

## ***BRIEF BIOGRAPHICAL NOTE***

Family Name : Emmanuel FLORATOS

Birth Date : Athens 26-11-1947

Citizenship : Greek

Religion : Christian Orthodox

Family Status : Married, 2 children (Maria , Zoe )

Degrees : B.Sc. Mathematics 1969, Athens University  
Ph.D. Theoretical Physics 1973, Athens University

Army Obligations : Navy 1973-1975 (30 Months)

Profession : Prof. Physics Department, Univ. of Crete (1983 -2000)  
Prof. Physics Department, Univ. of Athens (2000 -2014 )

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## **POSTDOCTORAL –UNIVERSITY PROFESSOR- -INSTITUTE DIRECTOR POSITIONS**

- 1973 – 1975 : NCSR “DEMOKRITOS” Research Associate  
1976 : Research visitor ICTP – Trieste  
1976 – 1978 : Fellow – CERN, Theory Group  
1978 : Scientific Associate – C.N.R.S. Marseille, Theory Group  
1978 – 1980 : Research Associate – C.E.A. – C.E.N. Saclay Theory division  
1980 – 1981 : Research Associate - Ecole Normale Superieure - C.N.R.S. – Paris, Theory division.  
1981 – 1983 : Scientific Associate – Inst. Theor. Physics. (ITP) University of Bern.  
**1983 -2000 : Prof. Physics, Physics Dept. Univ. of Crete – Iraklion.**  
1984 – 1986 : Summer Corresponding Fellow – CERN  
1988 – 1989 : Sabbatical year – Scientific Associate – CERN (Theory Group)  
1990 : Visiting Prof. – Ecole Normale Superieure, C.N.R.S., Paris.  
**1995-2000 : Director Institute of Nuclear Physics, NCSR “Demokritos”, Athens**  
1995 : Visiting Prof. - Ecole Normale Superieure – CNRS, Paris  
**2000-2003 : Director Institute of Nuclear Physics, NCSR “Demokritos”, Athens**  
**2000-2014 : Prof. Physics, Physics Dept. University of Athens, Athens.**

## **ADMINISTRATION:**

- 1985-1988,1991-1994 Elected Chairman Department of Physic  
Univ of Crete Herakleion Crete  
1993-1996 Member NATO Committee ASI  
1994-2005 Greek Delegate at CERN Council  
1994-2000 Council Member Greek Atomic Energy Commission(GAEC)  
1997-1998 Council vice Prsident GAECVice President  
1996-2000 Member National Committee of Science and Techology-Ministry of Development  
1995-2003 Director Institute of Nuclear Physics-NCSR Demokritos  
2003-2005 President of the Center and Chairman of the Board of Directors  
National Center for Scientific Research-(NCSR Demokritos)

## **DISTINCTIONS-HONOURS**

- 2003** : Elected Member, European Academy of Sciences  
(EURASC-BELGIUM)
- 2004** Blaise Pascal Medal in Physics ,European Academy of Sciences(EAS)
- 2005** : Chevalier De L' Ordre National Du Merite, French Republic: Elected  
Member of the European Academy of Sciences (EAS-Brussels)
- 2010-** Elected Member of the Presidium-EURASC:

## **RESEARCH INTERESTS**

### **1) *Strong Interactions***

Perturbative QCD (deep inelastic scattering  $e^+e^-$  annihilation, fragmentation function, quark-gluon jets, Non-perturbative QCD (chiral symmetry breaking, large N expansion).

### **2) *Non-perturbative methods in field theory***

Spontaneous generation of mass gap in asymptotically free 2-dimensional models. Stochastic quantization approach to field theory and Quantum Mechanics.

### **3) *Strings-Membranes, Self-Duality, Quantum Gravity***

String field theory, Infinite Symmetries of Membranes, Membrane limit of YM fields. Self-Duality of Membranes and geometry of 3-manifolds in 3 and 7 dimensions. Self-dual gravity in 8 dimensions. Gravitational Instantons. AdS/CFT,

### **4) *M-Theory, Quantum Mechanics and Quantum Computers***

Matrix model for supermembrane in 11 dim. Number theory and Quantum Mechanics for discrete phase-space. Discrete Wavelets, Fast quantum algorithms for quantum computers. Quantum Information and Geometry

Discretized Holography and Black Holes

## **PUBLICATIONS**

125 In refereed Journals

4500 Citations. (Journals, Proceedings, Books)