Telmo Cunha

Email: telmocunha@gmail.com Linkedin: https://www.linkedin.com/in/telmo-cunha-195a8a169/ Mobile: +351938285084

Personal webpage: https://tabdc.github.io/

# **EDUCATION**

University of Lisbon - Instituto Superior Técnico (IST)

Lisbon, Portugal

2019-2025

MSc in Applied Mathematics and Computation - Pure Mathematics Track (GPA: 17/20) 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)

Swiss-European Mobility Programme in Theoretical Physics

University of Lisbon - Instituto Superior Técnico (IST)

BSc in Engineering Physics - Theoretical Physics Track (GPA: 15/20)

Lausanne, Switzerland

2016-2017

Lisbon, Portugal

2012-2019

### Academic Positions

Invited Assistant Professor at ISCTE – Instituto Universitário de Lisboa

Mathematics I and Mathematics II for  $1^{st}$  year Economics students.

Teaching Assistant at ISCTE - Instituto Universitário de Lisboa

Optimization for  $1^{st}$  year Management students.

Summer Research Assistant at Aalto University (AScI Program)

Equivariance properties of Graph Neural Networks under the supervision of Prof. Vikas Garq.

Lisbon, Portugal

September 2024 - August 2025

Lisbon, Portugal February 2024 - July 2024

Helsinki, Finland

June 2023 - September 2023

### Experience

Private Tutoring in Physics and Mathematics

Tutored several students in introductory math and physics courses at the university level.

Lisbon, Portugal 2015 - 2023 Lisbon, Portugal

Translation at Altice Foundation

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

2022

Lisbon, Portugal

DeepLearning.AI Course

Took the Neural Networks and Deep Learning online course.

Attended the Lisbon Machine Learning Summer School.

MOOC, Coursera 2022

MIT Course - Computer Science and Programming

MOOC, edX

Took the Introduction to Computer Science and Programming Using Python online course.

2021

Author at PULSAR Magazine

Wrote a couple of articles for the physics student magazine at IST.

Lisbon, Portugal

2015

## 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 research project, part of the master's in mathematics, exploring the basic mathematical setup for geometric quantization, see [geometric quantization].

# Hobbies

• Climbing / Guitar Playing / Boardgames / Reading.