Filipe Nazaré Santos

Vila Nova de Gaia, Porto, Portugal filipe.anp.santos@gmail.com

Education

Instituto Superior Técnico September 2024 – Ongoing
MSc. Applied Mathematics, Avg. grade (so far): 19/20 *Lisbon, Portugal*

Instituto Superior Técnico October 2021 – July 2024
BSc. Engineering Physics, Avg. grade: 18/20 *Lisbon, Portugal*

Escola Quark April 2021 – December 2021
Physics School *Universidade de Coimbra, Portugal*

Colégio de Nossa Senhora da Bonança September 2018 – June 2021
High School, Avg. grade: 19.9/20 *Vila Nova de Gaia, Portugal*

Networks and Memberships

President of the Physics Student's Association October, 2023 – October 2024
Instituto Superior Técnico, NFIST *Lisbon, Portugal*

- Management of the largest Physics Student's Association in Portugal, NFIST
- NFIST projects include Semana da Física, Física sobre Rodas, Jornadas de Engenharia Física and Escola de Verão de Astronomia

Instructor and Course Coordinator February, 2022 – Ongoing
TreeTree2 *Lisbon, Portugal*

- Coordinator of the Special Relativity Afterschool course
- Instructor at 2 editions of the Physics Bootcamp course, 1 edition of the Astrophysics course and 1 edition of the Programming course
- Coordinator of the Atlas Project, alongside Gabriel Almeida
- Coordinator of the Physics Summer Academy and the (upcoming) Advanced School on Physics.

Member of AEIST November, 2024 – November, 2025
Instituto Superior Técnico, AEIST *Lisbon, Portugal*

- Worked for the Editorial Department of AEIST, Técnico's general student's association

Work and Teaching Experience

Mini-course Coordinator September, 2025 - June, 2026
Instituto Superior Técnico *Lisbon, Portugal*

- Coordinator of the "Complementos de Matemática", a series of courses about mathematical techniques and topics applied to Physics, such as Hilbert Spaces, Tensor Calculus and Group Theory. The courses are endorsed by the IST Department of Physics.

Teaching Assistant April, 2024 – July, 2025
Instituto Superior Técnico *Lisbon, Portugal*

- 2023/2024 Mechanics and Waves (Main Professor: Prof. Mário Pimenta)
- 2024/2025 Linear Algebra (Main Professor: Prof. João Alves)
- 2024/2025 Probability and Statistics (Main Professor: Prof. Manuel Cabral Morais)
- 2026/2027 Probability and Statistics (Main Professor: Prof. Giovani Silva)

Summer Internship July, 2023 - August, 2023
INESC MN *Lisbon, Portugal*

- Worked in the project "Smart labels for digital and green textile industry", oriented by Prof. Maryam Salimian

Internship September, 2023 - February, 2024
IPFN - GoLP *Lisbon, Portugal*
- Worked in the project "Compact ion acceleration using microstructured targets", oriented by Prof. Frederico Fiuza

Paid Tutor January, 2023 – June, 2024
Portal da Sabedoria *Lisbon, Portugal*
- Tutoring in Maths and Physics for both high school and University students
- Developer of a website with Maths summaries

Volunteering

Volunteer Tutor November, 2022 – September 2023
Explicamisto *Lisbon, Portugal*
- Tutoring in Maths, Physics and Chemistry for a disadvantaged high school student
- Member of the organisation's Pedagogical Department

List of Publications

Wave optical imaging of an oscillating electric dipole orbiting a black hole
FS, Vitor Cardoso, José Natário, João S. Santos - under revision at Phys. Rev. D *Sep. 2026*

Relativistic elastic response to gravitational waves: explicit solutions for a rectangular plate
José Natário, FS - pre-print *Jun. 2026*

Awards & Honors

2× **"Jaime Campos Ferreira" Prize for Best Masters Student**
Instituto Superior Técnico, Lisbon *2026, 2025*

2× **Academic Excellence Diploma**
Instituto Superior Técnico, Lisbon *2025, 2024*

Centra and CoG Masters Research Grant
Instituto Superior Técnico, Lisbon / Niels Bohr Institute, Copenhagen *2025*

Gulbenkian "Novos Talentos em Matemática" Grant
Fundação Calouste Gulbenkian, Lisbon *2024*

2× **Academic Merit Diploma**
Instituto Superior Técnico, Lisbon *2023, 2022*

Silver Medal at the Ibero-American Physics Olympiads
Sociedade Brasileira de Física, Lisbon *2022*

Specialized Skills

Programming Languages: Python (intermediate), Mathematica (intermediate), C/C++ (intermediate), Julia (beginner)
Languages: Portuguese (native speaker), English (advanced), Italian (intermediate)

Other Interests

Athletics: Gym 3 times a week
Instruments: Acoustic and electric guitar, piano
Hobbies: Reading, traveling, cinema