ALESSANDRO FILIPPO, PH.D.
STUDENT

⌂ University of Rome Tor Vergata, Via della Ricerca Scientifica 1 - 00133 Rome (Italy).
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PERSONAL INFORMATION

Born on July 7, 1997 in Rome, Italy.

EDUCATION

Ph.D. (Student, III year)	University of Rome Tor Vergata, Ph.D. Mathematics program.	From November 2022
Master degree	University of Rome Tor Vergata, Pure and Applied Mathematics, 110/110 magna cum laude. Thesis: "*Robustness and centrality indices in some complex networks*", under the supervision of Prof. Daniele Bertaccini.	April 2022
Bachelor degree	University of Rome Tor Vergata, Mathematics, 108/110.	October 2019

RESEARCH

Interests: Numerical Linear Algebra * Matrix Theory * Network Science.

Research abroad

✈ University of Strathclyde, Glasgow, UK - under the supervision of Dr. Francesca Arrigo, two months.   November 2023 & November 2024

PUBLICATIONS

Published articles

■ D. Bertaccini and A. Filippo. *A proposal for ranking through selective computation of centrality measures*. PLOS ONE, 18(9):1–16, 09 2023.

Submitted / in press articles

☐ F. Arrigo, D. Bertaccini, and A. Filippo. Updating Katz centrality by counting walks. arXiv:2411.19560

Other publications

☑ D. Bertaccini and A. Filippo. *Notes on Complex Networks*, 2023.
☑ A. Filippo. *Robustness and centrality indices in some complex networks,* Master thesis, under the supervision of Prof. Daniele Bertaccini, 2022.

TALKS AND POSTERS

- 2ggALN, University of Pisa, Italy, 21/01/2025. **Talk**: "Walk-induced strategies for updating Katz centrality in simple graphs".   January 2025
- CACN24, University of Rome Tor Vergata, Italy. **Poster**: *"New numerical strategies for approximately updating Katz centrality"*.   December 2024
- Numerical Linear Algebra, CIRM Luminy, France. **Poster**: *"Efficient strategies for updating some resolvent-based centrality measures"*.   September 2024
- PYSANUM Seminar, University of Pisa, Pisa, Italy. **Talk:** *"Complex Networks: robustness, centrality indices and new strategies for ranking nodes"*.   December 2023
- NA Seminar, University of Strathclyde, Glasgow, UK. **Talk:** *"Node ranking via selective computation of centrality measures"*.   November 2023
- 2ggALN, GSSI, L'Aquila, Italy. **Poster:** *"A proposal for ranking through selective computation of centrality measures"*.   May 2023

TEACHING

- **University tutor at Engineering Department**, Geometry, University of Rome Tor Vergata, Rome, Italy.   March 2023 - June 2024
- **University tutor at Mathematics Department**, Geometry 1, University of Rome Tor Vergata, Rome, Italy.   October 2021 - January 2022

OTHER SKILLS

- ⊕ **Languages:** Italian (native), English (upper intermediate).
- ⌨ **Informatics:** Matlab, Python, C, R, Eiffel.

Rome, 15/04/2025