

ALLEGATO B

UNIVERSITÀ DEGLI STUDI DI MILANO

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Federico Casetta CURRICULUM VITAE

INFORMAZIONI PERSONALI (NON INSERIRE INDIRIZZO PRIVATO E TELEFONO FISSO O CELLULARE)

COGNOME	CASSETTA
NOME	FEDERICO
DATA DI NASCITA	31/10/1991

INSERIRE IL PROPRIO CURRICULUM (non eccedente le 30 pagine)

Federico Casetta Ph. D.

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Spoken languages

Italian (native)

English (fluent - CAE - C1 level)

Bibliometric Indexes (July, 2020)

N° of Publications (ISI only): 7

H-Index (Scopus): 3

Citations (Scopus): 21

Research areas

Igneous petrology

Petrology of alkaline magmas

Mantle metasomatism

Volatiles cycle

Geodynamics

Mineral-melt thermobarometry

Academic career

2019-present Postdoctoral researcher at the Department of Physics and Earth Sciences, University of Ferrara (Italy).

2019-2020 Teaching assistant in Petrography and Laboratory of Petrography B.Sc. courses, Department of Physics and Earth Sciences, University of Ferrara (Italy).

2017-2018 Teaching assistant in Geological Survey B.Sc. course, Department of Physics and Earth Sciences, University of Ferrara (Italy).

2015-2018 Ph.D. in Petrography and Petrology (cum laude), Department of Physics and Earth Sciences, University of Ferrara (Italy). Thesis title: “Thermobarometry, geochronology and petrological evolution of the Middle-Late Triassic magmatic products in the Dolomitic Area (Southern Alps)”.

2013-2015 M.Sc. in Geological Sciences, Geo-Resources and Territory, University of Ferrara (Italy). Thesis title: “Petrological study and 3D modelling of the volcano-plutonic complex and the dyke swarm of the Predazzo area”. Grade: 110/110 cum laude.

2010-2013 B.Sc. in Geological Sciences, University of Ferrara (Italy). Thesis title: “Petrological and geochemical study of the intrusive rocks of the Predazzo Complex in the border zones”. Grade: 110/110 cum laude.

Abroad internships

11/2019-01/2020 Guest Researcher at the Department of Lithospheric Research of the University of Vienna (Austria). Development of high-resolution EPMA analyses on recently erupted products from Mt. Etna (Italy).

11-12/2017 Guest Researcher at the Scottish Universities Environmental Research Centre (Glasgow - UK). Development of Sr-Nd isotopic and Ar/Ar age analyses on whole-rock and mineral separates from the magmatic products of the Dolomitic Area (Southern Alps).

11-12/2016 Guest Researcher at the Scottish Universities Environmental Research Centre (Glasgow - UK). Development of Sr-Nd isotopic and Ar/Ar age analyses on whole-rock and mineral separates from the magmatic products of the Dolomitic Area (Southern Alps).

5-7/2016 Guest Researcher at the University of Rochester (Rochester - NY - USA). Development of HP-HT experiments with piston cylinder apparatus for the homogenization of olivine-hosted melt inclusions.

Awards and scholarships

2019 Best Ph.D. thesis in mineralogy, petrography, geochemistry, volcanology and their application to cultural heritage and environment, Italian Mineralogy and Petrology Society (SIMP).

2019 “Enzo Michele Piccirillo” award for abroad mobility funded by the Italian Mineralogy and Petrology Society (SIMP), supporting the project “Space vs. time: diffusion chronometry as a tool for investigating the timing of the Mt. Etna plumbing system”.

2019 “Nicolò Copernico” award for innovative Ph.D. Theses in Science and Technology, University of Ferrara.

2019 Best Ph.D. Thesis in Earth and Marine Sciences, University of Ferrara.

2017 Abroad Mobility Grant funded by University of Ferrara, supporting the project “Sr-Nd isotopes and Ar/Ar age of the magmatic products of the Predazzo, Mt. Monzoni and Cima Pape complexes (Dolomitic Area, Southern Alps)”.

2016 Abroad Mobility Grant funded by University of Ferrara, supporting the project “Sr-Nd isotopic analysis and Ar/Ar dating of the magmatic products of the Dolomitic Area”.

2016 Young Researchers Grant funded by University of Ferrara, supporting the project “The role of volatiles in the magmatic processes of the continental rift volcanoes”.

Convener at national and international congresses

2019 Convener at the SIMP-SGI-SOGEL Congress, September 16-19, 2019, Parma (Italy). Session title: “Permo-Triassic geodynamic evolution of the Western Tethys realm: insights from magmatism, tectonics and stratigraphic data”.

2018 Convener at the SGI-SIMP Congress, September 12-14, 2018, Catania (Italy). Session title: “Geodynamic evolution between the Variscan and Alpine orogeneses: clues from mantle features and magmatic events”.

Participation to national and international congresses and workshops

2020 EGU Congress, May 4-8, 2020, Online.

2019 International school “Structure and Composition of the Lower Continental Crust”, October 7-10, 2019, Pavia (Italy)

2019 SIMP-SGI-SOGEL Congress, September 16-19, 2019, Parma (Italy).

2018 SGI-SIMP Congress, September 12-14, 2018, Catania (Italy).

2017 British Planetary Science Congress, December 4-5, 2017, Glasgow (UK).

2017 SGI-SIMP-SOGEL-AIV Congress, September 3-6, 2017, Pisa (Italy).

2017 EGU Congress, April 23-28, 2017, Wien (Austria).

2017 MEREMA (MElting and fluid/melt-rock REactions in the Mantle) International Winter School, February 13-17, 2017, Pavia (Italy).

2016 Advanced School on Physics of Volcanoes, October 16-21, 2016, ICTP Trieste (Italy).

2016 EMC2016 Congress, September 11-15, 2016, Rimini (Italy).

Participation to national and international projects

2018-now: Participation to the 20178LPCPW PRIN (Italian National Research Program) project “Micro to Macro - How to unravel the nature of the Large Magmatic Events”.

2017: Participation to the 20175322 project “3D Microstructural evidences of impact stage in chondrite meteorites” at the Synrmp beamline of the Elettra Synchrotron Radiation Facility (Trieste, Italy).

2016: Participation to the 20165074 project “Low pressure degassing-driven crystallization in lava stalactites of Mount Etna volcano (Italy)” at the Synrmp beamline of the Elettra Synchrotron Radiation Facility (Trieste, Italy).

2016: Participation to the 20160125 project “Volumetric estimation of intergranular melts and textural reconstruction of mantle xenoliths” at the Synrmp beamline of the Elettra Synchrotron Radiation Facility (Trieste, Italy).

2016: Participation to the 20160121 project “Vescicles and Ti-Fe oxides degassing-related nucleation and growth in the trachytic products of Mount Etna volcano (Italy)” at the Synrmp beamline of the Elettra Synchrotron Radiation Facility (Trieste, Italy).

2015: Participation to the 20155219 project “3D analysis of bubbles evolution along the longitudinal profile of the 1669 AD lava flow at the Mount Etna volcano (Italy)” at the Synrmp beamline of the Elettra Synchrotron Radiation Facility (Trieste, Italy).

Editorial activity

- 2020-2021: Editor of the Special Issue "Magma Ascent and Evolution: Insights from Petrology and Geochemistry". Minerals - MDPI.

Revision activity

Scientific reviews for the following journals:

- AGU Books - Wiley
- Periodico di Mineralogia - Nuova Cultura Ed.
- Journal of Petrology - Oxford University Press
- Minerals - MDPI

Teaching and dissemination activities

2017-present: Correlator of 5 B.Sc. and 4 M.Sc. theses focused on petrological and volcanological topics:

- The feeding system of the Cima Pape volcano-plutonic complex (Middle Triassic, Dolomites area): insights from clinopyroxene texture and composition (2020 - M.Sc.)
- Petrography, ore geology and genesis of the Bedovina Mine (Predazzo Intrusive Complex, TN) (2020 - B.Sc.)
- Petrological study of selected eccentric eruptions at Mt. Etna (2019 - M.Sc.)
- Petrological study of the magmatic products of the Valli del Pasubio-Posina-Laghi area (2019 - B.Sc.)
- Petrographic and mineral chemical study of the ultramafic xenoliths from La Grille (Gran Comore) (2019 - B.Sc.)
- Origin and evolution of the I Cycle andesites at Lipari (Aeolian Islands) (2018 - M.Sc.)
- Petrographic and geochemical study of the Cima Pape volcano-plutonic sequence (2018 - B.Sc.)
- December 2015 paroxysmal event at Mt. Etna summit craters: relationships between intensive parameters and eruptive style (2017 - M. Sc.)
- Petrological study of lavas from Malta Plateau and Pleiades (Northern Victoria Land - Antarctica) (2017 - B.Sc.)

2017-2018: Tutoring activity during the Petrography B.Sc. course; Department of Physics and Earth Sciences, University of Ferrara (Italy).

2018: Tutoring activity during the dissemination event "Porte Aperte al Polo Scientifico Tecnologico" at the University of Ferrara (Italy).

2018: Participation to the dissemination event "UniFE ORIENTA" organized by the University of Ferrara (Italy).

2017: Participation to the dissemination event "Notte dei Ricercatori" organized by the University of Ferrara (Italy).

2017: Tutoring activity during the dissemination event "Porte Aperte al Polo Scientifico Tecnologico" at the University of Ferrara (Italy).

2016-2017: Tutoring activity during the PLS (Progetto Lauree Scientifiche) Program at the University of Ferrara (Italy).

2016: Student helper at the EMC2016 Congress, September 11-15, 2016, Rimini (Italy).

2016: Tutoring activity during the dissemination event "Porte Aperte al Polo Scientifico Tecnologico" at the University of Ferrara (Italy).

Publication List

Peer-reviewed (ISI referenced journals only)

Coltorti, M., Bonadiman, C., Casetta, F., Faccini, B., Giacomoni, P.P., Pelorosso, B., and Perinelli, C., 2020. Nature and evolution of the northern Victoria Land Lithospheric Mantle (Antarctica) as revealed by ultramafic xenoliths. Geological Society of London Memoirs: The Antarctic Mantle. Accepted manuscript

Lanzafame, G., Casetta, F., Giacomoni, P.P., Donato, S., Mancini, L., Coltorti, M., Ntaflos, T., and Ferlito, C., 2020. The Skaros effusive sequence at Santorini (Greece): petrological and geochemical constraints on an interplinian cycle. Lithos, 105504. DOI: <https://doi.org/10.1016/j.lithos.2020.105504>

Melchiorre, M., Faccini, B., Gregoire, M., Benoit, M., Casetta, F., and Coltorti, M., 2020. Melting and metasomatism/refertilisation processes in the Patagonian Sub-Continental Lithospheric Mantle: a review. Lithos, 354-355. DOI: <https://doi.org/10.1016/j.lithos.2019.105324>

Casetta, F., Giacomoni, P.P., Ferlito, C., Bonadiman, C., and Coltorti, M., 2020. The evolution of the mantle source beneath Mt. Etna (Sicily, Italy): from the 600 ka tholeiites to the recent trachybasaltic magmas. International Geology Review, 62(3), 338-359. DOI: <https://doi.org/10.1080/00206814.2019.1610979>

Casetta, F., Ickert, R.B., Mark, D.F., Bonadiman, C., Giacomoni, P.P., Ntaflos, T., and Coltorti, M., 2019. The alkaline lamprophyres of the Dolomitic Area (Southern Alps, Italy): markers of the Late Triassic change from orogenic-like to anorogenic magmatism. Journal of Petrology, 60(6), 1263-1298. DOI: <https://doi.org/10.1093/petrology/egz031>

Casetta, F., Coltorti, M., Ickert, R.B., Bonadiman, C., Giacomoni, P.P., and Ntaflos, T., 2018. Intrusion of shoshonitic magmas at shallow crustal depth: T-P path, H₂O estimates, and AFC modeling of the Middle Triassic Predazzo Intrusive Complex (Southern Alps, Italy). Contributions to Mineralogy and Petrology, 173(7), 57. DOI: <https://doi.org/10.1007/s00410-018-1483-0>

Casetta, F., Coltorti, M., and Marrocchino, E., 2018. Petrological evolution of the Middle Triassic Predazzo Intrusive Complex, Italian Alps. International Geology Review, 60(8), 977-997. DOI: <https://doi.org/10.1080/00206814.2017.1363676>

Non-Peer-reviewed

Casetta, F., 2019. Thermobarometry, geochronology and petrological evolution of the Middle-Late Triassic magmatic products in the Dolomitic Area (Southern Alps). Plinius, 45. DOI: [10.19276/plinius.2019.01002](https://doi.org/10.19276/plinius.2019.01002)

Conference abstracts (* = presenting author)

Casetta, F.*, Ickert, R.B., Mark, D.F., Bonadiman, C., Giacomoni, P.P., Ntaflos, T., and Coltorti, M., 2020. Pre-rifting volatile-rich melts and asthenosphere influxes: The alkaline-carbonatitic lamprophyres of the Southern Alps (NE Italy). Goldschmidt Congress, June 21-26, 2020, Honolulu (Hawaii, USA).

Petrone, C.*, Di Stefano, F., Giacomoni, P.P., Mollo, S., Gertisser, R., Casetta, F., Del Bello, E., Andronico, D., Scarlato, P., Coltorti, M., and Ferlito, C., 2020. The 2019 paroxysmal eruptions at Stromboli volcano (Italy): magma dynamics recorded by mineral chemistry. Cities on volcanoes Congress, May 23-27, 2020, Heraklion, Crete (Greece).

Casetta, F.*, Giacomoni, P.P., Nardini, N., and Coltorti, M., 2020. How to reconstruct the geometry of a Middle Triassic feeding system: clues from clinopyroxene textures in lava flows from Cima Pape (Southern Alps, Italy.) EGU General Assembly, May 3-8, 2020, Wien (Austria).

Casetta, F.*, Ickert, R.B., Mark, D.F., Bonadiman, C., Giacomoni, P.P., Ntaflos, T., and Coltorti, M., 2020. Volatile-rich melts as markers of the asthenospheric influx prior to rifting events: the case of the alkaline-carbonatitic lamprophyres of the Dolomitic Area (Southern Alps, Italy). EGU General Assembly, May 3-8, 2020, Wien (Austria).

Rizzo, A.L. *, Coltorti, M., Faccini, B., Casetta, F., Ntaflos, T., and Italiano, F., 2020. Geochemistry of noble gas and CO₂ in fluid inclusions from lithospheric mantle beneath Eifel and Siebengebirge (Germany). EGU General Assembly, May 3-8, 2020, Wien (Austria).

Giacomoni, P.P. *, Ferlito, C., Bonadiman, C., Casetta, F., Ottolini, L., Zanetti, A., and Coltorti, M., 2020. Geochemistry of basic magmatism of Western Antarctic Rift: implications for volatiles storage and recycling in the mantle. EGU General Assembly, May 3-8, 2020, Wien (Austria).

Casetta, F.*, Ickert, R.B., Mark, D.F., Bonadiman, C., Giacomoni, P.P., Ntaflos, T., and Coltorti, M., 2019. Lamprophyres as precursors of the Alpine Tethys opening: a Late Triassic alkaline-carbonatitic magmatic episode in the Dolomitic Area (Southern Alps). International school "Structure and Composition of the Lower Continental Crust", October 7-10, 2019, Pavia (Italy).

Rizzo, A.L., Coltorti, M.*, Faccini, B., Casetta, F., Ntaflos, T., and Italiano, F., 2019. Petrology and volatile content of mantle xenoliths from Eifel rift. International Conference on Gas Geochemistry (ICGG), September 30 - October 5, 2019, Palermo-Milazzo (Italy).

Faccini, B.*, Coltorti, M., Brenna, M., Casetta, F., and Briggs, R., 2019. Multiple subduction-related metasomatic pulses in mantle xenoliths from the Karioi volcano, North Island, New Zealand. SIMP-SGI-SOGEL Congress, September 16-19, 2019, Parma (Italy).

Casetta, F.*, Giacomoni, P.P., Ferlito, C., Bonadiman, C., and Coltorti, M., 2019. From the 600 ka tholeiites to the recent trachybasaltic magmas at Mt. Etna: evolution of a lherzolitic mantle. SIMP-SGI-SOGEL Congress, September 16-19, 2019, Parma (Italy).

Rizzo, A.L., Coltorti, M.*, Faccini, B., Casetta, F., Ntaflos, T., and Italiano, F., 2019. Petrological features and volatile content of ultramafic xenoliths from Eifel (Germany). SIMP-SGI-SOGEL Congress, September 16-19, 2019, Parma (Italy).

Giacomoni, P.P. *, Coltorti, M., Bonadiman, C., Ferlito, C., Casetta, F., Zanetti, A., and Ottolini, L., 2019. Subduction-related volatiles involved in the genesis of Cenozoic primary alkaline melts in Northern Victoria Land. SIMP-SGI-SOGEL Congress, September 16-19, 2019, Parma (Italy).

Casetta, F.*, Ickert, R.B., Mark, D.F., Bonadiman, C., Giacomoni, P.P., Ntaflos, T., and Coltorti, M., 2019. The alkaline-carbonatitic lamprophyres of the Dolomitic Area: Late Triassic precursors of the Alpine Tethys opening. SIMP-SGI-SOGEL Congress, September 16-19, 2019, Parma (Italy).

Casetta, F., Giacomoni, P.P., Nardini, N.*, and Coltorti, M., 2019. Petrological features of clinopyroxene in lava flows from Cima Pape (Dolomitic Area, Southern Alps): how to unravel the feeding system of a Middle Triassic volcano. SIMP-SGI-SOGEL Congress, September 16-19, 2019, Parma (Italy).

Giacomoni, P.P. *, Casetta, F., Valenti, V., Lanzafame, G., Coltorti, M., and Ferlito, C., 2019. Thermo-barometric constraints on Mt. Etna feeding system during the 2015 summit eruptive activity. Goldschmidt Congress, August 18-23, 2019, Barcelona (Spain).

Casetta, F.*, Coltorti, M., Ickert, R. B., Bonadiman, C., Giacomoni, P.P., and Ntaflos, T., 2018. The Predazzo Intrusive Complex (Dolomites, Southern Alps): thermobarometry, oxybarometry and hygrometry of a shallow multi-pulse intrusion. SGI-SIMP Congress, September 12-14, 2018, Catania (Italy).

Casetta, F.*, Coltorti, M., Ickert, R. B., Bonadiman, C., Giacomoni, P.P., and Ntaflos, T., 2018. The role of crustal assimilation in the genesis of the Middle Triassic Predazzo Intrusive Complex (Dolomites, Southern Alps). SGI-SIMP Congress, September 12-14, 2018, Catania (Italy).

Coltorti, M.*, Casetta, F., Giacomoni, P.P., Ferlito, C., and Bonadiman, C., 2018. Can a simple lherzolitic mantle source explain the geochemical variation of Etnean magmas through time? SGI-SIMP Congress, September 12-14, 2018, Catania (Italy).

Casetta, F.*, Giacomoni, P.P., Coltorti, M., Ferlito, C., and Bonadiman, C., 2017. Mt. Etna vs. Hyblean Plateau: modelling the mantle source beneath SE Sicily. SGI-SIMP-SOGEL-AIV Congress, September 3-6, 2017, Pisa (Italy).

Faccini, B.*, Coltorti, M., Gamberini, E., Bonadiman, C., Briggs, R.M., and Casetta, F., 2017. Subduction-related metasomatism as evidenced in ultramafic xenoliths from North Island, New Zealand. SGI-SIMP-SOGEL-AIV Congress, September 3-6, 2017, Pisa (Italy).

Casetta, F.*, Coltorti, M., Giacomoni, P.P., Bonadiman, C., and Ntaflos, T., 2017. A crosschecked model to constrain P-T-fO₂-H₂O of a water-rich K-alkaline system: the unique case of the Predazzo Triassic volcano-plutonic complex. SGI-SIMP-SOGEI-AIV Congress, September 3-6, 2017, Pisa (Italy).

Giacomoni, P.P., Casetta, F., Coltorti, M., Ferlito, C., and Valenti, V.*, 2017. P-T-fO₂-H₂O modelling of Voragine and New South East Crater magmatic systems during the December 2015 summit activity at Mt. Etna (Italy). SGI-SIMP-SOGEI-AIV Congress, September 3-6, 2017, Pisa (Italy).

Casetta, F.*, Giacomoni, P.P., Coltorti, M., Ferlito, C., and Bonadiman, C., 2017. Modelling Mt. Etna mantle sources. Geophysical Research Abstracts Vol. 19, EGU2017-7949. EGU General Assembly, April 23-28, 2017, Wien (Austria).

Casetta, F.*, Giacomoni, P.P., Lanzafame, F., Coltorti, M., Bonadiman, C., and Mancini L., 2017. Use of X-ray computed microtomography to estimate the volume of intergranular melts in mantle xenoliths. MELting and fluid/melt-rock REactions in the Mantle (MEREMA) School, February 13-17, 2017, Pavia (Italy).

Coltorti, M., Casetta, F.*, Ferlito, C., and Giacomoni, P.P., 2016. The mantle sources and the feeding system of Etnean magmatism and its evolution through time. Advanced School on Physics of Volcanoes, October 16-21, 2016, ICTP, Trieste (Italy).

Casetta, F.*, Coltorti, M., Marrocchino, E., and Bonadiman, C., 2016. A shoshonitic multi-pulse intrusion in the Southern Alps domain (NE Italy): the Predazzo Intrusive Complex (PIC). Rend. Online Soc. Geol. It., Suppl. n.1 al Vol. 40. 88th SGI Congress, September 7-9, 2016, Naples (Italy).

Data

14/07/2020

Luogo

FERRARA