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Citations and h-index

N° citations: 158, H-index: 7 (database SCOPUS)

Scientific and professional interests

My research focuses on the study of orogenic chains (Variscan, Alpine and Oman Mountains) from macro- to microscale, from low-grade metamorphism up to high-pressure conditions through space and time. I am interested in investigating the interactions between deformation and metamorphic processes and reconstructing the exhumation mechanism, the kinematic and the tectonometamorphic evolution of polydeformed terranes to unveil processes responsible for the formation of orogens and reconstructing their geodynamics. To do so, I use multidisciplinary tools and skills deriving from structural geology, metamorphic petrology and geochronology, including fieldwork, microstructural and petrological analyses, forward, conventional and iterative thermodynamic modelling coupled with in-situ geochronology with the aid of electron probe micro-analyser (EPMA), Micro-CT tomography, electron backscattered diffraction analyses (EBSD), laser ablation inductively coupled plasma mass spectrometry (LA-ICP-MS) and Raman spectroscopy.

Current position:

2023-2025:

Postdoctoral position at "Dipartimento di Scienze Biologiche, Geologiche e Ambientali dell'Alma Mater Studiorum Università di Bologna", on the project: "*RISING - The Role of continental lithosphere In Subduction zones: sINking or floatinG*" - Supervisor Prof. Francesco Giuntoli (01/12/2023 ÷ 30/11/2025).

Education:

2020-2023:

Ph.D. *cum laude* at "Dipartimento di Scienze della Terra, Università degli Studi di Torino": "*Tectono-metamorphic evolution of the Nappe Zone of the Sardinian Variscan belt, Italy. Constraining the architecture of the hinterland-foreland transition zone in collisional environment*" [Supervisor: Prof. Rodolfo Carosi (Università di Torino); co-supervisors: Prof. Chiara Montomoli (Università di Torino) & Dott. Salvatore Iaccarino (Università di Torino); collaborator Prof. Vitale Brovarone Alberto (Università di Bologna)].

2017-2018:

Master degree in Scienze Geologiche Applicate (Georisorse e Territorio) at "Dipartimento di Scienze della Terra, Università degli Studi di Torino": "*Studio geologico-strutturale e geocronologico di due settori della East Variscan Shear Zone: la Linea Posada-Asinara (Sardegna, Italia) e la Cavalaire Fault (Maures Massif, Francia)*" [Supervisor: Prof. Rodolfo Carosi; co-supervisor: Dott. Matteo Simonetti] – 110/110 *cum laude e menzione*.

Working activity:

2023:

Scholarship at "Dipartimento di Scienze della Terra, Università degli Studi di Torino", on geological mapping and structural geology, on the project: "*Rilevamento geologico per progetto CARG Foglio 172 Pinerolo*" - Supervisor Prof. Rodolfo Carosi (01/02/2023 ÷ 30/11/2023).

2019-2020:

Scholarship at "Dipartimento di Scienze della Terra, Università degli Studi di Torino", on geological mapping and structural geology, on the project: "*Completamento Della Cartografia Geologica In Terra Vittoria Ed Integrazione Del Materiale Cartografico In Un Dataset Digitale*" - Supervisor Prof. Chiara Montomoli (01/05/2019 ÷ 30/09/2019).

Publications in peer-reviewed journals (* corresponding author):

1. **PETROCCIA A***, BONASERA M., CASO F., NERONE S., MORELLI M., BORMIOLI D. & MOLETTA G. (2020): *Structural and geomorphological framework of the upper Maira Valley (Western Alps, Italy): the case study of the Gollone Landslide*. Journal of Maps, 16:2, 534-542, DOI: 10.1080/17445647.2020.1784806
2. SIMONETTI M*, CAROSI R., MONTOMOLI C., CORSINI M., **PETROCCIA A.**, COTTLE J.M. & IACCARINO S. (2020): *Timing and kinematics of flow in a transpressive dextral shear zone, Maures Massif (Southern France)*. International Journal of Earth Sciences, 109, 2261-2285, DOI: 10.1007/s00531-020-01898-6
3. CAROSI R., **PETROCCIA A***, IACCARINO S., SIMONETTI M., LANGONE A. & MONTOMOLI C. (2020): *Kinematics and timing constraints in a transpressive tectonic regime: the example of the Posada-Asinara shear zone (NE Sardinia, Italy)*. Geosciences, 10, 288, DOI: 10.3390/geosciences10080288
4. OBERTO M. & **PETROCCIA A***. (2021): *Preliminary data of the Cannero Riviera mineralized system (Southern Alpine Domain, Western Alps, Italy)*. Rendiconti Online della Società Geologica Italiana, Vol. 53 (2021), doi.org/103301/ROL.2021.01
5. CASO F*, NERONE S., **PETROCCIA A.** & BONASERA M. (2021): *Geology of the southern Gran Paradiso Massif and Lower Piedmont Zone contact area (middle Ala Valley, Western Alps, Italy)*. Journal of Maps, 17, 2, 237-246, doi.org/10.1080/17445647.2021.1911869
6. **PETROCCIA A.** & IACCARINO S*. (2021): *Metaconglomerate in the Pinerolo Unit (Dora Maira Massif, Western Alps): a key outcrop for Alpine geology and training structural geologists*. International Journal of Earth Sciences, doi.org/10.1007/s00531-021-02087-9

7. CAROSI R*, MONTOMOLI C., IACCARINO S., BENETTI B., **PETROCCIA A.** & SIMONETTI M. (2022): *Constraining the timing of evolution of shear zones in two collisional orogens: fusing structural geology and geochronology*. *Geosciences* 2022, 12, 231. <https://doi.org/10.3390/geosciences12060231>

8. **PETROCCIA A***, CAROSI R., MONTOMOLI C., IACCARINO S. & VITALE BROVARONE A. (2022): *Deformation and temperature variation along thrust-sense shear zones in the hinterland-foreland transition zone of collisional settings: a case study from the Barbagia Thrust (Sardinia, Italy)*. *Journal of Structural Geology*, 161, <https://doi.org/10.1016/j.jsq.2022.104640>

9. **PETROCCIA A***, MONTOMOLI C., IACCARINO S. & CAROSI R. (2022): *Geology of the contact area between the Internal and External Nappe Zone of the Sardinian Variscan Belt (Italy): new insights on the complex polyphase deformation occurring in the hinterland-foreland transition zone of collisional belts*. *Journal of Maps*, <https://doi.org/10.1080/17445647.2022.2093660>

10. **PETROCCIA A***, CAROSI R., MONTOMOLI C., IACCARINO S. & VITALE BROVARONE A. (2022): *Thermal variation across collisional orogens: insights from the hinterland-foreland transition zone of the Sardinian Variscan belt*. *Terra Nova*, <https://doi.org/10.1111/ter.12635>

11. **PETROCCIA A***. (2023): *Spatial variation of pure and simple shear across transpressive shear zones: flow kinematics map of the Posada-Asinara shear zone (NE Sardinia, Italy)*. *Rendiconti Online della Società Geologica Italiana*, 60, 35-47, <https://doi.org/10.3301/ROL.2023.28>

12. DANA D., IACCARINO S.*, SCHMID S.M., **PETROCCIA A.** & MICHARD A. (2023): *Structural and metamorphic evolution of a subducted passive margin: insights from the Briançonnais nappes of the Western Alps (Ubaye – Maira valleys, France-Italy)*. *Swiss Journal of Geosciences*, <https://doi.org/10.1186/s00015-023-00445-0>

13. NERONE S., **PETROCCIA A***, CASO F., DANA D. & MAFFEIS A. (2024): *Assessing the importance of H₂O content in the tectono-metamorphic evolution of shear zones: a case study from the Dora-Maira Massif (Western Alps)*. *Journal of Metamorphic Geology*, 10.1111/jmg.12750

14. CAROSI R., MONTOMOLI C.*, IACOPINI D., **PETROCCIA A.**, SIMONETTI M. & OGGIANO G. (2024): *Geology of the Asinara Island (Sardinia, Italy)*. *Journal of Maps*; <https://doi.org/10.1080/17445647.2024.2317136>

15. CASO F., **PETROCCIA A***, NERONE S., MAFFEIS A., CORNO A. & ZUCALI M. (2024): *Comparison between 2D vs. 3D microstructures and implications for metamorphic constraints using a chloritoid–garnet-bearing micaschist*. European Journal of Mineralogy; 36, 381–395, <https://doi.org/10.5194/ejm-36-381-2024>, 2024
16. **PETROCCIA A.**, CAROSI R., MONTOMOLI C*, IACCARINO S., FORSHAW J. & PETRELLI M. (2024): *Transtension or Transpression? Tectono-metamorphic constraints on the formation of the Monte Grighini dome (Sardinia, Italy) and implications for the Southern European Variscan belt*. International Journal of Earth Sciences; <https://doi.org/10.1007/s00531-024-02410-0>
17. MONTOMOLI C.*, IACCARINO S., DI VINCENZO G., LANARI P., **PETROCCIA A.** & CAROSI R. (2024): *Deformation and pressure-temperature-time history of the External Tuscan Units in the Northern Apennines (Italy): the case of the Punta Bianca Unit*. Journal of Geodynamics
18. **PETROCCIA A***, FORSHAW J., LANARI P., IACCARINO S., MONTOMOLI C. & CAROSI R. (2025): *Pressure and Temperature Estimation in Greenschist-Facies Metapelites: an Example From the Variscan Belt in Sardinia*. Journal of Metamorphic Geology; 10.1111/jmg.12799
19. **PETROCCIA A***, GIUNTOLI F., PILIA S., VIOLA G., STERNAI P. & CALLEGARI I. (2025): *Sustained strain localisation and coeval brittle-ductile deformation in an exhuming low-grade shear zone: Insights from the Saih Hatat Window (NE Oman)*. Journal of Structural Geology. <https://doi.org/10.1016/j.jsg.2024.105328>
20. MAFFEIS A.*, **PETROCCIA A.**, NERONE S., . CASO F., CORNO A., BONAZZI M., BOERO F., CORVÒ S. GHIGNONE S. & GROppo C. (2025): *Filling the gap in the UHP metamorphic record of the Liguro-Piemont Lower unit: insights on fluid-mediated formation of atoll garnets*. Lithos. <https://doi.org/10.1016/j.lithos.2025.107981>

Abstract in conferences (oral/PICO/IES):

1. **PETROCCIA A.**, CAROSI R., MONTOMOLI C. & SIMONETTI M. (2019): *1:25.000 structural map of Mamone in the northern of the Sardinian variscan basement*. Interactive extended session (IES): Congresso SGI-SIMP Parma;
2. BONASERA M., **PETROCCIA A.**, CASO F., NERONE S. & MORELLI M. (2020): *Multidisciplinary approach to assess landslide hazards in alpine environment: the geomorphological map of the upper Maira Valley (Western Alps, Italy)* (PICO-Display): EGU General Assembly, Vienna;

3. LANARI P., FORSHAW J., ZHANG Q., MARKMANN T., **PETROCCIA A.**, RUBATTO D. & VHO A. (2022): *Beauty and the Beast: phase equilibrium modelling of eclogites*. Abstract Book: International Eclogite Conference (IEC);
4. MAFFEIS A., NERONE S., CORNO A. CASO F. & **PETROCCIA A.** (2022): *The Western Alps exhumation history detailed through the eyes of glaucophane-bearing eclogitic rocks: preliminary metamorphic data from the Internal Piedmont Zone*. Abstract Book: Congresso SGI-SIMP Torino;
5. **PETROCCIA A.**, FORSHAW J., LANARI P., CAROSI R., MONTOMOLI C. IACCARINO S. & VITALE BROVARONE A. (2022): *Constraining P-T conditions in low-grade metapelites: a case study from the hinterland-foreland transition zone of the Variscan belt, Sardinia*. Abstract Book: Congresso SGI-SIMP Torino;
6. **PETROCCIA A.**, FORSHAW J., LANARI P., CAROSI R., MONTOMOLI C. IACCARINO S. & VITALE BROVARONE A. (2023): *Metamorphic constraints in low-grade metapelites: a case from the Variscan belt in Sardinia*. Abstract Book: Metamorphic Studies Group Research in Progress meeting in Oxford;
7. CAROSI R., SIMONETTI M., MONTOMOLI C., **PETROCCIA A.** & IACCARINO S. (2023): *Constraining the timing of evolution of transpressive shear zones in the Southern Variscan belt: fusing structural geology and geochronology*. International conference: "Perigondwanian orogenies: from Variscan to Indosinian", Orleans, France. Insitut des Sciences de la Terre d'Orléans, Société géologique de France;
8. CAROSI R., MONTOMOLI C., IACCARINO S., DANA D., BORCHI A., CORNO A., **PETROCCIA A.**, GIANOTTI F., STELLINO L. & DRAGO D. (2023): *Mapping the Dora-Maira metamorphic basements: the example CARG project sheet n. 172 "Pinerolo" (Western Alps)*. Abstract Book: Congresso SIMP-SGI Potenza;
9. **PETROCCIA A.**, CAROSI R., MONTOMOLI C., IACCARINO S., FORSHAW J.B. & PETRELLI M. (2023): *Tectono-metamorphic constraints on shear deformation of the Monte Grighini dome (Sardinia): implications for the Southern European Variscan belt*. Abstract Book: Congresso SIMP-SGI Potenza;
10. NERONE S., **PETROCCIA A.**, CASO F., DANA D. & MAFFEIS A. (2024): *H₂O content variation in the metamorphic evolution of shear zones: a case from the Dora-Maira Massif (Western Alps); 37th INTERNATIONAL GEOLOGICAL CONGRESS 2024 (IGC), Busan, Korea;*
11. **PETROCCIA A.**, CASO F., NERONE S., MAFFEIS A., CORNO A. & Zucali M. (2024): *2D vs. 3D rock investigation comparison and possible influences for thermodynamic modelling estimates*. Abstract Book: SGI-SIMP Bari;

12. **PETROCCIA A. (2024):** *Hidden beauty: metamorphic estimates and phase equilibrium modelling of low-grade metapelites*. 22 October 2024 | Gruppo Nazionale di Petrografia (GNP);
13. **PETROCCIA A. (2024):** *Untangling exhuming shear zones with the aid of Micro-CT tomography*. 13 November 2024 | 8th ZEISS X-Ray Microscopy European Network User Workshop 2024;
14. **PETROCCIA A. (2024):** *Hidden beauty: approaches, limitations and potentialities of metamorphic estimates of low-grade metapelites*. EGU GMPV ECS Campfires – Thursday November 21st.

Abstract in conferences (Poster):

1. **PETROCCIA A., SIMONETTI M., MONTOMOLI C., CAROSI R. & CORSINI M. (2017):** *Correlation between Maures Massif (France) and Sardinian Variscan basement: preliminary lithological, structural and metamorphic data from two sections of the European Variscan belt*. Abstract Book: Congresso SIMP-SGI-SOGEI-AIV, Pisa;
2. **PETROCCIA A., SIMONETTI M., CAROSI R. & MONTOMOLI C. (2018):** *Kinematics of the flow in the Cavalaire Fault (Maures Massif, SE France): correlation with the transpressional Posada-Asinara shear zone in northern Sardinia*. Abstract Book: YORSGET, 01/06-07-2018, Montgenevre;
3. **CAROSI R., PETROCCIA A. & MONTOMOLI C. (2018):** *1:25.000 structural map of Lodè and Mamone in the northern of the Sardinian variscan basement*. Abstract Book: Congresso SGI-SIMP Catania;
4. **PETROCCIA A., SIMONETTI M., CAROSI R. & MONTOMOLI C. (2018):** *Kinematic of the flow and finite strain analysis in the Cavalaire Fault (Maures Massif, SE France) and in the Posada-Asinara shear zone (Sardinia basement, Baronia)*. Abstract Book: Congresso SGI-SIMP Catania;
5. **PETROCCIA A., CAROSI R., MONTOMOLI C. & SIMONETTI M. (2019):** *Geochronology and deformation in the Posada-Asinara Line (NE Sardinia basement, Baronia, Italy): timing and shearing constraints in the Southern European Variscan belt*. Abstract Book: Congresso SGI-SIMP Parma;
6. **PETROCCIA A., CAROSI R., MONTOMOLI C. & SIMONETTI M. (2019):** *1:25.000 structural map of Mamone in the northern of the Sardinian variscan basement*. Abstract Book: Congresso SGI-SIMP Parma;

7. **PETROCCIA A.**, CAROSI R., MONTOMOLI C. IACCARINO S. & VITALE BROVARONE A. (2021): *Deciphering the structural-thermal architecture in the hinterland-foreland transition zone: the case of the Nappe Zone in the Sardinian Variscan belt*. Abstract Book: Waiting for YORSGET, 21/22-06-2021;
8. **PETROCCIA A.**, CAROSI R., MONTOMOLI C. IACCARINO S. & VITALE BROVARONE A. (2021): *Structural, kinematic, and thermal constraints on shear deformation in the Barbagia Thrust (Nappe Zone, Sardinia, Italy)*. Abstract Book: Congresso SGI Trieste;
9. SIMONETTI M, CAROSI R., MONTOMOLI C., IACCARINO S. & **PETROCCIA A.** (2021): *The multidisciplinary study of regional-scale shear zones, a powerful tool for improving paleogeographic reconstructions*. Abstract Book: Congresso BE GEO SCIENTISTS 2021;
10. BONASERA M., CASO F., NERONE S., ARGANTE V. & **PETROCCIA A.** (2021): *Morphostructural and lithological control on drainage pattern in Bognanco Valley (Piedmont, Northwest Italy)*. Abstract Book: Congresso BE GEO SCIENTISTS 2021;
11. **PETROCCIA A.**, CAROSI R., MONTOMOLI C. IACCARINO S., FRANCESCHELLI M., CRUCIANI G. & PETRELLI M. (2022): *On the timing of non-coaxial shearing within the Monte Grighini Complex (Sardinia, Italy): preliminary data from in-situ U-(Th)-Pb monazite ages*. Abstract Book: St Andrews 2022 metamorphic studies group (MSG) research in progress meeting;
12. **PETROCCIA A.**, CAROSI R., MONTOMOLI C. IACCARINO S. & VITALE BROVARONE A. (2022): *In shear we "thrust": deformation and temperature variation along a thrust-sense shear zone in the hinterland-foreland transition zone of the Sardinian belt*. Abstract Book: European DRT (Deformation mechanisms, Rheology and Tectonics) Society, Catania;
13. **PETROCCIA A.**, CAROSI R., MONTOMOLI C. IACCARINO S. & VITALE BROVARONE A. (2022): *The Baunei area: a key sector to decipher the upper structural level deformation related to nappe-stacking during the Variscan orogeny*. Abstract Book: YORSGET;
14. MAFFEIS A., NERONE S., CORNO A. CASO F. & **PETROCCIA A.** (2022): *Detailing the exhumation history of the Western Alps through the eyes of glaucophane-bearing eclogitic rocks: preliminary metamorphic data from the Internal Piedmont Zone*. Abstract Book: International Eclogite Conference (IEC);
15. **PETROCCIA A.**, CAROSI R., MONTOMOLI C. & IACCARINO S. (2022): *Mapping polyphase deformation linked to the nappe stacking in a collisional framework: a case study from the Nappe Zone of the Variscan Belt*. Abstract Book: Congresso SGI-SIMP Torino;

16. CAROSI R., MONTOMOLI C. IACCARINO S., BENETTI B., **PETROCCIA A.** & SIMONETTI M. (2022): *Constraining the timing of evolution of shear zones in collisional orogens: an interplay between structural geology and geochronology*. Abstract Book: Congresso SGI-SIMP Torino;
17. **PETROCCIA A.**, NERONE S., DANA D., CASO F. & MAFFEIS A. (2022): *Constraining P-T conditions of non-coaxial deformation between subducted continental units: a case study from the Dora-Maira Massif, Western Alps*. Abstract Book: Congresso SGI-SIMP Torino;
18. IACCARINO S. & **PETROCCIA A.** (2022): *Deformed metaconglomerate of Pinerolo Unit along the Val Germanasca: a twofold geosite*. Abstract Book: Congresso SGI-SIMP Torino;
19. **PETROCCIA A.**, CAROSI R., MONTOMOLI C. & IACCARINO S. (2023): *How much can contour maps help? Flow kinematics map of the Posada-Asinara shear zone (NE Sardinia, Italy)*. Abstract Book: Congresso SIMP-SGI Potenza;
20. NERONE S., **PETROCCIA A.**, CASO F., DANA D. & MAFFEIS A. (2023): *Unveiling the importance of H₂O in the tectono-metamorphic evolution of shear zones: a case from the Dora-Maira Massif (Western Alps)*. Abstract Book: Congresso SIMP-SGI Potenza;
21. **PETROCCIA A.**, CASO F., NERONE S., CORNO A. & MAFFEIS A. (2023): *2D vs. 3D rock-forming minerals relations and distribution in a chloritoid-garnet-bearing micaschist from the Dora Maira Massif (Western Alps)*. Abstract Book: EXCITE Conference Granada;
22. CASO F., **PETROCCIA A.**, NERONE S., MAFFEIS A. CORNO A. & Zucali M. (2024): *2D vs. 3D sample petrography and microstructure comparison using a chloritoid-garnet-bearing micaschist*. Abstract Book: Advanced X-ray characterization technologies in Earth Sciences;
23. **PETROCCIA A.**, NERONE S., CASO F. & MAFFEIS A. (2024): *revealing the importance of H₂O content variation in the metamorphic evolution of shear zones: a case from the Dora-Maira Massif (Western Alps)*. Abstract Book: Bristol 2024 metamorphic studies group (MSG) research in progress meeting;
24. **PETROCCIA A.**, GIUNTOLI F., CALLEGARI I. & VIOLA G. (2024): *Hybrid veins and heterogeneous deformation in the Saih Hatat window, Oman belt: a possible record of fossil episodic tremors and slow slip events*. Abstract Book: European Mineralogical Conference 2024, Dublin;
25. **PETROCCIA A.**, GIUNTOLI F., VIOLA G. & CALLEGARI I. (2024): *Heterogeneous rock response to deformation in subduction-related continental shear zones: a possible record of episodic tremors and slow slip events from the Saih Hatat window, Oman*. Abstract Book: Congresso SGI-SIMP Bari;

26. **PETROCCIA A.**, CAROSI R., MONTOMOLI C., IACCARINO S., FORSHAW J.B. & PETRELLI M. (2024): Constraining the deformation in transpressive shear zones: insights from the Monte Grighini Shear Zone in Sardinia and implications for the Southern European Variscan belt. Abstract Book: Congresso SGI-SIMP Bari;
27. CAROSI R., MONTOMOLI C., IACOPINI D., **PETROCCIA A.**, SIMONETTI M. & OGGIANO G. (2024): *Geology of the Asinara Island (Sardinia, Italy)*. Abstract Book: Congresso SGI-SIMP Bari;
28. CAROSI R., SIMONETTI M., MONTOMOLI C., IACCARINO S., & **PETROCCIA A.** (2024): *The importance of regional-scale shear zones in paleogeographic reconstructions: the case study of the Variscan belt in the Mediterranean area*. Abstract Book: Congresso SGI-SIMP Bari;
29. **PETROCCIA A.**, GIUNTOLI F., VIOLA G. & CALLEGARI I. (2024): *Weakening and pore pressure fluctuations during progressive shearing from subducted continental units of the Saih Hatat Dome, Oman*. AGU 2024.

Invited talk

- "Studio geologico – strutturale e geocronologico di due settori della East Variscan shear zone: la Linea Posada – Asinara (Sardegna, Italia) e la Cavalaire Fault (Maures Massif, Francia", invited talk for the received David Giuntini Award 2020;
- "Carta geologico-strutturale dell'area di Mamone (Baronie, NE Sardegna, Italia)", Roma, invited talk for the received Premio Emilio Cortese 2020;
- "Shear Zones in collisional frameworks: case studies from the Variscan and Alpine chains" Bologna, invited talk for the Deformation Fluids and Tectonics (DFT) group meeting;
- Seminar at the Institute of Petrology and Structural Geology seminar series in Prague, Faculty of Science, Charles University, with the title "Exhuming low-grade shear zones in collisional frameworks: Weakening and pore pressure fluctuations during progressive shearing from subducted continental units of the Saih Hatat Window, NE Oman.

Fieldwork:

- 2017-2018 – NE Sardinia (Lodè): geological mapping, sampling and structural data collection and analysis;
- 2016-2017 – southern France (Maures Tanneron Massif): geological mapping, sampling and structural data collection and analysis;
- 2019 – Gran Paradiso Massif (Mondrone): geological mapping, sampling and structural data collection and analysis;
- 2019 – Maira Valley (Acceglio, Gollone landslide): geological mapping, sampling and structural data collection and analysis;

- 2020 – Bognanco Valley (Bognanco, Bognanco landslide): geological mapping, sampling and structural data collection and analysis;
- 2018-2020 – Central and southern-central Sardinia (Mulargia Lake, Sorgono, Muravera, Lago Alto del Flumendosa, Bitti, Lula): geological mapping, sampling and structural data collection and analysis;
- 2019 – Sardinia (Gairo St.Elena): geological mapping, sampling and structural data collection and analysis;
- 2020 – Sardinia (Baunei): geological mapping, sampling and structural data collection and analysis;
- 2021 – Central Sardinia: geological mapping, sampling and structural data collection and analysis in the Nappe Zone;
- 2020-2021 – Western Alps, near Mt. Bracco e Caucinere (Piemonte, Italy): geological mapping, sampling and structural data collection and analysis;
- 2022 – Central and western Sardinia: geological mapping, sampling and structural data collection and analysis in the Mt. Grighini;
- 2023 – Pinerolo, Western Alps, Dora Maira Massif; geological mapping, sampling and structural data collection for CARG project;
- 2024 – Oman, Saih Hatat dome and around areas; geological mapping, sampling and structural data collection;
- 2025 – Oman, Saih Hatat dome and around areas; geological mapping, sampling and structural data collection.

Awards and mentions:

- "*Medaglia d'Argento*" for the best Master Thesis in Earth Sciences of "Dipartimento di Scienze della Terra, Università degli Studi di Torino, **2018-2019**", with the title: "Studio geologico – strutturale e geocronologico di due settori della East Variscan shear zone: la Linea Posada – Asinara (Sardegna, Italia) e la Cavalaire Fault (Maures Massif, Francia)". Supervisors Carosi R., Simonetti M.;
- "*Concorso Scientifico - Premio David Giuntini*" for the best Master Thesis in Earth Sciences **2019**, with the title: "Studio geologico – strutturale e geocronologico di due settori della East Variscan shear zone: la Linea Posada – Asinara (Sardegna, Italia) e la Cavalaire Fault (Maures Massif, Francia)". Supervisors Carosi R., Simonetti M.;
- "*Concorso Scientifico - Premio Emilio Cortese per la migliore carta geologica (Best geological map)» biennio 2019-2020*", with the title: "Carta geologico-strutturale dell'area di Mamone (Baronie, NE Sardegna, Italia)";
- Winner of ERASMUS+ TRAINEESHIP Call **2021** della Scuola di Scienze della Natura;
- "*Best Poster Award*" – *Young Researcher in Structural Geology and Tectonics (YORSGET) 2022*, with the title: "The Baunei area: a key sector to decipher the upper structural level deformation related to nappe-stacking during the Variscan orogeny";

- *"Best Poster Award" – Deformation Mechanisms, Rheology and Tectonics (DRT) 2022*, with the title: "In shear we "thrust": deformation and temperature variation along a thrust-sense shear zone in the hinterland-foreland transition zone of the Sardinian belt";
- *"Special mention for the Talk" – Metamorphic Studies Group Research in Progress meeting in Oxford (2023)*, with the title: *"Metamorphic constraints in low-grade metapelites: a case from the Variscan belt in Sardinia"*;
- *"Special mention for the Quintino Sella SGI award for the Best PhD Thesis (2024)"* with the title: *"Tectono-metamorphic evolution of the Nappe Zone of the Sardinian Variscan belt, Italy. Constraining the architecture of the hinterland-foreland transition zone in collisional environment"*.

Grant and funds:

- *"Grant SGI" for the conference Geosciences: a tool in a changing world, Pisa 2017* (Congresso congiunto AIV, SGI, SIMP e SoGel);
- Winner of the *Free Access to the LA-ICP-MS facility supported by PVRG research group 2020* (Petro-Volcanology Research Group at Department of Physics and Geology, University of Perugia, Supervisor Dr. Maurizio Petrelli), with a brief research proposal with the title: "U-(Th)-Pb in-situ monazite timing constrain of the Monte Grighini Complex in the Nappe Zone of the Variscan belt in Sardinia";
- Co-winner of the *Free Access to the LA-ICP-MS facility supported by PVRG research group 2021* (Petro-Volcanology Research Group at Department of Physics and Geology, University of Perugia, Supervisor Dr. Maurizio Petrelli), with a brief research proposal with the title: "P-T-d and geochronological constraints of the mylonitic zone between the Pinerolo and the Rocca Solei units (Dora Maira Massif, Western Alps, Italy): implication for the tectono-metamorphic history of HP subducted terranes";
- *"Travel Grant 2022" for the Metamorphic Studies Group Meeting* in the University of St Andrews;
- *"DRT Society support scheme 2022" for the 23° DRT (Deformation mechanisms, Rheology and Tectonics) conference - Catania (Italy)*;
- Winner of the TransNational Access (TNA) in the framework of the EXCITE Network 2022-2023 **2nd call** (Horizon 2020) with project: (SH.E.A.R. - SHear zonEs non-coAxial equilibRium); 3D analysis of shear zones: quantifying non-coaxial deformation and thermodynamic equilibrium;
- *Metamorphic Studies Group Meeting bursary grant for the MSG2024* in Bristol;

- *"Special Grant Geoscienze" for the Congresso congiunto SIMP, SGI, SOGEI, AIV with the title "The Geoscience paradigm: Resources, Risks and future perspectives" (Potenza 2023);*
- *"Excite travel grant" EXCITE conference in Granada, scheduled from 8 to 10 November 2023;*
- Winner of the TransNational Access (TNA) in the framework of the EXCITE Network **4th call** with project: (2.3D.E.MO. 2.3D Equilibrium MOdelling); Influence of 2D vs 3D phase relations on phase equilibrium modelling;
- Co-winner of the TransNational Access (TNA) in the framework of the EXCITE Network **4th call** with project: (H.-T.E.M.P. High-Temperature Elucidates Migmatitic Processes); Reconstructing the high-temperature deformation in migmatites through garnets;
- Winner of the transnational access **2024** (TNA) / national open access (NOA) to the ILGE network, part of the MEET project (NGEU initiative funded by the Ministero dell'Università e della Ricerca) with project: "THRILLER linking microStructures with geoCHRonology to unveil the contInental LithosphERe subduction";
- *"Grant SIMP" for the conference Geology for a sustainable management of our Planet, Bari 2024 (Congresso congiunto SGI-SIMP);*
- Winner of the TransNational Access (TNA) in the framework of the EXCITE² Network **1st call 2024** with project: DE.P.T.H.: DEciphering continental subduction Processes Through dilational Hydroshear veins;
- Winner of the TransNational Access (TNA) in the framework of the EXCITE² Network **2nd call 2025** with project: STRAIN: Shear localisaTion of viscous vs. plastic defoRmAtIon in shear zoNes.

Abroad period:

- Visiting PhD student and member of the COMPUTATIONAL PETROLOGY GROUP at the Institute of Geological Sciences of the University of Bern (Switzerland) under the supervision of Prof. Pierre Lanari (01/03/2022 ÷ 01/05/2022);
- Visiting PhD student at the Institute of Geological Sciences of the University of Bern (Switzerland) under the supervision of Prof. Pierre Lanari and Dr. Forshaw Jacob (02/10/2022 ÷ 06/10/2022);
- Visiting student at Unidad de Microtomografía de Rayos X, Centro de Instrumentación Científica, Universidad De Granada (Spain) for the Micro-CT analysis under the supervision of Prof. Encarnación Ruiz Agudo and Fatima Linares (20/04/2023 ÷ 30/04/2023).

Editorial activity:

- Contributor for the "*Atlas of Structural Geology second edition*" (2nd Edition - December 4, **2020** Edited by Soumyajit Mukherjee);
- Contributor for the journal "Il Geologo" dell'Ordine dei Geologi della Toscana, with the title: "Studio geologico-strutturale e geocronologico di due settori della East Variscan Shear Zone: la Linea Posada-Asinara (Sardegna, Italia) e la Cavalaire Fault (Maures Massif, Francia)"; n113, 27-31, december **2020**;
- Contributor for the journal "Geologicamente" della Società Geologica Italiana, nella sezione Giovani Geologi; n7, 54.55, **2022**;
- Contributor for chapter "La storia geologica d'Italia" per i volumi "Alla scoperta dei Minerali d'Italia Vol. 1 e 2 – **2022**" (Edited by Respino Daniele);
- Associate Editor of the PhD **2022** volume of the "Rendiconti Online della Società Geologica Italiana";
- Member of the Editorial Board of PLINIUS (SIMP), currently active (<https://www.socminpet.it/344/plinius.html>);
- Member of the Scientific Advisory Board of Geologica Acta, the Earth Science journal sponsored by the Faculty of Earth Sciences (University of Barcelona, UB), the Institute of Earth Science (GEO3BCN-CSIC), the Institute of Environmental Assessment and Water Research (IDAEA-CSIC) and the Universitat Autònoma de Barcelona (UAB).

Activity organization:

- Member of the PhD representers (**2019-2022**);
- Member of the organizing committee of the 1st Be Geoscientist Congress (**2021**);
- Member of the organizing committee of the PhD-Day del 90° Congresso della Società Geologica Italiana, **2021**;
- Member of the organizing committee of the Notte Europea delle Ricercatrici e dei Ricercatori a Torino, **2021**;
- Member of the organizing committee of the Congresso congiunto SGI e SIMP, with the title Geosciences for a sustainable future (Torino, **2022**);
- Member of the organizing committee of the PhD-Day del Congresso congiunto SGI e SIMP, with the title Geosciences for a sustainable future (Torino, **2022**);
- Member of the organizing committee of the Notte Europea delle Ricercatrici e dei Ricercatori a Torino, **2022**;
- Member of the organizing committee of the 2nd Be Geoscientist Congress (Sustainability and risk: BeGEO scientists on the road to the future; Napoli, **2023**);
- Convener of the session "S40. From macro- to micro-investigations in structural geology: methodological essentials and advances" during the SIMP-SGI **2023** meeting in Potenza;
- Member of the Tectonic Studies Group Committee in the position of Early Career Researcher (ECR) Rep. from the **2024** and currently active;
- Co-convener at the EGU General Assembly **2025** of the session "TS1.6 Deformation processes and texture analysis";
- Co-convener at the EGU General Assembly **2025** of the course "Geology 101".

Third mission:

- Curator of the social media content for the EGU TS (Tectonics and Structural Geology group) currently active;
- Curator of the social media content for the GIGS (Gruppo Italiano di Geologia Strutturale) currently active;
- Curator of the social media content for the DFT (Deformation Rheology and Tectonics group) currently active.

Teaching:

2025:

Tutor of the Petrography course [cod. 00799] (20h) at "BiGeA - Dipartimento di Scienze Biologiche, Geologiche e Ambientali Alma Mater Studiorum - Università di Bologna", Supervisor Prof. Braga R.;

2024:

Tutor of the Petrography course [cod. 00799] (20h) at "BiGeA - Dipartimento di Scienze Biologiche, Geologiche e Ambientali Alma Mater Studiorum - Università di Bologna", Supervisor Prof. Braga R.;

2022:

Lesson at "Dipartimento di Scienze della Terra, Università degli Studi di Torino", Lesson about the "geodynamics of the earth by Sandbox", Structural Geology bachelor course (20/12/22; 2h; Supervisors Prof. Carosi Rodolfo and Prof. Montomoli Chiara);

2022:

Lesson at "Dipartimento di Scienze Naturali, Università degli Studi di Torino", Lesson about the "geodynamics of the earth by Sandbox", general geology bachelor course (2h; Supervisor Prof. Montomoli Chiara);

2022:

Field lesson and general introduction to earth sciences at "Dipartimento di Scienze della Terra, Università degli Studi di Torino", for the bachelor students (04/11/22; 8h; Resp. Prof. Rodolfo Carosi);

2022:

Class and field support at "Dipartimento di Scienze della Terra, Università degli Studi di Torino" for the Applied Structural Geology course (32; Supervisors Prof. Rodolfo Carosi, Prof. Montomoli Chiara & Dott. Iaccarino Salvatore);

2021:

Lesson at "Dipartimento di Scienze Naturali, Università degli Studi di Torino", Lesson about the "geodynamics of the earth by Sandbox", general geology bachelor course (18/11/21; 2h; Supervisor Prof. Montomoli Chiara);

2021:

Field lesson and general introduction to earth sciences at "Dipartimento di Scienze della Terra, Università degli Studi di Torino", for the bachelor students (29/10/21; 8h; Supervisor Prof. Rodolfo Carosi);

2020:

Class and field support at "Dipartimento di Scienze della Terra, Università degli Studi di Torino" for the Applied Structural Geology course (24h; Supervisors Prof. Rodolfo Carosi, Prof. Montomoli Chiara & Dott. Iaccarino Salvatore) and for Tectonics and Regional Geology (12h; Supervisors Prof. Rodolfo Carosi, Prof. Montomoli Chiara & Dott. Iaccarino Salvatore);

2020:

Class and field support at "Dipartimento di Scienze Naturali, Università degli Studi di Torino" for the general Geology course (40h; Supervisors Dott. Carlo Bertok & Dott. Franco Gianotti);

2018-2019:

Class and support at "Dipartimento di Scienze della Terra, Università degli Studi di Torino" for the Laboratory of Petrography (15h; Supervisors Prof. Daniele Castelli & Prof. Chiara Groppo); Laboratory of Mineralogy (15h; Supervisors Prof. Piera Benna & Dott. Marco Bruno); Laboratory of Geology (15h; Supervisors Prof. Anna D'Atri & Prof. Simona Ferrando) and Laboratory of Paleontology (5h; Supervisors Dott. Francesca Lozar);

Review activity:

- Solid Earth
- Lithos
- International Journal of Earth Sciences
- G3: Geochemistry, Geophysics, Geosystem
- Tectonics
- Tektonika
- Journal of Maps
- Journal of Structural Geology
- Journal of Asian Earth Sciences
- Italian Journal of Geosciences
- Geodinamica Acta (All Earth)
- Geological Magazine
- GWIS Fellowship Competition

Affiliation:

- Società Geologica Italiana (SGI);
- Società italiana di Mineralogia e Petrologia (SIMP);
- BeGeoScientists.

