Curriculum vitae

PERSONAL INFORMATION

DE LANDRO GRAZIA, PhD

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Date of birth: 13/11/1988, Nationality: Italian

EDUCATION

2017 **PhD in Geophysics** with mention of "Doctor Europaeus'', University of Bologna "Alma Mater Studiorum", Bologna, Italy
Title: " Tracking space and time changes of physical properties in complex geological media",
Supervisors: Prof. M. Belardinelli and Prof. A. Zollo.
Final Grade: Excellent Cum Laude.

2013 **M.A.Sc. in Physics**, Geophysics curriculum, Department of Physics, University of Naples "Federico II", Naples, Italy.
Thesis in seismology entitled "High accuracy Earthquake location with Double-Difference technique in 3D structure".
Supervisor: Prof. Aldo Zollo. Final Grade: 110/110 Cum Laude.

2011 **B.A.Sc. in Physics**, Department of Physics, University of Naples "Federico II", Naples, Italy.
Thesis in seismology entitled "Seismic array: locating events outside ISNet network",
Supervisor: Prof. Aldo Zollo.

CURRENT AND PREVIOUS POSITIONS

01/2021 – **Fixed Term Researcher**, Physics for the Earth System and the Circumterrestrial Medium
Employer: Department of Physics "Ettore Pancini", University of Naples Federico II
The research tasks concern the analysis of data related to the processes of generation and nucleation of natural or anthropogenically produced earthquakes, their modeling through numerical approaches, their use for the improvement of systems seismic monitoring in tectonically active areas or exploitation of the subsurface for energy.

02/2023 **Visiting Researcher**
Stanford University – Collaborated with Prof. Tiziana Vanorio, head of the Rock Physics and Geomaterials Laboratory, to initiate a research partnership on the interdisciplinary analysis of fluid-induced seismicity across multiple scales and geological conditions.

04/2022 **Guest Scientist**
Department of Physics and Astronomy, Geophisical section, of University "Alma Mater Studiorum" of Bologna working with prof. Maria Elina Belardinelli and Dr. Massimo Nespoli for a collaboration on the topics of poro-elastic modeling.

06/2019 – 01/2022 **Research Fellow**
Department of Physics, University of Naples "Federico II" (SSD: FIS/06)
Research activity funded under the contract between ENI spa and the University of Naples "Federico II": "Development and testing of automatic procedure for detection of medium changes based on P-wave and S-wave velocity estimates from micro-seismicity monitoring".

02/2019 – 05/2019 **Research Fellow**
Department of Physics, University of Naples "Federico II" (SSD: FIS/06)
Research activity in the context of the "SERA - Seismology and Earthquake Engineering

Research Infrastructure Alliance for Europe " project (CUP: E62F17000440006). The activity of research concerns: " Development and application of an automatic procedure for the localization of the micro-seismicity aimed at building a seismic catalog ".

02/2018 – 01/2019 **Research Fellow**
Department of Physics, University of Naples "Federico II" (SSD: FIS/06)
Research activity in the in the frame of European Project "HORIZON 2020", titled: " Development and testing of automatic procedures for refined earthquake catalogs based on accurate location of micro-seismicity ".

07/2017 – 09/2017 **Research Fellow**
Department of Physics, University of Naples "Federico II" (SSD: FIS/06)
Research activity within the " EPOS Implementation Phase " project. The research activity concerned the" Real-time data analysis for Early Warning ".

03/2015 – 08/2015 **Guest Scientist**
ISTerre: Institut des Sciences de la Terre de l'Université de Grenoble Alpes (France)
Research project: " Rock physics properties from tomographic images"
working with prof. Jean Virieux and prof. Stephane Garambois.

02/2014 – 04/2014 **Collaboration Contract**
Vesuvius Observatory, National Institute of Geophysics and Volcanology, Naples, Italy
Description: Creation of interface in csh for the use of the NonLinLoc software for earthquake location in 3D velocity models, its functionality test and training, and drafting of user manual.

INTEREST

RESEARCH: I'm interested in ***understanding and reconstructing the processes of generation and nucleation of natural or anthropogenically produced earthquakes***, their modeling through numerical approaches, their use for the improvement of systems seismic monitoring in tectonically active areas or exploitation of the subsurface for energy. My current research focuses on the mechanisms of earthquake generation in porous media permeated by fluids at different scales (from laboratory experiment to field regional scale), with particular attention to the processes of interaction between fluids and the mechanical properties of the rocks by *rock physical modeling*.
TEACHING: My primary goal is to teach students with fundamental knowledge in physics and geosciences by ***supporting the enthusiasm for the topic and the development of critical thinking***. I'm involved in teaching both basic courses of physics and engineering for undergraduate students, also in the context of the Secondigliano prison university pole, and advanced courses of geophysics and seismology for master's and PhD students (Seismology, Applied Geophysics, Inverse Methods, Rock Physics).
Moreover, my tasks concern integrative student service tasks, such as guidance and tutoring, including in support of the preparation of thesis and doctorate. The final aim is to *contribute to the development of the next generation of engineers and geoscientist* prepared to face the challenges of environmental risk assessment and mitigation of future society.

FELLOWSHIPS AND AWARDS

2024 **Winner of the EAGE Arie van Weelden Award (2024)** – Prestigious prize awarded by the European Association of Geoscientists and Engineers (EAGE) in recognition of outstanding contributions to applied geosciences by a young researcher.

2023 Achievement of the Italian **National Scientific Habilitation** to the functions of Associate University Professor in the Sector 02/C1 - ASTRONOMY, ASTROPHYSICS, PHYSICS OF THE EARTH AND PLANETS.

2022 Achievement of the Italian **National Scientific Habilitation** to the functions of Associate University Professor in the Sector 04/A4 -GEOPHYSICS.

2021 – **Fixed Term Research Position**, Department of Physics, University of Naples "Federico II". Project Title: Detection and tracking of crustal fluid by multi-parametric methodologies and technologies.

2018 – 2021 **Postdoc Fellowship**, Department of Physics, University of Naples "Federico II". Project Title: Development and application of an automatic procedure for the localization of the

micro-seismicity aimed at building a seismic catalog.

2017 PhD thesis selected in the shortlist of 6 **finalists of the "Lions Bologna" Prize** for Research Science and Technological Innovation 2017, named after Claudio Bonivento, Professor Emeritus of the University of Bologna, and a member of the Lions Club Bologna

2015 Winner of the **MARCO POLO grant**, established with the aim of promoting the scientific training abroad of young researchers at the University of Bologna, with the project research project, "Rock physics properties from tomographic images."

MEMBERSHIPS OF SCIENTIFIC SOCIETIES

2023 Member of the European Association of Geoscientist and Engineers (EAGE)

2019 Member of the American Geophysical Union (AGU)

2015- Member of the European Geophysical Union (EGU)

GRADUATE COURSES

2022 - present Course Lecturer – Institutions of Physics, Department of Mechatronics Engineering, University Pole of Secondigliano Prison, University of Naples “Federico II”, Naples, Italy

2024 - 2025 Course Lecturer – Laboratory of Physics, Department of Mechatronics Engineering, University of Naples “Federico II”, Naples, Italy

2021/22–24/25 Course Lecturer – Rock Physics, PhD course in Structural Engineering, Geotechnics and Seismic Risk of the University of Federico II, Naples, Italy

2021 – 2023 Course Lecturer – Institutions of Physics, Department of Mechatronics Engineering, University of Naples “Federico II”, Naples, Italy

- TEACHING Assistant

2018 – 2020 Teaching Assistant – Inverse Methods, Department of Physics, University of Naples “Federico II”, Naples, Italy

2018 – 2019 Teaching Assistant – Physics, Department of Chemistry, University of Naples “Federico II”, Naples, Italy

2014 – 2019 Teaching Assistant – Seismology, Department of Physics, University of Naples “Federico II”, Naples, Italy

INSTITUTIONAL RESPONSIBILITIES

2021 –present Member of Course of Study Council (CCdS) of Mechatronic Engineering, Department of Information Engineering, University of Naples “Federico II”, Naples, Italy

2021 –present President and Member of Exam Committees for the Courses of Istitution of Physics, Applied Geophysics, Geophysics Elements, Rock Physics, Physics, Physics II for Departments of Physics, Engineering and Geology, University of Naples “Federico II”, Naples, Italy

2016 –present Secretary and Member of Graduate Studies Committee, Department of Physics, University of Naples “Federico II”, Naples, Italy

SUPERVISION OF GRADUATE AND PhD STUDENTS

From 2019 to present, Co-Tutor of the candidates' **B.A.Sc. theses in Physics**:

1. Francesco Scotto Di Uccio entitled "Comparative analysis of methods for the localization of an earthquake";
2. Francesco Romano entitled "An application of Wadati diagram to ISNet data";
3. Alessia Oliva titled "Influence of micro-parameters on seismic velocity, inelastic attenuation and

resistivity".

From 2016 to present, Co-Tutor of the **M.A.Sc. Theses in Physics** of the following candidates:

1. Anna Russo entitled "Advanced methods for earthquake localization";
2. Salvatore Giordano entitled "Study of Localization Performance with Techniques of Seismic Antenna";
3. Raffaella Esposito entitled "3D and 4D Seismic Tomography in the seismogenic area of Irpinia";
4. Francesco Scotto Di Uccio entitled "Detection of seismic events at the noise level".
5. Aldrea Sollai entitled High-Precision Earthquake Location Using the Source Specific Station Term and Waveform Coherence (SSST-WC) Method: Application to the 2020-2021 Corinth Gulf seismicity".

From 2014 to present, tutoring of master's and doctoral students for the **activity of bulletin construction and revision** (detection, picking, localization and characterization) of seismicity recorded by the Seismic Network Irpinia Seismic Network (ISNet) for the compilation of the related online bulletin (http://isnet-bulletin.physics.unina.it/cgi-bin/isnet-events/isnet.cgi).

For 2022, **Co-Tutor of PhD student** Raffaele Rea, XXXVII cycle of the PhD in Physics, University of Naples Federico II, for the activity "Multi-parametric location and time-domain source parameter estimation of induced earthquakes: application to The Geysers Geothermal field.

From 2021 to 2024, **Co-Tutor of PhD student (**and from 2024 to 2025 **post-doc researcher)** Titouan Muzellec, XXXVI cycle of the PhD in Structural Engineering, Geotechnics and Seismic Risk, University of Naples Federico II, with a thesis entitled "4D medium properties variations and fluid influence: Application to the 2014 northern Nagano earthquake sequence".

For 2023, **Co-Tutor of Post-Doc researcher** Filippo Accomanno, for the activity of THRAM PRIN project aimed to the construction of a geological/structural 3D model of Southern Italy.

From 2024, **Co-Tutor of PhD student** Rodolfo Petito Penna, XXXVIII cycle of the PhD in Modeling and engineering risk and complexity (MERC), Scuola Superiore Meridionale, with a thesis entitled "3D/4D seismic imaging of elastic/anelastic properties of complex geological media".

From 2024, **Co-Tutor of PhD student** Andrea Sollai, XXXIX cycle of the PhD in Structural Engineering, Geotechnics and Seismic Risk, University of Naples Federico II, with a thesis entitled "Earthquake Waveform Reflection Modelling and Migration in Campi Flegrei area".

ORGANISATION OF SCIENTIFIC MEETINGS

05/2025 Member of the **Local Organizing Committee**– *1st EAGE-NSG Workshop on Near Surface Geoscience in Italy* (2025), organized by the European Association of Geoscientists and Engineers (EAGE) and the Near Surface Geoscience Division (NSG).

07/2023 Member of the **Local Organizing Committee** of the final meeting of the national project PRIN-FLUIDS (national project PRIN FLUIDS, Grant Number 20174 × 3P29)

04/2023 Principal **Convener and Chairman** of the multi-disciplinary session "Advances in monitoring and studying the presence and migration of fluids within the crust using multi-disciplinary approaches" at the international conference General Assembly of the European Geosciences Union (EGU) 2023.

12/2021 Member of the **Local Organizing Committee** of the Annual meeting of the national project PRIN-FLUIDS (national project PRIN FLUIDS, Grant Number 20174 × 3P29)

05/2020 **Co-convener and Chairman** of the session "Tectonic and volcanic earthquake swarms: From a multi-disciplinary imaging and tracking of crustal fluids to characterization of transient forcing" of the international conference General Assembly of the European Geosciences Union (EGU) 2020.

12/2019 Member of the **Local Organizing Committee** of the kick-off meeting of the national project PRIN-FLUIDS (national project PRIN FLUIDS, Grant Number 20174 × 3P29)

REVIEWING ACTIVITIES

2021 - present **Reviewer of scientific proposals** for Italian National Institute of Geophysics and Volcanology (INGV), in the framework of the "Pianeta Dinamico" (Earth Dynamics) program (period 2023-2025) and for the National Science Center, Poland.

2021 Guest Associate Editor in Volcanology of Frontiers in Earth Science Journal.

2014 –present **Reviewer for scientific journals**: Journal of Geophysical Research, Geophysical Journal International, Applied Science, Frontiers in Earth Science, Geophysics, Remote Sensing, Energies.

INVITED SEMINARS

Johannes Gutenberg University of Mainz (Germany) (online, 2021), Department of Physics and Astronomy of the Alma Mater University of Bologna (Bologna, 2022), Joint international congress of the Italian Societies of Mineralogy and Petrology (SIMP) and Italian Geological Society (SGI) (Potenza, 2023). *SHINE 4th Training School*, organized by Italian Geological Society (Naples, 2024).

RESEARCH PROJECTS

- From 01-01-2014 to 31-12-2014: Implementing (**UNINA research unit**) of the activities of WP2 and WP7 of the REAKT Project, Strategies and tools for Real Time EArthquake RisK ReducTion.
- From January 2014 to April 2016: Implementation (**UNINA research unit**) of WP4 activities (Task4.1.3 Seismic detection, location and tracking of medium changes in the shallow hydrothermal system) of the MEDSUV Project (MEDiterranean SUpersite Volcanoes, call FP7 ENV.2012.6.4-2);
- From 15/05/2014 to 22/05/2014 and from 17/11/2014 to 20/11/2014: Participation (**UNINA research unit**) to the geophysical surveys aimed at the recording of active data repeated in time, and the acquisition of seismic noise at the Solfatara volcano (Campi Flegrei - Naples) RICEN experiment (Repeated InduCed Earthquakes and Noise experiment);
- From June 2018 to April 2019: **Participation in several surveys** for the installation and the maintenance of seismic stations located along the Rome-Naples high-speed line as part of QA no. 559/2017 of 22.12.2017. Application contract no. 07/2018 of 11.04.2018: "Development of early systems seismic warning "between the Italian Railway Network (RFI) and the University of Naples Federico II (Resp. Scientific prof. A. Zollo);
- From February 2017 to December 2018: Realization (**UNINA research unit**) of the activity "Study of feasibility, including cost analysis, for the development of innovative techniques for seismic monitoring (seismic antennas, linear arrays, OBS and 4D tomography etc ..) and offshore subsidence "in the context of the 2016 Operating Agreement (two-year period 2017-2018) with the Ministry of Economic Development (MISE) - Environmental safety also relating to the research and cultivation of hydrocarbons (Resp. Sc. Prof. A. Zollo);
- From January 2019 to 2021: Realization (**UNINA research unit**) of the activities of line 1 "Setting upa system (SW) for automatic event detection and characterization, building catalog, evaluate the space-time-magnitude evolution" of the PREPOSE project" PRE and POst Seismic Events analysis " within the framework of the ENI Framework Agreement - University of Naples Federico II;
- From 03/11/2019 to present, **Referent of the UNINA research unit** and responsible for tasks 2.1, 3.2 and 4.1 under the PRIN-FLUIDS project ((Grant Number 20174 × 3P29, https://www.prinfluids.it/). "Detection and tracking of crustal fluid by multi-parametric methodologies and technologies" (PI Aldo Zollo, UNINA).The project sees the collaboration of five partners including Universities (UNINA, UNIBAS, UNIBA) and national research entities (INGV-ROMA, CRN-IREA,CNR-IMAA).
- From 01/01/2021 to present, **Scientific responsibility for two activities** (WP) "Event location and refined picking" and "A 3D/4D tomographic model (LET)" of the DETECT experiment: "DEnse mulTi-paramEtriC observations and 4D high resoluTion imaging to unveil the preparatory phase and segmentation of large earthquakes." The experiment, designed from the results and collaborations born out of the PRIN-FLUIDS project, involved the installation of a constellation of seismic arrays (200 stations) in the fault area of the 1980 Irpinia earthquake from August 2021 to July 2022 (https://www.prinfluids.it/the-project-detect/) for the development of integrated methodologies for fault monitoring during the inter-seismic phase. Responsible for the project are Profs. Aldo Zollo, Matteo Picozzi and Gaetano Festa of the Federico II Department of Physics, and lead partner the GFZ
- From 01/11/2022 to present, Referent of **UNINA research unit** for WP5 "Earthquake source processes and wave impact on structures," Spoke 3 - Earthquakes and volcanoes, of the RETURN project. - PNRR

(multi-Risk sciEnce for resilienT commUnities undeR a changiNg climate, code PE000005) and contact person for task 5.2 "Laboratory experiments and digital twins." The project is an extended partnership on environmental risks funded by the NRP that includes 26 partners and aims to create a network between universities, research institutions, local authorities, the National Civil Defense Department, private individuals and industry on the topic of integrated management of natural hazards and climate change impacts. Budget 115.1 million euros.

- From 09/2023 to 08/2025, participation as **UNINA research unit** in the activities to be carried out in collaboration with CNR-IMAA (Institute of Methodologies for Environmental Analysis) and CNR-IREA (Institute for Electromagnetic Sensing of the Environment) in the Project "FRACTURES: Multiscale study of seismogenic processes in Campania-Lucania Apennines using machine learning algorithms and multiparametric observations" (PI: Tony Alfredo Stabile) funded under the call for PROJECTS RESEARCH PROJECTS OF RELEVANT NATIONAL INTEREST - Call for proposals PRIN 2022 Prot. 2022BEKFN2.
- From 11/2023 to 10/2025, **co-Principal Investigator** of the project PRIN-SUD, under 40, "TRHAM: Relation between 3D Thermo-Rheological model and seismic HAzard for the risk Mitigation in the urban areas of Southern Italy" (250 k€).
- **Principal Investigator** of the project MICROS "MonItoring roCk paRameters evolution in the vOlume embedding active faultS" in the framework of the University of Naples funding for the research (FRA, 20 k€), judged eligible (4.9/5) but not founded because I'm co-PI of the founded PRIN-PNRR TRHAM project.
- **Recipient of Research Support Grant (2025)** – Awarded by the University of Naples Federico II to support the research activities of female researchers returning from maternity leave.

CAREER BREAKS

07/2017 – 12/2017 Maternity leave giving birth to my first son.

07/2020 – 12/2020 Maternity leave giving birth to my second son.

07/2023 – 12/2023 Maternity leave giving birth to my daughter.

PUBBLICATIONS

1. De Landro G., O. Amoroso, T. A. Stabile, E. Matrullo, A. Lomax and A. Zollo (2015); High-precision differential earthquake location in 3-D models: evidence for a rheological barrier controlling the microseismicity at the Irpinia fault zone in southern Apennines. Geophys J Int., 203 (3): 1821-1831. doi: 10.1093/gji/ggv397
2. Amoroso O., G. Russo, G. De Landro, A. Zollo, S. Garambois, S. Mazzoli, M. Parente, and J. Virieux. (2016). High resolution 3D imaging of the Irpinia active fault zone. In: Rendiconti Online Società Geologica Italiana. vol. Suppl n. 1 al Vol. 40., doi: 10.3301/ROL.2016.79
3. Amoroso, O., G. Russo, G. De Landro, A. Zollo, S. Garambois, S. Mazzoli, M. Parente, and J. Virieux (2017), From Velocity and Attenuation Tomographies to Rock Physical Modeling:Inferences on fluid-driven earthquake processes at the Irpinia fault system in Southern Italy. Geophys. Res. Lett., 44. doi:10.1002/2016GL072346
4. De Landro G., V. Serlenga, G. Russo, O. Amoroso, G. Festa, P. P. Bruno, M. Gresse, J. Vandemeulebrouck and A. Zollo (2017), 3D ultra-high resolution seismic imaging of shallow Solfatara crater in Campi Flegrei (Italy): New insights on deep hydrothermal fluid circulation processes. Scientific Reports 7, 3412. doi:10.1038/s41598-017-03604-0
5. Picozzi, M., A. Oth, S. Parolai, D. Bindi, G. De Landro and O. Amoroso (2017), Accurate estimation of seismic source parameters of induced seismicity by a combined approach of generalized inversion and genetic algorithm: application to The Geysers geothermal area, California. J. Geophys. Res. Solid Earth, 122. doi:10.1002/2016JB013690
6. Amoroso O., G. Festa, P. P. Bruno, L. D'Auria, G. De Landro, V. Di Fiore, S. Gammaldi, M. Pilz, P. Roux, G. Russo, V. Serlenga, M. Serra, H. Woith and A. Zollo (2018), Integrated tomographic method for volcanic structures; accepted for publication on J.Appl. Geophysics.156, 16-30. https://doi.org/10.1016/j.jappgeo.2017.11.012
7. De Landro, G., Amoroso, O., Russo, G., Esposito, R., Tarantino, S., Zollo, A., Ascione, A., Mazzoli, S., Parente, M., Garambois, Stephan, V., Jean, Stabile, T. A., Lomax, A. (2018). An integrated, multi-constrained and multi-scale picture of the upper crustal structure of the irpinia active faults system (southern Italy).. In: Geodinamica, Sismicità in Italia tra studi sismologici, geologici e geodetici Paolo Galli, Luisa Valoroso, Luigi Improta. p. 41-45, ISBN: 978-88-943717-0-3
8. G. De Landro, S. Gammaldi, V. Serlenga, O. Amoroso, G. Russo, G. Festa, L. D'Auria, P. P. Bruno, M. Gresse, J. Vandemeulebrouck, A. Zollo. A high resolution, multi-parametric analysis to image the shallow Solfatara crater in Campi Flegrei caldera (Italy). In: Geodinamica, Struttura e dinamica delle aree vulcaniche italiane Stefano Branca, Federico Lucchi, Jacopo Selva Pag.245-249. ISBN:978-88-943717-0-3
9. De Landro, G., Serlenga, V., Amoroso, O., Russo, G., Festa, G. and Zollo, A., 2019. High resolution attenuation images from active seismic data: The case study of Solfatara volcano (southern Italy). Frontiers in Earth Science, 7, p.295., doi: 10.3389/feart.2019.00295
10. G. De Landro, O. Amoroso, G. Russo, A. Zollo (2020). 4D Travel-Time Tomography as a Tool for Tracking Fluid-Driven Medium Changes in Offshore Oil–Gas Exploitation Areas. ENERGIES, vol. 13, p. 5878-5895, ISSN: 1996-1073, doi: 10.3390/en13225878
11. De Landro, G., Picozzi, M., Russo, G., Adinolfi, G.M. and Zollo, A., 2020. Seismic networks layout optimization for a high-resolution monitoring of induced micro-seismicity. Journal of Seismology, 24, pp.953-966., doi: 10.1007/s10950-019-09880-9
12. Zollo A., Caruso A., De Landro G., Colombelli S., Elia L. (2021). A Bayesian Method for Real-Time Earthquake Location Using Multiparameter Data. JOURNAL OF GEOPHYSICAL RESEARCH. SOLID EARTH, vol. 126, ISSN: 2169-9313, doi: 10.1029/2020JB020359
13. Festa, G., Adinolfi, G.M., Caruso, A., Colombelli, S., De Landro, G., Elia, L., Emolo, A., Picozzi, M., Scala, A., Carotenuto, F. and Gammaldi, S., 2021. Insights into mechanical properties of the 1980 Irpinia fault system from the analysis of a seismic sequence. Geosciences, 11(1), p.28.
14. Scala, A., Adinolfi, G.M., Picozzi, M., Scotto di Uccio, F., Festa, G., De Landro, G., Priolo, E., Parolai, S., Riccio, R. and Romanelli, M., 2022. Monitoring the Microseismicity through a Dense

Seismic Array and a Similarity Search Detection Technique: Application to the Seismic Monitoring of Collalto Gas-Storage, North Italy. Energies, 15(10), p.3504.

15. Di Martino, M.D.P., De Siena, L., Serlenga, V. and **De Landro, G.**, 2022. Reconstructing Hydrothermal Fluid Pathways and Storage at the Solfatara Crater (Campi Flegrei, Italy) Using Seismic Scattering and Absorption. (2022) FRONTIERS IN EARTH SCIENCE, vol. 10, ISSN: 2296-6463, doi: 10.3389/feart.2022.852510
16. **De Landro G.**, Amoroso O., Russo G., D'Agostino N., Esposito R., Emolo A., Zollo A. (2022). Decade-long monitoring of seismic velocity changes at the Irpinia fault system (southern Italy) reveals pore pressure pulsations. SCIENTIFIC REPORTS, vol. 12, ISSN: 2045-2322, doi: 10.1038/s41598-022-05365-x
17. Longobardi V., Nazeri S., Colombelli S., Rea R., **De Landro G.**, Zollo A. (2023). Time Domain Source Parameter Estimation of Natural and Man-Induced Microearthquakes at the Geysers Geothermal Field. ENERGIES, vol. 16, ISSN: 1996-1073, doi: 10.3390/en16031121
18. Palo M., Picozzi M., **De Landro G.**, Zollo A. (2023). Microseismicity clustering and mechanic properties reveal fault segmentation in southern Italy. TECTONOPHYSICS, vol. 856, ISSN:0040-1951, doi: 10.1016/j.tecto.2023.229849
19. Adinolfi G. M., **De Landro G.**, Picozzi M., Carotenuto F., Caruso A., Nazeri S., Colombelli S., Tarantino S., Muzellec T., Emolo A., Zollo A., Orefice A., Ulivieri B., Calcagni D., Piantanida M. (2023). Comprehensive study of micro-seismicity by using an automatic monitoring platform. FRONTIERS IN EARTH SCIENCE, vol. 11, ISSN: 2296-6463, doi: 10.3389/feart.2023.1073684
20. Muzellec, T., **De Landro, G.**, Camanni, G., Adinolfi, G. M., & Zollo, A. (2025). The complex 4D multi-segmented rupture of the 2014 Mw 6.2 Northern Nagano Earthquake revealed by high-precision aftershock locations. *Tectonophysics*, 230641.
21. Camanni, G., **De Landro, G.**, Mazzoli, S., Michele, M., Muzellec, T., Ascione, A., ... & Zollo, A. (2025). Remobilization of inverted normal faults drives active extension in the axial zone of the southern Apennine mountain belt (Italy). *Journal of the Geological Society*, *182*(2), jgs2024-184.
22. Vanorio, T., Geremia, D., **De Landro, G.**, & Guo, T. (2025). The recurrence of geophysical manifestations at the Campi Flegrei caldera. *Science Advances*, *11*(18), eadt2067.
23. **De Landro, G.**, Vanorio, T., Muzellec, T., Russo, G., Lomax, A., Virieux, J., & Zollo, A. (2025). 3D structure and dynamics of Campi Flegrei enhance multi-hazard assessment. *Nature Communications*, *16*(1), 1-12.

Fonte Scopus (date: 03/06/2025)
Num. citazioni: 297
H-index: 9
Fonte Scholar (data: 03/06/2025)
Num. citazioni: 363
H-index: 10

CONFERENCE PRESENTATIONS

1. De Landro G., O. Amoroso, T. A. Stabile, E. Matrullo, A. Lomax and A. Zollo. High-precision differential earthquake location in 3-D models: evidence for a rheological barrier controlling the microseismicity at the Irpinia fault zone in southern Apennines. Presented at EGU 2015, Vienna (Austria).
2. G. De Landro, Amoroso, O., G. Russo, A. Zollo, S. Garambois, S. Mazzoli, M. Parente, and J. Virieux. High resolution 3D imaging of the Irpinia active fault zone part 2: Modeling of rock physical properties. Presented at 35th General Assembly of the European Seismological Commission 2016, Trieste (Italy).
3. De Landro G., S. Gammaldi, V. Serlenga, G. Russo, O. Amoroso, G. Festa, P. P. Bruno, M. Gresse, J. Vandemeulebrouck, L. D'Auria and A. Zollo. 2D and 3D high resolution seismic

imaging of shallow Solfatara crater in Campi Flegrei (Italy): new insights on deep hydrothermal fluid circulation processes. Presented at EGU 2017, Vienna (Austria).

4. G. De Landro, O., Amoroso, M., Picozzi, G. M., Adinolfi, A., Zollo. MONITORING OF RESERVOIR CONDITION BY TRACKING THE MICRO-SEISMICITY EVOLUTION AND MEDIUM PROPERTIES CHANGES. Biannual National Update Meeting, CLYPEA- NETWORK PER LA SICUREZZA OFFSHORE. Torino, Italy.
5. De Landro G., Picozzi M., Adinolfi G.M., G. Russo and Zollo A. Seismic networks layout optimization for a high resolution monitoring of induced micro-seismicity. Presented at 36th General Assembly of the European Seismological Commission (ESC) 2018, La Valletta (Malta).
6. G. De Landro, S. Gammaldi, V. Serlenga, O. Amoroso, G. Russo, G. Festa, L. D'Auria, P. P. Bruno, M. Gresse, J. Vandemeulebrouck and A. Zollo. A high resolution, multi-parametric analysis to image the shallow Solfatara crater in Campi Flegrei caldera (Italy). Presented at 36th General Assembly of the European Seismological Commission (ESC) 2018, La Valletta (Malta).
7. G. De Landro, S. Gammaldi, V. Serlenga, O. Amoroso, G. Russo, G. Festa, L. D'Auria, P. P. Bruno, M. Gresse, J. Vandemeulebrouck, A. Zollo. A high resolution, multi-parametric analysis to image the shallow Solfatara crater in Campi Flegrei caldera (Italy). Presentato al 37-esimo Convegno del GNGTS (Gruppo Nazionale di Geofisica della Terra Solida) 2019, Bologna.ù
8. Relatore di presentazione sollecitata: G. De Landro, Amoroso O., G. Russo, R. Esposito, S. Tarantino, A. Zollo, A. Ascione, S. Mazzoli, M. Parente, S. Garambois, J. Virieux, T. A., A. Lomax. An integrated, multi-constrained and multi-scale picture of the upper crustal structure of the Irpinia active faults system (Southern Italy). Presentato al 37-esimo Convegno del GNGTS (Gruppo Nazionale di Geofisica della Terra Solida) 2019, Bologna.
9. De Landro, G., Esposito, R., Amoroso, O., Russo, G., & Zollo, A. Seismic velocity changes over 10 years correlate the micro-seismicity evolution at the Irpinia Fault System (Southern Italy). AGU Fall Meeting 2019, San Francisco, USA.
10. Russo, G., De Landro, G., Amoroso, O., & Zollo, A. 4D travel-time tomography as a tool for tracking fluid-driven mediumchanges in offshore oil-gas exploitation areas. AGU Fall Meeting 2019, San Francisco, USA.
11. "PRIN-FLUIDS The next generation of crustal fluid monitoring systems: UNINA activity", kick-off meeting del progetto PRIN-FLUIDS project, department of physics, University of Naples.
12. Aldo Zollo, Grazia De Landro, Antonio Caracausi, Raffaele Castaldo, Nicola D'Agostino, Michele Paternoster, Agata Siniscalchi, Tony Alfredo Stabile, and Andrea Tallarico. The project FLUIDS: Detection and tracking of crustal fluids by multi-parametric methodologies and technologies. General Assembly of the European Geosciences Union (EGU) 2020. Online
13. Grazia De Landro, Raffaella Esposito, Amoroso Ortensia, and Aldo Zollo. Time-lapse tomographic images of the Irpinia Fault System (Southern Italy) reveal Vp/Vs ratio changes that correlate with micro-seismicity production and evolution. General Assembly of the European Geosciences Union (EGU) 2020. Online.
14. Invited seminar "3D High-resolution Multi-parametric analysis of Solfatara Crater" in occasione del ciclo di seminari internazionale ("Attenuation meeting series") coordinato dal prof. Luca De Siena della Johannes Gutenberg University of Mainz (Germania) . Online 10/07/2021.
15. Relatore: "Decade-long monitoring of seismic velocity changes at the Irpinia fault system (southern Italy) reveals pore pressure pulsations", PRIN-FLUIDS annual meeting, department of physics, University of Naples.
16. Invited seminar "Decade-long monitoring of seismic velocity changes at the Irpinia fault system (southern Italy) reveals pore pressure pulsations" at department of physics and astronomy of University of Bologna Alma Mater, Bologna, Italy il 27/04/2022.
17. Guido Russo, Grazia De Landro, Ortensia Amoroso, Nicola D'Agostino, Raffaella Esposito, Antonio Emolo, and Aldo Zollo. Decade-long monitoring of seismic velocity changes at the Irpinia Fault System (southern Italy). General Assembly of the European Geosciences Union (EGU) 2022, Vienna (Austria).
18. De Landro, G., Stabile, T. A., Muzellec, T., Serlenga, V., and Zollo, A.: Monitoring pore-pressure

from Vp/Vs ratio around the Costa Molina 2 wastewater disposal well in southern Italy, General Assembly of the European Geosciences Union (EGU) 2023, Vienna Austria, 24–28 Apr 2023, EGU23-9822.

19. Seminar entitled "Rock Physics and Application Examples" as part of the of the educational offer of the Doctoral Course in Structural Engineering, Geotechnics and Seismic Risk Seismic Risk of the University of Naples "Federico II". (4 hours, 07/03/2023). (4 ore, 07/03/2023).
20. De Landro G., Colombelli S., Russo G., Zollo A. "Laboratory experiments with rock samples, to investigate the mechanism controlling the nucleation and propagation of earthquake ruptures. Monitoring damage evolution in rock samples (in triaxial evolution) through accurate micro-crack location and high resolved tomography " nell'ambito del meeting del Progetto RETURN PNRR, Spoke 3 - Earthquakes and volcanoes. Bologna, 16-17 Maggio 2023
21. Invited presentation at the joint international congress of the Italian Societies of Mineralogy and Petrology (SIMP), Società Geologica Italiana (SGI), Società Geochimica Italiana (SOGEI) and the Italian Association of Volcanology (AIV), entitled "Decade-long monitoring of seismic velocity changes at the Irpinia fault system (southern Italy) reveals pore pressure pulsations" in the session "Characterisation, monitoring and modelling of rock-fluid and fluid-fluid interaction processes within the crust using multidisciplinary approaches."
22. De Landro, G., Vanorio, T., & Guo, T. (2024, June). Enhancing the Passive Monitoring of the Rock Damage Process. In *SPE Europec featured at EAGE Conference and Exhibition?* (p. D021S012R002). SPE.
23. De Landro, G., Vanorio, T., Titouan, M., Russo, G., Lomax, A., Virieux, J., and Zollo, A.: 3D Structure and Dynamics of Campi Flegrei Enhance Multi-Hazard Assessment, EGU General Assembly 2025, Vienna, Austria, 27 Apr–2 May 2025, EGU25-11536, https://doi.org/10.5194/egusphere-egu25-11536, 2025.
24. Giovanni, C., De Landro, G., Mazzoli, S., Michele, M., Muzellec, T., Ascione, A., Schaff, D. P., Tarantino, S., and Zollo, A.: Active extension in the axial zone of the southern Apennines (Italy) is driven by the remobilization of inverted normal faults, EGU General Assembly 2025, Vienna, Austria, 27 Apr–2 May 2025, EGU25-18558, https://doi.org/10.5194/egusphere-egu25-18558, 2025.

Co-author of 30 presentations of research results at national (GNGTS, Società Italian Geological Society) and international (EGU, ESC, ECEES, SSA, AGIS,IUGG) conferences from 2014 to 2023.