

CV Sara Callegaro



Place of residence: Correzzola, Italy

Date of birth: 14th March 1984

Nationality: Italian

Passport: YB0077900

CF: CLLSRA84C54G693V

Languages: Italian (native), English (C2), Norwegian (B2), French (B1),

Email: s.callegaro@unibo.it

Phone: +47 40584736; +39 3518004149

EDUCATION

❖ 01/01/2009 – 01/01/2012 **PhD in Earth Sciences**

Department of Geoscience, University of Padova (Italy)

- *Origin and environmental impact of the Central Atlantic magmatic province*
- Supervisor: Prof. Andrea Marzoli
- Thesis defended: 26/04/2012.

❖ 01/10/2006-01/10/2008 **Master Degree in Geology and Technical Geology**

Department of Geoscience, University of Padova (Italy)

- *CAMP volcanism at the T-J boundary: age and geochemistry of lava piles from the Moroccan Meseta*
- Supervisor: Prof. Andrea Marzoli
- Thesis defended: 08/10/2008, 110/110 honors

❖ 01/10/2003-01/10/2006 **Bachelor Degree in Earth Sciences**

Department of Geoscience, University of Padova (Italy)

- *Sampling and magnetostratigraphic analyses of the Halobia superba layer - Upper Triassic in Lagonegro basin*
- Supervisor: Prof. Nereo Preto
- Thesis defended: 13/10/2006, 110/110 honors

CURRENT AND PREVIOUS APPOINTMENTS

2020 – 2024 **Full professor** at the Department of Biological, Geological and Environmental Sciences, University of Bologna, Italy. PI of CoG-ERC DEGAS project (European Research Council).

2024 – 2025 **Tenure-track researcher** at the Department of Biological, Geological and Environmental Sciences, University of Bologna, Italy.

2020 – 2024 **Researcher** at the Centre for Planetary Habitability, Department of Geosciences, University of Oslo, Norway. PI of YFF MAPLES project (Norwegian Research Council).

2019 – 2020 **Science teacher high school**, I.I.S. De Nicola, Piove di Sacco (PD), Italy.

2016 – 2019 **Post-doctoral research fellow** at the Centre for Earth Evolution and Dynamics, Department of Geosciences, University of Oslo, Norway.

2015 – 2016 **Post-doctoral scholarship** at the Department of Geosciences, University of Padova, Italy.

2013 – 2015 **Post-doctoral research fellow (senior)** at the Department of Geosciences, University of Padova, Italy.

2012 – 2013 **Post-doctoral research fellow (junior)** at the Department of Geosciences, University of Padova, Italy.

RESEARCH ACHIEVEMENTS AND PEER RECOGNITION

Track record overview: Track record overview: 43 published articles and 2 book chapters since 2012, 9 of which as first author. Total citations 2162 (1634 since 2021) From Google Scholar (30/4/26). H-index: 22 (Scopus), 25 (Google Scholar). Over 40 published abstracts in international congresses, of which 7 for invited presentations (2026 – Goldschmidt Montréal, keynote; 2025 GRC – Maine, USA; 2024 – AGU, Washington, USA; 2024 EGU – Wien, Austria; 2022 SGI-SIMP – Turin, IT; 2017 GSA – Seattle, USA; 2015 IUGG – Prague, Czech Republic).

Fellowships and awards:

2025 DEGAS project funded (2.0 M€) - Consolidator grant #101170872 from the European Research Council.

2019 MAPLES project funded (0.8 M€) - Young Research Talent grant #302096 from the Norwegian Research Council.

2019 EU Seal of Excellence for Marie Skłodowska Curie Actions (Individual Fellowships) for proposal #838698 - MAGMARCTIC evaluated 91.2% (threshold for immediate grant preparation agreement: 92.4%).

2022 P.I. of synchrotron light experiment SP30344-1, microfluorescence beamline I18 of Diamond Light Source. Project title: “Synchrotron X-ray Fluorescence (SXRF) analysis of natural augite crystals from Large Igneous Provinces – The Karoo-Ferrar case: insights into degassing and mantle source heterogeneities”.

2019 CEED Young Scientist Prize for my “excellent scientific contribution to unravelling the links between massive volcanic degassing, global climatic changes, and mass extinctions through geologic time”. The prize is given every year by the Norwegian Centre of Excellence SFF - Centre for Earth Evolution and Dynamics (now Centre for Planetary Habitability) and comes with a 5000 € research grant.

2016 Research fellowship: 3-years post-doc project funded in 2016 at the Centre for Earth Evolution and Dynamics.

2014 “Borsa per l'estero Enzo Michele Piccirillo”, grant for a research stay abroad for PhD students funded by the Italian Society of Mineralogy and Petrography (SIMP).

Other peer recognitions:

2021 UiO Leadership Course – Starting Level completed. This is a prestigious course organized by the University of Oslo, which can be attended only by invitation/endorsement by the Head of Department.

From 2020 **ASN abilitation** (Associazione Scientifica Nazionale) for academic professorship in the Italian academic system (associate professor level, valid until 31/05/2031; full professor level valid until 30/10/2033).

COMMISSION OF TRUST

Guest editor for ELEMENTS Magazine (“Large Igneous Provinces: versatile drivers of global change”) and Frontiers in Earth Science (“How Large Igneous Provinces During the Triassic Shaped Modern-Day Ecosystems”) for two thematic issues on LIPs and their environmental consequences.

Reviewer for Science Advances, Nature Geoscience, Geology, Earth and Planetary Science Letters, Journal of Petrology, Contributions to Mineralogy and Petrology, G-cubed, American Mineralogist, Lithos, African Journal of Earth Sciences, Arabian Journal of Earth Sciences.

Reviewer for ERC Advanced Grants 2025.

Convenor and session organizer for Goldschmidt Conference 2021 and 2023; EGU 2026; SIMP 2026. Theme chair for Goldschmidt Conference 2025 (Theme 4 - Volcanism, magmatic systems and hazards).

Membership of scientific societies: IAVCEI, SIMP, EGU, GSA, EAG, AIV.

Invited talks at research institutions: University of Hamburg (2025); University of Milano Bicocca (2025); University of Trieste (2025); Khalifa University (2022); Trinity College Dublin (2018), University of Oslo (2015).

TEACHING EXPERIENCE

2024-ongoing Courses of “Petrography” (bachelor level), “Applied Petrology” (master level) and “Life and deep time catastrophes” (PhD level), Department of Biological, Geological and Environmental Sciences, University of Bologna.

2022-2024 University of Oslo, Department of Geosciences, Lecturer for the course GEO4822 Geochemistry, and special syllabuses in Igneous Petrology and Volcanology.

2017 University of Oslo, Department of Geosciences, Lecturer for DEEP Research School Intensive PhD courses: “Formation and evolution of Large igneous provinces”; “Solid Earth-Fluid Earth Interactions GEO-DEEP9400”.

2018 University of Oslo, Department of Geosciences, Assistant for the field trip to Sognefjord and Western Norway across the Caledonides, as part of the Tectonics course (GEO4840/9840).

2015 University of Padova, Department of Geosciences Teaching assistant for Petrography (hand samples and microscopic description), for the course “Didactics for Earth sciences and laboratory”, 2° TFA program for high school teacher qualification training.

2010-2014 University of Padova, Department of Geosciences, Teaching assistant for the Petrographic Microscopy course and Volcanology course, and field trip assistant (Vesuvius, Eolian Islands).

2015, 2019-2020 High school teacher (Science) at IIS Enrico De Nicola, Piove di Sacco and LSS A. Cornaro, Padova (IT).

SUPERVISING EXPERIENCE

2025 – ongoing University of Bologna, supervision of PhD student (Caraffini) and post doc (Cheviet) with grants funded by the DEGAS project.

2021 – 2023 University of Oslo, supervision of Post-doc Manfredo Capriolo, position funded by my Young Research Talent Grant MAPLES

2022 – ongoing University of Oslo, Department of Geosciences, Co-supervisor of 2 master students (UiO)

2016 – ongoing University of Oslo, Department of Geosciences, Co-supervisor of 4 PhD students

2012-2016 University of Padova, Department of Geosciences Co-supervision of 3 bachelor and 4 master students

FIELDWORK EXPERIENCE

2020-ongoing Field activities in the Oslo Rift and Iceland.

2023 Participation to field course for PhD students GEO9200 to Namibia, organized by A. Braathen (UiO).

2023 Participation to field course and workshop VII IAVCEI Commission on Caldera Collapse, Bozen (IT)

2007-2023 Participation and organization of international fieldwork campaigns: South Africa and Lesotho, Eastern North America (U.S.A.), Meseta and Anti Atlas (Morocco), Fagradalsfjall volcanic eruption (Iceland), Corsica (France).

2013-2023 Participation and organization of national fieldwork campaigns: Oslo Rift, Dolomites, Cima d’Asta, Euganean and Berici Hills, Mt. Etna, Lagonegro Basin, Perda Liana.

2011 Participation to volcanological field mission to Mt. Nyiragongo (Democratic Republic of Congo) under the patronage of UNOPS (United Nations) for monitoring and gas sampling of Nyiragongo lava lake.

ANALYTICAL EXPERIENCE

- Electron microprobe and SEM analyses and BSE or SE imaging (IGG-CNR, Padova; Department of Geosciences, University of Oslo)
- Synchrotron light micro-XRF (S) on pyroxene (Diamond Light Source, Didcot, UK) – PI of experiment SP30344-1 and participant to 7 experiments from 2011 in two different beamlines.
- Ion probe (SIMS) analyses (S, Cl, H₂O, C, F) on pyroxene (NordSIMS, Stockholm; WHOI, Whoods Hole, USA)
- Piston cylinder experiments (powder and assembly preparation, cylinder load and unload procedures) at the McGill university experimental petrology Laboratory (Montréal, Canada).
- Chemical separation in clean lab and (N)TIMS isotopic analyses (CRPG-CNRS, Nancy, FR; BGC, Berkeley, USA; University of Geneva, CH).
- Raman spectroscopy of solid, liquid and gas phases (Dep. Chemistry, Padova University and Diamond Light Source, Didcot, UK).
- Microscopic observations in transmitted polarized light and reflected light for description and selection of Earth Sciences materials for mineral separations and chemical analyses. Expertise on supports: thick sections, thin sections, oriented mineral mounts.

OTHER EXPERIENCE

2019 Psychology of learning, Docimology, Cultural anthropology courses (24 CFU), Univ. Reggio Calabria (IT).

2018 Editorial translation for essays course, from English to Italian, La Matita Rossa Association (IT).

2010 Museum guide at the Mineralogy Museum, University of Padova, Department of Geosciences, within the

project “Vivi Padova” – museum tours organized for elementary to high school students.

2018 Short listed for tenure-track position in Mineralogy and Petrology at the University of Trieste – Department of Mathematics and Earth Sciences.

IT SKILLS

- MS Office (Word, Excel, Power Point)
- Adobe CS suite (Illustrator, Photoshop, InDesign)
- Petrological softwares: IgPet, MELTS, Magma Chamber Simulator, REEBBOX PRO
- GoogleEarth
- Data reduction softwares: PyMCA, OMNIC
- Rudimental knowledge of Matlab, R, ENVI, OriginLAB, ArcGIS

OUTREACH AND PUBLIC ENGAGEMENT ACTIVITIES

- 2021-2023 Scientific advisor for the BBC documentary «Inferno Earth» on the end-Permian mass extinction. My role was to accompany BBC staff to relevant outcrops in the Dolomites (IT) and to advice on appropriate wording for the documentary lines and on the graphics. (www.bbc.co.uk/programmes/p0fpwly8)
- 2021-present Collaboration with textile artist Cristina Mariani. With sponsorship from my research project, Cristina Mariani produced textile art from thin sections and core samples from my collection. Her artistic line researches the soil and the bedrock as a sacred space that begs for contemplative acts. (<http://www.cristinamariani-art.com/>)
- 2021 Interview about the 2021 Nyiragongo eruption and following risk of limnic eruption of the lake Kivu. The interview appeared in an article by Line Fransson in the Norwegian newspaper Dagbladet on 29/05/2021 (www.dagbladet.no/nyheter/barna-flykter-tror-de-er-pa-ferie/73829099)
- 2015 Mineralogy lab for children “La vera magia dei minerali/The true magic of minerals”. This was a summer activity I proposed and realized with the sponsorship of the local library of my municipality (Correzzola, PD – IT). The initiative was dedicated to elementary school children, which could touch and become acquainted with mineral specimens. The goal was to remove the idea of minerals as ‘healing’ or ‘power’ stones, and replace it with the scientific nature of some phenomena such as the birefringence of calcite or the fiber optic properties of ulexite. The lab great success and it was requested bottom up for the following years, but it was unfortunately discontinued because I moved to Norway.
- 2010 Museum guide at the Museum of Mineralogy and Palaeontology of the University of Padova for the initiative “Vivi Padova: un’aula grande come la mia città/Live Padova: a classroom as big my city” as side activity during my PhD at Padova University. My role was accompanying school classes (weekdays) and families (weekends) through the museum’s collections (www.padovanet.it/informazione/vivipadova-anno-202223).
- 2015 Participation to the science talent-show Famelab-Italia. A three-day masterclass prepares the participants: they are trained by an actor, who teaches them how to present their science on stage in 3 minutes. I learnt that voice modulation, body language, facial mimics are key aspects during a presentation if you want the audience to remember your message. Invaluable experience. (<https://famelab-italy.it>).
- 2019-2020 Videos for the students of E. De Nicola high school (Pieve di Sacco, IT) describing the activities of a research team at the synchrotron (Diamond Light Source, UK). The videos were shaped to inform on both the functioning of a synchrotron, and the activities of a woman in science. They were used for the seminars organized by the school to orient the students towards the possible career paths and University courses.
- 2010-2015 Participation to the yearly activities organised by the University of Padova for attracting students in their last year of high school. Our goal as geoscience group was to explain the syllabus, give advice, and attract attention by exposing e.g. cool specimens of rocks and fossils, posters from conferences, videos of field and lab activity.
- 2022 Outreach talk about the geology of Oslo (title: «Oslo geology for your Tinder date») at CEED Christmas Symposium 2022 (www.mn.uio.no/ceed/english/research/news-and-events/events/conferences-and-seminars/christmas-symposium-to-copenhagen.html)
- 2022-present Scientific advisor for Gerd Monika Flodgren. She is writing a novel based on the story of a female volcanologist operating in Iceland in the 90’s. My role is to advise about the geochemical and geophysical techniques that were available in the 90’s for monitoring volcanic unrest.
- 2014-2015 Participation to the 13° contest “Protagonista per una sera/Protagonist for one evening” with a lecture on the geology of Hawaii. The contest is organised by the SAT – Society for Alpinism of Trento (IT) and every

talk/lecture gets voted by the public. At the end of the year, a winner is selected (I scored third). (www.satarco.it/it-it/gruppi/protagonista)

- 2011 Pandolfo F. and Callegaro S., Nella bocca del Nyiragongo/Into the Nyiragongo crater, KUR Magazine, La Venta Geographical Exploration, 2011, issue 2. Outreach article describing the UNOPS expedition to Mt. Nyiragongo to which I participated in May-June 2011. (<https://www.laventa.it/en/>)

Bologna, 04/06/2026

