GEORGIOS CHRISTOU

giorgos.christou@protonmail.com ◇ LinkedIn ◇ GitHub

EDUCATION

PhD Particle Physics, The University of Edinburgh, Edinburgh, Scotland — Sept 2024 - Present

MSc Particle and Nuclear Physics, The University of Edinburgh, Edinburgh, Scotland — Sept 2023 - Aug 2024
Graduated with A3 Distinction, 1^{st} in class, GPA: 75/100

BSc Physics, University of Cyprus, Nicosia, Cyprus — Sept 2019 - Jun 2023
Graduated with Excellence, 1^{st} in class, GPA: 8.66/10

High School Diploma, Lyceum Makariou III, Larnaca, Cyprus — Sept 2015 - Jun 2018
Graduated with Excellence, GPA: 19.22/20

RESEARCH EXPERIENCE

MSc Thesis — Nov 2023 - Aug 2024
Proton structure and light quark Yukawa couplings — *University of Edinburgh*

- Usage of machine learning architectures (DNN, CNN, GCN) to perform multi-class classification on particle physics data
- Statistical methods for optimization
- Setting upper limits on parameters of interest using statistical tools

CERN Summer Student Programme 2023 — Jun 2023 - Aug 2023
CP asymmetries in charm decays — *LHCb Collaboration*

- Usage of C++ and statistical tools such as ROOT to develop a re-weighting algorithm for particle physics data

BSc Thesis and Undergaduate Internship — May 2022 - May 2023
Baryon Spectrum using Lattice QCD — *University of Cyprus*

- Usage of Python and C++ to perform advanced statistical analysis on lattice QCD data
- Gained experience on working with HPC environments
- Thesis results published in *Phys. Rev. D* **108**, 094510 (2023), PhysRevD.108.094510.

TEACHING EXPERIENCE

Teaching Assistant — Sept 2024 - Present
The University of Edinburgh

- Assisting students with workshop problems and marking assignments on machine learning, simulations and statistical analysis for the courses Data Analysis and Machine Learning (Postgraduate course), Computer Modelling (Undergaduate course)

PUBLICATIONS

- C. Alexandrou, S. Bacchio, **G. Christou**, and J. Finkenrath, "Low-lying baryon masses using twisted mass fermions ensembles at the physical pion mass," *Phys. Rev. D* **108**, 094510 (2023), arXiv:2309.04401.

SKILLS

- **Programming**: Python, C++, Bash/Shell, Fortran, Mathematica
- **Languages**: Greek (Native), English (IELTS Score: 8, Level: C1), French (Beginner)
- **Technical**: Git, GitHub, LaTeX, Linux, Unix, Machine Learning (scikit-learn, TensorFlow, Keras, PyTorch), Data Analysis (NumPy, Pandas), Publication-grade Data Visualization (MatPlotLib, Seaborn), Database Knowledge (HDF5)
- **Soft Skills**: Communication (technical and non-technical), Collaboration & Teamwork, Time Management, Problem Solving & Critical Thinking

AWARDS & ACHIEVEMENTS

Class Medal Award for MSc in Particle and Nuclear Physics, The University of Edinburgh Nov 2024
Awarded for the excellent performance in the MSc in Particle and Nuclear Physics

Valedictorian in the Department of Physics, University of Cyprus Jun 2023
Awarded to the student with the highest GPA of the department

OTHER

Cypriot National Guard Military Service: Cyprus, 14 Months Jul 2018 - Sept 2019
Rank: Private