

Matteo Lombardi

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Education

01/11/2025– **PhD in Mathematics.**

present UniMoRe – Department of Physics, Informatics and Mathematics – Modena.

Supervisor: Dr. Giorgia Franchini. Co-supervisor: Prof. Federica Porta.

Scholarship funded by Regione Emilia Romagna within the program “*High-level skills to address the challenges of the technological, cultural, economic and social transition towards sustainability*” – PR FSE+ 2021/2027 titled: “*Towards greener AI: optimising hyperparameters for sustainable and adaptive intelligence*”.

12/11/2022– **Master’s Degree in Mathematics – Data Science.**

12/12/2024 UniMoRe – Department of Physics, Informatics and Mathematics – Modena.

75-hour curricular internship at HiPeRT Lab with research thesis project: *Hyperparameter Optimization of an Augmented Autoencoder for 6D Pose Object Estimation through Neural Architecture Search*.

Advisor: Dr. Giorgia Franchini. Co-advisors: Dr. Davide Sapienza, Dr. Elena Govi.

Grade: 110/110 cum laude.

01/10/2018– **Bachelor’s Degree in Mathematics.**

28/10/2022 UniMoRe – Department of Physics, Informatics and Mathematics – Modena.

Thesis: *Genetic Algorithms and Applications*.

Advisor: Prof. Silvia Bonettini.

Grade: 106/110.

Work Experience

16/02/2025– **Research Fellow.**

31/10/2025 UniMoRe – Department of Physics, Informatics and Mathematics – Modena.

Junior research grant SSD MATH-05/A: *Numerical optimization with adaptive accuracy and applications to machine learning*.

Scientific tutor: Prof. Luca Zanni.

Teaching

- **Preparatory mathematics course for first-year students** (20 hours) – University of Modena and Reggio Emilia, Department of Chemical and Geological Sciences, September 7-11, 2026.
- **Mathematics remedial classes for students requiring additional foundational training** (50 hours) – University of Modena and Reggio Emilia, Department of Chemical and Geological Sciences, March-May, 2026.
- **Preparatory mathematics course for first-year students** (20 hours) – University of Modena and Reggio Emilia, Department of Chemical and Geological Sciences, September 8-12, 2025.

Publications

- M. Lombardi, D. Sapienza, E. Govi, G. Franchini, **Hyperparameter optimization of an augmented autoencoder for 6D pose object estimation through neural architecture search**, In: *Mathematics in Engineering*, (2026).
- F.Candeliere, E. Busi, S. Cerri, L. Sola, M. Lombardi et al., **Enterotype-specific microbial biomarkers of immune checkpoint inhibitor response revealed by large-scale integrated metagenomic analysis**, In: *Cancer Immunology, Immunotherapy*, (2026).

I authorize the processing of the personal data contained in my curriculum vitae pursuant to Legislative Decree 2018/101 and GDPR (EU Regulation 2016/679).