

# Cyprus Membership Application



University of Cyprus  
Department of Physics

Fotios Ptochos  
University of Cyprus

# Cyprus Higher Education System

Cyprus is emerging as higher education center for the Eastern Mediterranean

- 3 public Universities
- 7 private Universities
- 55000 students

# University of Cyprus (UCY) – Department of Physics

- ❑ The only tertiary-education institution in Cyprus offering B.Sc., M.Sc and Ph.D. degrees in physics

## Facts and Trivia

- ❑ Established in 1991 – Part of Natural Science Department
- ❑ First students in 1993
- ❑ First graduates in 1997
- ❑ 1999 Autonomous Department

# UCY – Department of Physics

## Academic Personnel

- Professors (5)
- Associate Professors (7)
- Assistant Professors (1)
- Lecturer(1)

## Students

- Undergraduates (120)
- Graduates (25 Ph.D.)  
( 5 M.Sc.)

## Research Areas

- ❑ Theoretical Nuclear and Particle Physics (2)
- ❑ Quantum Gravity, String Cosmology  
and Cosmology (1)
- ❑ Experimental Particle Physics (3)
- ❑ Theoretical Condensed Matter Physics (2)
- ❑ Experimental Condensed Matter Physics (4)
- ❑ Theoretical and Computational Biophysics (2)

# UCY - HEP- EX group

## Member of CMS Collaboration

Prior involvement @ L3 and CDF

### Personnel

- ❑ 3 Faculty members  
(P. Razis, F. Ptochos, H. Saka)
- ❑ 4 Post Doctoral Fellows
- ❑ 5 Ph.D. students
- ❑ 3 Undergraduate students
- ❑ 1 Electrical Engineer

### Involvement

- ECAL, Tracking, L1 E/ $\gamma$  and HLT top hadronic triggers, MC production and coordination
- **Phase II:** HGCAL, L1-tau trigger, 40MHz-Scouting, MATHULSA
- Searches for BSM physics with emphasis on Extended Higgs Sector with 3<sup>rd</sup> generation fermions

# CYPRUS – CERN Relations

- ❑ 1994 – 2012 CERN – CYPRUS collaboration under various MOUs
- ❑ April 1, 2016 Cyprus became an **associate member** of CERN
- **Target:** April 1, 2022 Cyprus to become a **full member**

# Physics/HEP group outreach

- ❑ Heavy Involvement in the reform of the Cyprus High School Physics Education (**2015 -**)
  - Physics Curriculum for all years of High School
  - Preparation of all educational material used at the public schools (student/instructor books, lab activities, instructor's guide)
- ❑ MasterClasses (**2012 -**)
  - Initially 12 students for a pilot run
  - 100 students in 2020 prior to the first Covid-19 lockdown
- ❑ Organization of science fests and physics clubs at various high schools across Cyprus
- ❑ Organization of virtual tours of the CMS detectors for high school students

# Physics/HEP bi-communal outreach

- Starting with the Cyprus IPPOG membership, planning to extend our outreach activities to engage the youth from both the Greek Cypriot and Turkish Cypriot communities.
- Use the MasterClasses to involve students from both communities, **especially women**, to interact on the basis of physics interests and excitement, replicating a working environment that follows the principles of international research collaboration.
- Extend these activities to a program of student mentoring and participation in cutting-edge aspects of modern physics research related to CERN activities and not only, fulfilling this way one of the founding goals of CERN, to promote peace through science.



# Outlook

- ❑ IPPOG naturally provides an umbrella for our outreach activities and future plans.
- ❑ Many new ideas and feedback for outreach activities and ways to communicate particle physics to general audience with main target high school students and teachers.
- ❑ University of Cyprus and its Physics Department is the natural Educational and Research Center of Cyprus that can organize, host, and promote all Particle Physics outreach activities in the country.
- ❑ Seek accession of University of Cyprus representing the Republic of Cyprus as a new IPPOG member.