

Loukas Zacharis

M.Sc. Physics & Technological Applications / Engineer of Applied Mathematical & Physical Sciences

School of Applied Mathematical & Physical Sciences | National Technical University of Athens (NTUA) | Iroon Polytechniou, 9 | Zografou, Attica, Greece, 15772

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EDUCATION

National Technical University of Athens (NTUA) & National Centre For Scientific Research Demokritos (NCSR) | Athens, Greece

- M.Sc. in Physics & Technological Applications, Grade (Excellent, 9.17/10) | October 2025
 - *Thesis:* Software development for the simulation of EPR spectra, Grade (Excellent, 10/10)

National Technical University of Athens (NTUA) | Athens, Greece

- Integrated Master (5-Year Diploma equivalent to B.Sc + M.Sc) in Applied Mathematical & Physical Sciences, Grade (Very Good, 8.03/10) | October 2023
 - *Thesis:* A critical approach to the relationship between technology and society, Grade (Excellent, 10/10)
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RESEARCH EXPERIENCE

EPR/ Mössbauer Spectroscopy Lab, National Centre For Scientific Research Demokritos (NCSR)

Research Assistant | October 2024 - October 2025

- Developed simulation software in MATLAB to model EPR/SPR spectra, validating experimental data obtained from cryogenic measurements.
- Operated cryogenic systems using Liquid Nitrogen (77 K) and Liquid Helium (4.2 K) to maintain stable sample environments for Mössbauer spectroscopy.
- Executed safe transfer protocols for cryogenic fluids and monitored system pressure/vacuum levels.
- Assisted in the calibration of temperature sensors.

- Assisted in sample preparation.
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TEACHING EXPERIENCE

Private Tutor (Self-Employed) | Athens, Greece

Freelance Math & Physics Instructor | September 2023 – Present

- Provided one-on-one instruction in Physics and Mathematics for middle and high school students.
 - Adapted teaching methods to accommodate diverse learning styles and improve student performance in school exams.
 - Simplified complex quantitative concepts to enhance student comprehension and engagement.
 - Developed and organized curriculum tailored to students' needs and educational standards.
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ADDITIONAL EXPERIENCE

Galanis Sports Data | Ag. Paraskevi, Attica, Greece

Sports Data Analyst | November 2023 - Present

- Collected and logged real-time statistical data for professional matches using proprietary software.
- Maintained high data integrity and accuracy under strict time constraints.

Hellenic Army

Military Service | November 2022 – August 2023

- Fulfilled mandatory military service.

SKILLS & LANGUAGES

Languages

- **Greek:** Native speaker
- **English:** Proficient (Michigan ECPE, 2015)

Technical & Laboratory

- **Laboratory:** Cryogenics (Liquid Nitrogen & Liquid Helium handling), Sample Preparation.

- **Software:** MATLAB, Fortran, ROOT, Java.

Artistic

- **Music:** Classical Guitar (Degree level), Music Theory, Performance
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REFERENCES

Dr. Yiannis Sanakis | Research Director | Institute of Nanoscience and Nanotechnology | NCSRDI | i.sanakis@inn.demokritos.gr | +30 6974725979

Prof. Leonidas Tsetseris | Professor | Department of Physics | School of Applied Mathematical and Physical Sciences | NTUA | leont@mail.ntua.gr | +30 2107723046