

## CURRICULUM VITAE ET STUDIORUM

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## PRESENT POSITION

- **Since 10/30/2024** – Associate Professor (SSD GEOS-02/C) at the Department of Sciences - University “G. d’Annunzio” of Chieti-Pescara (Italy)
- **From 10/01/2021 to 10/30/2024** – Associate Professor (SSD GEO/03) at DiSPUTer - University “G. d’Annunzio” of Chieti-Pescara (Italy)
- **From 10/01/2018 to 10/01/2021** – Researcher (RTDb - L.240/2010. Art. 24, comma 3, lettera b) at DiSPUTer, University “G. d’Annunzio” of Chieti (Italy). PI on a project funded by H2020-MSCA-IF-2017 (*Marie Skłodowska-Curie Individual Fellowships*), Type of action: MSCA-IF-GF (Global Fellowships), Proposal #795396  
Title: *Seismogenic compression in southern Italy? – High-resolution topography (Lidar) and morphotectonic analysis to test the active nature of the Southern Apennine Outer Thrust Front* - GRANT AGREEMENT N° 795396 (<https://cordis.europa.eu/project/id/795396>)

## NATIONAL SCIENTIFIC HABILITATION

- **07/15/2020** – Achievement of **National Scientific Habilitation (ASN 2018-2020) to apply for permanent positions as Associate Professor**  
CALL D.D. 2175/2018, COMPETITION AREA ‘04/A2’ *STRUCTURAL GEOLOGY, STRATIGRAPHY, SEDIMENTOLOGY AND PALEONTOLOGY*

## EDUCATION

- **From 04/01/2010 to 04/01/2012** – **Post-doctoral fellowship**  
Project title ‘*Study of active tectonics and structures responsible for strong earthquakes in the Abruzzo region aimed at the definition of seismic hazard scenarios*’.  
Cofunding University “G. d’Annunzio” of Chieti-Pescara & Bank ‘Cassa di Risparmio della Provincia di Chieti’ (Italy)

- **03/09/2009 – PhD** in “Ambiente e Territorio”  
Institution: ‘Università degli Studi del Molise’ - Di.S.T.A.T., Pesche (Isernia), Italy -  
Supervisors: Prof. G. Pappone and Prof. P. Boncio.  
Thesis title: “*Geological-structural setting of the northern Matese and kinematic analysis of the Quaternary deformation along the Bojano normal fault system (Molise-Central Italy)*”
- **07/12/2005 – Master Degree (cum laude)** in Geological Sciences  
Institution: University “G. d’Annunzio” of Chieti (Italy) - Supervisor: Prof. G. Lavecchia.  
Thesis title: “*Kinematic analysis and seismotectonic zonation of Sicily (Southern Italy)*”

## RESEARCH AREAS AND EXPERTISE

*Seismotectonics, Active Tectonics, Structural Geology, Morphotectonics*

### Specific Research Expertise:

- *Quantitative Geomorphology & Morphotectonic Analysis*
- *3D Reconstruction of Seismogenic Structures*
- *Kinematic & Stress-Field Analysis from structural-geological and seismological data,*
- *Field Surveys*

## TECHNICAL SKILLS

### Software and tools:

- *Matlab* (<https://www.mathworks.com/products/matlab.html>) and *Topotoolbox* (Schwanghart, W., Kuhn, N.J., 2010) for topographic and quantitative geomorphology analyses.
- Consolidated expertise with *ArcGIS* by ESRI for spatial data management and geoprocessing.
- Consolidated expertise *Move Suite* by PETEX, <https://www.petex.com/pe-geology/move-suite/>
- *Win-Tensor* by Delvaux D. and Sperner B., 2003  
([https://damiendelvaux.be/Tensor/WinTensor/win-tensor\\_download.html](https://damiendelvaux.be/Tensor/WinTensor/win-tensor_download.html)).
- *FaultKinWin/Stereonet* by R.W. Allmendinger  
(<http://www.geo.cornell.edu/geology/faculty/RWA/>)
- *Microsoft Office* (<https://www.microsoft.com/>)

## PAPERS INDEXED IN SCOPUS (<https://www.scopus.com/authid/detail.uri?authorId=16241360000>)

1. Battistelli M., Ferrarini F., Bucci F., Santangelo M., Cardinali M., Merryman Boncori, J.P.; Cirillo D., Carafa M.M.C.; Brozzetti F. (2025). Bridging the Gap Between Active Faulting and Deformation Across Normal-Fault Systems in the Central–Southern Apennines (Italy): Multi-Scale and Multi-Source Data Analysis. *Remote Sensing*, 17 (14). DOI: 10.3390/rs17142491
2. Lavecchia, G., Bello, S., Andrenacci, C., Cirillo D., Pietrolungo F., Talone D., **Ferrarini F.**, de Nardis T., *et al.* (2024). QUIN 2.0 - new release of the QUaternary fault strain INDicators database from the Southern Apennines of Italy. *Sci Data* 11, 189 (2024). <https://doi.org/10.1038/s41597-024-03008-6>
3. de Nardis R., Pandolfi C., Cattaneo M., Monachesi G., Cirillo D., **Ferrarini F.**, Bello S., Brozzetti F., Lavecchia G. (2022). Lithospheric double shear zone unveiled by microseismicity in a region of slow deformation. *Scientific Reports* 12 (1), 21066 DOI: 10.1038/s41598-022-24903-1
4. Cirillo, D., Totaro, C., Lavecchia, G., Orecchio, B., De Nardis, R., Presti, D., **Ferrarini, F.**, Bello, S., Brozzetti, F. (2022). Structural complexities and tectonic barriers controlling recent seismic activity in the Pollino area (Calabria-Lucania, southern Italy)-constraints from stress inversion and 3D fault model building. *Solid Earth*, 13, 205-228. DOI: 10.5194/se-13-205-2022

5. Lavecchia, G., Bello, S., Andrenacci, C., Cirillo, D., **Ferrarini, F.**, Vicentini, N., de Nardis, R., Roberts, G., Brozzetti, F. (2022). QUaternary fault strain INDicators database - QUIN 1.0 - first release from the Apennines of central Italy. *Scientific Data*, 9 (1), DOI: 10.1038/s41597-022-01311-8
6. **Ferrarini, F.**, Toké, N.A., Carafa, M.M.C., Arrowsmith, J.R. (2021). *Editoriale: Unveiling Active Faults: Multiscale Perspectives and Alternative Approaches Addressing the Seismic Hazard Challenge*. *Frontiers in Earth Science*, 9, DOI: 10.3389/feart.2021.738164
7. **Federica Ferrarini**, J Ramón Arrowsmith, Francesco Brozzetti, Rita de Nardis, Daniele Cirillo and Giusy Lavecchia (2021). Late-Quaternary tectonics along the peri-Adriatic sector of the Apenninic chain (central-southern Italy): inspecting active shortening through topographic relief and fluvial network analysis. *Lithosphere*, 2021 (1), 1-28. DOI: 10.2113/2021/7866617
8. **Federica Ferrarini**, Rita de Nardis, Francesco Brozzetti, Daniele Cirillo, J Ramón Arrowsmith and Giusy Lavecchia (2021). Multiple lines of evidence for a potentially seismogenic fault along the central-Apennine (Italy) active extensional belt – An unexpected outcome of the  $M_w$  6.5 Norcia 2016 earthquake. *Front. Earth Sci.* 9:642243, doi: 10.3389/feart.2021.642243
9. Simone Bello, Chelsea Scott, **Federica Ferrarini**, Francesco Brozzetti, Tyler Scott, Daniele Cirillo, Rita de Nardis, Ramon Arrowsmith, and Giusy Lavecchia (2021). High-resolution surface faulting from the 1983 Idaho Lost River Fault  $M_w$  6.9 earthquake and previous events", *Scientific Data*, 8:68 | <https://doi.org/10.1038/s41597-021-00838-6>
10. Bello S., de Nardis R., Scarpa R., Brozzetti F., Cirillo D., **Ferrarini F.**, di Lieto B., Arrowsmith R.J and Lavecchia G. (2021) Fault Pattern and Seismotectonic Style of the Campania – Lucania 1980 Earthquake ( $M_w$  6.9, Southern Italy): New Multidisciplinary Constraints. *Front. Earth Sci.* 8:608063. doi: 10.3389/feart.2020.608063
11. Lavecchia Giusy, de Nardis Rita, **Ferrarini Federica**, Cirillo Daniele, Bello Simone, Brozzetti Francesco (2021). Regional Seismotectonic Zonation of Hydrocarbon Fields in Active Thrust Belts: A Case Study from Italy. In: *Building Knowledge for Geohazard Assessment and Management in the Caucasus and other Orogenic Regions*, NATO Science for Peace and Security Series C: Environmental Security (F. L. Bonali, F. Pasquaré Mariotto, N. Tsereteli, Eds), [http://dx.doi.org/10.1007/978-94-024-2046-3\\_7](http://dx.doi.org/10.1007/978-94-024-2046-3_7)
12. Brozzetti, F. Boncio, P., Cirillo, D., **Ferrarini, F.**, de Nardis, R., Testa, A., Liberi, F., Lavecchia, G. (2019). High-Resolution Field Mapping and Analysis of the August–October 2016 Coseismic Surface Faulting (Central Italy Earthquakes): Slip Distribution, Parameterization, and Comparison with Global Earthquake. *Tectonics*, 38 (2), 417-439, doi: 10.1029/2018TC005305
13. Santilano, E. Trumpy, G. Gola, A. Donato, D. Scrocca, **F. Ferrarini**, F. Brozzetti, R. de Nardis, G. Lavecchia, and A. Manzella (2019). A Methodology for Assessing the Favourability of Geopressured-Geothermal Systems in Sedimentary Basin Plays: A Case Study in Abruzzo (Italy)," *Geofluids*, vol. 2019, Article ID 4503943, 28 pages, 2019. <https://doi.org/10.1155/2019/4503943>
14. Castaldo R., de Nardis R., De Novellis V., **Ferrarini F.**, Lanari R., Lavecchia G., Pepe S., Solaro G. and Tizzani P. (2018). Coseismic stress and strain field changes investigation through 3D Finite Element modelling of DInSAR and GPS measurements and geological/seismological data: the L'Aquila (Italy) 2009 earthquake case study. *J Geophys Res – Sol Ea*, 123, 4193-4222 <https://doi.org/10.1002/2017JB014453>
15. F. Villani, R. Civico, S. Pucci, L. Pizzimenti, R. Nappi, P. M. De Martini, & Open EMERGEIO Working Group:, Agosta F., Alessio G., Alfonsi L., Amanti M., Amoroso S., Aringoli D., Auciello E., Azzaro R., Baize S., Bello S., Benedetti L., Bertagnini A., Binda G., Bisson M., Blumetti A. M., Bonadeo L., Boncio P., Bornemann P., Branca S., Braun T., Brozzetti F., Brunori C.A., Burrato P., Caciagli M., Campobasso C., Carafa M., Cinti F. R., Cirillo D., Commerci V., Cucci LDe Ritis., R., Deiana G., Del Carlo P., Del Rio L., Delorme A., Di Manna P., Di Naccio D., Falconi L., Falcucci E., Farabollini P., Faure Walker J.P., **Ferrarini F.**, Ferrario M.F., Ferry

- M., Feuillet N., Fleury J., Fracassi U., Frigerio C., Galluzzo F., Gambillara R., Gaudiosi G., Goodall H., Gori S., Gregory L. C., Guerrieri L., Hailemikael S., Iezzi F., Invernizzi C., Jablonská D., Jacques E., Jomard H., Kastelic V., Klinger Y., Lavecchia G. et al. (2018). A database of the coseismic effects following the 30 October 2016 Norcia earthquake in Central Italy. *Scientific Data*, 5,180049
16. F. Villani, R. Civico, S. Pucci, L. Pizzimenti, R. Nappi, P. M. De Martini, & Open EMERGEO Working Group:, Agosta F., Alessio G., Alfonsi L., Amanti M., Amoroso S., Aringoli D., Auciello E., Azzaro R., Baize S., Bello S., Benedetti L., Bertagnini A., Binda G., Bisson M., Blumetti A. M., Bonadeo L., Boncio P., Bornemann P., Branca S., Braun T., Brozzetti F., Brunori C.A., Burrato P., Caciagli M., Campobasso C., Carafa M., Cinti F. R., Cirillo D., Comerci V., Cucci LDe Ritis., R., Deiana G., Del Carlo P., Del Rio L., Delorme A., Di Manna P., Di Naccio D., Falconi L., Falcucci E., Farabollini P., Faure Walker J.P., **Ferrarini F.**, Ferrario M.F., Ferry M., Feuillet N., Fleury J., Fracassi U., Frigerio C., Galluzzo F., Gambillara R., Gaudiosi G., Goodall H., Gori S., Gregory L. C., Guerrieri L., Hailemikael S., Iezzi F., Invernizzi C., Jablonská D., Jacques E., Jomard H., Kastelic V., Klinger Y., Lavecchia G. et al. (2019). Correction: A database of the coseismic effects following the 30 October 2016 Norcia earthquake in central Italy (Scientific Data, (2018) 5, 10.1038/sdata.2018.49) - Scientific Data, 6 (1), 4;
  17. R. Civico, S. Pucci, F. Villani, L. Pizzimenti, P. M. De Martini, R. Nappi, & Open EMERGEO Working Group:, Agosta F., Alessio G., Alfonsi L., Amanti M., Amoroso S., Aringoli D., Auciello E., Azzaro R., Baize S., Bello S., Benedetti L., Bertagnini A., Binda G., Bisson M., Blumetti A. M., Bonadeo L., Boncio P., Bornemann P., Branca S., Braun T., Brozzetti F., Brunori C.A., Burrato P., Caciagli M., Campobasso C., Carafa M., Cinti F. R., Cirillo D., Comerci V., Cucci LDe Ritis., R., Deiana G., Del Carlo P., Del Rio L., Delorme A., Di Manna P., Di Naccio D., Falconi L., Falcucci E., Farabollini P., Faure Walker J.P., **Ferrarini F.**, Ferrario M.F., Ferry M., Feuillet N., Fleury J., Fracassi U., Frigerio C., Galluzzo F., Gambillara R., Gaudiosi G., Goodall H., Gori S., Gregory L. C., Guerrieri L., Hailemikael S., Iezzi F., Invernizzi C., Jablonská D., Jacques E., Jomard H., Kastelic V., Klinger Y., Lavecchia G. et al. (2018). Surface ruptures following the 30 October 2016 Mw6.5 Norcia earthquake, central Italy. *Journal of Maps*, 14(2), 151-160
  18. **F. Ferrarini**, P. Boncio, R. de Nardis, G. Pappone, M. Cesarano, P.P.C. Aucelli, G. Lavecchia (2017). Segmentation pattern and structural complexities in seismogenic extensional settings: The North Matese fault system (central Italy). *J. Struct. Geol.*, 95, 93-112, <http://dx.doi.org/10.1016/j.jsg.2016.11.006>
  19. G. Lavecchia, G.M. Adinolfi, R. de Nardis, **F. Ferrarini**, D. Cirillo, F. Brozzetti, R. De Matteis, G. Festa and A. Zollo (2017). Multidisciplinary inferences on a newly recognized active east-dipping extensional system in Central Italy. *Terra Nova*, 29(1), 77-89. doi: 10.1111/ter.12251
  20. G. Lavecchia, R. Castaldo, R. de Nardis, V. De Novellis, **F. Ferrarini**, S. Pepe, F. Brozzetti, G. Solaro, D. Cirillo, M. Bonano, P. Boncio, F. Casu, C. De Luca, R. Lanari, M. Manunta, M. Manzo, I. Zinno, P. Tizzani (2016). Ground deformation and source geometry of the August 24, 2016, Amatrice earthquake (Central Italy) investigated through analytical and numerical modelling of DInSAR measurements and structural-geological data. *Geophys. Res. Lett.*, 43, doi:10.1002/2016GL071723
  21. G. Lavecchia, R. de Nardis, G. Costa, L. Tiberi, **F. Ferrarini**, D. Cirillo, F. Brozzetti, P. Suhadolc (2015). Was the Mirandola thrust really involved in the Emilia 2012 seismic sequence (northern Italy)? Implications on the likelihood of triggered seismicity effect. *Boll. Geofis. Teor. Appl.*, 56 (4), 461-488
  22. **F. Ferrarini**, G. Lavecchia, R. de Nardis and F. Brozzetti (2015). Fault geometry and active stress from earthquakes and field geology data analysis: the Colfiorito 1997 and L'Aquila 2009 cases (central Italy). *Pure Appl. Geophys.*, 172 (5), 1079-1103, DOI 10.1007/s00024-014-0931-

23. **Ferrarini, F.**, Lavecchia, G., De Nardis, R., Brozzetti, F., Romano, M.A. (2013). Active deformation field from earthquakes and faults in the Colfiorito 1997 and L'Aquila 2009 seismic sequence epicentral areas (central Italy). *Rendiconti Online Società Geologica Italiana*, 29, 51-54, ISSN 20358008
24. Romano M.A, de Nardis R., Lavecchia G., Garbin M., Peruzza L., Priolo E., Romanelli M., **Ferrarini F.** (2013). Preliminary analysis of the microearthquake-faults association in the Sulmona basin (central Apennines, Italy). *Rend. Soc. Geol. It.*, 29, 150 – 153, ISSN 20358008
25. G. Lavecchia, **F. Ferrarini**, F. Brozzetti, R. de Nardis, P. Boncio and L. Chiaraluce (2012). From surface geology to aftershock analysis: Constraints on the geometry of the L'Aquila 2009 seismogenic fault system. In: *Spec. Vol. of Italian Journal of Geosciences. (Boll. Soc. Geol. It.)*, 131 (3), 330-347, <https://doi.org/10.3301/IJG.2012.24>
26. Cesarano M., Pappone G., Amato V., Aucelli P.P.C., Baranello S., Cascella A., Casciello E., **Ferrarini F.**, Lirer F., Monaco R., Roskopf C. (2011). Stratigraphy and tectonic setting of the Sannio Unit in the northern sector of Matese Mountains | Stratigrafia ed assetto geometrico dell'Unità del Sannio nel settore settentrionale dei monti del Matese. *Rend. online Soc. Geol. It.*, Suppl. Vol. 12, 35-38, ISSN 2035-8008
27. Lavecchia, G., Boncio, P., Brozzetti, F., De Nardis, R., Di Naccio, D., **Ferrarini, F.**, Pizzi, A., Pomposo, G. (2011). The April 2009 L'Aquila (central Italy) seismic sequence (Mw 6.3): A preliminary seismotectonic picture. In: *Recent Progress on Earthquake Geology* (Guarnieri P., Ed.), 1-17, Nova Science Publishers, Inc.
28. P. Boncio, A. Pizzi, F. Brozzetti, G. Pomposo, G. Lavecchia, D. Di Naccio and **F. Ferrarini** (2010). Coseismic ground deformation of the 6 April 2009 L'Aquila earthquake (central Italy, Mw6.3). *Geophys. Res. Lett.*, 37, L06308, doi:10.1029/2010GL042807
29. **Ferrarini F.**, Boncio P., Pappone G., Cesarano M., Aucelli P.P.C. (2009). New data on geometry, kinematics and segmentation of the active normal fault system along the north-easter border of the Matese Mts. (Molise) | Nuovi dati su geometria, cinematica e segmentazione del sistema di faglie attive lungo il margine nord-orientale del Matese (Molise). *Rend. Soc. Geol. It.*, 5, 100-103, ISSN 20358008
30. G. Lavecchia, **F. Ferrarini**, R. De Nardis, F. Visini, M.S. Barbano (2007). Active thrusting as a possible seismogenic source in Sicily (Southern Italy): Some insights from integrated structural–kinematic and seismological data. *Tectonophysics*, 445, 145–167
31. G. Lavecchia, R. De Nardis, F. Visini, **F. Ferrarini**, M.S. Barbano (2007). Seismogenic evidence of ongoing compression in eastern-central Italy and mainland Sicily: a comparison. *Boll. Soc. Geol. It.*, 126 (2), 209-222
32. Lavecchia G., **Ferrarini F.**, Visini F., de Nardis R., Barbano M.S. (2006). Evidence for seismogenic thrust-related deformation in Sicily | Evidenze di deformazione compressiva attiva e sismogenetica in Sicilia. *Rend. Soc. Geol. It.*, 2, 148-149, ISSN 0392-3037

## DATASET AND ALGORITHM RELEASE

1. Lavecchia G., Bello S., Andrenacci C., Cirillo D., Pietrolungo F., Talone D., **Ferrarini F.**, de Nardis R, Galli P., Faure Walker J., Sgambato C., Menichetti M., Monaco C., Gambino S., De Guidi G., Barreca G., Carnemolla F., Brighenti F., Giuffrida S., Carboni F., Ferranti L., Valoroso L., Toscani G., Barchi M. R., Roberts G., Brozzetti F. (2023). *QUIN 2.0 – new release of the QUaternary fault strain INDicators database from the Southern Apennines of Italy*. Zenodo. <https://doi.org/10.5281/zenodo.8414734>
2. Lavecchia G., Bello, S., Andrenacci C., Cirillo D., **Ferrarini F.**, Vicentini N., de Nardis R., Brozzetti F. (2021). *QUaternary fault strain INDicators database: QUIN 1.0 – first release from the Apennines of central Italy*. PANGAEA, <https://doi.pangaea.de/10.1594/PANGAEA.934802>

3. Lavecchia G., Bello, S., Andrenacci C., Cirillo D., **Ferrarini F.**, Vicentini N., de Nardis R., Brozzetti F. (2021). *Host Faults Database of Central Italy [Data set]*. Zenodo. <https://doi.org/10.5281/zenodo.5603004>
4. **Ferrarini Federica**, J Ramón Arrowsmith, Francesco Brozzetti, Rita de Nardis, Daniele Cirillo, Kelin X Whipple, & Giusy Lavecchia. (2021). COLOSSEO-1 [Data set]. Zenodo. <https://doi.org/10.5281/zenodo.4729624>
5. Scott, C., Bello, S., **Ferrarini, F.** (2020). Matlab Algorithm for Systematic Vertical Separation Measurements of Tectonic Fault Scarps. <https://zenodo.org/records/4247586>
6. Scott, C., Scott, T., Arrowsmith, R., Brigham, C., Bello, S., Xu, J., **Ferrarini, F.**, Milliner, C., Donnellan, A. (2020). Topography of Normal Faults in the Volcanic Tablelands, CA 2019. Distributed by OpenTopography. <https://doi.org/10.5069/G97S7KXT>

## SPEAKER AT INTERNATIONAL AND NATIONAL CONGRESSES

1. **2022** – EGU General Assembly, Vienna  
*Presentation Title: Boosting detection of active tectonics with multi-source data and integrated methods: recent outcomes from the Apennines.* **Federica Ferrarini**, J Ramón Arrowsmith, Rita de Nardis, Francesco Brozzetti, Daniele Cirillo, Kelin X Whipple, and Giusy Lavecchia. <https://doi.org/10.5194/egusphere-egu22-3646>
2. **2019** – GSA (Geological Society of America) – Phoenix, AZ, USA.  
*Presentation Title: Late-Quaternary tectonics along the peri-adriatic belt of central Italy: possible evidence of active shortening from topography, fluvial network analysis, and landscape evolution.* **Ferrarini F.**, Arrowsmith J R., Brozzetti F., Cirillo. D., de Nardis R., Lavecchia G. Geological Society of America Abstracts, Vol. 51, No. 5, ISSN 0016-7592 doi: 10.1130/abs/2019AM-338495
3. **2018** – 20<sup>th</sup> EGU General Assembly, Vienna.  
*Presentation Title: Integrated morphometric and 3D-structural analysis to detect subtle evidence of active faulting in the central Italy extensional environment -* **F. Ferrarini**, G.Lavecchia, R. Arrowsmith, R. de Nardis, F. Brozzetti, D. Cirillo. Geophysical Research Abstracts, Vol. 20, EGU2018-16260
4. **2016** – 88<sup>th</sup> Congress of the Italian Geological Society, Naples.  
*Presentation Title: Inherited fault system control on seismogenic activity: the North Matese case (Molise, Italy).* **F. Ferrarini**, G. Lavecchia, P. Boncio, R. de Nardis, G. Pappone, M. Cesarano, P.P.C. Aucelli. Rend. Online Soc. Geol. It., 40, 215, doi: 10.3301, ROL.2016.79, ISSN 2035-8008
5. **2009** – Annual Meeting of the Italian Group of Structural Geology (GIGS), Udine.  
*Presentation Title: Nuovi dati su geometria, cinematica e segmentazione del sistema di faglie attive lungo il margine nord-orientale del Matese (Molise).* **F.Ferrarini**, P. Boncio, G.Pappone, M. Cesarano, Pietro P.C.Aucelli. Rend. online Soc. Geol. It., 5, 100-103
6. **2006** – 83<sup>th</sup> Summer Meeting of the Italian Geological Society, Chieti.  
*Presentation Title: Evidenze di deformazione compressiva attiva e sismogenetica in Sicilia.* G. Lavecchia, **F. Ferrarini**, F. Visini, Rita De Nardis, M.S. Barbano. Rend. Soc. Geol. It., 2, Nuova Serie, 148-149
7. **2005** – 24<sup>th</sup> National Conference of GNGTS (Gruppo Nazionale di Geofisica della Terra Solida), Rome  
*Presentation Title: Regional tectonic setting and major seismogenic provinces in Sicily: a new proposal.* **Federica Ferrarini**, Giusy Lavecchia, Francesco Visini, Rita de Nardis, Serafina Barbano. Abstract Proceedings, 2005, 132-135

## (PI) OF INTERNATIONAL RESEARCH PROJECTS admitted to funding based on Peer-Review Evaluation

1. **01/10/2018-01/10/2021** – **Appointed Researcher** of the project '*COLOSSEO - Seismogenic Compression in southern Italy? – High-resolution topography (Lidar) and mOrphotectonic analySis to test the active nature of the Southern ApenninE Outer thrust front*' (<https://cordis.europa.eu/project/id/795396>).  
H2020-MSCA-IF-2017, Marie Skłodowska-Curie Actions, Founding Scheme: MSCA-IF-GF (Global Fellowships). Funds €262,269 - GRANT AGREEMENT N°795396. *Hosting Institution* University “G. d’Annunzio” of Chieti-Pescara (Italy). *Partner Organization*: Arizona State University, Tempe, AZ, USA

## PARTICIPATION IN NATIONAL/INTERNATIONAL RESEARCH GROUPS

1. **2024** – European Task-Force “EuQuaGe” (EMERGEIO, <https://www.preventionweb.net/organization/european-earthquake-geology-task-force-emergeio>) - *First Field Exercise of the European Earthquake Geology Task Force (EuQuaGe) performed in Türkiye on the surface rupture of 06 February 2023 Elbistan (Kahramanmaraş) Earthquake* - <https://www.preventionweb.net/news/first-field-exercise-european-earthquake-geology-task-force-euquage-performed-turkiye-surface>
2. **2014-2015** – Italian Civil Protection Department (DPC)- Research Unit of Chieti. *Title: UniCH) Newly found Quaternary faults in the Calabro-Lucania Region: Detailed mapping and integration with GPR and seismological data aimed at the 3D reconstruction of the active fault system* agreement INGV-DPC 2014-15 – Seismological Projects - Project S1 - Base-knowledge improvement for assessing the seismogenic potential of Italy
3. **2014-2015** – Project ATLANTE GEOTERMICO/Geothermic Atlas (<http://atlante.igg.cnr.it/>);
4. **2010** - Università degli studi del Molise – Research activities related to the fulfillment of the Explanatory Notes of the Sheet 431 - Caserta Est - CARG project- Geological and geo-thematic cartography at scale 1:50.000 - '*Sismicità*' in *Note Illustrative alla carta geologica alla scala 1:50.000 - Foglio 431 Caserta Est*, G. Carannante, M. Cesarano, G. Pappone, M.L. Putignano, a cura di) (<http://www.isprambiente.gov.it/Media/carg/campania.html>)
5. **2009** – Università degli studi del Molise – Research activities related to the fulfillment of the Explanatory Notes of the Sheet 405 - Campobasso - CARG project- Geological and geo-thematic cartography at scale 1:50.000 - '*Sismicità*' in *Note Illustrative alla carta geologica alla scala 1:50.000 - foglio 405 Campobasso* (G. Pappone, P.P.C. Aucelli, M. Cesarano, M.L. Putignano, D Ruberti, Eds)
6. ([http://www.isprambiente.gov.it/Media/carg/405\\_CAMPOBASSO/Foglio.html](http://www.isprambiente.gov.it/Media/carg/405_CAMPOBASSO/Foglio.html))
7. **2006-2009** – Field survey of a sector included in the Sheet 405-Campobasso Campobasso - CARG project - Geological and geo-thematic cartography at scale 1:50.000 ([http://www.isprambiente.gov.it/Media/carg/405\\_CAMPOBASSO/Foglio.html](http://www.isprambiente.gov.it/Media/carg/405_CAMPOBASSO/Foglio.html))

## NATIONAL/INTERNATIONAL CONGRESS/MEETINGS ORGANIZATION OR CONVEYING

1. **2024** – Scientific and Organizing Committee member of the '*CRUST Plenary Workshop*' - Chieti 2024 -June 23<sup>rd</sup> -25<sup>th</sup> (<https://www.crust.unich.it/avvisi/crust-plenary-workshop-chieti-2024-june-23rd-25th-2024>)
2. **2024**–convener at EGU General Assembly 2024 (Vienna) of the session *T3.3. Studying active faults from the near-surface to seismogenic depth: an open challenge* (F. Ferrarini, F. Bonali, V. Kastelic, R. de Nardis, V. Alania) – <https://meetingorganizer.copernicus.org/EGU24/session/48674>

3. **2023** – co-convener at EGU General Assembly 2023 (Vienna) of the session *S3.3. Studying active faults from the near-surface to seismogenic depth: an open challenge* (F.L. Bonali, R. de Nardis, **F. Ferrarini**, R. Arrowsmith, V. Alania) – <https://meetingorganizer.copernicus.org/EGU23/session/46229>
4. **2022** – co-convener at the *Joined Congress of SGI-SIMP - S31. Towards modern concepts in seismotectonic-model definition and imaging: multidisciplinary and multiscale approaches in different tectonic settings* (R. de Nardis, F.L. Bonali, **F. Ferrarini**, V. Paoletti, D. Presti) – <https://geoscienze.org/torino2022/index.php/sessioni/elenco-sessioni>
5. **2021** – co-convener at 90<sup>th</sup> Congress of the Italian Geological Society - *P.13 Earthquakes and Tsunami* (F. Romano, L. Valoroso, B. Lolli, **F. Ferrarini**, S. Pepe, A. Magrin) <https://www.geoscienze.org/trieste2021/index.php/sessioni/elenco-sessioni-old#p13>
6. **2020** – convener at ‘Geological Society of America’ Congress– GSA (October 20-26) - *T1. The Multidisciplinary Approach of the Seismotectonics as a Key Tool to Expand Horizons on Faulting Process Understanding and to Address Effective Seismic Hazard Assessment* (**F. Ferrarini**, R. de Nardis, J.R. Arrowsmith) – <https://community.geosociety.org/gsa2020/program/technical/topical>

## EDITOR’S ROLE AND RESPONSIBILITIES

1. **Since April 2025** - April 2025: Associate Editor of the Journal *TECTONOPHYSICS* – (<https://www.sciencedirect.com/journal/tectonophysics/about/editorial-board>)
2. **November 2019 – April 2021**: Guest Associate Editor of the Journal *FRONTIERS IN EARTH SCIENCE - Section ‘Structural Geology and Tectonics’*  
Research Topic's Article collection: UNVEILING ACTIVE FAULTS: MULTISCALE PERSPECTIVES AND ALTERNATIVE APPROACHES ADDRESSING THE SEISMIC HAZARD CHALLENGE - <https://www.frontiersin.org/research-topics/12168/unveiling-active-faults-multiscale-perspectives-and-alternative-approaches-addressing-the-seismic-ha>

Peer-reviewer since 2020 of the Journals (<https://orcid.org/0000-0002-6726-4073>)

- JOURNAL OF SEISMOLOGY (ISSN:1383-4649)
- TECTONOPHYSICS (ISSN:0040-1951)
- SOLID EARTH (ISSN:1869-9510)
- GEOSCIENCES (ISSN 2076-3263)
- FRONTIERS IN EARTH SCIENCES (E-ISSN:2296-6463)

## TEACHING

1. **Academic Year 2025/2026** – Courses in the Bachelor’s and Master’s Programs in Geological Sciences at the University “G. d’Annunzio” of Chieti-Pescara
  - *MORPHOTECTONICS* – GE406 (60h - 6 CFU)
  - *FIELD SURVEY* – (60h - 6 CFU)
2. **Academic Year 2024/2025** – Courses in the Bachelor’s and Master’s Programs in Geological Sciences at the University “G. d’Annunzio” of Chieti-Pescara
  - *ADVANCED GIS* – GE407 (60h - 6 CFU)
  - *MORPHOTECTONICS* – GE406 (60h - 6 CFU)
  - *GEOGRAPHIC INFORMATION SYSTEMS (GIS) LABORATORY*– GE421 (30h-3 CFU).
3. **Academic Year 2023/2024** – Courses in the Bachelor’s and Master’s Programs in Geological Sciences at the University “G. d’Annunzio” of Chieti-Pescara
  - *ADVANCED GIS* – GE407 (60h - 6 CFU)
  - *MORPHOTECTONICS* – GE406 (60h - 6 CFU)

- *ANALYSIS AND INTEGRATION OF GEOLOGICAL AND GEOPHYSICAL DATA* - GE422(10h - 1 CFU)
4. **Academic Year 2022/2023** – Courses in the Master's Program in Geological Sciences at the University “G. d’Annunzio” of Chieti-Pescara
    - *ADVANCED GIS* – GE407 (60h - 6 CFU)
    - *MORPHOTECTONICS* – GE406 (60h - 6 CFU)
  5. **Academic Year 2021/2022** – Courses in the Master's Program in Geological Sciences at the University “G. d’Annunzio” of Chieti-Pescara
    - *ADVANCED GIS* – GE407 (60h - 6 CFU)
    - *MORPHOTECTONICS* – GE406 (60h - 6 CFU)
  4. **Academic Year 2018-2019** – Seminar (1 CFU) within the PhD Course EEH "Earthquake and Environmental Hazard", 34<sup>th</sup> cycle, at the University “G. d’Annunzio” of Chieti (Italy) - *Title: “MORPHOMETRIC EXAMINATION OF TOPOGRAPHY USING ARCGIS AND TOPOTOOLBOX” (DEM analysis and Topographic derivatives; Fluvial network analysis and Active Tectonics)*
  5. **Academic Year 2017-2018** – Subsidiary teaching (4 CFU) at the University “G. d’Annunzio” of Chieti (Italy) (DiSPUTer) in the course ‘*Geological field survey*’ – Teacher Prof. F. Brozzetti
  6. **Academic Year 2016-2017** – Subsidiary teaching (4 CFU) at the University “G. d’Annunzio” of Chieti (Italy) (DiSPUTer) in the course ‘*Geological field survey*’ – Teacher Prof. F. Brozzetti

## UNDERGRADUATE AND PHD THESIS SUPERVISION

1. **November 2022 to 2025** – PhD Student: Marco Battistelli - PhD Course in Geosciences (38<sup>th</sup> cycle) - University “G. d’Annunzio” of Chieti (Italy) - *Thesis title: Analysis of the geometric, kinematic and dynamic relationships between active deformation and Quaternary faulting along structures, potentially seismogenic, in key areas of the central Apennines*
2. **2015** – Student: Dario Angiolilli – Bachelor Degree at the University “G. d’Annunzio” of Chieti (Italy). *Thesis title: Rilevamento geologico della dorsale carbonatica di Pesche-Carpinone e dell’alta valle del fiume Carpino (Isernia)*, Tutor: Prof. Francesco Brozzetti; co-Tutor: Federica Ferrarini, PhD
3. **2011** - Student: Alessandro Verdecchia – Bachelor Degree at University “G. d’Annunzio” of Chieti (Italy) - *Thesis title: “Ricostruzione di strutture profonde nell’area colpita dal sisma aquilano del 6 aprile 2009”*, Tutor: Prof. Paolo Boncio; co-Tutor: Federica Ferrarini, PhD
- 4.

## INSTITUTIONAL ROLES AND RESPONSIBILITIES at the University “G. d’Annunzio” of Chieti-Pescara (Italy)

1. **Since September 2025** – Vice-chair of the PhD Program in Geosciences – School of Advanced Studies, “G. d’Annunzio” University
2. **Since February 2025** – Representative of the Department of Science in the CIA (“G. d’Annunzio” University IT Committee)
3. **Since 2025** – Chair of the Master's Degree Quality Assurance Group – LM74 (Master's Degree in Geological Sciences for Risk, Environment and Resources) at the “G. d’Annunzio” University

4. **From 2022 to 2024** – Member of the Master's Degree Quality Assurance Group – LM74 (Master's Degree in Geological Sciences and Technologies of Earth and Planets) at the “G. d’Annunzio” University
5. **From 2019 to 2023** – (PI) of the *Memorandum of Understanding (MOU)* between the University “G. d’Annunzio” of Chieti-Pescara (Italy) and Arizona State University (Tempe, AZ, USA) aimed to 1) Establish educational relationships, 2) Develop collaborative relationships among faculty and academic staff, 3) Jointly host synergistic activities including workshops and conferences on the geology and seismotectonics of areas of common interest;
6. **Since 2016** - Responsible for the Scientific Secretariat of the CRUST – Interuniversity Center for 3D Seismotectonics with territorial applications (<https://www.crust.unich.it/>)
7. **Academic Year 2017-18** – Expert on the subject for the course ‘*Geological Field Survey*’ - Teacher Prof. Francesco Brozzetti
8. **Academic Year 2017-18** – Expert on the subject for the course ‘*Regional Tectonics and Seismotectonics*’ – Teacher: Prof. Giusy Lavecchia
9. **Academic Year 2016-17** – Expert on the subject for the course ‘*Geological Field Survey*’ – Teacher Prof. Francesco Brozzetti
10. **Academic Year 2016-17** – Expert on the subject for the course ‘*Regional Tectonics and Seismotectonics*’ – Teacher Prof. Giusy Lavecchia
11. **Academic Year 2014-2015** – Expert on the subject for the courses ‘*Regional Tectonics*’ (Teacher Prof. Giusy Lavecchia and ‘*Geological Field Survey*’ (Teacher Prof. Francesco Brozzetti)
12. **Academic Year 2015-2016** – Expert on the subject for the courses ‘*Regional Tectonics*’ (Teacher Prof. Giusy Lavecchia and ‘*Geological Field Survey*’ (Teacher Prof. Francesco Brozzetti)
13. **Academic Year 2011-12** – Expert on the subject for the courses ‘*Regional Tectonics and Seismotectonics*’ (Teacher Prof. Giusy Lavecchia), ‘*Seismology and Sismotectonics*’ (Teacher e Prof. Giusy Lavecchia) and ‘*Structural Geology and Tectonics*’ (Teacher Prof. Giusy Lavecchia);
14. **Academic Year 2010-11** – Expert on the subject for the courses ‘*Regional Tectonics and Seismotectonics*’ (Teacher Prof. Giusy Lavecchia)

## RESEARCH FELLOWSHIPS AND OTHER WORKING POSITIONS IN NATIONAL/INTERNATIONAL ACADEMIC AND RESEARCH INSTITUTIONS

1. **From 10/01/2018 to 10/01/2020** – Research Fellowship at the Arizona State University (Supervisor Prof. J Ramón Arrowsmith) - SESE (School of Space Exploration), Tempe, Az, USA. Outgoing phase nell'ambito del progetto di ricerca COLOSSEO - Seismogenic COMpression in southern Italy? – High-resolution topography (Lidar) and mOrphotectonic analySis to test the active nature of the Southern ApenninE Outer thrust front (<https://cordis.europa.eu/project/id/795396>). H2020-MSCA-IF-2017, Marie Skłodowska-Curie Actions, Founding Scheme: MSCA-IF-GF (Global Fellowships). Grant Agreement n°795396. *Host Institution*: University “G. d’Annunzio” of Chieti Pescara (Italy) - *Partner Organization*: Arizona State University, Tempe, AZ, USA
2. **From 06/01/2016 to 30/09/2018** – Research Fellowship on the project titled: “*Structural-geological analysis and 3D seismotectonics aimed at seismic hazard targets*” - University “G. d’Annunzio” of Chieti-Pescara (Italy). Supervisor: Prof. Giusy Lavecchia
3. **From 02/01/2015 to 02/01/2016** – Scholarship on the project titled “*Analisi della tettonica estensionale finalizzata alla ricostruzione del quadro sismotettonico nell'Appennino molisano e nella zona di raccordo con l'Abruzzo meridionale*”. University “G. d’Annunzio” of Chieti-Pescara (Italy). Supervisor: Prof. Giusy Lavecchia

4. **From 02/01/2014 to 01/01/2015** – Scholarship funded by the (Italian) National Research Council (<http://atlante.igg.cnr.it/>) for the project ‘GEOTHERMIC ATLAS’– Title: “*Geothermal resources characterization in the Abruzzo and Molise regions*”. University “G. d’Annunzio” of Chieti-Pescara (Italy). Supervisor: Prof. Giusy Lavecchia
5. **From 04/01/2012 to 10/19/2013** - Research Fellowship on the project titled: “*3-D definition of potentially active faults in the epicentral area of the L’Aquila 2009 earthquake*”. University “G. d’Annunzio” of Chieti-Pescara (Italy). Supervisor: Prof. Giusy Lavecchia
6. **From 10/07/2009 to 07/07/2010** – fixed-term contract at Earth Science Dept.- University “G. d’Annunzio” of Chieti-Pescara (Italy) for “*Vector and raster database building in GIS environment of existing maps and geological records, and reference management*”. Tutor: prof.ssa Giusy Lavecchia
1. **From 05/14/2009 to 10/14/2009** – fixed-term contract at ‘University of Studies of Molise’ (DISTAT, Isernia, Italy) for collaboration in research activities related to the fulfillment of the Campobasso Geological Sheet n°405 - CARG project - Geological and geo-thematic cartography at scale 1:50.000. Tutor: Prof. Carmen Roskopf

## INVITED SPEAKER

1. **March 2019** – Arizona State University, Tempe, AZ (USA) – *Presentation title: “The extensional deformation style in Italy: Examples from Central-Southern Apennines”*;
2. **December 2016** – National Institute of Geophysics and Volcanology (INGV – L’Aquila). *Presentation title: The North Matese fault system (central Italy)”*
3. **June 2012** – “Jaume Almera” Institute of Earth Sciences (ICTJA-CSIC). *Presentation title: From surface geology to aftershock analysis: constraints on the geometry of the L’Aquila 2009 seismogenic fault system*

## ABSTRACT PROCEEDINGS IN NATIONAL OR INTERNATIONAL CONGRESSES (\*speaker)

1. Faults like to hide: subsurface evidence of poorly known and possibly active normal faults at the border between central and southern Apennines (Italy). Marco Battistelli, Michele MC Carafa, **Federica Ferrarini**, Francesco Brozzetti (2026). EGU General Assembly, 2026. <https://doi.org/10.5194/egusphere-egu26-11802>
2. Where faults hide: an alternative structural style of deformation for an enigmatic slow-deforming zone of the central-southern Apennines (Italy). Marco Battistelli, **Federica Ferrarini**, Francesco Bucci, Michele Santangelo, Mauro Cardinali, Daniele Cirillo, Michele MC Carafa\*, Francesco Brozzetti (2025). IASPEU-SAGA Joint Scientific Meeting, <https://iaga-iaspei-2025.org/book-of-abstracts/>
3. Marco Battistelli\*, **Federica Ferrarini**, Francesco Bucci, Michele Santangelo, Mauro Cardinali, John Peter Merryman Boncori, Daniele Cirillo, Michele MC Carafa, Francesco Brozzetti (2025). Reconciling active deformation and Quaternary normal faulting in a poorly understood sector of the central-southern Apennines (Italy): a multi-scale, multi-source data approach. EGU General Assembly, 2025. <https://meetingorganizer.copernicus.org/EGU25/EGU25-17882.html>
4. Daniele Cirillo\*, Giusy Lavecchia, Carmelo Monaco, **Federica Ferrarini**, Federico Pietrolungo, Simone Bello, Carlo Andrenacci, Anna Chiara Tangari, Marco Battistelli, Donato Talone, Ambra Palmucci, Valeriano Pio Santoro, Francesco Brozzetti (2025). 3D Fault Modelling of the Crati Basin (Northern Calabria, Southern Italy): Integrating Geology, Seismic Interpretation, Earthquake Analysis, and Geodetic Data for Hazard Assessment in an Active Tectonic Region. EGU General Assembly 2025.

- <https://meetingorganizer.copernicus.org/EGU25/EGU25-19026.html>;
5. Battistelli M.\*, **Ferrarini F.**, Carafa M.M.C., Cardinali M., Bucci F., Merryman Boncori J.P. & Brozzetti F. (2024). Do faults play hide-and-seek? New hints on the relationship between active deformation and surface faulting in a seismic gap zone of central-southern Apennines - A multidisciplinary approach. EGU General Assembly, 2024.  
<https://doi.org/10.3301/ABSGI.2024>;
  6. E. Zambonelli, D. Cirillo, D. Talone, L. Filippi, A. Ammirati, S. Sirignano, G. Costa, V. Pazzi, S. F. Fornasari, **F. Ferrarini**, F. Brozzetti, G. Lavecchia, and R. de Nardis (2024). The new urban strong motion array along the Crati Valley. EGU General Assembly, 2024.  
<https://meetingorganizer.copernicus.org/EGU24/EGU24-19909.html>;
  7. **Federica Ferrarini\***, J Ramón Arrowsmith, Rita de Nardis, Francesco Brozzetti, Daniele Cirillo, Kelin X Whipple, and Giusy Lavecchia (2022). Boosting detection of active tectonics with multi-source data and integrated methods: recent outcomes from the Apennines. EGU General Assembly, 2022. <https://doi.org/10.5194/egusphere-egu22-3646>;
  8. **Ferrarini F.\***, Arrowsmith J R., Brozzetti F., Cirillo. D., de Nardis R., Lavecchia G. (2019). Late-Quaternary tectonics along the peri-adriatic belt of central Italy: possible evidence of active shortening from topography, fluvial network analysis, and landscape evolution. Geological Society of America Abstracts, Vol. 51, No. 5, ISSN 0016-7592 doi: 10.1130/abs/2019AM-338495, Phoenix, Sept. 22-25, 2019
  9. **Federica Ferrarini\***, J Ramón Arrowsmith, Francesco Brozzetti, Rita de Nardis, Daniele Cirillo, Giusy Lavecchia (2019). Seismogenic compression in southern Italy? Morphotectonic analysis to detect possible evidence of Late Quaternary tectonics along the Southern Apennine Outer Front. SCEC Contribution #9738, Annual Meeting of the Southern California Earthquake Center, September 8-11, 2019, Palm Springs (CA)
  10. Simone Bello, Ramon Arrowsmith, Chelsea Scott, Giusy Lavecchia, Tyler Scott, Rita De Nardis, & **Federica Ferrarini**. The 1983 Borah Peak earthquake (M7.3) (Idaho - USA) - 3D architecture and seismotectonics along the Lost River fault from field observations and high-resolution topography integrated with seismological data. SCEC Contribution # 9418, Annual Meeting of the Southern California Earthquake Center, September 8-11, 2019, Palm Spring (CA)
  11. Bello, Simone, Lavecchia, Giusy, Arrowsmith, J. Ramon, de Nardis, Rita, Brozzetti, Francesco, Cirillo, Daniele and **Ferrarini, Federica** (2019). A NEW 3D INTERPRETATION OF THE IRPINIA 1980 EARTHQUAKE (MW 6.9, ITALY) FAULT SYSTEM: 40 YEARS LATER. Geological Society of America Abstracts, Vol. 51, No. 5, ISSN 0016-7592doi: 10.1130/abs/2019AM-338878
  12. **Ferrarini F.\***, Arrowsmith J R., Lavecchia G. (2019). Testing Late Quaternary tectonics in low-rate contractional settings – preliminary outcomes from fluvial network analysis along the Southern Apennine Outer compressional Front (SAOF). Workshop CRUST in Memory of G. Pialli, Perugia, July 9-10, 2019
  13. Lavecchia G., de Nardis R., Monachesi G., Cattaneo M., Marzorati S., Cirillo D., **Ferrarini F.** & Brozzetti F. (2019). Three-dimensional pattern of lithospheric compression in central Italy – Geodynamic implication. SIMP-SGI-SOGEI Congress, Parma (Italy), Sept. 2019
  14. de Nardis R., Pandolfi C., Monachesi G., Cattaneo M., Marzorati S., Cirillo D., **Ferrarini F.**, Brozzetti F. & Lavecchia G. (2019). High-sampling of multi-layered crust-scale seismogenic deformation in Central-Eastern Italy. SIMP-SGI-SOGEI Congress, Parma (Italy), Sept. 2019
  15. de Nardis R., Pandolfi C., Monachesi G., Cattaneo M., Marzorati S., Cirillo D., **Ferrarini F.**, Brozzetti F. & Lavecchia G. (2019) - Focal Mechanisms for middle-crust to upper mantle earthquakes beneath Central-Eastern Italy: implication for lithospheric scale seismotectonic zoning. Workshop CRUST in Memmory of G. Pialli, Perugia, July 9-10, 2019
  16. Santilano, E.Trump, G. Gola, A. Donato, D. Scrocca, **F. Ferrarini**, F.Brozzetti, R. de Nardis, G. Lavecchia, A. Manzella (2019). The geothermal favourability of geopressured-geothermal

- systems: a case study in Italy. European Geothermal Congress 2019 Den Haag, The Netherlands, 11-14 June 2019
17. **F. Ferrarini\***, G.Lavecchia, R. Arrowsmith, R. de Nardis, F. Brozzetti &, D. Cirillo (2018). Integrated morphometric and 3D-structural analysis to detect subtle evidence of active faulting in the central Italy extensional environment. 20<sup>th</sup> EGU Gen. Ass, Abs. Vol. 20, EGU2018-16260
  18. **F. Ferrarini\***, G.Lavecchia, R. de Nardis, R. Arrowsmith, F. Brozzetti &, D. Cirillo (2018). Multiple line of evidence for a new seismogenic fault north-east of the Mt Vettore fault (central Italy) – an unexpected outcome of the Norcia 2016-2017 seismic sequence. SIMP-SGI Congress, Catania, September 2018
  19. F. Brozzetti, P. Boncio, D. Cirillo, **F. Ferrarini**, R. de Nardis, A Testa, F. Liberi, G. Lavecchia (2018). Analysis of the August-October 2016, central Italy, coseismic surface faulting slip-distributions, parameterization and comparison with global earthquakes Extended Abstract of the 37<sup>th</sup> GNGTS Congress, Bologna 19-21 November 2018
  20. G. Lavecchia, R. de Nardis, **F. Ferrarini**, D. Cirillo, F. Brozzetti (2017). Structural style of seismogenic extension in Central Italy – a 3D insight from L’Aquila 2009 and Central Italy 2016-2017 seismic sequence. Proceedings of the 36<sup>th</sup> Congress of the GNGTS (Gruppo Nazionale di Geofisica della Terra Solida), 161-164
  21. **F. Ferrarini\***, G.Lavecchia, R. de Nardis, R. Arrowsmith, F. Brozzetti &, D. Cirillo (2017, 08). Exploring new seismic hazard scenarios in central Italy: hints about a previously unknown active normal fault highlighted by the Norcia 2016 (Mw 6.5) seismic sequence. SCEC Annual Meeting;
  22. G. Lavecchia, R. de Nardis, **F. Ferrarini**, D. Cirillo, F. Brozzetti (2017). First-order and subsidiary faults controlling the time-space evolution of the Central Italy 2016 seismic sequence—a multi-source data detailed 3D reconstruction. 19<sup>th</sup> EGU Gen. Ass., Abs. Vol., EGU2017-17417
  23. P. Tizzani, R. Castaldo, V. De Novellis [...], **F. Ferrarini**, F. Brozzetti, D. Cirillo, P. Boncio (2017). Finite Element analysis of source geometry and slip distribution of the 2016 Amatrice Mw 6.2 earthquake (Central Italy) through the integration of geological and satellite data. 19<sup>th</sup> EGU Gen. Ass, Abs. Vol., EGU2017-16528
  24. Giuseppe Solaro, Manuela Bonano, Paolo Boncio [...], **Federica Ferrarini**, Riccardo Lanari et al., (2017). Ground Deformation and Sources geometry of the 2016 Central Italy Earthquake Sequence Investigated through Analytical and Numerical Modeling of DInSAR Measurements and Structural-Geological Data. 2017 AGU Fall Meeting, AGU, New Orleans, LA, 11-15 Dec 2017
  25. Santilano A., Trumpy E., Gola G., Donato, A., **Ferrarini F.**, Brozzetti, F., Lavecchia, G., Manzella, A. (2017). Spatial analysis for the assessment of Geopressured-Geothermal unconventional systems: preliminary results from the Abruzzi case study. Proceedings of XII National Congress of GTI (Gruppo di Geoscienze e Tecnologie Informatiche), Gavorrano (Italy)
  26. **F. Ferrarini\***, G. Lavecchia, P. Boncio, R. de Nardis, G. Pappone, M. Cesarano, P.P.C. Aucelli (2016). Inherited fault system control on seismogenic activity: the North Matese case (Molise, Italy). *Rend. Online Soc. Geol. It.*, Suppl. 1, Vol. 40, 215, doi: 10.3301/ROL.2016.79
  27. P. Tizzani, M. Bonano, P. Boncio, F. Brozzetti, R. Castaldo, F. Casu, D. Cirillo, C., De Luca, R. de Nardis, V. De Novellis, **F. Ferrarini**, R. Lanari, G. Lavecchia, M. Manunta, M. Manzo, A. Pepe, S. Pepe, G. Solaro, I. Zinno (2016). An intriguing perspective on the source geometry and slip distribution of the 2016 Amatrice Mw 6.2 earthquake (central Italy) from geological and satellite data. Proceedings of 35<sup>th</sup> Annual Congress of the GNGTS (Italian Group of the Solid Earth Geophysics), 83, Lecce
  28. **Ferrarini F\***, Lavecchia G., Boncio P., de Nardis R., Pappone G., Cesarano M., Aucelli P.P.C. (2015). Clues of structural inheritance and localised reactivation along a Quaternary

- active normal fault system (Molise, Central Italy). Annual Meeting of GIGS (Italian Structural Geol. Group), Milan, *Rend. Online Soc. Geol. It.*, Suppl. n. 1, Vol. 36, p. 37
29. Lavecchia G., de Nardis R., Di Naccio D., **Ferrarini F.**, Cirillo D., Brozzetti F. (2015). Active compression in Eastern Abruzzo (central Italy): evidence from geological, morphotectonic and macroseismic data analyses. Annual Meeting of GIGS (Italian Structural Geol. Group), Milan, *Rend. Online Soc. Geol. It.*, Suppl. n. 1, Vol. 36, p. 45
  30. de Nardis R., Lavecchia G., Romano M.A., Peruzza L., Priolo E., **Ferrarini F.**, Brozzetti F. (2015). Active deformation field from background microseismicity in a "silent" area of the Apennine seismogenic belt (Sulmona basin, central Italy): data and analyses. Annual Meeting of GIGS (Italian Structural Geol. Group), Milan, *Rend. Online Soc. Geol. It.*, Suppl. n. 1, Vol. 36, p. 33
  31. Adinolfi G., Lavecchia G., De Matteis R., De Nardis R., B. Francesco, **Ferrarini F.**, Zollo A. (2015). The April 7, 2009, Mw 5.5 aftershock of the L'Aquila earthquake: seismogenic fault geometry and its implication for the central Apennines active extensional tectonics (Italy). 17<sup>th</sup> EGU General Assembly, Abs. Vol., EGU2015-1115
  32. Romano M.A., de Nardis R., Lavecchia G., Garbin M., Peruzza L., Priolo E., Romanelli M., **Ferrarini F.** (2014). Seismotectonic setting of the Sulmona basin area (Abruzzo, central Italy) - Evidence from microearthquake activity and focal mechanisms. 16<sup>th</sup> EGU General Assembly, EGU2014-886
  33. **F. Ferrarini\***, G. Lavecchia and R. de Nardis (2013). Active stress from earthquakes and field geology: data analysis from L'Aquila 2009-2012 seismic sequence (Abruzzo, central Italy). Proceedings of the 40<sup>th</sup> Workshop of the International School of Geophysics Properties and Processes of Crustal Fault Zones, Erice, Sicilia

### SHORT COURSES ATTENDED

1. Short Course in "Topographic Analysis Kit (TAK) for Topotoolbox" (511) – Adam Forte & Kelin X Whipple – GSA Annual Congress, Phoenix, AZ (USA), September 22-25, 2019
2. Short Course in "Advancing understanding of geomorphology with topographic analysis emphasizing high-resolution topography" – June 12-15, 2017 – Teachers: R. Arrowsmith, W. Schwanghart, C. Crosby, B. Bookhagen, University of Potsdam, Institute of Earth and Environmental Sciences, Potsdam (Germany)
3. Short Course in "Geostatistics for the Environment and the Territory – Introduction to Geostatistics with ArcGIS Geostatistical Analyst, November 11-12 2013 – Teacher: S. Trevisani - C.I.R.G.E.O. & University of Padua - Agripolis – Legnaro, Padua (Italy)
4. Course on "Geographic Information System and Technological Innovation (50 h), February-April 2009 – Teacher: Dr. Geol. M. Pilone, Pescara (Italy)
5. Course on "Seismic Microzonation" – University "G. d'Annunzio" of Chieti & Order of Geologists of the Abruzzo Region & University of Studies of L'Aquila – June 08-13, 2009, Chieti (Italy)

### AFFILIATIONS AND MEMBERSHIPS

1. [CRUST](#) – Interuniversity Center for 3D Seismotectonics with territorial applications, since 2016
2. [INGV](#) – National Institute of Geophysics and Volcanology – from 02/15/2024 to present;
3. [CNR](#) – (Section of Pisa) – from 01/13/2015 to 12/31/2017
4. [GIGS](#) – Italian Group of Structural Geologists, since 2016
5. [SGI](#) – Società Geologica Italiana, since 2016
6. [EGU](#) – European Geophysical Union – since 2017
7. [GSA](#) – Geological Society of America – from 08/13/2019 to 2021

March 25<sup>th</sup>, 2026

Federica Ferrarini

A handwritten signature in black ink that reads "Federica Ferrarini". The script is cursive and matches the printed name above it.