

# GEORGIOS CHRISTOU

[giorgos.christou@protonmail.com](mailto:giorgos.christou@protonmail.com) ♦ [LinkedIn](#) ♦ [Github](#)

## EDUCATION

---

**B.Sc. in Physics**, University of Cyprus, Nicosia, Cyprus  
Graduated with Excellence, GPA: 8.66/10

Sept 2019 - Jun 2023

**High School Diploma (Apolytirio)**, Lyceum Makariou III, Larnaca, Cyprus  
Graduated with Excellence, GPA: 19.22/20

Sept 2015 - Jun 2018

## RESEARCH EXPERIENCE

---

### CERN Summer Student Programme 2023

Jun 2023 - Aug 2023

Internship, Project Supervisors: [Prof. Angelo Carbone](#), [Dr. Federico Betti](#)

*LHCb Collaboration*

- Study of  $CP$  asymmetries in charm decays at the [LHCb Collaboration](#).
- Development of new kinematic weighting algorithm for the measurement of  $CP$  asymmetries.

### Continuum limit of the low-lying baryon spectrum

Sept 2022 - May 2023

BSc Thesis, Project Supervisor: [Prof. Constantia Alexandrou](#)

*University of Cyprus*

- The thesis was a continuation of the previous project and the purpose was to complete the calculations for the baryon mass spectrum.
- Became familiar with the environment of exascale computers.
- Implementation of model averaging for bias elimination.
- Using three different ensembles with different lattice spacings and various computational techniques it was possible to calculate the baryon mass spectrum at the continuum limit and compare the results to the experimental values.
- Prediction of previously unmeasured masses of doubly- and triply-charmed baryons.

### Low-lying baryon spectrum using lattice QCD simulations

May 2022 - Jun 2022

Undergraduate Internship, Project Supervisor: [Prof. Constantia Alexandrou](#)

*University of Cyprus*

- Calculation of various baryon masses using correlator data generated from lattice QCD simulations.
- Implementation of methods for evaluating the low-lying baryon spectrum at finite lattice spacing.

### Wave function of the universe for the Starobinsky inflationary model

Jun 2021 - Aug 2021

Undergraduate Internship, Project Supervisor: [Prof. Nicolaos Toubas](#)

*University of Cyprus*

- The main purpose of this project was to see whether initial conditions favouring inflation are probable.
- We approximated the Starobinsky potential as a step function and we used the WKB approximation in the semiclassical regime in order to find the wave function for various values of the inflaton field.
- Using appropriate boundary conditions we constructed the quantum probability density distribution for this inflationary model.

## SKILLS

---

**Programming:** Fortran, Mathematica, C++, Python, ROOT, Bash/Shell

**Languages:** Greek (Native), English (IELTS Score: 8, Level: C1), French (Beginner)

**Technical:** Git, Github,  $\text{\LaTeX}$ , Linux, Unix

## AWARDS & ACHIEVEMENTS

---

**Grade 5 Music Theory**, The Associated Board of the Royal Schools of Music

Grade: Distinction

**Electric Guitar Degree**, Musical Horizons Conservatory

Grade: Excellent

## OTHER

---

**Military Service:** Cyprus, 14 Months

Jul 2018 - Sept 2019

Rank: Private

## INTERESTS

---

My hobbies include photography and especially wide-field and deep-sky astrophotography, as well as creating time-lapse videos. Moreover I enjoy playing guitar and listening to music. Another passion of mine is creating programs to solve numerical problems in physics. Lastly, I enjoy reading fantasy books.