

Öykü Beysi

M.Sc. Student in Advanced Methods in Particle Physics

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PROFILE

EDUCATION

- 2026 – present **Master of Science · Advanced Methods in Particle Physics**
Université Clermont Auvergne · TU Dortmund · Università di Bologna
Erasmus Mundus Joint Master — three universities, three countries: Université Clermont Auvergne (Sep 2026 – Mar 2027), Technische Universität Dortmund (Apr 2027 – Sep 2027), Università di Bologna (Oct 2027 – Mar 2028).
IMAPP: imapp.eu
- 2022 – 2026 **Bachelor of Science · Physics**
Istanbul University
GPA: 3.41 / 4.00 · Graduated with honors.
Istanbul University: fen.istanbul.edu.tr/tr/

HONORS AND AWARDS

- Jul 2025 **Certificate of Honor**
Istanbul University Faculty of Science
Certificate of Honor for high academic standing during undergraduate studies in Physics.

RESEARCH EXPERIENCE

- 2025 – present **GeantTR AutoSim Project**
Supervisor: Dr. Özgür Aytan
Co-developed a web-based, code-free GEANT4 simulation platform enabling detector simulations without requiring programming expertise. Designed modular simulation architectures for scintillator-based detector systems, ensuring physical accuracy and computational efficiency. Performed Light Yield and Time-of-Flight (TOF) analyses to evaluate detector performance under varying geometrical and material configurations. Implemented radiation transport modelling, optical photon tracking, and statistical analysis of detector response.

Nov 2024 – Nov 2025

TÜBİTAK 2209-A National Student Research Grant

Project: Investigation of Reflective Coating Materials on Scintillator Efficiency using Geant4

Supervisor: Dr. Mehmet Erhan Emirhan

Developed detailed GEANT4 optical photon transport simulations to evaluate scintillator light collection efficiency. Implemented surface boundary modelling, reflectivity optimization, and photon transport analysis. Conducted experimental validation using NaI(Tl) and plastic scintillator detectors. Demonstrated strong agreement between simulation predictions and experimental measurements, validating simulation accuracy.

ACADEMIC PRESENTATIONS

Jun 2025

"Investigation of Reflective Surface Coating Materials on Scintillator Efficiency" — Poster

2209-A/B National Student Workshop, Yıldız Technical University

May 2025

"GeantTR AutoSim: A Code-Free Online Geant4 Simulation Platform" — Presentation

YEFIST 2025, Marmara University

SCIENTIFIC TRAINING AND CERTIFICATIONS

Feb 2025

Vienna Conference on Instrumentation (VCI2025)

Technical University of Vienna

Dec 2023

Particle Accelerators and Detectors Workshop

Istinye University

Oct 2023

Geant4 Advance Training Course

CERN, Switzerland

Oct 2023

Introduction to Particle Accelerators

Lund University

Jul 2023

Quantum Mechanics Course

University of Colorado Boulder

EXTRACURRICULAR ACTIVITIES AND LEADERSHIP

2023 – present

Digital Creator, Bilimsizlik

Bilimsizlik

Founded a physics outreach platform reaching over 25,000 followers and 4 million views.

Communicate complex scientific concepts to broad audiences in a clear, concise, and accurate manner. Developed strong skills in scientific communication, interdisciplinary collaboration, and public engagement.

2022 – 2024

Secretary and Board Member, Istanbul University Physics Club

Istanbul University Physics Club

13th IU Physics Workshop: Member of the Organization Committee for Turkey's largest national physics workshop (4,000+ participants); coordinated social media and speaker communications.

Robotic Coding Camp: Mentored participants in Arduino-based project development, fostering practical skills in robotics and coding. Engin Arık Physics Seminars: Co-organized a series of 5 seminars hosting prominent physicists to facilitate academic discussions.

LANGUAGES

Turkish

Native

English

Upper-Intermediate (B2)

German

Beginner