

THOMAS ROBIGLIO

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EDUCATION

Central European University

PhD in Network Science

Supervisors: Prof. T. P. Peixoto, Prof. M. Karsai

September 2023 - Now

Polito, SISSA, ICPT, UdP, Paris-Saclay, Sorbonne

Master of Science program in Physics of Complex Systems

Thesis: “Higher-order structures in face-to-face interaction networks”

Supervisors: Prof. A. Barrat, Prof. M. Génois, Prof. L. Dall’Asta

International Track

September 2021 - July 2023

110/110 Cum Laude

Graduated 28 July 2023

Università degli Studi di Torino

Bachelor degree in Physical Science and Technology

Thesis: “Interacting contagion models on simplicial complexes”

Supervisors: Prof. M. Osella, Dr. G. Petri

Department of Physics

September 2018 - July 2021

107/110

Graduated 20 July 2021

EXPERIENCE

Centre de Physique Théorique, Marseille

Internship student

March 2023 - July 2023

Worked under the supervision of Prof. Alain Barrat and Prof. Mathieu Génois on the statistical analysis and mathematical modeling of face-to-face interactions in human gatherings.

CENTAI Institute

Visiting Student

February 2023 - September 2023

Worked under the supervision of Prof. Giovanni Petri on the relation between mechanism and behavior in complex systems with higher-order interactions.

ISI foundation

Student

April 2021 - July 2021

Assisted senior research scientist Dr. Giovanni Petri in the study of high-order interactions and spreading phenomena on simplicial complexes. The results of this work are the focus of my undergraduate thesis and are contained in [1].

PARTICIPATIONS IN SCHOOLS AND CONFERENCES

- * International School and Conference on Network Science - Vienna (Austria), 10/07/2023 - 14/07/2023
- * Spring College on the Physics of Complex Systems, ICTP - Trieste (Italy), 20/02/2023 - 17/03/2023
- * Conference on Complex Systems, Palma de Mallorca (Spain), 17-21/10/2022

SOFTWARE

- * **Complex Group Interactions (XGI):** a Python package for higher-order networks.
- * **H0I:** a Python package for higher-order information theory, optimized using JAX.

TECHNICAL STRENGTHS

- * Python 🐍, Julia, C++, ROOT, Wolfram Mathematica
- * MS Office Package, L^AT_EX
- * **Languages:** French, Italian (Native) English (Proficient).

INTERESTS

Italian politics, novels, podcasts. Sports junkie: football (Torino FC), cycling and mountaineering.

PUBLICATIONS

- [1] Maxime Lucas et al. “Simplicially driven simple contagion”. In: *Phys. Rev. Res.* 5 (1 Mar. 2023), p. 013201. DOI: 10.1103/PhysRevResearch.5.013201. URL: <https://link.aps.org/doi/10.1103/PhysRevResearch.5.013201>.

Thomas Robiglio et al. *Synergistic signatures of group mechanisms in higher-order systems*. 2024. arXiv: 2401.11588 [physics.soc-ph].