

GIUSY LAVECCHIA

Full professor of Structural Geology

Nationality: Italian

Place and date of birth: Potenza, 8 March 1955

Affiliation: Science Department of G. d'Annunzio University, Chieti, Italy

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SPECIALIZATION

Field geology, structural geology, tectonics, strain and stress analysis, regional geology, geodynamics, earthquake geology, seismotectonics, seismogenesis, 3D fault modelling, magmatogenesis in intra-continental extensional setting, management and development of geodatabases.

ACADEMIC TRAINING

1979-1981 Research grant in Structural Geology, Department of Earth Sciences, Perugia, Italy.

1980 Winner of "*Premio Dal Piaz*" for young researchers from the Geological Society of Italy.

1980 Master's Course in Structural Geology at Imperial College London.

1978 Winner of a CNR research scholarship in Earth Sciences at Federico II University, Napoli.

1977 Degree (*Summa cum laude*) in Geological Sciences at Federico II University, Napoli.

EMPLOYMENT

1995-Present Full Professor in Structural Geology at the Earth Science Department of G.d'Annunzio University, Chieti.

1987-1994 Associate Professor in Structural Geology at the Earth Science Dept. of Perugia University

1984 NATO fellowship as Visiting Scientist in Structural Geology at the Department of Geology and Geophysics of Berkeley (U.S.A).

1981-1986 Researcher in Structural Geology at the Earth Science Department of Perugia University.

QUALIFICATIONS AND SERVICE

Since 1 November 2022	Doyen of G. d'Annunzio University
2021-2023	Chair of the Master's Degree Program in Geological Sciences and Technologies of the Earth and Planets at Ud'A University
2020-2022	Coordinator of the PhD Course in Earthquake and Environmental Hazards at the DISPUTER Department, Ud'A University, Italy.
2019-2022	Member of the Steering Committee for the Master's Degree in "Geological Sciences for Seismic Risk" (Classe Laurea LM79) at the University of Messina
2016-2022	Head of CRUST "Centro interUniversitario per l'analisi Sismotettonica Tridimensionale con applicazioni territoriali".
2019	Member of the Technical/Scientific Committee "Comitato emergenze e prevenzione rischi geologici" of the Italian Geological Society
2014-2017	Deputy Director of the Department of Psychology, Health and Territory of the Ud'A University, Chieti.
2012-2017	Member of the National Committee on Seismic Risks in Italy.
2008-2011	Coordinator of the Basic Science Section of the "G. d'Annunzio School of Advanced Studies", Chieti, Italy.
1997-2008	Head of the Laboratory of Geodynamics and Seismogenesis, Ud'A Chieti, Italy.
2001-2008	Coordinator of the PhD course in "Geology and Tectonics of the Lithosphere" at the Earth Science Department, Ud'A University, Italy
2003-2005	Member of the Coordination Group of the Abruzzi Universities for Applied Research on Seismic Risks
2004	National Coordinator of PRIN Project on " <i>Zonazione sismogenetica e scenari di pericolosità sismica per l'Appennino centrale e settentrionale</i> ".
2002-2005	Member of the National Committee on Seismic Risks in Italy
1997-2000	Member of the CNR Scientific Council of the "Centro di Studio di Geologia dell'Appennino e delle Catene peri-Mediterranee", Firenze.
1996-1999	Member of the Administration Board of the G. D'Annunzio University, Chieti (Ud'A CDA)
1997	National Coordinator of PRIN Project on " <i>Un approccio interdisciplinare alla geologia ed alla geodinamica del margine tirrenico orientale</i> ".

COORDINATION ROLES

2019-2022	National Coordinator of PRIN Project 2017 on " <i>Overtime tectonic, dynamic and rheologic control on destructive multiple seismic sequences: Special Italian Faults and earthquakes from real 4D cases to models</i> "
2017-2022	Coordinator of PhD Course Study on "Earthquake and Environmental Hazards" at Ud'A. August 2018-August 2021
2018	Primary Coordinator of H2020 Programme, Marie Skłodowska-Curie IF - Global Fellowship, 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), Approved budget Euro 262.269,00.
2008-2012	Coordinator of the Basic Science Section of the "G. d'Annunzio School of Advanced Studies", Ud'A.
2003-2011	Scientific Coordinator of Sheet Teramo (n.339) of Geological Map of Italy National Program (scale :1.50.000)
2001-2008	Coordinator of the Ph.D. course study in "Geology and Tectonics of the Lithosphere" at Ud'A
2004	National Coordinator of PRIN Project on " <i>Zonazione sismogenetica e scenari di pericolosità sismica per l'Appennino centrale e settentrionale</i> ".
1996-2001	Scientific Coordinator of Sheet Avezzano (n. 368) of Geological Map of Italy National Program (scale:1.50.000).
1997	National Coordinator of PRIN Project on " <i>Un approccio interdisciplinare alla geologia ed alla geodinamica del margine tirrenico orientale</i> ".

DIGITAL SKILLS

Microsoft Office package, Corel Draw graphic suite, ArcGIS-ESRI software, software for structural data analysis (FaultKin, Stereonet), Move 3D Midland Valley 3D modules.

RESEARCH ACTIVITY

ERC (European Research Council) sectors: primarily PE10-5 and subordinately PE10-7.

Since 1978, I have been the author of about 120 peer-reviewed scientific papers, along with book chapters, geological maps, and field trip guides, with an H-index of 33 and total citations exceeding 2900 (as of 5 March 2024, according to Scopus).

Since 1985, my research activity has been conducted within several Italian projects where I have served as either Principal Investigator or Research Unit Responsible. These projects were supported by institutions such as MIUR, GNGTS (Gruppo Nazionale di Geofisica della Terra Solida), DPC/INGV (Department of Civil Protection/National Institute of Geophysics and Vulcanology), CNR-IRPI, CNR-IREA, as well as the Universities of Perugia and Chieti (Ud'A), and the Umbria and Abruzzo Regions.

From February 2016 to February 2020, I was a member of the research staff for a Horizon 2020 project focusing on HiTech AlkCarb.

From 2018 to 2022, I was the Primary Coordinator of project "COLOSSEO" in the frame of the H2020 Programme, Marie Skłodowska-Curie

Throughout my research activity, I have pursued several independent but interconnected paths:

- Conducting field mapping and structural analysis of the Apennines' upper crust fold-and-thrust belt structures.
- Investigating extensional provinces through field mapping and structural analysis, focusing on low-angle extensional faults within the Apennines.
- Performing multi-scale strain and stress analysis to understand deformation processes.
- Interpreting the Apennines crust and lithosphere structure through analysis of seismic lines and balancing of geologic sections.
- Elaborating new criteria for a 3D seismotectonic zoning to enhance seismic hazard studies in peninsular Italy and Sicily.
- Studying the tectonic setting and mantle structure in carbonatite magmatic provinces.
- Applying plume models to elucidate the evolution of Mediterranean rift basins and associated peripheral thrust belt systems.

These research endeavours have significantly contributed to advancing our understanding of geological processes and tectonic evolution in complex geological settings.

TEACHING AND MENTORING ACTIVITY

Master Courses in Structural Geology, Geodynamics, Regional Geology, Tectonics, Advanced field mapping, Seismotectonics, and Seismogenesis.

I have supervised dozens of master's students, a dozen Ph.D. students, and Postdoctoral scholars.

PUBLICATIONS

Selected peer-reviewed articles

1. **Lavecchia G.** (1979). Analisi Cinematica Del Sovrascorrimento Del F. Fiastrone (Sibillini Nord Orientali). Boll. Soc. Geol. It., 98, 457-468.
2. **Lavecchia G.**, Piali G., De Martin M., Lechi G.M., Rampoldi R. (1980). Lineazioni Da Satellite E Tettonica Da Wrenching Nel Settore Settentrionale Dell'appennino Umbro-Marchigiano. Boll. Soc. Geol. It., 99, 245-253.
3. **Lavecchia G.** (1981). Appunti Per Uno Schema Strutturale Dell'appennino Umbro-Marchigiano. 3 - Lo Stile Deformativo. Boll. Soc. Geol. It., 100, 271-278.
4. **Lavecchia G.**, Piali G. (1981). Modello Geodinamico Dell'area Umbro-Marchigiana E Suo Significato Sismogenetico. Annali Di Geofisica, 34, 135-147.
5. Alfano L., Decandia F.A., **Lavecchia G.**, Piali G., Biella G., Lozej A., Scarascia S. (1982). Profilo Piombino-Ancona: Dati Geofisici Ed Interpretazione Geologica. Boll. Soc. Geol. It., 101, 247-258.
6. Barbano M.S., Coli M., Ghisetti F., **Lavecchia G.**, Ruscetti M., Scandone P., Slejko D., Valpreda E., Vezzani L. (Gruppo Redazionale Della Carta Sismotettonica Del P.F.G.) (1982). Carta Sismotettonica D'Italia. Mem. Soc. Geol. It., 24, 491-496.
7. **Lavecchia G.** (1982). Confronto Fra Due Sistemi A Pieghe: L'appennino Umbro-Marchigiano Ed Il Giura Franco-Svizzero. Boll. Soc. Geol. It., 101, 69-76.
8. **Lavecchia G.**, Minelli G., Piali G. (1983). Strutture Plicative Minori Dell'appennino Umbro-Marchigiano. Boll. Soc. Geol. It., 102, 95-112.
9. **Lavecchia G.**, Minelli G., Piali G. (1984). L'appennino Umbro-Marchigiano: Tettonica Distensiva E Ipotesi Di Sismogenesi. Boll. Soc. Geol. It., 103, 467-476.
10. **Lavecchia G.**, Minelli G., Piali G., Biella G., Conversini P., Demartin M., Lozej A., Maistrello M., Scarascia S., Tabacco I. (1984). Primi Risultati Del Profilo Sismico A Rifrazione Perugia-Frontone. Boll. Soc. Geol. It., 103, 447-466.
11. **Lavecchia G.** (1985). Neogene-Quaternary Evolution Of The Tyrrhenian-Apennines System. Mem. Soc. Geol. It., 30, 213-214.
12. **Lavecchia G.** (1985). Il Sovrascorrimento Dei Monti Sibillini: Analisi Cinematica E Strutturale. Boll. Soc. Geol. It., 104, 161-194.
13. **Lavecchia G.**, & Piali (1986). Arcuate Fold-Belts In The Apennines (Italy). Terra Cognita, 6(3), A10, 584-585.
14. **Lavecchia G.** (1988). The Tyrrhenian-Apennines System: Structural Setting And Seismotectogenesis. Tectonophysics, 147, 263-296.
15. **Lavecchia G.**, Minelli G., Piali G. (1988). The Umbria-Marches Arcuate Fold-Belt (Italy). Tectonophysics, 146, 125-137.
16. Barchi M., Guzzetti F., **Lavecchia G.**, Lolli O., Bontempo R. (1988). Sezioni Geologiche Bilanciate Attraverso Il Sistema A Pieghe Umbro-Marchigiano: 1. La Sezione Trevi-Valle Dell' Ambro. Boll. Soc. Geol. It., 107, 109-130.
17. Barchi M., **Lavecchia G.**, Minelli G. (1989). Sezioni Geologiche Bilanciate Attraverso Il Sistema A Pieghe Umbro-Marchigiano: 2 - La Sezione Scheggia-Serra S. Abbondio. Boll. Soc. Geol. It., 108, 69-81.
18. **Lavecchia G.**, Stoppa F. (1989). Il "Rifting" Tirrenico: Delaminazione Della Litosfera Continentale E Magmatogenesi. Boll. Soc. Geol. It., 108, 219-235.
19. **Lavecchia G.**, Stoppa F. (1989). Tettonica E Magmatismo Nell'appennino Settentrionale Lungo La Geotraversa Isola Del Giglio-Monti Sibillini. Boll. Soc. Geol. It., 108, 237-254.
20. **Lavecchia G.**, Stoppa F. (1990). The Tyrrhenian Zone: A Case Of Lithosphere Extensional Control Of Intra-Continental Magmatism. Earth And Planetary Sciences Letters, 99, 336-350.
21. Barchi M., Brozzetti F., **Lavecchia G.**, (1991). Analisi Strutturale E Geometrica Dei Bacini Della Media Valle Del Tevere E Della Valle Umbra. Boll. Soc. Geol. It., 110, 65-76.
22. Barchi M., **Lavecchia G.**, Menichetti M., Minelli G., Piali G., Nardon S. (1991). Analisi Della Fratturazione Del Calcare Massiccio In Una Struttura Anticlinale Dell'appennino Umbro-Marchigiano. Boll. Soc. Geol. It., 110, 101-124.
23. Brozzetti F., **Lavecchia G.**, Stoppa F. (1991). Presentazione Di Alcuni Aspetti Tettonico-Strutturali E Petrologici Del Distretto Ultra-Alcalino Umbro-Laziale. Studi Geologici Camerti, Crop 11, Vol. Sp. 2, 327-337.
24. Stoppa F., **Lavecchia G.**, (1992). Late Pleistocene Ultra-Alkaline Magmatic Activity In The Umbria-Latium Region (Italy): An Overview. Journ. Volc. Geoth. Research, 52, 277-293.
25. Brozzetti F., **Lavecchia G.**, (1994). Seismicity And Related Extensional Stress Field: The Case Of The Norcia Seismic Zone (Central Italy). Annales Tectonicae, 8, 36-57.
26. **Lavecchia G.**, Barchi M., Brozzetti F. (1994). Recent Tectonics And Active Stress Field In The Umbria-Marche Apennines. Mem. Soc. Geol. It., 48, 535-537.
27. **Lavecchia G.**, Barchi M., Brozzetti F., Menichetti M. (1994). Sismicità e Tettonica Nell'area Umbro-Marchigiana. Boll. Soc. Geol. It., 113, 483-500.

28. **Lavecchia G.**, Brozzetti F., Barchi M., Menichetti M., Keller J.V.A. (1994). Seismotectonic Zoning In East-Central Italy Deduced From An Analysis Of The Neogene To Present Deformations And Related Stress Fields. *Geological Society Of America Bulletin*, 106, 1107-1120.
29. Boncio P., Bacheca A., Brozzetti F., **Lavecchia G.**, (1995). Analisi Geometrica E Cinematica Del Settore Centrale Della Catena Narnese-Amerina (Umbria Sud-Occidentale). *Studi Geologici Camerti*, Vol. Sp. 1995/1, 73-86.
30. Brozzetti F., **Lavecchia G.** (1995). Evoluzione Del Campo Degli Sforzi E Storia Deformativa Nell'area Dei Monti Martani (Umbria). *Boll. Soc. Geol. It.*, 114, 155-176.
31. **Lavecchia G.**, Federico C., Stoppa F., Karner G.D. (1995). La Distensione Tosco-Tirrenica Come Possibile Motore Della Compressione Appenninica. *Studi Geologici Camerti*, Vol. Sp. 1995/1, 489-497.
32. Boncio P., Brozzetti F., **Lavecchia G.** (1996). State Of Stress In The Northern Umbria-Marche Apennines (Central Italy): Inferences From Micro-Earthquake And Fault Kinematic Analyses. *Annales Tectonicae*, 10(1-2), 80-97.
33. **Lavecchia G.**, Stoppa F. (1996). The Tectonic Significance Of Italian Magmatism: An Alternative View To The Popular Interpretation. *Terra Nova*, 8, 435-446.
34. Boncio P., Brozzetti F., Ponziani F., Barchi M., **Lavecchia G.**, Piali G. (1998). Seismicity And Extensional Tectonics In The Northern Umbria-Marche Apennines. *Mem. Soc. Geol. It.*, 52, 539-555.
35. Boncio P., **Lavecchia G.** (1999). I Terremoti Di Colfiorito (Appennino Umbro-Marchigiano) Del Settembre-Ottobre 1997: Contesto Tettonico E Prime Considerazioni Sismogenetiche. *Boll. Soc. Geol. It.*, 118, 229-236.
36. Boncio P., Brozzetti F., **Lavecchia G.** (2000). Architecture And Seismotectonics Of A Regional Low-Angle Normal Fault Zone In Central Italy. *Tectonics*, 19(6), 1038-1055.
37. Boncio P., Brozzetti F., **Lavecchia G.**, Bacheca A., Minelli G. (2000). Note Stratigrafiche E Strutturali Alla Carta Geologica Del Settore Centrale Della Catena Narnese-Amerina (Umbria, Scala 1:25.000). *Boll. Soc. Geol. It.*, 119, 69-83.
38. Boncio P., **Lavecchia G.** (2000). A Geological Model For The Colfiorito Earthquakes (September-October 1997, Central Italy). *Journal Of Seismology*, 4, 345-356.
39. Boncio P., **Lavecchia G.** (2000). A Structural Model For Active Extension In Central Italy. *Journal Of Geodynamics*, 29, 233-244.
40. **Lavecchia G.**, Boncio P. (2000). Tectonic Setting Of The Carbonatite-Melilitite Association Of Italy. *Mineralogical Magazine*, 64(4), 583-592.
41. Pace B., Di Matteo P., Boncio P., **Lavecchia G.** (2001). Considerazioni Sull'evoluzione Geologica Della Marsica Sud-Orientale (Abruzzo, Appennino Centrale) Sulla Base Di Un'analisi Integrata Di Dati Stratigrafici E Strutturali. *Boll. Soc. Geol. It.*, 120, 139-150.
42. **Lavecchia G.**, Boncio P., Brozzetti F., Stucchi M., Leschiutta I. (2002). New Criteria For Seismotectonic Zoning In Central Italy: Insights From The Umbria-Marche Apennines. *Boll. Soc. Geol. It.*, Vol. Sp., 1, 881-890.
43. **Lavecchia G.**, Creati N., Boncio P. (2002). The Intramontane Ultra-Alkaline Province (IUP) Of Italy: A Brief Review With Considerations On The Thickness Of The Underlying Lithosphere. *Boll. Soc. Geol. It.*, Vol. Sp., 1, 87-98.
44. Pace B., Boncio P., **Lavecchia G.** (2002). The 1984 Abruzzo Earthquake (Italy): An Example Of Seismogenic Process Controlled By Interaction Between Differently Oriented Synkinematic Faults. *Tectonophysics*, 350, 237-254.
45. Pace B., Peruzza L., **Lavecchia G.**, Boncio P. (2002). Seismogenic Sources In Central Italy: From Causes To Effects. *Mem. Soc. Geol. It.*, 57, 419-429.
46. **Lavecchia G.**, Boncio P., Creati N. (2003). A Lithospheric-Scale Seismogenic Thrust In Central Italy. *Journal Of Geodynamics* 36, 79-94.
47. **Lavecchia G.**, Boncio P., Creati N., Brozzetti F. (2003). Some Aspects Of The Italian Geology Not Fitting With A Subduction Scenario. *Journal Of The Virtual Explorer*, 10, 1-14.
48. **Lavecchia G.**, Creati N. (2003). Lithospheric Tectonic Context Of The Carbonatite-Melilitite Rocks Of Italy. *Per. Mineral.*, Special Issue Eurocarb, 72, 33-40.
49. Bell K., Castorina F., **Lavecchia G.**, Rosatelli G., F. Stoppa (2004). Is There A Mantle Plume Below Italy? *Eos*, 85(50), 541, 546-547.
50. Boncio P., **Lavecchia G.**, Milana G., Rozzi B. (2004). Seismogenesis In Central Apennines, Italy: An Integrated Analysis Of Minor Earthquake Sequences And Structural Data In The Amatrice-Campotosto Area. *Annals Of Geophysics*, 47, 1723-1742.
51. Boncio P., **Lavecchia G.**, Pace B. (2004). Defining A Model Of 3d Seismogenic Sources For Seismic Hazard Assessment Applications: The Case Of Central Apennines (Italy). *Journal Of Seismology*, 8, 407-425.
52. **Lavecchia G.**, Boncio P., Creati N., Brozzetti F. (2004). Stile Strutturale, Stato Termo-Meccanico E Significato Sismogenetico Del Thrust Adriatico: Dati E Spunti Da Una Revisione Del Profilo Crop 03 Integrata Con L'analisi Di Dati Sismologici. *Boll. Soc. Geol. It.*, 123, 111-125.
53. Bell K., **Lavecchia G.**, Stoppa F. (2005). Reasoning And Beliefs About Italian Geodynamics. *Boll. Soc. Geol. It.*, Vol. Sp., 5, 119-127.
54. Di Naccio D., Boncio P., Cirilli S., Casaglia F., Morettini E., **Lavecchia G.**, Brozzetti F. (2005). Role Of Mechanical Stratigraphy On Fracture Development In Carbonate Reservoirs: Insight From Outcropping Shallow-Water

Carbonates In The Umbria-Marche Apennines, Italy. *Journal Of Volcanology And Geothermal Research*, 148, 98-115.

55. **Lavecchia G.**, Bell K., Stoppa F., Creati N. (2005). The Mediterranean Region, An Independent Micro-Plate Above A Trapped Plume Head: Inferences From Isotopic Data And Area Balancing Considerations. *Rend. Soc. Geol. It.*, 1, 111-112.
56. **Lavecchia G.**, Scalera G. (Eds.) (2006) - *Frontiers In Earth Sciences: New Ideas And Interpretation*. *Annals Of Geophysics*, 49(1), Doi: 10.4401/Ag-4406.
57. **Lavecchia G.**, Creati N. (2006). 5. A Mantle Plume Head Trapped In The Transition Zone Beneath The Mediterranean: A New Idea. In: Scalera G., Lavecchia G. (Eds.), *Frontiers In Earth Sciences: New Ideas And Interpretation*, *Annals Of Geophysics*, 49, 373-387.
58. **Lavecchia G.**, Stoppa F., Creati N. (2006). 6. Carbonatites And Kamafugites In Italy: Mantle-Derived Rocks That Challenge Subduction. In: Scalera G., Lavecchia G. (Eds.), *Frontiers In Earth Sciences: New Ideas And Interpretation*, *Annals Of Geophysics*, 49(1), 389-402.
59. Pace B., Peruzza L., **Lavecchia G.**, Boncio P. (2006). Layered Seismogenic Source Model And Probabilistic Seismic-Hazard Analyses In Central Italy. *Bulletin Of The Seismological Society Of America*, 96, 107-132.
60. Boncio P., Mancini T., **Lavecchia G.**, Selvaggi G. (2007). Seismotectonics Of Strike-Slip Earthquakes Within The Deep Crust Of Southern Italy: Geometry, Kinematics, Stress Field And Crustal Rheology Of The Potenza 1990-1991 Seismic Sequences (M_{max} 5.7). *Tectonophysics*, 445, 281-300, Doi:10.1016/J.Tecto.2007.08.016.
61. **Lavecchia G.**, De Nardis R., Visini F., Ferrarini F., Barbano M.S. (2007). Seismogenic Evidence Of Ongoing Compression In Eastern-Central Italy And Mainland Sicily: A Comparison. *Boll. Soc. Geol. It.*, 126, 209-222.
62. **Lavecchia G.**, Ferrarini F., De Nardis R., Visini F., Barbano M.S. (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.
63. Peruzza L., Pace B., **Lavecchia G.**, Boncio P. (2007). Reply To "Comment On 'Layered Seismogenic Source Model And Probabilistic Seismic-Hazard Analyses In Central Italy' By B. Pace, L. Peruzza, G. Lavecchia, And P. Boncio" By W. Marzocchi. *Bulletin Of The Seismological Society Of America*, 97(5), 1766-1768, Doi: 10.1785/0120070043.
64. Pace B., Boncio P., Brozzetti F., **Lavecchia G.**, Visini F. (2008). From Regional Seismic Hazard To "Scenario Earthquakes" For Seismic Microzoning: A New Methodological Tool For The Celano Project. *Soil Dynamics And Earthquake Engineering*, 28, 866-874, Doi:10.1016/J.Soildyn.2007.11.001.
65. Boncio P., Tinari D.P., **Lavecchia G.**, Visini F., Milana G. (2009). The Instrumental Seismicity Of The Abruzzo Region In Central Italy (1981-2003): Seismotectonic Implications. *Italian Journal Of Geosciences*, 128(2), 367-380, Doi: 10.3301/Ijg.2009.128.2.367.
66. Brozzetti F., Boncio P., **Lavecchia G.**, Pace B. (2009). Present Activity And Seismogenic Potential Of A Low-Angle Normal Fault System (Città Di Castello, Italy): Constraints From Surface Geology, Seismic Reflection Data And Seismicity. *Tectonophysics*, 463, 31-46.
67. Brozzetti F., **Lavecchia G.**, Mancini G., Milana G., Cardinali M. (2009). Analysis Of The 9 September 1998 M_w 5.6 Mercure Earthquake Sequence (Southern Apennines, Italy): A Multidisciplinary Approach. *Tectonophysics*, 476, 210-225.
68. Visini F., De Nardis R., Barbano M.S., **Lavecchia G.** (2009). Testing The Seismogenic Source Of The January 11th 1693 Sicilian Earthquake (I_0 X/Xi): Insights From Macroseismic Field Simulation. *Italian Journal Of Geosciences*, 128(1), 147-156.
69. Boncio P., Pizzi A., Brozzetti F., Pomposo G., **Lavecchia G.**, Di Naccio D., Ferrarini F. (2010). Coseismic Ground Deformation Of The 6 April 2009 L'aquila Earthquake (Central Italy M_w 6.3). *Geophysical Research Letters*, 37, L06308, Doi:10.1029/2010gl042807.
70. Visini F., De Nardis R., **Lavecchia G.** (2010). Rates Of Active Compressional Deformation In Central Italy And Sicily: Evaluation Of The Seismic Budget. *International Journal Of Earth Sciences*, 99, S243-S264, Doi: 10.1007/S00531-009-0473-X.
71. De Nardis R., Garbin M., **Lavecchia G.**, Pace B., Peruzza L., Priolo E., Romanelli M., Romano M.A., Visini F., Vuan A. (2011). A Temporary Seismic Monitoring Of The Sulmona Area (Abruzzo, Italy) For Seismotectonic Purposes. *Bollettino Di Geofisica Teorica E Applicata*, 52, 651-666, Doi: 10.4430/Bgta0026.
72. **Lavecchia G.**, De Nardis R., Cirillo D., Brozzetti F., Boncio P. (2012). The May-June 2012 Ferrara Arc Earthquakes (Northern Italy): Structural Control Of The Spatial Evolution Of The Seismic Sequence And Of The Surface Pattern Of Coseismic Fractures. *Annals Of Geophysics*, 55(4), 533-540, Doi: 10.4401/Ag-6173.
73. **Lavecchia G.**, Ferrarini F., Brozzetti F., De Nardis R., Boncio P., Chiaraluce L. (2012). From Surface Geology To Aftershock Analysis: Constraints On The Geometry Of The L'aquila 2009 Seismogenic Fault System. *Italian Journal Of Geosciences*, 131, 330-347, Doi: 10.3301/Ijg.2012.24.
74. Sgroi T., De Nardis R., **Lavecchia G.** (2012). Crustal Structure And Seismotectonics Of Central Sicily (Southern Italy): New Constraints From Instrumental Seismicity. *Geophysical Journal International*, 189, 1237-1252, Doi: 10.1111/J.1365-246X.2012.05392.X.
75. Bell K., **Lavecchia G.**, Rosatelli G. (2013). Cenozoic Italian Magmatism - Isotope Constraints For Possible Plume-Related Activity. *Journal Of South American Earth Sciences*, 41, 22-40.

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