Dr. Arianna Secchiari

Nationality: Italian | **Gender** Female | arianna.secchiari@unipr.it |

https://www.researchgate.net/profile/Arianna_Secchiari |

Parco Area delle Scienze 157a, Università degli Studi di Parma, 43124, Parma, Italy

About me: - Ph.D. degree at Parma and Montpellier University. - European Ph.D. degree. Currently: Post-Doc Fellow (Parma University) Geochemistry and Petrology. Main research interests: 1) Chemical and isotopic heterogeneity in the Earth's mantle; 2) Mantle petrology and radiogenic isotope geochemistry (Sr-Nd-Pb-Os), with particular emphasis on subduction-zone processes and magmatism; 3) Recycled mantle pyroxenites and their role in HIMU basalts genesis; 4) Crustal recycling and geochemical cycles in the "subduction factory"; 5) Genesis and evolution of the ophiolitic sequences.

WORK EXPERIENCE

01/10/2018 – CURRENT – Parma, Italy
POST DOC FELLOW – PARMA UNIVERSITY

Project: "**A new approach to unravel geochemical heterogeneities in the Earth mantle: Os-Pb isotope investigation of modern and ophiolitic oceanic peridotites.**"

Current research themes:
- Pb isotope composition of recycled mantle pyroxenites: new constraints on mantle heterogeneities and HIMU genesis;
- Origin of supra-subduction zone mantle pyroxenites from Ouassé area (New Caledonia): formation of mantle heterogeneities in SSZ settings;
- Origin of the hydrous mafic-ultramafic rocks from Plum area (Massif du Sud, New Caledonia): constraints on arcs building in intra-oceanic environment.

Department of Chemistry, Life Sciences and Environmental Sustainability

01/10/2017 – 30/09/2018 – Parma, Italy
POST DOC FELLOW – PARMA UNIVERSITY

Project: **"Pb isotope study of mantle pyroxenites"** in the framework of PRIN 2015 Prot. 2015C5LN35 "Melt-rock reaction and melt migration in the MORB mantle through combined natural and experimental studies".
Main aims of the project:
- to investigate Pb isotope composition both in whole-rock and mineral separates (clinopyroxene and garnet) in recycled, garnet-bearing pyroxenites;
- to shed light on the geochemical cycle of "key elements" (U, Th, Pb) in the subduction factory;
- to decipher the role of recycled garnet pyroxenites in the HIMU genesis.

Department of Chemistry, Life Sciences and Environmental Sustainability | https://scvsa.unipr.it/it

01/10/2016 – 31/05/2017 – Berlin, Germany
POST DOC VISITING SCIENTIST – FREE UNIVERSITY OF BERLIN

Project title: **"Re-Os systematics and chalcophile element behavior in the New Caledonia ophiolite"**.
Main aims of the project:
- to investigate HSE (highly siderophile elements) and S-Se-Te behaviour in mantle sections of different geodynamic affinity (i.e. MOR and SSZ);
- particular focus was devoted to unraveling HSE behaviour in ultra-depleted mantle sections, with emphasis on hydrous melting, fluid/melt-peridotite interaction, and late-stage metasomatism.

Earth Science Department, Geochemistry division |

https://www.geo.fu-berlin.de/en/geol/fachrichtungen/geochemhydromin/geochemie/index.html

01/01/2013 – 01/04/2016 – Parma, Italy

PHD STUDENT – PARMA UNIVERSITY - MONTPELLIER UNIVERSITY

Thesis: **"Geochemical and Sr, Nd and Pb isotope investigation of the New Caledonia ophiolite".**
"Co-tutelle" agreement: Parma and Montpellier University.
Supervisors: Dr. Alessandra Montanini (University of Parma, Italy) and Dr. Delphine Bosch (University of Montpellier, France).
Ph.D. committee: Prof. Massimo Coltorti (University of Ferrara, Italy) and Prof. Michel Grégoire (University of Tolouse III).

European Ph.D. degree
Referees: Prof. Carlos Garrido (University of Granada) and Prof. Michel Grégoire (University of Tolouse III).

My research project dealt with a comprehensive petrological and geochemical characterization (major, trace element, and Sr-Nd-Pb isotopes) of the main lithologies (peridotites and gabbronorites) belonging to the New Caledonia Nappe. This study allowed tracking, for the first time, the origin, the evolution, and the processes experienced by the ultra-depleted Peridotite Nappe.

PARTICIPATION IN NATIONAL AND INTERNATIONAL RESEARCH PROGRAMS

10/2018 – 02/2020
PRIN Prot.2015C5LN35: "Melt-rock rection and melt migration in the MORB mantle through combined natural and experimental studies"

Participation in PRIN Prot.2015C5LN35 (Parma Unit) as research fellow.
Main research themes:
- origin and role of mantle pyroxenites in the genesis of mantle heterogeneities;
- role of mantle pyroxenites in MOR and OIB magmatism.

https://m-in-m-project.com/university-of-parma/

01/10/2016 – 31/05/2017
TRR 170 "Late Accretion onto Terrestrial Planets"

Participation in TRR 170 "Late Accretion onto Terrestrial Planets", research area b2 (S-Se-Te and HSE budget in the BSE) funded by DFG (Deutsche Forschungsgemeinschaft, German research foundation).
https://www.trr170-lateaccretion.de/irtg-fellowships-2016-2019

PUBLICATIONS

Highly siderophile and chalcophile element behaviour in abyssal type and supra-subduction zone mantle: new insights from the New Caledonia ophiolite.

Lithos , 354–355, 105338.
https://doi.org/10.1016/j.lithos.2019.105338 – 2020
Secchiari A., Gleissner P., Li, C., Goncharov A., Milke R., Becker H., Bosch D., Montanini A., 2020. "Highly siderophile and chalcophile element behaviour in abyssal type and supra-subduction zone mantle: new insights from the New Caledonia ophiolite". Lithos, 354-355, 105338. (Available online: 16 December 2019).
Scopus metrics: cited by 4.
https://doi.org/10.1016/j.lithos.2019.105338

New Caledonia Ophiolite, Marginal Rifting to Fore-arc Evolution.

Acta Geologica Sinica, 2020, 94, pp. 9–10.
https://doi.org/10.1111/1755-6724.14431 – 2020
Cluzel D., Aitchison J., **Secchiari A.,** Montanini A., Bosch D., 2020. New Caledonia Ophiolite, Marginal Rifting to Fore-arc Evolution. Acta Geologica Sinica, 2020, 94, pp. 9–10

Sr, Nd, Pb and trace element systematics of the New Caledonia harzburgites: Tracking source depletion and contamination processes in a SSZ setting.

Geoscience Frontiers, 2020, 11(1), pp. 37–55.
https://doi.org/10.1016/j.gsf.2019.04.004 – 2020
Secchiari A., Montanini A., Bosch D., Macera P., Cluzel D., 2020 "Sr, Nd, Pb and trace element systematics of the New Caledonia harzburgites: Tracking source depletion and contamination processes in a SSZ setting" Geosciences Frontiers 11, 37-55. (Available online 4 May 2019).
Scopus metrics: cited by 13.

The eocene subduction-obduction complex of New Caledonia.

Geological Society Memoir, 2020, 51(1), pp. 93–130.
https://doi.org/10.1144/M51-2018-70 – 2020
Maurizot P., Collot J., Iseppi M., Lesimple S., **Secchiari A .,** Bosch D., Montanini A., Macera P., 2020 . "Chapter 5: The Eocene subduction obduction complex". Geological Society Memoir, 51(1), pp. 93–130.
Scopus metrics: cited by 11.

Origin of the spinel-pyroxene symplectites in the harzburgites from the New Caledonia peridotite.

Ofioliti, 2019, 44(1), pp. 31–42.
https://doi.org/10.4454/ofioliti.v44i1.515 – 2019
Secchiari A., Montanini A., Bosch D., Macera P., Cluzel D., 2019 "Origin of the spinel-pyroxene symplectites in the harzburgites from the New Caledonia Peridotite". Ofioliti, 44 (1), 31-42.
Scopus metrics: cited by 5.

The contrasting geochemical message from the New Caledonia gabbronorites: insights on depletion and contamination processes of the sub-arc mantle in a nascent arc setting.

Contributions to Mineralogy and Petrology, 2018, 173(8), 66.
https://doi.org/10.1007/s00410-018-1496-8 – 2018
Secchiari A., Montanini A., Bosch D., Macera P., Cluzel D., 2018 "The contrasting geochemical message from the New Caledonia gabbronorites: insights on depletion and contamination processes of the sub arc mantle in a nascent arc setting". Contributions to Mineralogy and Petrology, 173:66.
Scopus metrics: cited by 12.

Melt extraction and enrichment processes in the New Caledonia lherzolites: Evidence from geochemical and Sr-Nd isotope data.

Lithos, 2016, 260, pp. 28–43.
https://doi.org/10.1016/j.lithos.2016.04.030 – 2016
Secchiari A., Montanini A., Bosch D., Macera P., Cluzel D., 2016. "Melt extraction and enrichment processes in the New Caledonia lherzolites: evidence from geochemical and Sr Nd isotope data". Lithos, 260, p. 28 43.
Scopus metrics: cited by 20.

Early Eocene clinoenstatite boninite and boninite-series dikes of the ophiolite of New Caledonia; a witness of slab-derived enrichment of the mantle wedge in a nascent volcanic arc.

Lithos, 2016, 260, pp. 429–442.
https://doi.org/10.1016/j.lithos.2016.04.031 – 2016
Cluzel D., Ulrich M., Jourdan F., Meffre S., Paquette J.L., Audet M.A., **Secchiari A.**, Maurizot P., 2016. "Early Eocene clinoenstatite boninite and boninite like dikes of the ophiolite of New Caledonia; a witness of slab derived enrichment of the mantle wedge in a nascent volcanic arc". Lithos, 260, 429-442.
Scopus metrics: cited by 26.

Geochemical and Sr, Nd, Pb isotope investigation of the New Caledonia ophiolite.

Secchiari, 2016, Ph.D. thesis.
https://www.repository.unipr.it/handle/1889/3148 – 2016
Secchiari A., 2016. Geochemical and Sr, Nd, Pb isotope investigation of the New Caledonia ophiolite. Ph.D. Thesis, Parma and Montpellier University, p.191.
Reviewers: Prof. Massimo Coltorti, Prof. Michel Grégoire, Prof. Carlos Garrido.

Link:
https://www.repository.unipr.it/handle/1889/3148 - Parma University
http://www.theses.fr/2016MONTT173# - Montpellier University

Geochemical and Sr, Nd, Pb isotope investigation of the New Caledonia ophiolite.

Plinius, 2016, 42, 94-100.
https://www.socminpet.it/files/download/vol-42/secchiari.pdf – 2016
Secchiari A., 2016. "Geochemical and Sr, Nd, Pb isotope investigation of the New Caledonia ophiolite". Plinius, 4 2, 94 100. DOI: 10.19276/ plinius. 2016. 01012.

Major, trace element and Sr-Nd-Pb isotope composition of the New Caledonia gabbronorites.

https://doi.org/10.26022/IEDA/111517 – 2020
Secchiari, A., Montanini, A., Bosch, D., Macera, P., Cluzel, D. 2020. Major, trace element and Sr-Nd-Pb isotope composition of the New Caledonia gabbronorites.
Geochemical dataset available on EARTHCHEM: https://ecl.earthchem.org/search.php

Geochemical and Sr-Nd-Pb isotope characterisation of the New Caledonia peridotites (harzburgites and lherzolites).

https://doi.org/10.26022/IEDA/111515 – 2020
Secchiari, A., Montanini, A., Bosch, D., Macera, P., Cluzel, D. 2020. Geochemical and Sr-Nd-Pb isotope characterisation of the New Caledonia peridotites (harzburgites and lherzolites).
Geochemical dataset available on EARTHCHEM: https://ecl.earthchem.org/search.php

Re-Os, highly siderophile (HSE) and chalcophile (S-Se-Te) element characterisation of the New Caledonia peridotites.

https://doi.org/10.26022/IEDA/111518 – 2020
Secchiari, A., Gleissner, P., Li, C., Becker, H., Bosch, D., Montanini, A. 2020. Re-Os, highly siderophile (HSE) and chalcophile (S-Se-Te) element characterisation of the New Caledonia peridotites.
Geochemical dataset available on EARTHCHEM: https://ecl.earthchem.org/search.php

AUTHOR METRICS

Author metrics from Scopus

8 documents
91 citations by 50 documents
h index: 5

(on March 23rd, 2021)

PUBLICATIONS IN PREP.

Temperatures and cooling rates recorded by the New Caledonia ophiolite: new insights on thermal evolution.

Secchiari A., Montanini A., Cluzel D. : Temperatures and cooling rates recorded by the New Caledonia ophiolite: new insights on thermal evolution. In prep. for Chemical Geology

Hydrous mafic and ultramafic intrusives in a nascent volcanic arc (Massif du Sud, New Caledonia).

Secchiari A., Montanini A., Cluzel D. : Hydrous mafic and ultramafic intrusives in a nascent volcanic arc (Massif du Sud, New Caledonia).
In prep.

Pb isotope composition of recycled mantle pyroxenites: insights into the the HIMU source of oceanic basalts?

Secchiari A., Montanini A., Bosch D., Tribuzio R., Pb isotope composition of recycled mantle pyroxenites: insights into the the HIMU source of oceanic basalts?
In prep.

Supra-subduction mantle pyroxenites in an infant subduction system: the New Caledonia ophiolite record.

Ferrari E., **Secchiari A.,** Montanini A., Cluzel D., "Supra-subduction mantle pyroxenites in an infant subduction system: the New Caledonia ophiolite record."
In prep.

The effects of graphite and particles size on reflectance spectra of silicates.

Bruschini E., Carli C., Capaccioni F., Vincendon M., Buellet AC, Vetere F., **Secchiari A.,** Perugini D., Montanini A., The effects of graphite and particles size on reflectance spectra of silicates.In prep.

CONFERENCES AND SEMINARS

19/04/2021 – 30/04/2021 – Virtual
EGU General Assembly 2021

Secchiari A.*, Montanini A., Cluzel D., Ferrari E., "Hydrous mafic-ultramafic intrusives in a nascent arc (Massif du Sud, New Caledonia ophiolite)."
Accepted for to GD4.1 – Subduction dynamics, volatiles and melts: Investigations from surface to deep mantle.
https://www.egu21.eu/

19/04/2021 – 30/04/2021 – Virtual
EGU General Assembly 2021

Ferrari E., **Secchiari A**.*, Montanini A., Cluzel D., "Supra-subduction mantle pyroxenites in an infant subduction system: the New Caledonia ophiolite record".
Accepted for GMPV4.1 – Evolution of the Earth's upper mantle: a petrological, geochemical and geodynamic perspective on lithospheric mantle xenoliths, orogenic and ophiolitic peridotites.

19/04/2021 – 30/04/2021 – Virtual
EGU General Assembly 2021

Bruschini E.*, Carli C., Capaccioni F., Vincedon M., Buellet A.C., Vetere F., **Secchiari A.**, Ferrari M., Perugini D., Montanini A. "The effects of graphite and particles size on reflectance spectra of silicates"
Accepted for session PS1.1 – Rocky planets around the Sun and other stars – bulk, interiors, atmospheres, and their interdependent evolution

12/02/2021 – Virtual
Working Group on Mediterranean Ophiolites - Virtual Winter Meeting

Secchiari A.*, Montanini A., Cluzel D., "Amphibole-bearing mafic-ultramafic intrusives in a nascent arc setting (Massif du Sud, New Caledonia"
https://drive.google.com/file/d/17vz5u8Ue9xYfIbhoeBW1LcEIbATKU0Ya/view

21/06/2020 – 26/06/2020 – Virtual
Virtual Goldschmidt 2020

Montanini A.*, **Secchiari A.,** Bosch D., Cluzel D., Macera P., "The New Caledonia mantle section: tracking source depletion and contamination processes in a supra-subduction setting."
https://doi.org/10.46427/gold2020.1832

31/01/2020 – University of Torino, Italy
Working Group on Mediterranean Ophiolites - Winter Meeting

Secchiari A.*, Montanini A., Bosch D., Cluzel D., [Oral presentation]:"Temperatures and cooling rates recorded by the New Caledonia peridotites: new insights on thermal evolution"
https://drive.google.com/file/d/1CzUaLEhElfGGXLHmiuTxQm5FIR_4ggDK/view

31/01/2020 – University of Torino, Italy
Working Group on Mediterranean Ophiolites - Winter Meeting

Ferrari E., **Secchiari A.,** Bosch D., Cluzel D. Montanini A.*, [Poster presentation]: "Supra-subduction pyroxenites from the New Caledonia peridotites: a preliminary study."
https://drive.google.com/file/d/1CzUaLEhElfGGXLHmiuTxQm5FIR_4ggDK/view

13/11/2019 – 22/11/2019 – Oman
Fifth IGCP-649 Diamonds and Recycled Mantle Workshop

Cluzel D.*, Aitchison J., **Secchiari A.,** Montanini A., Bosch D. [Poster presentation]: “New Caledonia Ophiolite, marginal rifting to fore-arc evolution”.
https://onlinelibrary.wiley.com/doi/full/10.1111/1755-6724.14431

16/09/2019 – 19/09/2019 – Parma, Italy
SIMP-SGI-SOGEI conference

Ferrari E.*, Montanini A., **Secchiari A.,** Bosch D. & Cluzel D. [IES presentation]: “Pyroxenite diversity in supra-subduction mantle: preliminary data from the New Caledonia ophiolite”. Rend. Online Soc. Geol. It., p. 297.

16/09/2019 – 19/09/2019 – Parma, Italy
SIMP-SGI-SOGEI conference

Montanini A., **Secchiari A.***, Bosch D. & Tribuzio R. [Oral presentation]: “Pb isotope composition of recycled mantle pyroxenites: insights into the the HIMU source of oceanic basalts?” Rend. Online Soc. Geol. It., p. 304.

22/01/2019 – 24/01/2019 – Montpellier
New Caledonia Peridotite Amphibious Drilling Workshop

Secchiari A.*, Montanini A., Bosch D., Macera P., Cluzel D., [Poster presentation]: “Geochemical and Sr-Nd-Pb isotope investigation of the New Caledonia peridotite nappe: unravelling the history of a poorly known mantle section.”
https://newcaledoniadp.wordpress.com/

22/01/2019 – 24/01/2019 – Montpellier
New Caledonia Peridotite Amphibious Drilling Workshop

Montanini A.*, **Secchiari A.,** Bosch D., Macera P., Cluzel D., “The geochemical message from the New Caledonia gabbronorites: insights on depletion and contamination processes of the sub-arc mantle in a nascent arc setting.”
https://newcaledoniadp.wordpress.com/

07/04/2019 – 12/04/2019 – Wien
EGU General Assembly 2019

Carli C.*, Serventi G., Maturilli A., Ferrari S., Sgavetti M., **Secchiari A.,** Montanini A., Helbert J. [Poster presentation]:“Emis sivity and reflectance spectra of sulfide-bearing samples: new constraints for the hermean surface composition.” Geophysical Research Abstracts Vol. 21, EGU2019-8326.
https://meetingorganizer.copernicus.org/EGU2019/EGU2019-8326.pdf

25/06/2018 – 28/06/2018 – Pavia, Italy
3° EMAW European Mantle Workshop

Secchiari A.*, Becker H., Gleissner P., Li C., Montanini A., Bosch D., [Oral presentation]: “Highly siderophile and chalcophile element behaviour in abyssal-type and supra-subduction zone mantle: constraints from the New Caledonia ophiolite." Abstract Book p.3° European mantle workshop.
http://emaw2018iggpavia.unipv.it/

25/06/2018 – 28/06/2018 – Pavia, Italy
3° EMAW European Mantle Workshop

Secchiari A.*, Montanini A., Bosch D., Macera P., Cluzel D., [Poster presentation]:“Geochemical and Sr-Nd-Pb isotope investigation of the New Caledonia harzburgite: unravelling the evolution of a sub-arc mantle source”. Abstract Book p. al 3° European mantle workshop.
http://emaw2018iggpavia.unipv.it/

16/09/2018 – 21/09/2018 – Berlin
European Planetary Science Congress

Serventi G., Carli C.*, Maturilli A., Ferrari S., Sgavetti M., **Secchiari A.,** Montanini A., Helbert J., [Poster presentation]:“Emissivity and reflectance spectra of sulfide-bearing samples: new constraints for the hermean surface composition”. EPSC Abstracts Vol. 12, EPSC2018-92-1.
https://ui.adsabs.harvard.edu/abs/2019EGUGA..21.8326C/abstract

08/04/2018 – 13/04/2018 – Wien
EGU General Assembly 2018

Secchiari A.*, Becker H., Gleissner P., Li C., Montanini A., Bosch D., [Oral presentation]: “New insights on highly siderophile and chalcophile element behaviour in abyssal-type and supra-subduction zone mantle sections of the New Caledonia ophiolite”. Geophysical Research Abstract, Vol 20, EGU2018-13877.
https://meetingorganizer.copernicus.org/EGU2018/EGU2018-13877.pdf

08/04/2018 – 13/04/2018 – Wien
EGU General Assembly 2018

Secchiari A.*, Montanini A., Bosch D., Macera P., Cluzel D., [Poster presentation]:“Building new crust in a nascent arc setting: the example of the New Caledonia gabbronorites”. Geophysical Research Abstract, Vol 20, EGU2018-13200.
https://ui.adsabs.harvard.edu/abs/2018EGUGA..2013200S/abstract

04/09/2017 – 06/09/2017 – Pisa, Italy
SGI-SIMP Conference

Secchiari A.*, Becker H., Gleissner P., Li C., Montanini A., Bosch D., [Poster presentation]:“Evidence from the New Caledonia peridotites for contrasting behavior of highly siderophile and chalcophile elements in supra-subduction zone and normal upper mantle”. Abstract Book p. 285.
https://www.socgeol.it/N804/geosciences-a-tool-in-a-changing-world.html

04/09/2017 – 06/09/2017 – Pisa, Italy
SGI-SIMP Conference

Secchiari A.*, Montanini A., Bosch D., Macera P., Cluzel D., [Oral presentation]: "The contrasting geochemical message from the New Caledonia gabbronorites: insights on depletion and contamination processes of the sub-arc mantle in a nascent arc setting". Abstract Book p. 287.
https://www.socgeol.it/N804/geosciences-a-tool-in-a-changing-world.html

07/09/2016 – 09/09/2016 – Napoli, Italy
SGI Conference

Secchiari A., Montanini A.*, Bosch D., Macera P., Cluzel D., [Oral presentation]: "Melt extraction and enrichment processes in the New Caledonia lherzolites". Rend. Online Soc. Geol. It., Suppl. n. 1 Vol. 40.
https://www.rendicontionline.it/296/issue-/issue.html

11/09/2016 – 15/09/2016 – Rimini, Italy
EMC 2016 - 2nd European Mineralogical Conference

Secchiari A., Montanini A.*, Bosch D., Macera P., Cluzel D., [Poster presentation]: "Subduction-related ultradepleted melts in a nascent arc: geochemical and isotopic evidence from the intrusive sequence of the New Caledonia ophiolite".
http://emc2016.socminpet.it/

26/08/2015 – 28/08/2015 – Wroclaw
2° EMAW - European Mantle Workshop

Secchiari A.*, Montanini A., Bosch D., Macera P., Cluzel D., [Oral presentation]: "Geochemistry and tectonic significance of lherzolites from New Caledonia Ophiolite". Mineralogia –Special papers, 43, p. 129.

10/09/2014 – 12/09/2014 – Milan, Italy
SGI-SIMP Conference

Secchiari A.*, Bosch D., Montanini A., Macera P., Cluzel D., [Oral presentation]:"Ultra-depleted peridotites of New Caledonia: a reappraisal". Rend. Online Soc. Geol. It., Suppl. n. 1 Vol. 31., p. 474.
https://www.rendicontionline.it/296/issue-/issue.html

04/05/2014 – 13/05/2014 – Marrakech
6° Orogenic Lherzolite Conference

Secchiari A.*, Bosch D., Montanini A., Macera P., Cluzel D., [Poster presentation]:"Multi-stage evolution of peridotites from New Caledonia: preliminary results".
http://lherzolite.gm.univ-montp2.fr/

HONOURS AND AWARDS

12/2019
MEREMA attending grant – SIMP -Italian Society of Mineralogy and Petrology

Grant for attending MEREMA 2 (International School on Mantle Dynamics) - scheduled for April 2020 and now postponed.

09/2017
SIMP PhD Thesis Award – SIMP- Italian Society of Mineralogy and Petrology

Award for the best PhD theses in Petrology and Mineralogy.
https://www.socminpet.it/374/premio-tesi-di-dottorato.html

06/2015
UGI Master Thesis Award 2014 – UGI Italian Geothermal Union

Award for master theses dealing with geothermal energy exploitation. Thesis: "Study of CO_2 and Radon gaseous emissions and numerical modeling of the geothermal reservoir behaviour, Monterotondo Marittimo (Grosseto, Tuscany)."
https://www.unionegeotermica.it/notiziari/UGINotiziario42.pdf

06/2013
Mobility funds for joint Italy-France PhD projects – French-Italian University

Vinci Call 2013, chapter 2: financial help to promote mobility between Italy and France in the framework of PhD projects. Mobility funds awarded: 4500 €.
https://www.universite-franco-italienne.org/menu-principal/appels-a-projets/programme-vinci/appels-et-resultats/

EDUCATION AND TRAINING

01/01/2013 – 01/04/2016 – Strada dell'Università, 12, Parma, Italy
PHILOSOPHIAE DOCTOR (PH.D.) – University of Parma

Field(s) of study
- Natural sciences, mathematics and statistics : *Earth sciences*

Excellent | Geochemical and Sr, Nd and Pb isotope investigation of the New Caledonia ophiolite |

https://www.unipr.it/

04/2013 – 04/2016 – 641 Avenue du Doyen Gaston Giraud, Montpellier, France
PHILOSOPHIAE DOCTOR (PH.D.) – University of Montpellier

"Co-tutelle" agreement Italy-France.

Field(s) of study
- Natural sciences, mathematics and statistics : *Earth sciences*

Excellent | Geochemical and Sr, Nd and Pb isotope investigation of the New Caledonia ophiolite |

https://www.umontpellier.fr/

01/04/2014 – 01/07/2014 – Strada dell'Università, 12 , Parma , Italy
ERASMUS PLACEMENT CONSORTIA – University of Parma

University traineeship at Géosciences Montpellier. The traineeship included lab activities as:
1. Sample preparation for whole rock and in situ trace element analysis
2. Chemical procedures for radiogenic isotope investigation (Sr-Nd-Pb)
3. ICP-MS and LA-ICP-MS measurements
4. Mass spectrometer measurements (TIMS and plasma-mass spectrometry Neptune plus)

Field(s) of study
- Natural sciences, mathematics and statistics : *Earth sciences*

https://www.unipr.it/

01/10/2009 – 30/09/2011 – Lungarno Antonio Pacinotti, 43, Pisa, Italy
MASTER OF SCIENCE (M.SC.) – University of Pisa

Geochemistry
Thesis: "Study of CO_2 and Radon gaseous emissions and numerical modeling of the geothermal reservoir behaviour, Monterotondo Marittimo (Grosseto, Tuscany)".
Supervisors: Prof. Alessandro Sbrana, Dr. Paola Marianelli and Dr. Maurizio Vaccaro.

Field(s) of study
- Natural sciences, mathematics and statistics : *Earth sciences*

110/110 cum laude | https://www.unipi.it/

01/10/2005 – 27/02/2009 – Lungarno Antonio Pacinotti, 43, Pisa, Italy
BACHELOR OF SCIENCE (B.SC) – University of Pisa

Geochemistry.
Thesis: "Hydrogeochemical data for the evaluation of the geothermal potential of Massa Marittima and Montioni areas (Tuscany, Grosseto)". Supervisors: Prof. Alessandro Sbrana, Dr. Paolo Fulignati.

Field(s) of study

- Natural sciences, mathematics and statistics : *Earth sciences*

110/110 cum laude | https://www.unipi.it/

01/09/2008 – 30/09/2008 – Viale della Stazione, 39, Massa, Italy
UNIVERSITY TRAINEESHIP – GeoTirreno S.r.l.

Field(s) of study

- Natural sciences, mathematics and statistics : *Earth sciences*

http://www.geotirreno.it/azienda.php

04/07/2005 – Via dei Molini, 333, Sarzana, Italy
HIGH SCHOOL DIPLOMA – Liceo Classico T. Parentucelli

LAB TRAINING

01/07/2018 – 31/07/2018
Pb isotope geochemistry in cpx and garnet separates at Géosciences Montpellier.

- Chemical procedures for sample preparation;
- Sample analysis with Neptune plus plasma mass spectrometer (at Géosciences Montpellier).

01/10/2016 – 31/05/2017
Re-Os, HSE and S-Se-Te geochemistry at Free University of Berlin.

- Chemical procedures and sample preparation for HSE (PGE - Au and Re), S-Se-Te and Os isotopes;
- Sample digestion using HP-asher;
- HSE and S-Se-Te analysis using IC-MS;
- $^{187}Os/^{188}Os$ and $^{187}Re/^{188}Os$ analysis with TIMS.

01/2015 – 30/06/2015
Sr-Nd-Pb isotope geochemistry and Sr-Nd geochronology at Géosciences Montpellier.

- Chemical procedures and sample preparation in clean laboratory for Sr-Nd-Pb isotope measurements;
- Sr-Nd isotope geochemistry on mineral separates (clinopyroxene and plagioclase): sample preparation and chemistry;
- Sr isotope measurements using TIMS (Nîmes University);
- Nd-Pb isotope measurements using Neptune plus plasma mass spectrometer (École normale supérieure de Lyon)

04/2014 – 31/07/2014
Whole-rock and in situ trace element geochemistry at Géosciences Montpellier.

- Sample preparation for whole-rock and in situ trace element measurements;
- Measurements of trace element concentrations in whole-rock with ICP-MS (Géosciences Montpellier);
- In situ trace element abundance measurements with LA-ICP-MS

IODP WORKSHOPS

22/01/2019 – 24/01/2019
"New Caledonia Peridotite Amphibious Drilling Workshop", held in Montpellier.

The workshop aimed at developing an amphibious ICDP/IODP proposal for drilling the onshore peridotites of New Caledonia and their offshore extension.
Scientific presentations (poster) at the workshop:
1) **Secchiari A**.*, Montanini A., Bosch D., Macera P., Cluzel D., Geochemical and Sr-Nd-Pb isotope investigation of the New Caledonia peridotite nappe: unraveling the history of a poorly known mantle section.
2) **Montanini A.***, Secchiari A., Bosch D., Macera P., Cluzel D., The geochemical message from the New Caledonia gabbronorites: insights on depletion and contamination processes of the sub-arc mantle in a nascent arc setting.
* = presenting author

05/06/2017 – 07/06/2017
Magellan Plus Workshop "Tyrrhenian magmatism and mantle exhumation (TIME): development of an IODP proposal for the Tyrrhenian basin".

At CNR- Consiglio Nazionale Ricerche Bologna.

COURSES AND WORKSHOPS

09/11/2017
"Elements cycling in the deep Earth: application through trace element and isotope studies".

Held by Vincent Salters (Florida State University) at Pavia University.

12/10/2016 – 14/10/2016
"Scientific writing".

Held by Celeste Brennecka (Münster University) at Free University of Berlin.

13/02/2014 – 14/02/2014
"Introduction to ICP-MS techinique"

Held by Massimo D'Orazio (University of Pisa)

08/09/2013 – 13/09/2013
"International school Zircon: a key mineral for dating and tracking geological processes".

At Pavia University.

06/05/2013 – 09/05/2013
"Academic Writing".

Held by Fergal Bradley & Kari Pitkänen (Language Centre, University of Helsinki) at Parma University.

29/04/2013 – 03/05/2013
"Mid-ocean ridge processes and ocean litosphere architecture"

Held by Benoit Ildefonse (Université de Montpellier) at Milan University.

04/03/2013 – 07/03/2013
Short Course: "Tectonics of Mid Ocean Ridges, Rifted Continental margins,and Subduction Zones".

Held by Cesar Ranero (Barcelona Center for Subsurface Imaging) at Parma University.

18/05/2011 – 20/05/2011
XI Course of Isotope Hydrology "Application of the isotope techniques to the study, evaluation and protection of water resources".

At CNR Pisa, IGG (Institute of Geosciences and Georesources).

25/10/2010 – 28/10/2010
Short course: "Fluids in the Earth".

Held by Robert J. Bodnar (Virginia Tech), Leonid V. Danyushevsky (University of Tasmania) and James D. Webster (American Museum of Natural History) at Earth Science Department, University of Naples "Federico II".

OTHER ACTIVITIES

2017 – CURRENT
Peer review activity for scientific journals.

Journals: Journal of Petrology, Chemical Geology, Lithos, Minerals, Ofioliti.

09/2018 – 09/2019
Member of the organising committee of the SIMP-SGI-SOGEI 2019 Conference (Parma).

http://parma2019.socminpet.it/index.php

2017 – CURRENT
Teaching.

Lectures and seminars for Bachelor, Master and PhD students:
- **University of Science and Technology of China**, Hefei [Invited, online], 16/07/2020: "A tale of mantle melting and contamination: the New Caledonia Peridotite Nappe";
- **Ferrara University** [Invited], 18/12/2019: "Geochemical and Sr-Nd-Pb-Os isotope investigation of the New Caledonia Peridotite Nappe: unravelling the origin of a poorly known mantle section";
- **Parma University**, 9/04/2019 "Geochemical and Sr-Nd-Pb isotope investigation of the New Caledonia Peridotite Nappe";
- **Freie Universität Berlin** 22/05/2017: "Evidence for contrasting behavior of highly siderophile and chalcophile elements in supra-subduction zone and abyssal-type mantle: the message from the New Caledonia peridotites";
- **Freie Universität Berlin**, 25/08/2016 [Invited]: "Geochemistry and origin of an ultra-depleted ophiolitic sequence: the New Caledonia ophiolite".

06/2018 – CURRENT
"Cultore della Materia" (Subject Expert and Teaching Assistant) for GEO/07 field (Petrology).

Main tasks:
examination committee for the courses:
- Petrography (Bachelor Degree in Earth Sciences, Prof. Teresa Trua);
- Petrography (Bachelor Degree in Natural and Environmental Sciences, Prof. Alessandra Montanini);
- Geochemistry and Geodynamics (Master Degree in Earth Sciences, Prof. Alessandra Montanini).

09/2018 – CURRENT
Scientific outreach activities.

- Participation in the "European Researchers night 2018" for the Petrology and Geochemistry group at Parma University;
- 2020-2021: Participation in the PLS program (MIUR, Italian Ministery of Education), a program created to combat early school leaving and to promote scientific knowledge in high school, with two seminars dealing with the birth and the evolution of oceans floors and mid-ocean ridges.

NETWORKS AND MEMBERSHIPS

01/2014 – CURRENT
Member of SIMP- Italian Society of Mineralogy and Petrology

01/2018 – CURRENT
Member of EGU - European Geosciences Union

LANGUAGE SKILLS

Mother tongue(s): ITALIAN

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	C2	C2	C1	C1	C1
FRENCH	B2	B2	B1	B1	B1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

DIGITAL SKILLS

Microsoft Office | Adobe Illustrator | Igpet | Glitter 3.0 | Basic knowledge of numerical simulation programs (FeFlow, PetraSim) | Experience in ArcGIS | Video conferencing (zoom skype teams Webex) | Social Media/Social Network

DRIVING LICENCE

Driving Licence: B

HOBBIES AND INTERESTS

Hobbies and free time

Travelling, Reading, Sport.