

Leonardo Di Gaetano

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🌐 Leonardo Di Gaetano 🎓 Scholar
🌐 Personal Page 🆔 ORCID



Education

- 2020 – 📖 **Ph.D. in Network and Data Science**, Central European University.
Thesis title: *Structures, dynamics, and application of higher order networks.*
- 2018 – 2020 📖 **M.Sc. in Theoretical Physics**, University of Catania.
Thesis title: *Dynamical instability and Lyapunov exponents in temporal networks.*
110/110 cum laude
- 2015 – 2018 📖 **B.Sc. in Physics**, University of Catania.
Thesis title: *Chaos in social systems: a research about talent, luck, and success.*
110/110 cum laude
- 2010 – 2015 📖 **Diploma di Maturità Scientifica**, Liceo Scientifico Galileo Galilei, Catania.
100/100 cum laude

Training

- 2023 📖 **Visiting Ph.D, student**, DIEP, UVA Amsterdam.
Research on higher-order hubs in structural brain networks.
- 2022 📖 **Visiting Ph.D, student**, VUMC, Amsterdam.
Research on node and network classification for epilepsy on functional brain networks.
- 2020 📖 **Visiting Master student**, QMUL, London.
Master Thesis.

Teaching

- 2022 📖 **TA for Dynamical systems** (Ph.D.)
Department of Network and Data Science, at Central European University.
- 2021 📖 **TA for Introduction to Mathematics** (B.Sc.)
Department of Quantitative Social Science, at Central European University.
Department of Politics, Philosophy, and Economics, at Central European University.
- 2019 📖 **Junior TA for Mathematics** (B.Sc.)
Department of Biology, at University of Catania.
📖 **Junior TA for Physics** (B.Sc.)
Department of Biology, at University of Catania.

Conferences

- 2022 📖 **CCS**, Palma de Mallorca.
Oral presentation: *Percolation and topological properties of temporal higher-order networks.*
- 2023 📖 **Netsci**, Vienna.
Oral presentation: *Percolation and topological properties of temporal higher-order networks.*

Conferences (continued)

- **Netsci, Brain Networks Satellite**, Vienna.
Oral presentation: *Higher-order biomarkers for epilepsy surgery: an extended neighbourhood perspective of brain networks*.

Summer schools

- 2020 ■ **Summer School on Economic Networks**, Oxford University.
- 2023 ■ **Complexity 72h**, Palma de Mallorca.

Skills

- Languages ■ Italian (Native), English (Proficient), Spanish (Intermediate), German (Basic).
- Coding ■ Python (Advanced), Matlab (Intermediate), R (Basic), NetLogo (Intermediate), \LaTeX .
- Web Dev ■ HTML.

Certification

Teaching Certification

- 2023-2024 ■ **Certificate of Teaching in Higher Education**. Awarded by Yehuda Elkana Center.

Research Publications

Journal Articles

- 1 D. Abella, P. Birello, **L. Di Gaetano**, *et al.*, “Unraveling higher-order dynamics in collaboration networks,” *arXiv preprint arXiv:2306.17521*, 2023.
- 2 A. Caligiuri, V. M. Eguíluz, **L. Di Gaetano**, T. Galla, and L. Lacasa, “Lyapunov exponents for temporal networks,” *Physical Review E*, vol. 107, no. 4, p. 044 305, 2023.
- 3 S. Chowdhary, E. Andres, A. Manna, L. Blagojević, **L. Di Gaetano**, and G. Iñiguez, “Temporal patterns of reciprocity in communication networks,” *EPJ Data Science*, vol. 12, no. 1, p. 7, 2023.
- 4 **L. Di Gaetano**, F. Battiston, and M. Starnini, “Percolation and topological properties of temporal higher-order networks,” *arXiv preprint arXiv:2306.00779*, 2023.
- 5 **L. Di Gaetano**, G. Carugno, F. Battiston, and F. Coghi, “Dynamical fluctuations in a minimal model of higher-order networks,” *arXiv preprint arXiv:2303.18169*, 2023.
- 6 Q.F. Lotito, M. Contisciani, C. De Bacco, *et al.*, “Hypergraphx: A library for higher-order network analysis,” *Journal of Complex Networks*, vol. 11, no. 3, cnado19, 2023.
- 7 G. Di Bona, **L. Di Gaetano**, V. Latora, and F. Coghi, “Maximal dispersion of adaptive random walks,” *Physical Review Research*, vol. 4, no. 4, p. L042051, 2022.