



ELPIDA OIKONOMOU

Physicist and Master's Student in Translational Engineering in Health and Medicine | Data and Research Enthusiast

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PROFILE

Analytical and detail-oriented **Physicist** currently pursuing a **Master's in Translational Engineering in Health and Medicine** at the National Technical University of Athens (NTUA). Experienced in **data analysis, numerical modeling, and scientific computing**, with research experience in computational physics and plasma simulations.

EXPERIENCE

Sales Assistant

Intersport

Feb 2025 – Nov 2025 Athens, Greece

- Developed communication and teamwork skills in a fast-paced retail setting.
- Strengthened multitasking and time management while balancing academic workload.

Research Intern

Academy of Athens

Summer 2024 Athens, Greece

- Worked with the **Zeltron PIC simulation** (Fortran) for plasma electrodynamics modeling.
- Attempted to simulate the motion of particles in Pulsar and to improve simulation accuracy.

EDUCATION

MSc in Translational Engineering in Health and Medicine

National Technical University of Athens (NTUA)

Sep 2025 – Present Athens, Greece

BSc in Physics

National and Kapodistrian University of Athens (NKUA)

Oct 2020 – Sep 2025

PROJECTS

Undergraduate Thesis: Synchro-Curvature Radiation in Pulsar Magnetospheres

NKUA Physics Department

2024 – 2025

- Conducted computational research on synchro-curvature radiation using **Python**.
- Implemented 4th-order Runge-Kutta methods for particle motion equations.
- Produced radiation spectra under different magnetospheric conditions.

Geomagnetic Storm Analysis

NKUA

2024

Processed satellite and geomagnetic data under Prof. I. Daglis.

Science Outreach: Planets in Your Hand

NKUA

2023

Contributed to the design and delivery of educational science communication activities.

TECHNICAL SKILLS

Python MATLAB C / Fortran LaTeX
Data Visualization PIC Simulations
Linux / Windows

LANGUAGES

Greek
English (C2)
German (A2)



SOFT SKILLS

Analytical Thinking Communication Adaptability
Teamwork Problem Solving

CONFERENCES & WORKSHOPS



Gamma-Ray Python Workshop
NKUA, 2024



Summer School on Gravity & Cosmology
NOA/IAASARS, 2023



Athens Science Festival (Volunteer)
2022



**World Space Week: Space & Climate
Change (Volunteer)**
2024

ADDITIONAL INFO

- Erasmus Semester – Poland (Spring 2024)
- Erasmus+ programs: Italy, Romania, Germany, Greece
- Interests: Biotechnology, Data Science, Neuroscience, Fitness, Nature, Travel