

# 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<sup>st</sup> year Economics students.* September 2024 - August 2025
- **Teaching Assistant at ISCTE – Instituto Universitário de Lisboa** Lisbon, Portugal  
*Optimization for 1<sup>st</sup> year Management students.* February 2024 - July 2024
- **Research Assistant at Aalto University (ASci Program)** Helsinki, Finland  
*Equivariance properties of Graph Neural Networks under the supervision of Prof. Vikas Garg.* April 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; L<sup>A</sup>T<sub>E</sub>X.

## (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 learning and nonlinear optimization on manifold learning, see [manifold learning].
- **Feature Selection:** A project for the course in mathematics for machine learning on feature selection via information theoretic considerations, see [feature selection].
- **Collaborative Filtering:** A project for the course in mathematics for machine learning 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.