Telmo Cunha

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Education

- **University of Lisbon - Instituto Superior Técnico (IST)** — Lisbon, Portugal
  MSc in Applied Mathematics and Computation - Pure Mathematics Track (GPA: 17/20) — *2019-2025*
  Thesis: Semilinear Wave Equations on Decelerated Expanding FLRW Spacetimes (Grade: 19/20)
  (Courses finished in 2022; Thesis concluded in 2025.)
- **École Polytechnique Fédérale de Lausanne (EPFL)** — Lausanne, Switzerland
  Swiss-European Mobility Programme in Theoretical Physics — *2016-2017*
- **University of Lisbon - Instituto Superior Técnico (IST)** — Lisbon, Portugal
  BSc in Engineering Physics - Theoretical Physics Track (GPA: 15/20) — *2012-2019*
  (Conducted on a part-time schedule.)

Academic Positions

- **Invited Assistant Professor at ISCTE – Instituto Universitário de Lisboa** — Lisbon, Portugal
  Mathematics I and Mathematics II for 1^{st} year Economics students. — *September 2024 - August 2025*
- **Teaching Assistant at ISCTE – Instituto Universitário de Lisboa** — Lisbon, Portugal
  Optimization for 1^{st} year Management students. — *February 2024 - July 2024*
- **Summer Research Assistant at Aalto University (AScI Program)** — Helsinki, Finland
  Equivariance properties of Graph Neural Networks under the supervision of Prof. Vikas Garg. — *June 2023 - September 2023*

Experience

- **Private Tutoring in Physics and Mathematics** — Lisbon, Portugal
  Tutored several students in introductory math and physics courses at the university level. — *2014 - 2023*
- **Translation at Altice Foundation** — Lisbon, Portugal
  Translation of mathematical content on Khan Academy from English to Portuguese. — *December 2019 - April 2020*
- **Summer Research Intern at Instituto Gulbenkian de Ciência (IGC)** — Oeiras, Portugal
  Modeling the evolution of cancerous cells under the supervision of Mónica Dias and Claudia Bank. — *June 2016 - August 2016*

Extracurricular

- **LxMLS22** — Lisbon, Portugal
  Attended the Lisbon Machine Learning Summer School. — *2022*
- **DeepLearning.AI Course** — MOOC, Coursera
  Took the Neural Networks and Deep Learning online course. — *2022*
- **MIT Course - Computer Science and Programming** — MOOC, edX
  Took the Introduction to Computer Science and Programming Using Python online course. — *2021*

Skills Summary

- **Languages**: Portuguese (Native); English (Fluent); French/Spanish (Basic reading).
- **Programming Languages**: Python (Pytorch/Numpy/Scikit-learn/Pandas); C/C++; R.
- **Tools**: Mathematica; LaTeX.

(Some) Academic Projects

- **Mathematical Foundations of Machine Learning**: Wrote a set of notes exploring the basics of Learning Theory, Machine Learning and Kernel Methods, see [mathematical foundations of deep learning].
- **Manifold Learning**: Two projects for the courses in mathematics for machine leaning and nonlinear optimization on manifold learning, see [manifold learning].
- **Feature Selection**: A project for the course in mathematics for machine leaning on feature selection via information theoretic considerations, see [feature selection].
- **Collaborative Filtering**: A project for the course in mathematics for machine leaning on collaborative filtering for a movie recommendation system based on matrix factorization methods, see [collaborative filtering].
- **Geometric Quantization**: A project exploring the basics of symplectic geometry and geometric quantization, see [geometric quantization].

Hobbies

- Climbing / Guitar Playing / Boardgames / Reading.