

PERSONAL INFORMATION

Raffaello Cioni



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Sex Male | Date of birth 22/07/1961 | Nationality Italian

WORK EXPERIENCE

2013 to present	Associate Professor in Volcanology and Geochemistry Dept. of Earth Sciences of University of Florence (Italy)
1999 to 2013	Associate Professor in Volcanology and Geochemistry Dept. of Earth Sciences of University of Cagliari (Italy)
1994 to 1999	Researcher in Volcanology and Geochemistry Dept. of Earth Sciences of University of Pisa (Italy)
1993 to 1994	Postdoc fellow Dept. of Earth Sciences of University of Pisa (Italy)
1987 to 1988	Research fellow Dept. of Earth Sciences of University of Pisa (Italy)
Other work experience	
1993	SORIM - Assistance to drilling of geothermal well PPT1, Pantelleria (15 days)
1993	Contract at Earth Sciences Dept., University of Pisa (6 months)
1990	Geotermica Italiana srl, Pisa Contract for "Geothermal prospections in the Mt Sabatini area" (2 months)
1986	Contract at Earth Sciences Dept., University of Siena (Italy) "Petrography of granitic rocks from Anctartica" (2 months)

EDUCATION AND TRAINING

1988 to 1992	PhD – "Il complesso Vulcanico di Bolsena ed il vulcanismo alcalino potassico del Lazio Settentrionale" Supervisor: Prof. Franco Barberi Dept. of Earth Sciences of University of Pisa (Italy)
1980 to 1986	Honours Degree in Geological Sciences (110/110 cum laude) Title: "Fasi magmatiche e freatomagmatiche nelle eruzioni esplosive del Vesuvio e dell'Isola di Vulcano (Italia)". Supervisor: Prof. Franco Barberi Dept. of Earth Sciences of University of Pisa (Italy)

ACADEMIC ACTIVITIES

Teaching	1993 – 1996	Volcanology (assistant) – Petrography (assistant) – Regional Volcanology (assistant) – Earth Sci. Dept., Università' di Pisa
	1996 – 1998	Physical Volcanology – Earth Sci. Dept., Università' di Pisa
	1999 – 2001	Volcanology – Earth Sci. Dept., Università' di Pisa
	1999 – 2013	Physical Volcanology – Earth Sci. Dept., Università' di Cagliari
	2001 - 2013	Geology of Volcanic Terrains – Earth Sci. Dept., Università' di Cagliari
	2001 - 2010	Geological Mapping of Volcanic Terrains – Earth Sci. Dept., Università' di Cagliari
	2010 – 2012	Geodynamics – Earth Sci. Dept., Università' di Cagliari
	2013 – present	Volcanology – Earth Sci. Dept., Università' di Firenze
	2013 – present	Volcanic Risks – Earth Sci. Dept., Università' di Firenze
	2013 – present	Stratigraphy of Volcanic Rocks – Earth Sci. Dept., Università' di Firenze
	2013 – present	Laboratory of Volcanology – Earth Sci. Dept., Università' di Firenze

Other didactic activities 2021 to present Volcanology seminars (7h each) in the Geochemistry course – Earth Sci. Dept., University of Firenze
 Examination commissions for all the above courses and for the other courses (Physics of Volcanism, Earth Sci. Dept., University of Firenze; Geochemistry, Earth Sci. Dept. University of Cagliari; English proficiency, Earth Sci. Dept. University of Cagliari; English proficiency, Earth Sci. Dept. University of Pisa)
 Member of the examination panel for the final examination of PhD students at Italian (University of Pisa, Cagliari, Firenze, Cosenza, Palermo, Pavia) and International institutions (University of Bristol, UK; Free University of Bruxelles, Belgium; University of Clermont Ferrand)

Visiting and Invited courses at International Institutions

- 1996 Visiting fellow at Caltech, Pasadena (USA; 1 month)
- 2009 Short course for the School of Advanced Archaeometry (Fribourg, CH) "Mount Vesuvius (Italy): Past and future impact on the environment and humans" (2 days)
- 2014 Visiting Professor at Orleans University (France; 1 month)
- 2014 Short course of Physical Volcanology (VULCAMED Project PONA3_00278/F "La ricerca geofisica e vulcanologica per il monitoraggio dei rischi naturali e ambientali e per la tutela e la fruizione delle risorse e del territorio", INGV Catania – 3 CFU)

Institutional Activities

- 2003 to 2012 Member of "Collegio dei Docenti, Dottorato in SCIENZE DELLA TERRA" - Earth Sci. Dept., University of Cagliari
- 2009 – 2011 "Commissione di Autovalutazione" Corso di Laurea in Scienze Geologiche, Earth Sci. Dept. University of Cagliari (President)
- 2013 to 2014 Member of "Collegio dei Docenti, Dottorato in SCIENZE E TECNOLOGIE DELLA TERRA E DELL'AMBIENTE" - Chemical and Earth Sci. Dept., University of Cagliari
- 2018 to present Member of "Collegio dei Docenti, Dottorato Regionale in SCIENZE DELLA TERRA PEGASO – Earth Sci. Depts., Universities of Firenze, Pisa and Siena"
- 2018 – 2019 "Commissione di Sintesi per la riforma del corso di Laurea in Scienze e Tecnologie Geologiche", Earth Sci. Dept., Firenze (President)
- 2022 to present Member of "Collegio dei Docenti, PhD in Earth and Planetary Sciences"- Earth Sci. Dept., University of Firenze
- 2017 to present "Commissione di Indirizzo", Earth Sci. Dept., Firenze (President)
- 2020 to present "Commissione sito web" Earth Sci. Dept., Firenze (President)

International agreements Universita' di Firenze - Escuela Superior Politecnica del Litoral, Guayaquil, Ecuador (Responsible)
Universita' di Firenze – Universidad Catolica del Maule, Salta, Chile (Responsible)
Erasmus Agreement University of Orleans, France (Responsible)
Erasmus Agreement Eotvos University, Budapest, Hungary (Responsible)

WORK ACTIVITIES

Main scientific interests

Geology of volcanic terrains

Field studies of volcanic deposits; Regional volcanology; Geological and structural mapping of volcanic areas

Physical Volcanology

Dynamics and physical volcanology of explosive eruptions; Trigger and depositional mechanisms of debris flows in volcanic areas; Dynamics of magma ascent;

Volcanic Hazards

Volcanic hazard assessment; Eruption and impact scenarios; Probabilistic volcanic hazards mapping

Geochemistry and petrology of volcanic products

Magma chamber processes; Textural and compositional features of volcanic products; Magmatic volatiles in groundmass glass and melt inclusions

Field Experience

Field activity has been carried on at several volcanoes worldwide

Italy: Vesuvius, Phlegrean Fields, Etna, Vulcano Island, Stromboli, Mt Vulsini, Mt Sabatini, Vico volcano, Sardinia Cenozoic volcanism, Mt. Amiata

Greece: Santorini

Turkey: Mt. Ararat

Ethiopia: Gedemsa caldera; Ignimbrites of the Southern Main Ethiopian Rift; Ririba Rift

Ecuador: Guagua Pichincha; Cotopaxi; Tungurahua

Guatemala: Fuego

El Salvador: San Salvador; Santa Ana

Iceland: Eyjafjallajokull, Askja, Oraefajokull

Papua – New Guinea: Rabaul caldera

Argentina: Copahue

Chile: Cordon Caulle – Puyehue; Ollague

Japan: Sakurajima

Research projects

Responsibility of research projects

Competitive projects

-PRIN 2022 Project “HEATED - PHreatic Eruptions at AcTive volcanoEs: processes, source parameters and physical models of eruption Dynamics”: Principal Investigator

- PRIN 2022 PNRR Project “RESILIENCE - Refine Eruptive Scenarios and Impact reLated to phreatomagmatic EruptioNs at Campi FlegreI (Italy)”. Responsible of Research Unit
PRIN 2008 – “AshErupt: Studio interdisciplinare della dinamica sin-eruttiva di eruzioni di cenere” (Principal Investigator)

PRIN 2003. “Tefrostratigrafia dell'attivita' recente del vulcano Cotopaxi. Correlazioni tra eventi eruttivi e innesco di colate di fango sineruttive”. Responsible of Research Unit

-DPC-INGV 2004-2006 - Project V3_4/11 - Task.2 Geological constraints on precursors of explosive eruptions: the opening phases of Plinian and subPlinian eruptions – Task 4. Ash eruptions at Vesuvius

Other Projects

-2016 Universita' Italo-Francese - Contribution for a PhD Grant, Project VINCI, Scientific responsible

- 2013 REG.AUTONOMA SARDEGNA. "Progetto di ricerca per la definizione di una metodologia finalizzata all'identificazione e rappresentazione cartografica degli apparati vulcanici nell'ambito regionale per l'attività di ricognizione, delimitazione e rappresentazione in scala idonea dei vulcani presenti ai sensi dell'art. 142 del Codice del Paesaggio e altre aree caratterizzanti la geomorfologia del territorio sardo individuate e tipizzate dal Piano Paesaggistico Regionale"
- 2011 CONTRIBUTO "Sistema premiale della ricerca, Art. 13 L.R. REG. AUTONOMA SARDEGNA n. 7/2007"
- 2007. PROGEMISA-INGV PISA. "Studio petrografico e petrochimico delle formazioni vulcaniche terziarie e quaternarie presenti nei fogli geologici 1:50.000 - 459 "Sassari", 500 - "Nuoro Est", 501 "Orosei", 528 "Oristano", 555 "Iglesias" e 563 "Isola di S. Pietro".
- 2004 CONTRIBUTO L.R. REG. AUTONOMA SARDEGNA 11/04/96 N.19 – Cooperazione PVS. "Studio dei prodotti emessi durante la crisi eruttiva iniziata nell'Ottobre 1999 al Guagua Pichincha (Quito, Ecuador): implicazioni per una valutazione della pericolosità vulcanica"
- 2003 CONTRIBUTO L.R. 11/04/96 N.19 REG. AUTONOMA SARDEGNA – Cooperazione PVS. "Vulcano Cotopaxi (Ecuador): variabilità composizionale dei prodotti relativi all'attività esplosiva degli ultimi 5000 anni"
- 2002 CONTRIBUTO L.R. 11/04/96 N.19 REG. AUTONOMA SARDEGNA – Cooperazione PVS. "La dinamica delle eruzioni del 5-7 ottobre 1999 del Guagua Pichincha (Quito, Ecuador): implicazioni per un possibile sviluppo futuro della crisi eruttiva in corso"
- 2001-2002 Project "The 1994-1999 eruptions of Rabaul, (Papua - New Guinea): a case study for volcanic hazard assessment in large restless calderas." CONTRIBUTI LEGGE 43-1990 REG. AUTONOMA SARDEGNA

Other fundings

- 1999-2013 "Ricerca di Ateneo" yearly contributions, University of Cagliari
- 2014 to present "Ricerca di Ateneo" yearly contributions, University of Firenze

Coordination responsibility into competitive projects

- 2022 PNRR-PE3 Project "RETURN" Multi-Risk science for resilient communities under a changing climate" VS3 Earthquakes and Volcanoes - Coordinator of WP3 -Task 3.1 "Pre-eruptive physico-chemical magma characteristics"
- 2005-2007 Scientific coordinator of the Project V3_4 "V3_4 - Vesuvio". Convenzione 2004-2006 INGV-DPC. Coordination of 20 Research Units

Participation to competitive research projects

- 2018 EUROVOLC, I3 European project, RU Dip. Scienze Terra, Firenze
- 2017- 2018 RIESCA project "Escenarios de Riesgo en Centro America" Univ. Di Palermo – IGG CNR – Ag. Italiana cooperazione allo Sviluppo
- 2013-2014 Progetto PRIN 2010-11 - Genesi e differenziazione dei magmi in relazione all'ambiente geodinamico ed alle caratteristiche petrologiche e geochimiche delle loro sorgenti: implicazioni per l'evoluzione del sistema convergente Africa-Europa - UR Dip. Scienze Terra Firenze, Responsible S. Conticelli
- 2006-2008 Progetto SPEED INGV-Reg. Campania SRPC. "Scenari di Pericolosità per la Prevenzione del Rischio dei Vulcani della Campania" RU INGV-Pisa, Responsible A. Neri
- 2002-2006 Progetto EXPLORIS, EEC Programme V, Programma "Environment and Sustainable Development" RU INGV-PISA, Responsible A. Neri
- PRIN 1999. "Evoluzione magmatica e vulcanologica nelle successioni dei margini, negli apparati centrali e nelle eruzioni fissurali nel Rift Etiopico settentrionale". RU Dip. Scienze Terra, Pisa; Responsible R. Mazzuoli
- 1993-1995 Progetto CEE "Santorini Volcano Laboratory", RU Dip. Scienze Terra, Pisa; Responsible A. Sbrana
- 1989 to 1998 - GNV Annual Projects (UR Dip. Scienze Terra, Pisa)

Participation and coordination of geological mapping projects

Analyst and Field Geologist - CARG Project 1:50000 Geological Map of Italy (sheets: 448 Ercolano; 466 Sorrento; 563 Isola di S. Pietro; 459 Sassari; 501 Orosei; 500 Nuoro Est; 528 Oristano)

Field Mapping Director - CARG Project 1:50000 Geological Map of Italy, Sheet 320 Casteldelpiano (in course)

Tutoring

Tutoring of numerous First and Second Level Thesis at Pisa, Cagliari and Firenze Universities

Tutoring to several PhD students at Pisa, Cagliari and Firenze Universities.

Distinct PhD students

Lucia Gurioli (Researcher at CNRS Clermont Ferrand, France); Claudia d’Oriano (Researcher at INGV, Italy); Marco Pistolesi (Associate Professor at University of Pisa, Italy); Mulas Maurizio (Associate Professor at University of Guayaquil, Ecuador); Alvaro Aravena Ponce (Associate Professor at Catholic University of Talca, Chile); Tadini Alessandro (Research Fellow at INGV, Italy); Pietro Gabellini (Research Fellow at University of Florence).

Public Appointments at National and International Panels

Public Appointments and Achievements

National Governmental Appointments

- 2023 to present Member (“Deputy Referent”) of the “*Commissione Grandi Rischi – Settore Rischio Vulcanico*” official commission of the National Department of Civil Protection (DPC)

- 2013 to 2017 Member of the “*Commissione Grandi Rischi – Settore Rischio Vulcanico*” official commission of the National Department of Civil Protection (DPC)

Appointments at Scientific Institutions

- 2020 to present ClerVolc Lab of Excellence consortium, Science and Strategic Committee

- 2017 to 2019 Member of INGV-DPC commission on “Individuazione degli elementi utili per l’aggiornamento dei livelli di allerta del Vesuvio e dei Campi Flegrei, con riferimento ai parametri del monitoraggio e alle fenomenologie attese”

- 2015 to 2019 Director of the Italian Interuniversity Center for Volcanological Research (CIRVULC)

- 2012 to 2017 Clermont-Ferrand Centre of Volcano Studies project – Evaluation panel

- 2012 to 2014 Member of National Project Commission for the volcanological projects of INGV-DPC

Appointments at Scientific Societies

- 2009 to 2014 President, Associazione Italiana di Vulcanologia

- 2011 to 2017 Leader, IAVCEI Commission on Tephra Hazard Modelling

Public concourses

Member of the selection panel at Italian institutions (University of Cosenza; University of Catania; University of Firenze; University of Cagliari; University of Pisa; INGV)

Career Achievements

- 2014 National Scientific Qualification of the Italian Ministry of Education, University, and Research (MIUR) as Full Professor of Geochemistry and Volcanology (GEO/08), sector 04/A1

- 2020 National Scientific Qualification of the Italian Ministry of Education, University, and Research (MIUR) as Full Professor of Geochemistry and Volcanology (GEO/08), sector 04/A1

Research Achievements

- Selected in 2nd percentile of the Most Influential Researchers for the Year 2019 – Plos Biology <https://doi.org/10.1371/journal.pbio.3000918>
- Top 100 Italian Researchers in Earth Sciences in 2022 and 2023 <https://research.com/scientists-rankings/earth-science/it>
- Ranked in the list of Top Italian Scientists (TIS) <https://topitalianscientists.org/>

Participation to Editorial Committees of Impacted Journals

Editorial Appointments	2013 to present	Review Editor, <i>Frontiers in Earth Science</i> , section Volcanology
	2017 to 2022	Review Editor, <i>Bulletin of Volcanology</i>
	2010 to 2014	Associate Editor, <i>Italian Journal of Geosciences</i>
	2008 to 2012	Associate Editor, <i>Periodico di Mineralogia</i>
	2002 to 2011	Associate Editor, <i>Bulletin of Volcanology</i>

Journal reviews for: *Geology*; *Geophysical Research Letters*; *J. Geophysical Research*; *Bulletin of Volcanology*; *J. Volcanology & Geothermal Research*; *AGU Geophysical Monographs*; *Chemical Geology*; *Mineralogy and Petrology*; *Geological Society of London Spec. Publ.*; *Mineralogical Magazine*; *Journal of Petrology*; *Earth Planetary Science Letters*; *Annals of Geophysics*; *Geosphere*; *Geosciences*; *Journal of Maps*; *Frontiers in Earth Sciences*; *Scientific Reports*; *Science Advance*; *Nature Communications*; *Nature*.

Proposal reviews for: Italian Ministry of Research and Education; INGV, Italy; National Science Foundation, USA; National Science Foundation, Swiss; National Science Foundation, Canada; National Science Foundation, Iceland; Agence Nationale de la Recherche, France; European Science Foundation; European Research Council; NERC, Great Britain.

Activities at International congresses

Invited presentations at several international congresses
 Invited presentations at international Summer schools.
 Invited Chapters in *Encyclopedia of Volcanoes* (Academic Press) and for several books
 Chair at several Sessions of Italian and International congresses

Steering and scientific committees of national and international congresses

SIMP 2006 (Fluminimaggiore, CA, Italy)
 Rittmann Conference 2009 (Nicolosi, CT, Italy)
 Geotalia 2009 (Rimini, Italy)
 Geotalia 2011 (Torino, Italy)
 Rittmann Conference for Young Researchers (Nicolosi, Catania, Italy)
 Rittmann Conference 2012 (Nicolosi, Catania, Italy)
 Geotalia 2013 (Pisa, Italy)
 Goldschmidt 2013 (National Committee; Field-trips Chair)
 Rittmann Conference 2014 (Nicolosi, Catania, Italy)
 SIMP-AIV-SOGEI-SGI 2015 "Il Pianeta Dinamico: sviluppi e prospettive a 100 anni da Wegener" (Florence, Italy)
 MeMoVolc EEC workshop on the "Dynamics of volcanic explosive eruption" - Geneva (CH)
 Rittmann Conference 2020, Scientific Committee (Catania, Italy)
 Rittmann Conference 2022, Scientific Committee (Catania, Italy)

Field Leader at International Congresses

1994 - IMA 16th General Meeting (Neapolitan Volcanoes)
 1995 – IAVCEI Volcanoes in Towns (Campanian Province Volcanoes)
 1996 – IAVCEI Comm. On Explosive Volcanism (Vesuvius Decade Volcano)
 1998 - IAVCEI "Cities on volcanoes 1" (Vesuvius and Phlegrean Fields)
 2001 – 10th Water Rock Interaction (San Pietro Island, Sardinia, Italy)
 2006 – Congr. SIMP (San Pietro Island, Sardinia, Italy)
 2013 - Goldschmidt 2013 (Quaternary Italian Volcanoes – From Vesuvius to Amiata)
 2018 – 10th Cities on Volcanoes, Naples (The city of Napoli and its active volcanoes)
 2018 - 10th Cities on Volcanoes, Naples (Somma-Vesuvius volcanic history and impact of the 79 AD eruption in archaeological excavations; mid-conference fieldtrip).

Memberships at Scientific Societies

IAVCEI - Int. Assoc. Volcanology and Geochemistry of the Earth Interiors

AGU - American Geophysical Union

AIV - Associazione Italiana di Vulcanologia

Association to Research Institutions

2006 – 2012 Associate Researcher at INGV, Italy

2015 – present Associate Researcher at IGG-CNR, Italy

International collaborations

Active collaborations with researchers at several international institutions (Universidad Catolica del Maule, Chile; Universidad Catolica del Norte, Chile; ESPOL, Ecuador; Instituto Geofisico, EPN, Ecuador; University of Oregon, USA; USGS, USA; SOEST, Hawaii, USA; CSIC Barcelona, Spain; CNRS-ISTO, Orleans, France; Lab. Magmas et Volcans, UCA, France; ISTeP –Université de la Sorbonne, France; University of Geneve, Switzerland; AIST-Geological Survey, Japan; National Research Institute for Earth Science and Disaster Resilience, Japan; INGV, Italy; CNR, Italy)

PUBLICATIONS

Publications and Citation Statistics
(as for 10 March 2024)

Total number of publications: 158

Geological Maps: 7

Books: 2

Total number of Abstracts at Conferences: about 200

Total number of publications in peer-reviewed journals (Scopus): 125

Total number of citations (Scopus): 5071

H index (Scopus): 42

Total number of publications indexed in Google Scholar: 338

Total number of citations (Google Scholar): 7539

H Index (Google Scholar): 50 (29 since 2019)

Firenze, 10 March, 2024

In Faith
Prof. Raffaello Cioni

