

**Eleftheriadis Christos, Professor**  
Nuclear Physics and Elementary Particle Physics Department

**Short Curriculum Vitae**

<http://cern.ch/celefthe>

**Personal Data**

Date of birth: December 13<sup>th</sup>, 1957, Email: [christos.elftheriadis@cern.ch](mailto:christos.elftheriadis@cern.ch)

Married, three children

**Administrative**

Elected member of the first Council of Aristotle University of Thessaloniki

**Academic degrees**

Graduate in Physics     Aristotle University of Thessaloniki (AUn), 1981

PhD Thesis                 Aristotle University of Thessaloniki, 1990

**Academic positions**

Research Assistant, Physics Dept, AUn 1982

Lecturer, Nuclear Physics and Elementary Particles Division, AUn, 1992

Corresponding Fellow at CERN, 1995

Assistant Professor, Nuclear Physics and Elementary Particles Division, AUn, 1999

Associate Professor, Nuclear Physics and Elementary Particles Division, AUn, 2007

Professor, Nuclear Physics and Elementary Particles Division, AUn, 2016

**PhDs**

Supervisor in 3 PhDs

Member of the Supervising Committee in 8 PhDs

Member of the Exam's Committee in 6 PhDs

**Conferences**

Participated in more than 30 conferences (in most of them with talk)

Member of the Organizing Committee in 8 Conferences

Organized one FLUKA course, in Thessaloniki (2014)

**Teaching activity**

Various lessons and lab exercises, namely:

Atomic and Molecular Physics (3rd semester)

Fundamentals of Nuclear and Particle Physics (5th semester)

Nuclear Physics (7th semester), Primordial and Stellar Nucleosynthesis (7th semester)

Particle Physics (Post-Graduate Physics program, 3rd semester)

Atomic Physics Lab exercises

Nuclear Physics Lab exercises

Advanced Nuclear Physics Lab exercises

Wrote chapters in several books, wrote one book (Fundamentals of Particle Physics, Nuclear Physics, Nucleosynthesis)

### **Outreach activity**

Gave several tens of talks and seminars in fields related to Particle, Astroparticle and Nuclear Physics in several cities in North Greece, as well as one or two talks every year in the CERN Master Classes, held in Thessaloniki.

### **Research activity**

Research interests are in the field of Astroparticle Physics, as an experimentalist. Co-author of more than 130 publications in International Journals, mainly in the following activities:

1) CPLEAR Experiment at CERN for the study of CP violation in neutral Kaons (undertook various responsibilities for the detector, worked on regeneration effects in analysis, on relation of CPLEAR data to quantum mechanics with Ellis, Nanopoulos and Mavromatos theory group, on EPR paradox, Bell inequalities etc).

2) TARC and nTOF experiments at CERN, Team Leader of the AUTH group (created the geometry package and coupled it to C.Rubbia's neutronics code, for the Monte Carlo studies in order to design TARC and subsequently nTOF).

3) CAST Experiment at CERN, solar axion searches, Team Leader of the AUTH group (created the Monte Carlo code to test an X-ray telescope against experimental results, running and analysis, etc).

Since 2009, worked for the creation of an interdisciplinary Astroparticle Physics Group (APG, <http://astroparticle.physics.auth.gr>) in AUTH, with scientists from the sectors of Particle Physics, Astrophysics and Cosmology, Atmospheric Physics and Engineering.

### **Selected Publications**

**“First direct observation of Time Reversal noninvariance in the neutral kaon system”**, A.Angelopoulos,...,C.A.Eleftheriadis,...(CPLEAR Collaboration)

Phys.Lett.B 444 (1998) 43, CERN-EP-98-153, Oct. 1998

**“First results from the CERN Axion Solar Telescope (CAST)”**

K.Zioutas, ..., C. Eleftheriadis, .. (CAST Collaboration)

Phys. Rev. Lett. 94, 121301 (2005), hep-ex/0411033

**“Search for chameleons with CAST”**

V. Anastassopoulos..., C. Eleftheriadis, .. (CAST Collaboration)

Phys.Lett. B749 (2015) 172–180

**“Introducing the CTA concept”**

B.S. Acharya ..., C. Eleftheriadis, .. (CTA Collaboration)

Astropart.Phys. 43 (2013) 3-18

**“Conceptual Design of the International Axion Observatory (IAXO)”**

E. Armengaud ..., C.Eleftheriadis, .. (IAXO Collaboration)

JINST 9 (2014) T05002

**“Deep sea tests of a prototype of the KM3NeT digital optical module”**

S. Adrian-Martinez ..., C.Eleftheriadis, ..KM3NeT Collaboration

Eur.Phys.J. C74 (2014) 9, 3056

**“New CAST Limit on the Axion-Photon Interaction”**

V.Anastassopoulos,... C.Eleftheriadis, ... (CAST Collaboration)

Nature Phys. 13 (2017) 584-590