

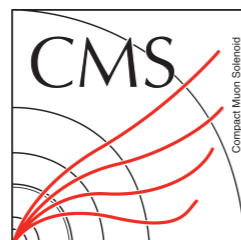
*CREATIONS Summer School 2018*

---

# Playing with Protons for a wonder-full primary classroom

Elena Elliniadou, MEd  
Principal, ICT teacher trainer  
2nd Primary School  
of Piraeus-Uruguay  
[elenelli9@gmail.com](mailto:elenelli9@gmail.com)

---



# Why?

“Children naturally enjoy observing and thinking about nature.” (Eshach & Fried, 2005, p. 315)

“It is, therefore, incumbent on the science educator to provide children with environments, materials, and activities, to develop their scientific reasoning while these ‘windows of opportunity’ are still open.” (ibid., p. 334)



Playing with Protons workshop at the National Observatory of Athens, Greece

# Why?

“Action needs to begin at primary school - age 14 is too late.”

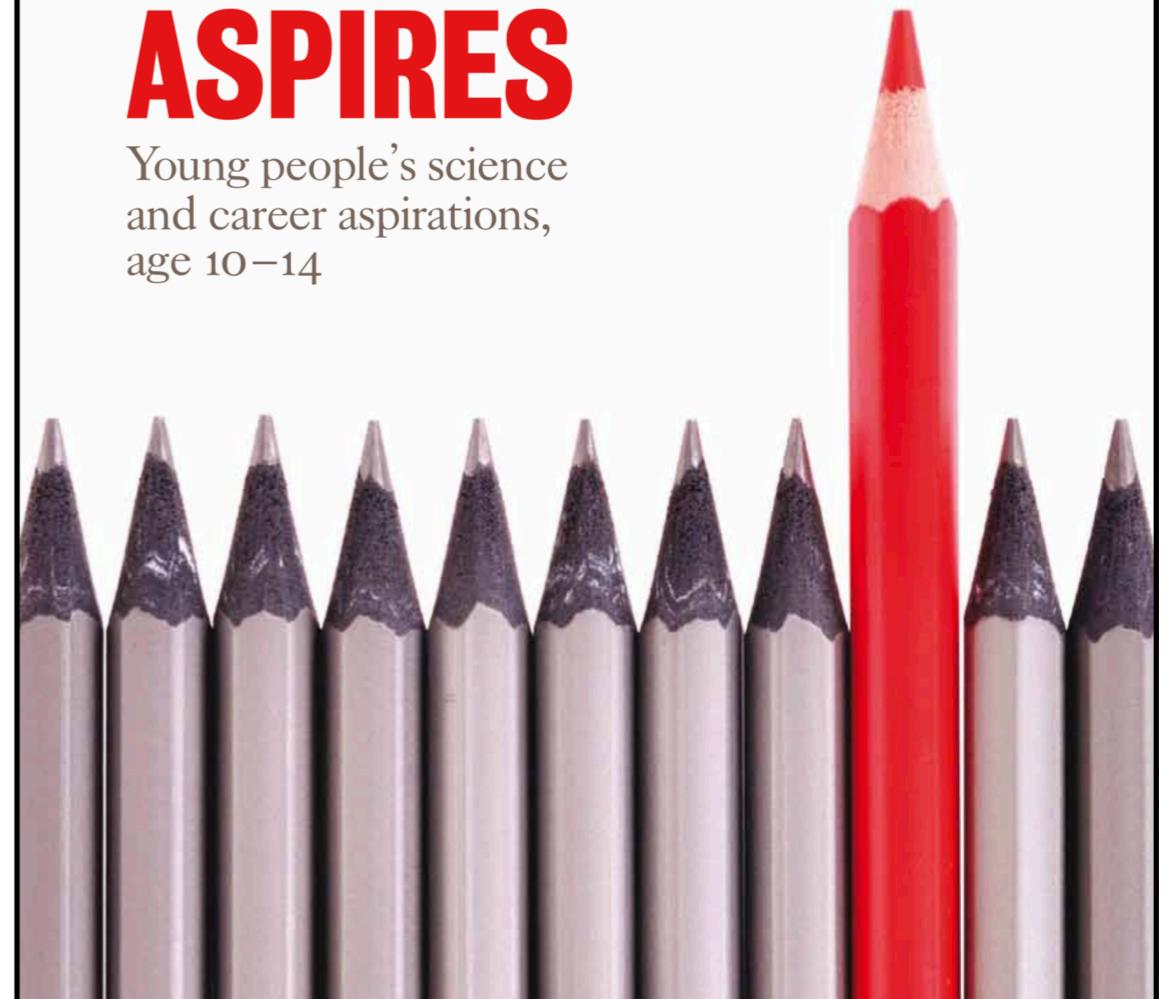
“Efforts to broaden students’ aspirations, particularly in relation to STEM, need to begin in primary school. Currently most activities and interventions are targeted at secondary school students.”

Department of Education &  
Professional Studies

**KING'S**  
*College*  
**LONDON**

## **ASPIRES**

Young people’s science  
and career aspirations,  
age 10–14



# Primary Teacher Professional Development at CERN

Experience the unique culture of cutting-edge science, technology and innovation at the world's largest particle physics laboratory.

Utilize creative methodologies to develop educational scenarios and lesson plans for enhancing primary physics teaching and learning.

Try out new learning activities, especially hands-on experiments with everyday materials, to increase student interest, motivation and wonder.

Get inspired and motivated to share newly acquired knowledge and wonder-full experience with peers, parents and the local community.



# What, Where, When



**Playing with protons in primary**  
by Angelos Alexopoulos



Safety first! Hill Primary School students get ready to build a cloud chamber at CERN (Image: Stella Tsirikla)



**PLAYING WITH PROTONS**

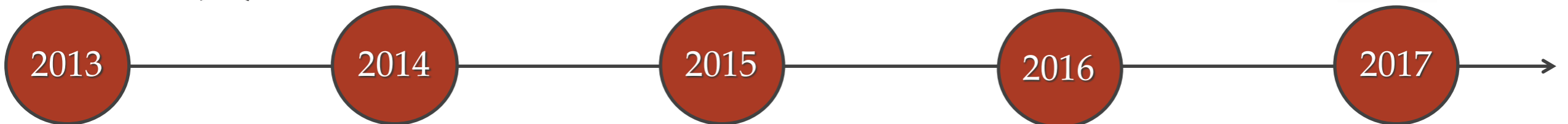
**CPD COURSES  
COMMUNITIES & RESOURCES  
SCHOOL INITIATIVES**



COMMUNITY 26.09.2016  
**Greek teachers learn ABCs of particle physics at CERN**  
SAKIS IOANNIDIS



**CMS AND CERN INSPIRE UK PRIMARY-SCHOOL TEACHERS TO PLAY WITH PROTONS**





Carlo Rubbia, Tina Nantsou, students of Hill Memorial School, Athens

---

# 2016: 1<sup>st</sup> Greek Teacher PD course at CERN

---



# 1<sup>st</sup> Greek Teacher PD at CERN: Feedback






# 2017: Continuation and Expansion to UK

**2<sup>nd</sup>**

**PLAYING WITH PROTONS GREECE CPD COURSE**

**26-30 AUGUST 2017 CERN**



**PLAYING WITH PROTONS**

Bringing together Greek primary teachers, science education specialists and CERN scientists to develop creative approaches for engaging 5th and 6th grade students with science, technology and innovation.

**1<sup>st</sup>**

**PLAYING WITH PROTONS UK CPD COURSE**

**21-25 AUGUST 2017 CERN**



**PLAYING WITH PROTONS**

Bringing together UK primary teachers, science education specialists and CERN scientists to develop creative approaches for engaging Key Stage 2 students with science, technology and innovation.

Organized by \_\_\_\_\_ Hosted by \_\_\_\_\_ Funded by \_\_\_\_\_ Under the auspices of \_\_\_\_\_ Supported by \_\_\_\_\_



Organized by \_\_\_\_\_ Hosted by \_\_\_\_\_ Supported by \_\_\_\_\_



# Our Greek Ambassadors\*



\*Greek teachers trained at CERN. We have more ambassadors / members – see next slide!

# Teachers Communities & Resources

Home | [Playing with Protons Greece](#)



## Playing with Protons Greece

Greece  
Domain: Science

Parent Community: **CREATIONS**

- Leave
- Invite
- Customize Community
- New sub-community

### Community

This is a community by Greek primary school teachers of the [Playing with Protons](#) programme at CERN. In here you will find learning resources such as educational scenarios and lesson plans but also school initiatives and more on primary science education. All this has been developed by the [CREATIONS](#) team and most importantly by the teachers themselves who, together with you, constitute an ever-growing community of passionate, innovative and creative primary science educators.

You are also encouraged to get involved with our parent [CREATIONS community](#) in which you can discover creative approaches based on the arts for an engaging science classroom that have been developed by 16 partners from 11 European countries.

### Managed By:

**Stephanos Cherouvis**



**Angelos Alexopoulos**



**Tina Nantsou**



**Members:144**

**Discussions: 4**

**Polls: 0**

**Groups: 0**

**Activities: 0**

**Resources: 20**

**Events: 12**

**Blogs: 0**

**Projects: 0**

# Footprint\*



2 countries



3 CPD courses

50+ schools 150+ teachers

~4,000 students

\*Up to 9 July 2018

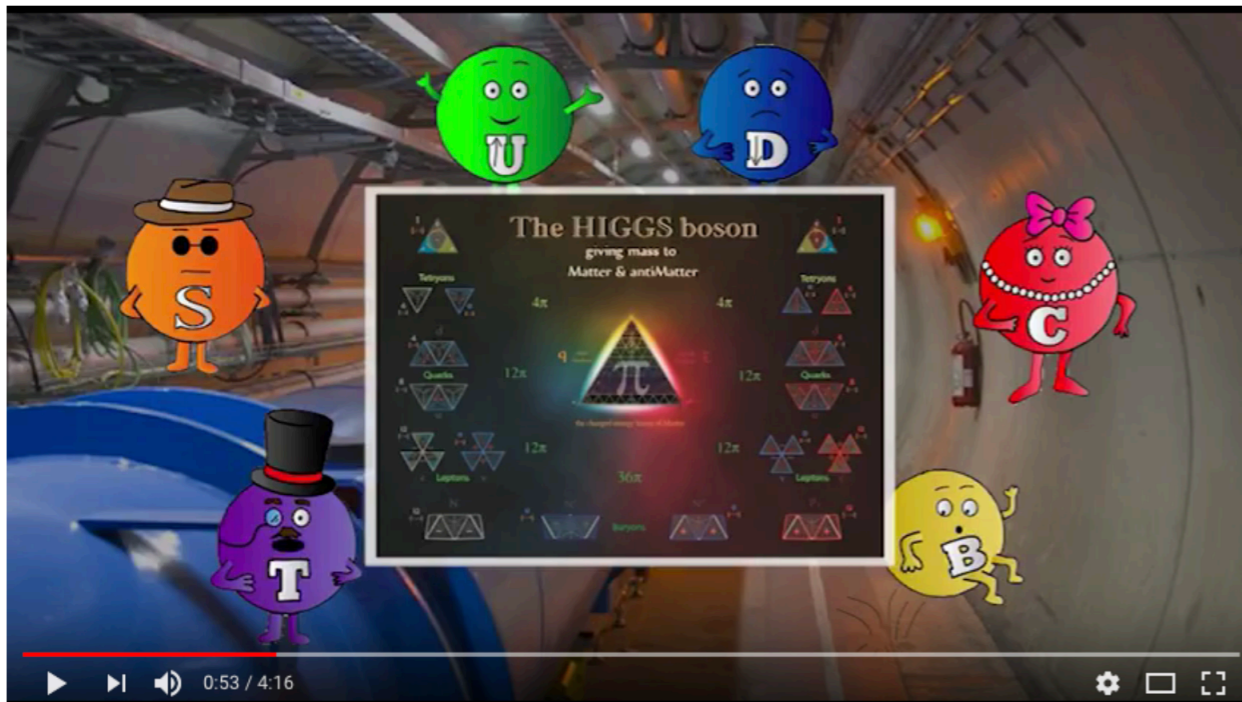


# Distinctions

## Particles4U (IPPOG)

Primary School (Age 12 and under) Winners

2nd and 6th Primary Schools of Artemida, Athens, Greece



Students from the 2nd and 6th primary schools of **Artemida**, a region near **Athens, Greece** combined particle physics with humor and to imagine a dialogue among particles. Thier video is called "The Quark Show."

## Looking...Up! (IAU OAD)




# Moving on!

**2<sup>nd</sup>**

**PLAYING WITH PROTONS UK CPD COURSE**

**30 JULY-03 AUGUST 2018 CERN**




**PLAYING WITH PROTONS**

Bringing together UK primary teachers, science education specialists and CERN researchers to develop creative approaches to engage Key Stage 2 students with physics, discovery and innovation.

**3<sup>rd</sup>**

**PLAYING WITH PROTONS GREECE CPD COURSE**

**26-30 AUGUST 2018 CERN**



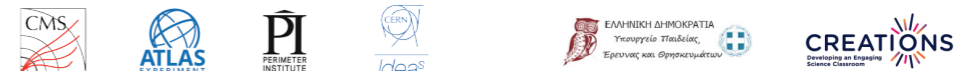
**PLAYING WITH PROTONS**

Bringing together Greek primary teachers, science education specialists and CERN scientists to develop creative approaches to engage 5th and 6th grade students with physics, discovery and innovation.

Organized by \_\_\_\_\_ Hosted by \_\_\_\_\_ Supported by \_\_\_\_\_



Organized by \_\_\_\_\_ Hosted by \_\_\_\_\_ Approved by \_\_\_\_\_ Supported by \_\_\_\_\_



---

# Creations Summer School 2018

---

- ❖ Introduction to science inquiry
- ❖ Astronomy workshop
- ❖ Cosmology workshop
- ❖ Elementary Particles workshop