

Curriculum Vitae et Studiorum

Lucia Gualtieri

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Google Scholar profile

Professional Experience

- 2023–present: **Scientist**. CMCC, Bologna, Italy.
- 2019–2022: **Assistant Professor**. Stanford University, CA.
- 2017–2019: **Postdoctoral Research Associate**. Princeton University, NJ.
- 2015–2017: **Postdoctoral Research Fellow**. LDEO of Columbia University, NY.
- 2015–2019: **Invited Honorary Research Associate**. University College London, UK.

Education

- 2011–2014: **Ph.D. in Geophysics**, with mention *très honorable*.
Marie Curie Fellow. Dual degree (*colutela*) obtained at Institut de Physique du Globe de Paris (France) and Università di Bologna (Italy).
- 2008–2010: **M.Sc. in Physics (Geophysics)**, with honors (110/110 *cum laude*).
Università di Bologna (Italy).
- 2005–2008: **B.Sc. in Physics**, with honors (110/110 *cum laude*).
Università di Bologna (Italy).

Honors, Awards and Habilitations

- 2021: **Italian National Habilitation to the university professorship, Associate Professor** (*Abilitazione Scientifica Nazionale alle funzioni di professore di seconda fascia*) awarded by the Italian Ministry of Education, University and Research.
Academic recruitment fields:
 - 04/A4 Geophysics (valid until 12/04/2032)
 - 02/C1 Astronomy, astrophysics, physics of the Earth and planets (valid until 29/03/2032).
- **Blavatnik Postdoctoral Award for Young Scientists**, New York Academy of Sciences, 2018.
For “*Contributions to the field of geophysics and seismology that have revolutionized our understanding of what globally detectable seismic background signals can tell scientists about environmental processes, such as hurricanes and landslides*”.
- **Keiiti Aki Young Scientist Award**, American Geophysical Union, 2017.
To an “*outstanding, early career seismologist in recognition of scientific accomplishments in the field of seismology*”.
- **Laura Bassi Young Scientist Award**, *Società Italiana di Fisica*, 2016.
Award given yearly to one scientist within seven years since their M.Sc. graduation for “*outstanding scientific work and accomplishments*”.

- **Claudio Bonivento Scientific Research Award**, Università di Bologna, 2014.
Ph.D. thesis award for “*scientific quality and originality*”.
- **Outstanding Student Presentation Award**, 2012.
Received during the *Third International QUEST Workshop* in the framework of the EU Initial Training Network QUEST (QUantitative Estimation of Earth's Seismic Sources and STructure), Tatranska Lomnica, Slovakia.

Books

- Nakata N, **Gualtieri L**, Fichtner A (editors & authors), 2019,
Seismic Ambient Noise, 372 pages, *Cambridge University Press*, Cambridge, UK.
<https://www.cambridge.org/core/books/seismic-ambient-noise/6D9AE0CC68897330A27DB7FF92ABAACF>

Peer-reviewed Publications

19. Magrini, F., Boschi, L., **Gualtieri, L.**, Lekic, V., Cammarano, F. (2021). Rayleigh-wave attenuation across the conterminous United States in the microseism frequency band, *Scientific Reports*, 11(1), 1-9. doi:10.1038/s41598-021-89497-6.
18. **Gualtieri, L.**, Bachmann, E, Simons, J F, Tromp, J (2021). Generation of secondary microseism Love waves: effects of bathymetry, 3D structure, and source seasonality, *Geophysical Journal International*, 226(1), 192-219. doi:10.1093/gji/ggab095.
17. Retailleau*, L & **Gualtieri***, L (2021). Multi-phase seismic source imprint of tropical cyclones, *Nature Communication*, 12, 2064. doi:10.1038/s41467-021-22231-y.
*Corresponding authors.
16. **Gualtieri, L.**, Bachmann, E., Simons, J.F., Tromp, J. The origin of secondary microseism Love waves, *Proceedings of the National Academy of Sciences*, 117(47), 29504-29511.
doi:10.1073/pnas.2013806117.
Selected press release: Physics Today news; Physics Today magazine; Stanford Science News.
15. Lindsey, N. J., Yuan, S., Lellouch, A., **Gualtieri, L.**, Lecocq, T., Biondi, B., 2020, City-scale dark fiber DAS measurements of infrastructure use during the COVID-19 pandemic, 47, e2020GL089931, *Geophysical Research Letters*. doi: 10.1029/2020GL089931.
Selected press release: EoS (science news magazine by AGU)
14. **Gualtieri, L.**, Stutzmann, E, Juretzek, C, Hadziioannou, C, Arduhin, F, 2019, Global scale analysis and modeling of primary microseisms, *Geophysical Journal International*, 218(1), 560–572. doi:10.1093/gji/ggz161.
13. Retailleau, L. & **Gualtieri, L.**, 2019, Towards high-resolution period-dependent seismic monitoring of tropical cyclones, *Geophysical Research Letters*, 46(3), 1329–1337. doi:10.1029/2018GL080785.
12. Arduhin F, **Gualtieri L**, Stutzmann E, 2019, Physics of ambient noise generation by ocean waves. In: *Seismic Ambient Noise*, N. Nakata, L. Gualtieri and A. Fichtner (eds.), Chapter 3, Cambridge University Press.
11. **Gualtieri L** & Ekström G, 2018, Broadband analysis and modelling of the 2015 Taan Fjord, Alaska landslide using Instaseis, *Geophysical Journal International*, 213, 1912–1923.
doi:10.1093/gji/ggy086.

10. **Gualtieri L**, Camargo SJ, Pascale S, Pons FME, Ekström G, 2018, The persistent signature of tropical cyclones in seismic ambient noise, *Earth and Planetary Science Letters*, 484, 287-294. doi:10.1016/j.epsl.2017.12.026.
Selected press release: Princeton University News; Columbia University News; NOAA.
9. Retailleau, L, Landès M, **Gualtieri L**, Shapiro N, Campillo M, Roux P, Guilbert J, 2018, Detection and analysis of a transient energy burst with beamforming of multiple teleseismic phases, *Geophysical Journal International*, 212(1), 14-24. doi:10.1093/gji/ggx410.
8. **Gualtieri L** & Ekström G, 2017, Seismic reconstruction of the 2012 Palisades rockfall through Lamb's problem solution, *Bulletin of the Seismological Society of America*, 107(1), 63-71. doi:10.1785/0120160238.
7. Farra V, Stutzmann E, **Gualtieri L**, Schimmel M, Arduin F, 2016, Ray-theoretical modeling of secondary microseism P-waves, *Geophysical Journal International*, 206(3), 1730-1739. doi:10.1093/gji/ggw242.
6. **Gualtieri L**, Stutzmann E, Capdeville Y, Farra V, Mangeney A, Morelli A, 2015, On the shaping factors of the secondary microseismic wavefield, *Journal of Geophysical Research*, 120(9), 6241-6262. doi:10.1002/2015JB012157.
5. Gal M, Reading AM, Ellingsen SP, **Gualtieri L**, Koper KD, Tkalčić H, Hemer MA, 2015, The frequency dependence and locations of short-period microseisms generated in the Southern Ocean and West Pacific, *Journal of Geophysical Research*, 120(8), 5764-5781. doi:10.1002/2015JB012210.
4. Arduin F, **Gualtieri L**, Stutzmann E, 2015, How ocean waves rock the Earth: two mechanisms explain seismic noise with periods 3 to 300 s, *Geophysical Research Letters*, 42(3), 765-772. doi:10.1002/2014GL062782.
Selected press release: The Independent; AGU blog.
3. **Gualtieri L**, Serretti P, Morelli A, 2014, Finite-difference P-wave travel time seismic tomography of the crust and uppermost mantle in the Italian region, *Geochemistry Geophysics Geosystems*, 15(1), 69-88. doi:10.1002/2013GC004988.
2. **Gualtieri L**, Stutzmann E, Farra V, Capdeville Y, Schimmel M, Arduin F, Morelli A, 2014, Modelling the ocean site effect on seismic noise body waves, *Geophysical Journal International*, 197(2), 1096-1106. doi:10.1093/gji/ggu042.
1. **Gualtieri L**, Stutzmann E, Capdeville Y, Arduin F, Schimmel M, Mangeney A, Morelli A, 2013, Modeling secondary microseismic noise by normal mode summation, *Geophysical Journal International*, 193(3), 1732-1745. doi:10.1093/gji/ggt090.

Awarded Research Grants and Fellowships

Principal Investigator: Research Grants

- Research proposal: “Seafloor seismology with a fiber optic array in Monterey Bay (SEAFOAM)”, funded by *National Science Foundation*, USA (2020-2023).
https://www.nsf.gov/awardsearch/showAward?AWD_ID=2023301&HistoricalAwards=false
- Research proposal: “Understanding the seismic signals generated by mass-wasting events”, funded by the *Brinson Foundation* to support postdoctoral researchers in the US (2016).

- Research proposal: “Studies concerning the origin of seismic noise”, funded by the *Brinson Foundation* to support postdoctoral researchers in the US (2015).

Principal Investigator: Fellowships

- Gabilan Faculty Fellowship, funded by *Stanford University*. The award is given to selected faculty members from the biosciences, engineering, natural and mathematical sciences based on their CV only, with the aim to “support the advancement of faculty women in science” (2021).
- Marie Curie Individual Fellowship, funded by the *European Commission*. Research proposal: “Seismic ambient noise as a proxy to investigate ice in polar regions” (2017-2018). <https://cordis.europa.eu/project/id/747805>. (*Declined*)
- Postdoctoral Fellowship in the Earth, Environmental and Ocean Sciences, funded by the *Lamont-Doherty Earth Observatory of Columbia University*. Research proposal: “Investigating the environment using seismology” (2015-2017).
- Postdoctoral Fellowship, funded by the *ETH Zürich*. Research proposal: “A novel technique for ambient noise tomography” (2015-2016). <https://ethz.ch/en/research/research-promotion/eth-fellowships/list-of-fellows.html>. (*Declined*).

Co-Investigator: research and workshop grants

- Research proposal: “Taking the pulse of cities with fiber-optic seismology”, funded by *Stanford University* (2020-2021).
- Workshop Proposal: “*Build Your Science and Career in Seismology*”, funded by the *European Geosciences Union*. The workshop was held at the University of Oxford in 2017 in the context of the 2017 TIDES meeting.

Fellowships within European Training Networks

- Marie Curie Doctoral Fellowship, funded within the Initial Training Network QUEST (*Quantitative Estimation of Earth’s Seismic Sources and Structure*) (2011-2013).

Professional Services and Synergistic Activities

Community Service

- Member of the Science Committee for the Earth-Scope Ocean Program, part of the UN Decade of Ocean Science for Sustainable Development (2020–present).
- Associate Editor for *The Seismic Record*, Seismological Society of America (2021– 2022).
- Member of the selection committee for the AGU seismology section’s Keiiti Aki Young Scientist Award (2020–2021).
- Member of the Graduate Student Admissions Committee, Stanford University (2019–2021).
- Panelist during the EU Cost Action TIDES workshop, “Career paths in Academia and industry”, University of Oxford, UK (2017).
- Early Career Scientist Representative of the European Geosciences Union, Seismology Division (2016-2018).

- Organizer of the weakly Marine Geosciences and Seismology seminars, LDEO of Columbia University, NY (2016-2017).
- Co-organizer of two outreach events at the American Museum of Natural History, New York. *SeismoDome: Sights and Sounds of Earthquakes & Global Seismology* (2016).
- Outstanding Student Paper Award judge, AGU Fall Meeting (2015–2021).
- Seismic noise data analyst for the automatic monitoring of seismic ambient noise at the global seismic network GEOSCOPE, IPGP, France, February-November 2014.

Academic Service

- Participation at 25 international conferences and workshops, contributing with 23 oral presentation (of which, 7 invited) and 4 poster presentations (2011–present).
- Invited departmental lectures at 24 universities and research institutes worldwide (2011–present).
- Main lecturer and instructor for three courses at Stanford University (2020–2021).
- Guest lecturer and teaching assistant for a course at Columbia University (2017) and Princeton University (2019).
- Supervision of post-doctoral researchers (1 at Stanford University), PhD students (3 at Stanford University), M.Sc. students (2 at IPGP and 1 at Stanford University) (2014–2020).
- Member of PhD thesis committees (2 at Stanford University (USA), 1 at University of Brest (France), 1 at Università Roma Tre, 1 at ETH-Zürich) (2017–2020).
- Member of M.Sc. thesis committees (2 at Stanford University) and Annual Review committees (3 at Stanford University) (2019–2020).

Organization of workshops and meetings

- Convener and chair at the *AGU Fall Meeting*, session "Ambient-Noise Seismology", San Francisco, CA, 2019 and 2020.
- Convener and chair at the *AGU Fall Meeting*, session "Waveform and Tomographic Inversion for Natural and Induced Seismic Events", Washington, DC, 2018.
- Convener at the *EGU General Assembly*, short course "Seismology for non-seismologists", Vienna, Austria, 2018.
- Co-organizer of career-oriented events for early career scientists at the third TIDES Advanced Training School, University of Oxford, UK.
- Convener at the *EGU General Assembly*, short course "Seismology for non-seismologists", Vienna, Austria, 2017.
- Convener and chair at the *AGU Fall Meeting*, session "Environmental monitoring with ambient seismic and acoustic wave fields", San Francisco, CA, 2016.
- Co-organizer of *The Women in Science at Columbia Graduate Research Symposium*, Columbia University, NY, 2016.

- Convener and chair at the *AGU Fall Meeting*, session "Theoretical and practical advancements on seismic interferometry and ambient noise", San Francisco, CA, 2015.
- Convener and chair at the *EGU General Assembly*, session "In QUEST of seismic models for sources and Earth's structure", Vienna, Austria, 2012.

Reviewer for international research journals and funding agencies

- Manuscript referee for: *Science*; *Scientific Reports*; *Geophysical Research Letters*; *Earth and Planetary Science Letters*; *Journal of Geophysical Research (Solid Earth; Ocean; Earth Surface)*; *Geochemistry, Geophysics, Geosystems*; *Geophysical Journal International*; *Seismological Research Letters*; *Solid Earth*; *Journal of Glaciology*; *Journal of Seismology*; *Earth Surface Dynamics*; *Geosciences Journal*; *Annalen der Physik*.
- Proposal referee for: *National Science Foundation (Marine Geology and Geophysics Program)*; *Deutsche Forschungsgemeinschaft (German Research Science Foundation)*; *Agence nationale de la recherche (French National Research Agency)*.

Languages

Italian (native);
English (fluent);
French (fluent).