note:</b> <u>Carnemolla F.</u> , Bonforte A., Brighenti F., Briole P., De Guidi G., Guglielmino F. “Multi-disciplinary analysis of ground deformation on the eastern flank of Mount Etna”	
15.15-15.30	<u>Marino C.</u> , Ferranti L., Natale J., Sacchi M., Anzidei M.	Vertical ground deformation of the Campi Flegrei offshore caldera based on paleo-sea level markers
15.30-15.45	<u>Tramparulo F.D.A.</u> , Di Giuseppe M.G., Isaia R., Troiano A., Natale J., Vitale S.	Interaction between structures and hydrothermal fluids in the Solfatara area: new insight from integrated geological, geophysical and volcanological study
15.45-16.15	<b>BREAK TIME</b>	
16.15-16.30	<u>Massaro S.</u> , Costa A., Sulpizio R., Coppola D., Capra L., Norini G., Groppelli G., Lo Zupone G., Porfido M.	Insights on the cyclic eruptive behavior and stress field conditions at dome volcanoes by coupling observational data with numerical modelling: the example of Fuego de Colima volcano (Mexico)
16.30-16.45	<u>Iozzia A.</u> , Alparone S., Bonforte A., Cannata A., Cannavò F., Cesca S., Gresta S., Rivalta E., Ursino A.	Repeating earthquakes and GPS data as tools to investigate the fault dynamics: a case of study from Pernicana fault system (Mt. Etna, Italy)
16.45-17.00	Branca S., <u>Musumeci D.</u> , Ingaliso L.	The significance of the 1971 flank eruption of Etna from volcanological and historic viewpoints

FRIDAY APRIL 9<sup>th</sup>, 2021

**SESSION 4 : MONITORING AND VOLCANIC RISK**

Conveners: *Andrea Bevilacqua (INGV-Pisa), Silvia Massaro (INGV-Bologna)*

POSTER SESSION (11.30-12.30)

Room 1	<i>Aiesi G., Bonforte A., Brandi G., Calvagna F., Consoli S., Distefano G., Falzone G., Ferro A., Gambino S., Guglielmino F., Laudani G., <b>Marsala G.</b>, Obrizzo F., Privitera L., Puglisi G., Russo S., Saraceno B., Velardita R.</i>	Multidisciplinary study of the dynamics along the southern rift and Pernicana fault system and relations with the Etna eruptive activity during the last 30 years
Room 2	<i><b>Campus A.</b>, Coppola D.</i>	Monitoring volcanic thermal emission using VIIRS
Room 3	<i><b>Gheri D.</b>, Marchetti E.</i>	Long-range infrasound detection of explosive volcanic activity
Room 4	<i><b>Messina M.</b>, Florida G., Viccaro M.</i>	A GIS-based approach to evaluate the hazard by lava flow invasion at Mount Etna volcano (Sicily, Italy)
Room 5	<i><b>Minio V.</b>, Zuccarello L., De Angelis S., Di Grazia G., Saccorotti G.</i>	MISARA: Matlab Interface for Seismo-acoustic ARray Analysis
Room 6	<i><b>Pucciarelli G.</b></i>	Seismic Tomography of Southern Tyrrhenian

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ORAL SESSION

14.30-14.45	<b>Key Note: <u>Tadini A.</u>, Roche O., Samaniego P., Azzaoui N., Bevilacqua A., Bernard B., Hidalgo S., de' Michieli Vitturi M.</b> “Tephra fallout hazard assessment with uncertainty quantification: a case study from Cotopaxi and Guagua Pichincha volcanoes, Ecuador”	
14.45-15.00	<b><u>Centorrino V.</u></b> , Bilotta G., Cappello A., Ganci G., Corradino C., Del Negro C.	Effective mitigation measures of lava flow hazards using optimized barriers configuration driven by numerical simulation
15.00-15.15	<b><u>Amato E.</u></b> , Corradino C., Torrasi F., Del Negro C.	Mapping of lava flows from the Mount Etna 2020-2021 paroxysmal events combining machine learning and satellite remote sensing techniques
15.15-15.30	<b><u>Torrasi F.</u></b> , Amato E., Corradino C. Del Negro C.	Radiative heat power derived from Sentinel-3 SLSTR, MODIS and VIIRS during December 2020 – March 2021 lava fountains at Etna volcano
15.30-15.45	<b><u>Eckel F.</u></b> , Langer H., Sciotto M.	Applying pattern recognition techniques to infrasound signals at Mount Etna
15.45-16.15	<b>BREAK TIME</b>	

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ORAL SESSION

16.15-16.30	<b><u>Aveni S.S.</u></b> , Blackett M.	Groundwater Level Variations in relation to Volcanic and Seismic Events. New Insights on Mt. Etna, Southern Italy
16.30-16.45	<b><u>Rubino C.</u></b> , Pérez N., Sortino F., Melián G., Asensio-Ramos M., Hernández P., Padrón E.	Continuous monitoring of diffuse volcanic degassing by means of a microGC measurements at the summit of Teide volcano, Tenerife, Canary Islands
16.45-17.00	<b><u>Cacciola L.</u></b> , Messina G., Reitano D., Corsaro R. A., Federico C.	GeoChem database: design and implementation of a data structure for geochemical data
17.00-17.15	<b><u>González G.</u></b> , Fujita E., Shibazaki B., Hayashida T., Chiodini G., Lucchi F., Nemeth K., Mora-Amador R., Moya A., Chigna G., Martí J., Rouwet D.	The effect of three large Mw ≥ 7.3 subduction earthquakes (August-November 2012) on volcanic unrest in Central America

**Best Poster and Oral Presentation Awards**

**Conference Closure**