

Dear members of the IAVCEI Commission on Volcanic Geology,

When it was decided to create the Commission of Volcano Geology a few years ago, the main motivation was not to lose awareness of the role of field volcanology, at a time of strong development of other branches of volcanology, such as the numerical modeling of volcanic phenomena. Thanks to the effort that the commission has carried out in these years, I believe that a wonderful shared path has been triggered within which field data and numerical data now speak to each other in a constant and fruitful way.

It is therefore necessary to continue on this path and make the importance of field volcanological data increasingly evident, whether it is a correct reconstruction of an eruptive sequence, the evolutionary history of a volcano or its cartography. These are the fields in which I have spent most of my activity so far. For me, studying a volcano meant reconstructing its entire eruptive history through the collection and organization of stratigraphic, chronological, volcano-tectonic, and cartographic data, to the point of seeing it move over time, change in shape and respond to its own internal impulses as well as to the changing tectonic regimes, to the earthquakes and climate changes that have intersected its history, to the point of taking shape in the form we admire today.

If I will be elected to serve as a co-leader of the IAVCEI Commission on Volcanic Geology I am enthusiastic about being able to giving my contribution in the form of a service to help our community improving the grown and the impact of this part of volcanology. A well-made volcanic geology is the basis for mitigating not only volcanic risk *sensu strictu*, but also hydrogeological and landslide risk in areas of intense volcanism. In addition, the field volcanologist has an important role in the exploration of geothermal areas and for mineral research. In all these cases, it is a question of transforming basic volcanological studies and cartography into a clear geological picture and a quality thematic cartography, building a bridge with other disciplines.

All this goes through the promotion and participation in conferences and congresses, organizing and promoting workshops and field schools, making dialogue more stringent with the other IAVCEI commissions, especially with those who deal with sedimentology, but not only.

CLAUDIA PRINCIPE CV

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Current position(s)

01/05/2023 – ongoing: Free research assignment at the Institute of Geosciences and Earth Resources of the Italian National Research Council (IGG-CNR) of Pisa.

01/05/2023 – ongoing: Free research assignment at the Vesuvius Observatory, Section of Naples of the National Institute of Geophysics and Volcanology (OV-INGV)

01/05/2023 – ongoing: Retired from IGG-CNR

Previous position(s)

01/01/2023 - 30/04/2023: Research Director at the Institute of Geosciences and Earth Resources (IGG-CNR) in Pisa, Italy

01/01/2016 - 30/04/2023: Head of the Archaeometry and Stratigraphic Micro-coring Laboratory of IGG-CNR

01/07/2014 - 01/07/2015: Head of the 8 laboratories making up the Mineral Separation and Rocks Treatment Department of IGG-CNR

11/04/2007 - 31/12/2015: Head of the Stratigraphic Micro-coring Laboratory of IGG-CNR

11/04/2007 - 31/12/2015: Head of the Archaeomagnetism Laboratory of IGG-CNR

16/11/1996 - 31/12/2022: Senior Researcher at the (IGG-CNR) in Pisa, Italy

19/11/1990 - 15/10/1996: Fixed-term employment contract as a researcher (art. 9, law n.363/1984), with the National Group for Volcanology (GNV), at the Institute of Geochronology and Isotope Geochemistry of the CNR of Pisa, Italy

01/10/1985 - 30/09/1990: Fixed-term employment contract as a researcher (ex-art. 36, with direct call, according to §2, as “Expert in volcanology”) with the National Group for Volcanology (GNV) of the CNR, at Institute of Geochronology and Isotope Geochemistry of the CNR of Pisa, Italy

17/11/1980 - 30/09/1985: Hired on a permanent basis in the role of “Specialist in Volcanology” in the Geothermal Exploration Sector of AGIP S.p.a. based in San Donato Milanese (Milan), Italy

Education and key qualifications

05/11/1986 - 1988: Scholarship to participate in a three-year specialization course in History of Science organised by the Domus Galilaean in Pisa in collaboration with the Institute of the Italian Encyclopedia in Rome, Italy.

01/09/1979 - 31/12/1979: Scholarship from the European Economic Community on the topic “Volcanology and Magmatology of the Campanian Area” at the Vesuvius Observatory, Naples, Italy.

12/07/1979: Degree in Geological Sciences, University of Pisa, Italy (110/110, *cum laudè*)

Languages

Italian	Mother tongue
French	Good level
English	Good level
Spanish	Medium level
Latin	Scolar level
Old Greek	Scolar level

Peer recognition

2021 - ongoing: Councilor on the Board of Directors of the “San Rossore – Migliarino – Massaciuccoli” Regional Natural Park, Tuscany, Italy

2016 - ongoing: Member of the Scientific Commission of the Order of Geologists of Tuscany, Italy

2016 - ongoing: Vice-president of the non-profit cultural association for the popularization of science “La Nuova Limonaia”, Pisa, Italy

2007 - ongoing: Alternate Representative of the Italian National Research Council at the International Association of Volcanology and Chemistry of the Earth Interior (IAVCEI), Commission of International Union of Geodesy and Geophysics (IUGG)

1996 - ongoing: Elected member of the International Commission on the History of Geological Sciences (INHIGEO), of the International Union of Geological Sciences (IUGS), and of the International Union of History and Philosophy of Sciences (IUHPST)

Convenor and conference organization in the last 5 years

- Chair of a IAVCEI-INHIGEO session, IUGG Berlin 2023
- Chair of a session, at the IAVCEI Conference held in Rotorua (NZ) in January 2023
- Component of the Scientific Committee of the SOGEI Meeting IGG-CNR held in Pisa in December 2022
- Chair of a session at the 47th INHIGEO meeting held in Les Eyzies (France) in September 2022
- Chair of the Panel 2 at the SISS in Catania (Italy) in November 2022
- Chair of an INHIGEO- IUGS/IUHPST session at the ESHS held in Bologna (Italy) in August 2020
- Chair of a session at the IIAS-2020 conference held in Brussels (Belgium) in June 2020
- Chair of a session at the V18 IUGG General Assembly held in Montréal (Canada) in July 2019
- Component of the Scientific Committee of the 3rd STRATI, held in Milan (Italy) in July 2019

Medals

- Diploma and medal of merit “as testimony to the work performed with a lively spirit of sacrifice and self-sacrifice, during the 1991-92 Etna emergency”, issued in May 1996 by the Italian Presidency of the Council, signed by the Under Secretary of State for the coordination of the Civil Protection, Prof. Franco Barberi.

Topics of current scientific interest:

- Geological mapping of volcanic areas and reconstruction of the evolutionary history of volcanoes.
- Detailed stratigraphy and chrono-stratigraphy (through the archaeomagnetic dating method) of recent volcanic areas.
- Study of the physical characteristics of lava and pyroclastic deposits, with particular attention to depositional and sedimentological dynamics and variations in proximal, lateral and distal depositional facies (also through the microstratigraphic core sampling methodology).
- Explosive processes in volcanic dynamics, with particular reference to monogenetic processes (Strombolian and violent Strombolian eruptions, diatrema activity, phreatic eruptions).
- Volcanology for geothermal exploration.

- Historical volcanology and history of volcanology.
- Archaeomagnetic dating of ovens and furnaces for the reconstruction of the Holocene Secular Geomagnetic Variation Reference Curve (CVGS) for dating volcanic deposits
- Interpolation and interpretation of geophysical data through the methodology of microstratigraphic core sampling, for paleo-environmental reconstruction and for the circumscription of sites of geo-archaeological interest.

Studied volcanic areas:

- Baja California (Mexico)
- Batumi (Georgia)
- Campi Flegrei (Campania, Italy)
- El Hierro (Canarie, SP)
- Isola d'Ischia (Campania, Italy)
- Kakheti (Georgia)
- Kiejo-Mbeya (Tanzania)
- Lanzarote (Canarie, SP)
- Lipari (Isole Eolie, Italy)
- Los Humeros (Mexico)
- Milos (Cicliadi, Grecia)
- Monte Amiata (Toscana, Italy).
- Monte Vulture (Basilicata)
- Montserrat (West Indies)
- Nisyros (Dodecaneso, Grecia)
- Pianosa (LI, Italy)
- Plaine des Sables-Piton de la Fournaise (Isola di Reunion, FR)
- Teide (Tenerife, SP)
- Udabno (Georgia)
- Varzià (Georgia)
- Vesuvio (Campania, Italy)
- Vulcano (Isole Eolie, Italy)

I'm author of more than 160 scientific papers on national and international journals. Inside the main scientific results of my activity can be listed the founding of the Campi Flegrei caldera related to the Campanian Ignimbrite event about 39.000 years ago (Rosi et al., 1983, J Volcanol Geotherm Res), the definition of the Maximum eruptive event in case of reactivation of Vesuvius at medium and long period (Rosi et al., 1993, J Volcanol Geotherm Res), the discovery of a carbonatitic volcanic suite at Monte Vulture, in Southern Italy (Principe & Stoppa, 1996, J Volcanol Geotherm Res), the definition of a new reference standard for silicic volcanism, and the production of new volcanological synthesis of various volcanoes, published inside Monographic volumes with attached large scale geological maps, as in the case of (i) Monte Amiata (Principe, Lavorini & Vezzoli, 2017, Regione Toscana, followed by a series of ISI referred papers and a geological large-scale map); (ii) Plain des sables, Isle Reunion (Principe et al., 2016), (iii) Monte Vulture, Southern Italy (Principe, 2006, Regione Basilicata), (iv) Nisyros Island (Marini & Hunziker ed, 2005, Lausanne University); Phlegraean Fields (1987) and Vesuvius (1986). The last one map I produced (Paolillo et al, 2016, J of Maps) changed the next eruptive scenario at Vesuvius volcano.

Viareggio, 19 November 2023

Claudia Principe

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