



Highly motivated and very curious person. I like to tackle challenging problems with an interdisciplinary approach yet in a theoretical rigorous framework. Aside from the pure research activity I carry on various dissemination activities to pursue my willing to share with the others the knowledge that I gained and the passion for science.

Contacts



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Lucca, (LU), Italy

Languages

Italian - Mother tongue

English - C1

Expertise



Programming languages

- C++ / C
- Python
- Matlab
- LaTeX
- Mathematica



Softwares

- Microsoft Office 365
- Apple editing suite
- Adobe Illustrator



Soft skills

- Presentation techniques
- Public speaking

Arianna Armanetti

PhD student in Complex Systems

Education

PhD in Complex Systems and Networks

IMT Scuola Alti Studi Lucca - 2023/today

Research field: **Network Theory, Information Theory, Psychometrics**

Research group: **NETWORKS**

Supervisor: **Prof. Miguel Ibanez Berganza**

Visiting PhD at Leiden University, The Netherlands

Department of Clinical Psychology - Jan - Jul 26

Supervisor: **Prof. Eiko Fried**

Master degree in Theoretical Physics

Università degli Studi di Pavia - 2021/23

Alumna at Collegio Universitario Alessandro Volta

Graduation mark: **110/110 cum laude**

Thesis: "**Performance analysis of filtering algorithms for complex networks**"

Bachelor degree in Physics

Università degli Studi di Pavia - 2018/21

Alumna at Collegio Universitario Alessandro Volta

Graduation mark: **110/110 cum laude**

Thesis: "**Artificial Neural Networks and Quantum Mechanics**"

Experience

Fostering Research Synergies Workshop

IMT School of Advanced Studies Lucca - Italy

18-20 Dec 2025

Member of the **organisational committee** for the 2025 edition, I also attended the 2023 edition in Lucca and presented at the 2024 edition in Rome

Brainhack Lucca 2025

IMT School of Advanced Studies Lucca - Italy

2-5 Dec 2025

Team leader of the project "Frequency-Resolved Functional Connectivity for Sleep Stage Characterization and Automated Sleep Staging"

Brainhack Lucca 2024

IMT School of Advanced Studies Lucca - Italy

1-5 Dec 2024

Team leader of the project "Probabilistic models of brain connectivity at rest"

Economic Fitness and Complexity Summer School

UNU MERIT - Maastricht, The Netherlands

8-12 Jul 2024

Oxford Summer School on Economic Networks

University of Oxford - UK

24-28 Jun 2024

Officine di Narrazione della Scienza

University of Bologna - Italy

7-14 Sep 2022

Activities

- Member of the **Physics4Teenagers** group since 2021
- Co-founder of the **PoetrySTEM** project since 2024, a slam poetry format with scientific poems. The format has been replicated in various venues, including the **Festival della Scienza** in Genova, the **European Researchers Night** in Pavia and in Lucca

Past activities

- Judge for the **Italian National Debate Championship** 2021 and 2022
- Judge for the **Palestra di Botta e Risposta Championship** from 2019 to 2022
- Editor and social media content creator for **ProVersi** from 2020 to 2023

Working experience

○ Curricular internship at Physics4Teenagers

University of Pavia, Italy

A.Y. 2021/22 and 2022/23

Physics4Teenagers is a group of the Physics Department whose aim is to disseminate science in non traditional ways

- I dealt with various projects for schools, universities, general public and scientific festivals;
- I participated in **creation and the teaching of 2 PCTOs** for several high schools (one on python programming and one on energy and climate change)
- I **tutored groups of first-year students** who were struggling with their exams
- I participated in the **organisation and the realisation** of 3 editions of the **Ten Days of Physics summer school** for high-schoolers, both holding seminars, managing one the laboratory activities and helping with the logistics
- I **organised and co-hosted a scientific event** for the public with established scientific communicators
- I gave several **guided tours of PER (Particle Escape Room)** an original escape room on the discovery of fundamental particles
- I contributed to the **creation and dissemination of Poweri Noi Watt should we do?** A didactical board game on energetic transition. This game has been presented also at LuccaComics&Games 2024 in the IMT Library space.

○ Teacher of Debate Techniques course

Collegio A. Volta - Pavia, Italy

A.Y. 2022/23 and 2023/24

○ Teacher of Origin of the Universe course

Collegio A. Volta - Pavia, Italy

A.Y. 2022/23

○ Teaching Assistant for the Preparation of Didactic activities course

for the master degree in Didactic of Physics

University of Pavia, Italy

A.Y. 2022/23

○ Teaching Assistant for the Data Analysis I course

for the bachelor degree in Physics

University of Pavia, Italy

A.Y. 2022/23

○ Tutor at Ten Days of Physics summer school

University of Pavia, Italy

A.Y. 2022/23

Publications

- S. Venturini et al.,
PER (Particle Escape Room) me si va ne la fisica recente, PoS ICHEP2022, 1164
- D. Aurelio et al.,
A teaching-learning sequence on colour in the context of a motivational stage for high school students, 2021, Proceedings for WCPE III 2021, Hanoi
- L. Zatti et al.,
PER me si va ne la fisica recente—an educational particle escape room (PER) towards the discovery of the Standard Model of Phys. Educ. 61 015050

Talks & Posters

- **Community detection in psychometric subjects network**
Invited talk @ Computational Network Science group meeting, Leiden Mar 2026
- **Community detection in psychometric subjects network**
Lightning talk @ Dutch Network Science Society Winter event, Amsterdam Feb 2026
- **Beyond factor analysis: detecting population heterogeneity in psychometric data**
Talk @ Fostering Research Synergies, Lucca Dec 2025
- **Performance analysis of filtering algorithms for complex networks** **Talk @** Conference on Complex Systems, Siena Sep 2025
- **Non-linear inferring models of questionnaires**
Talk @ Perspective in Non-Linear Dynamics, Lucca Jul 2025
- **Performance analysis of filtering algorithms for complex networks** **Poster @** StatPhys29, Florence Jul 2025
- **Hyde and seek with variables, the problem of inference in psychometrics**
Talk @ Fostering Research Synergies, Rome Nov 2024
- **Particle Escape Room, un'esperienza didattica innovativa**
Talk @ Congresso SIF, Salerno Sep 2023

Educational seminar

- **Long seminar on *Ordered chaos: what happens in Complex Systems?***
@ Esploranda association, Mulazzo (MS) Jun 2025
@ Ten Days of Physics summer school, Pavia Jun 2025
@ UNIDEL conference cycle, Lucca May 2025
@ Ten Days of Physics summer school, Pavia Jun 2024
- **Long seminar with lab experience on *Theoretical physicists at work***
@ Ten Days of Physics summer school, Pavia Jun 2023