



THE CYPRUS  
INSTITUTE

## Curriculum Vitae

### Efstathios Stiliaris

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#### **Academic and Professional details:**

##### **Education:**

**1988** - PhD in Experimental Nuclear Physics, Hahn-Meitner Institut and Freie Universitaet Berlin, Berlin, Germany

PhD Thesis Title: "Refraction and the Rainbow Effect in the Heavy Ion Scattering" (in German)

Supervisor: Prof. Wolfram von Oertzen, Grade: *magna cum laude*

**1984** - MSc in Experimental Nuclear Physics, Hahn-Meitner Institut and Freie Universitaet Berlin, Berlin, Germany

MSc Thesis Title: "Binding Energy Measurement and Spectroscopy of the Exotic Nucleus  $^{57}\text{Cu}$ " (in German)

Grade: Sehr Gut

**1981** - Diploma in Physics, Aristotle University of Thessaloniki, Thessaloniki, Greece

Grade: Excellent

##### **Professional Experience:**

**2012-to date:** Associate Professor, Division of Nuclear and Particle Physics, Department of Physics, National and Kapodistrian University of Athens, Athens, Greece.

**2001-2012:** Assistant Professor, Division of Nuclear and Particle Physics, Department of Physics, National and Kapodistrian University of Athens, Athens, Greece.

**1996-2001:** Research Associate at the University Institute of Accelerating Systems and Applications, Athens, Greece. For the first year supported by a EU Marie-Curie Return Fellowship. Since 1998 Researcher C.

**1992-1995:** Research Associate at the Deutsches Synchrotron DESY, Hamburg, Germany. Member of the High Energy Physics Group ZEUS. For the period Dec-1992 to Nov-1994 European Fellow within the HUMAN CAPITAL and MOBILITY Research Funding Programme.

**1990-1991:** Compulsory military service. Visiting Researcher at the NCSR-Demokritos, Tandem-Lab, Athens, Greece

**1989:** One year PostDoc at Hahn-Meitner-Institut Berlin, Germany (Wissenschaftlicher Mitarbeiter)

### **Research Experience:**

Nuclear Medical Imaging: SPECT (Single Photon Emission Computed Tomography) - Development and optimization of detector imaging devices, small field  $\gamma$ -Camera systems with high resolution and efficiency

Hadronic Physics: Study of the  $N \rightarrow \Delta$  transition in the proton with high precision inclusive measurements.

Nuclear Reactions: Study of Nuclear Structure with Radioactive Ion Beams. Development of new Pulse Shape Analysis Techniques.

### **Teaching Experience:**

Undergraduate Courses

- Introduction to Nuclear and Particle Physics
- Nuclear Physics I
- Probability and Statistics
- Introductory and Advanced Nuclear Physics Laboratory
- Introductory Physics Laboratory

Postgraduate Courses

- Experimental Methods in Physics II

Supervisor of

- 4 PhD Dissertations
- 5 MSc Theses
- 32 Diploma Theses

### **Management and Administrative experience:**

Head of the SPECT Laboratory, Physics Department, National and Kapodistrian University of Athens.

### **Honours and Achievements:**

- IKY Fellow (1976-1981)
- Two-year (1993-1994) Institutional and one-year (1996) Return EU Fellowship (Marie Curie Fellow)

### **Other skills:**

Experience in Control and Data Acquisition Systems based on GPIB, CAMAC, VME and PCI bus systems.

Fast Digitization with Flash ADC modules and Pulse Shape Analysis - FPGA programming.

Real Time Control System specialist (VxWorks-EPICS) and LabVIEW programmer.

Very good knowledge in Numerical Analysis, Monte-Carlo and Artificial Neural Networks Techniques.

Computer Skills: Unix and Linux programming - Shell scripting.

Languages: FORTRAN, C, C++

Other Programs: CERN Software (GEANT4, Root, PAW), GEANT4/Gate Simulation Software for Medical Imaging Applications, MathCAD, Origin.

### **Professional Service and Memberships:**

- Referee in following peer review journals: Nuclear Instruments and Methods A (ELSEVIER), Journal of Instrumentation (IOP), Artificial Intelligence in Medicine (ELSEVIER), Computers in Biology and Medicine (ELSEVIER) and Transactions on Image Processing (IEEE).
- Co-Editor of the "Imaging Technologies in Biomedical Sciences" (ITBS) Series (published in NIMA and JINST) and of the "From Parity Violation to Hadronic Structure and more" Conference Proceedings (European Physical Journal A).
- Regular Member of the IEEE.
- Member of the Hellenic Nuclear Physics Society - Twice elected member of the Board.

### **Publications:**

- Journal Papers: 66 + 81 (with the CMS Collaboration)
- Refereed Conference Papers: 47
- Other Conference Papers: 21
- Citation Index: 2946 (without CMS publications)
- H-Factor: 29 (ISI Web of Knowledge)

### **Selected Publications**

1. N.F. Sparveris et al., MAMI A1 Collaboration: *Measurements of the  $\gamma^*p \rightarrow \Delta$  reaction at low  $Q^2$* , Eur. Phys. J. A (2013) 49: 136
2. A. Pakou, E. Stiliaris et al.: *Fusion Cross Sections of  $^8\text{B} + ^{28}\text{Si}$  at Near-Barrier Energies*, Phys. Rev. C 87 (2013) 014619
3. E. Stiliaris et al.: *Energy Reconstruction from Pile-Up Events*, IEEE NSS/MIC Record N14-113 (2012) 1092-1097
4. A.-N. Rapsomanikis, M. Zioga, M. Kontos, M. Mikeli and E. Stiliaris: *Phantom Experimentation on Infrared and Optical Tomography*, IEEE NSS/MIC Record M18-73 (2012) 3632-3634
5. M. Argyrou, D. Maintas, Ch. Tsoumpas and E. Stiliaris: *Tomographic Image Reconstruction based on Artificial Neural Network (ANN) Techniques*, IEEE NSS/MIC Record M17-12 (2012) 3324-3327

6. D. Thanasis, et al.: *A Correction Method of the Spatial Distortion in Planar Images from  $\gamma$ -Camera Systems*, Journal of Instrumentation 4 (2009) P06012
7. E. Stiliaris and C.N. Papanicolas: *Multipole Extraction: A Novel, Model Independent Method*, AIP Vol. 904 (2007) 257-268
8. E. Stiliaris: *Parity Violation in Nuclear Systems: Experimental considerations in the deuteron photodisintegration with polarized photons*, Eur. Phys. J. A 24 (2005) 175-178
9. N. Sparveris et al., OOPS Collaboration: *Investigation of the Conjectured Nucleon Deformation at Low Momentum Transfer*, Phys. Rev. Lett. 94 (2005) 022003
10. E. Stiliaris, et al.: *Nuclear Rainbow Structure in the Elastic Scattering of  $^{16}\text{O}$  on  $^{16}\text{O}$  at  $E_L=350$  MeV*, Phys. Lett. 223B (1989) 291-295