



PERSONAL INFORMATION Petre-Constantin Boboc

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Sex M | Date of birth 14/03/1998 | Nationality Romanian

POSITION WITHIN THE PROJECT Research assistant**WORK EXPERIENCE**Oct. 2020 – Present **Research assistant**

Horia Hulubei National Institute for R&D in Physics and Nuclear Engineering (IFIN-HH), 30 Reactorului Str., Măgurele, Ilfov, Romania

- HASC's Detector maintenance
- Data analysis
- Software development
- Member of NA62 collaboration at CERN and PANDA collaboration at FAIR – GSI – Darmstadt

EDUCATION AND TRAINING2021 – Present **PhD student in Physics**

Faculty of Physics – University of Bucharest

- Currently studying the branching ratio of the $\pi^0 \rightarrow e^+e^-$ rare decay at NA62 experiment, CERN

2019 - 2021 **MSc. in Physics**

Faculty of Physics – University of Bucharest

- Advanced quantum mechanics, quantum field theory, numerical methods
- MSc. thesis: „Properties of targets subjected to intense lasers by means of PIC simulations”

2016 - 2019 **B.Sc. in Physics**

Faculty of Physics – University of Bucharest

- Classical mechanics, optics, thermodynamics, statistical physics, quantum mechanics, nuclear physics
- B.Sc. thesis: „ Modele Ising pe structuri de tip rețea ”

PERSONAL SKILLS

Mother tongue(s) Romanian

| Other language(s) | UNDERSTANDING | | SPEAKING | | WRITING |
|-------------------|---------------|---------|--------------------|-------------------|---------|
| | Listening | Reading | Spoken interaction | Spoken production | |
| English | B2 | B2 | B2 | B2 | B2 |

| Digital competence | SELF-ASSESSMENT | | | | |
|--------------------|------------------------|-----------------|------------------|-----------------|-----------------|
| | Information processing | Communication | Content creation | Safety | Problem solving |
| | Proficient user | Proficient user | Proficient user | Proficient user | Proficient user |

ADDITIONAL INFORMATION

- Publications** NA62 publications:
- Search for dark photon decays to $\mu^+ \mu^-$ at NA62 - E.Cortina Gil et al, NA62 Collaboration (doi:10.1007/JHEP09(2023)035)
 - Improved calorimetric particle identification in NA62 using machine learning techniques - E.Cortina Gil et al, NA62 Collaboration (doi:10.1007/JHEP11(2023)138)
 - A study of the K^+ to $\pi^0 e^+ \nu$ gamma decay - E.Cortina Gil et al, NA62 Collaboration (doi:10.1007/JHEP09(2023)040)
 - Search for the K^+ decays into the $\pi^+ e^+ e^- e^-$ final state - E.Cortina Gil et al, NA62 Collaboration (doi:10.1016/j.physletb.2023.138193)
 - Measurement of the K^+ to π^+ gamma gamma decay - E.Cortina Gil et al, NA62 Collaboration (doi.org/10.1016/j.physletb.2024.138513)
 - Search for leptonic decays of dark photons at NA62 - E.Cortina Gil et al, NA62 Collaboration (doi:10.1103/PhysRevLett.133.111802)
 - Development of a new CEDAR for kaon identification at the NA62 experiment at CERN - A. Bethani et al, NA62 Collaboration (doi:10.1088/1748-0221/19/05/P05005)
- Other publications:
- PID-Based Temperature Stabilization for Silicon Photomultipliers Using Thermoelectric Cooling Devices - P. C. Boboc, O. E. Huțanu, A. M. Bragadireanu (https://rjp.nipne.ro/2024_69_7-8/RomJPhys.69.906.pdf)