CURRICULUM VITAE

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POSITION: **Professor of Physics, University of Ioannina, Greece.**

BIRTH: January 14, 1958

NATIONALITY: GREEK

EDUCATION:

Ph.D. Physics, Columbia University, New York, 1989.
Thesis: Neutrino Production of Opposite Sign Dimuon Events at the FNAL Tevatron. Advisor: Prof. M. Shaevitz
M.Phil. Physics Columbia University, New York, 1986.
M.A. Physics Columbia University, New York, 1984.
Diploma Physics University of Ioannina Greece, 1981.

EMPLOYMENT:

2009- **Professor of Physics - Head of HEP Group at University of Ioannina.**
2000-2010: **Reader in HEP**, Imperial College London (tenured - June 2001).
1991-2000: **Assistant Scientist (staff)**, Physics Department, University of Wisconsin.
1989-1991: **Research Associate**, Physics Department, University of Wisconsin.
1984-1989: **Graduate Research Assistant**, Nevis Laboratory, Columbia University.
1982-1984: **Teaching Assistant**, Columbia University.
1981-1982: **Teaching Assistant**, Hunter Coll., CUNY.

PHYSICS:

- **Jet Cross Sections with the first LHC data.**
- **Searches for Fundamental Interactions and Supersymmetry at LHC.**
- **Jet Physics and pQCD in pp, ep and γp deep Inelastic Scattering.**
- **Neutrino-Nucleon Deep Inelastic Scattering.**

TEACHING:

2012- **Modern Physics II,** 2nd year, University of Ioannina, Greece.
2010- **Standard Model,** 1st year PhD, University of Ioannina Greece.
2010- **Digital Electronics,** Physics, Master, University of Ioannina Greece.
2010- **Modern Physics I,** Physics, 2nd year, University of Ioannina, Greece.
2010-1012 **Optics Lab,** Physics, 2nd year, University of Ioannina, Greece
2006-2007: **Advanced Particle** Physics, MSci, 4th year, Imperial College, London.
2002-2005: **Standard Model,** 1st year PhD, Imperial College, London.
2001-2006: **Microprocessors and Electronics,** 3d year, Imperial College, London.
2002-2009: **21 MSci Theses Students**, Imperial College, London (**21 complete**).
2001-2009: **Physics Tutorials** at Imperial College, London.
1985-1987: **Physics Labs**, Columbia University, New York.
1983-1984: **Physics and Mathematics**, Fordham University, New York.
1982-1984: **Physics Labs**, Columbia University, New York.
1981-1982: **Physics Labs**, Hunter College, CUNY, New York.

PhD STUDENTS:

2002-Present: Supervision of **6 PhD students** at Imperial College and Ioannina:

1) **Maiko Takahashi-Imperial College:** *CMS Potential for discovering the Higgs Boson Produced in Vector Boson Fusion and Decaying via* $H^0 \to \tau^+ \tau^- \to e+jet$, **(completed)**.

2) **Stefanos Dris-Imperial College:** *Performance of the CMS Tracker Optical Links and Future Upgrade Using Bandwidth Efficient Digital Modulation, Common Supervision with Dr. J. Troska, CERN.* **(completed).**

3) **Andrew Rose-Imperial College:** *The Level-1 Trigger of the CMS Experiment at the LHC and the SuperLHC* **(completed).**

4) **Jad Marrouche-Imperial College:** *A study of W+Jet-Production at the LHC using the CMS Jet and Missing Transverse Energy Triggers* **(completed).**

5) **Anastasios Papageorgiou-Imperial College:** *Applications of Jet Trigger Algorithms in discovering the Higgs Boson from the decay,* $H^0 \to \tau^+ \tau^- \to e+jet$, **(completed).**

6) **Dimitris Kolotouros-Ioannina:** *Development of a new TTC system for LHC experiments, common supervision with Dr. Sophie Baron, CERN.* **(Started).**

1995-1999: Guidance of thesis work of **10 PhD Students** (completed at DESY).

1990-1994: Guidance for four University of Wisconsin PhD Students working on the ZEUS Calorimeter Trigger.

ELECTRONICS:

CMS:

2007-Present: Development of generic trigger system for CMS at LHC and SLHC based on **uTCA technology**, Xilinx-V5 FPGAs and 3.2 Gbps optical links.

2005–2010: Design and implementation of the **CMS Global Calorimeter Trigger (GCT)** using Xilinx Virtex-II-Pro FPGAs and 1.2 Gbps optical links. Responsible for the GCT project.

2003-Present: R&D towards a **First Level Tracking Trigger** for CMS at Super-LHC.

2004–2005: Design of testing and zero suppression algorithms for the **CMS Silicon Tracker Front End Driver** (FED).

2003-2004: Testing and integration of the **CMS Tracker FED S-LINK64** Interface.

2002-2003: Design of a prototype **FED Tester Card** for testing the CMS FEDs.

2000-2003: Member of the **CMS Tracker FED Design** team.

2001-2002: Participation in the design of the **CMS APV25 Emulator** Trigger Card.

ZEUS:

1991-1993: Design of **Fast Trigger Electronics** using ECL and biCMOS devices for **ZEUS** at HERA.

1992-1994: Responsible for **Testing and Commissioning** of the Trigger electronics for the **ZEUS** Experiment at HERA.

1989-1991: Design of several 9U **VME** Cards for **Trigger Card test set-ups**.

CCFR:

1984-1987: Testing and Commissioning of the **FADC Data Acquisition Electronics** for the **CCFR** experiment at FNAL.

PROFESSIONAL POSITIONS:

2007-2011: **Leading the CMS Trigger Upgrade Programme (SLHC.**)

2007-2011: **Member of the CMS Upgrades Management Board.**

2006-2010: **CMS Global Calorimeter Trigger Project Manager.**

2005-2009: **Member of the CMS Tracker Institution Board.**

2003-2009: **Member of the UK CMS steering committee**.

2001-2005: **Head CMS Internal referee for Trigger and DAQ.**

1995-1998: **Convener of the ZEUS Jets and High E_T Phenomena Physics Group.**

1991-1995: **ZEUS Calorimeter First Level Trigger Coordinator.**

COMMITTEES :

2012-Present: Representing Greece at the **ECFA** (European Committee for Future Accelerators.

2012-Present: Member of the **Greek Committee for CERN**.

2012:-Present: Member of the **CMS Finance Subcommittee for Upgrades**.

2012: Heading the **CMS Cost-Book Review Panel for Pixel and HCAL detector upgrades.**

2012: Member of the **CMS Publications Subcommittee for Standard Model Physics**.

2010-Present: Representing CMS-Greece in the **CMS Finance Board**.

2010-Present: Representing Ioannina at the **CMS Collaboration Board**.

2010: Member of **US CMS HCAL-RCT Review Panel.**

2010-2009 **ATLAS-UK Detector Upgrades Review Panel (PPRP).**

2004-2007: **Particle Physics Grants Panel** (PPGP). PPGP reviews all the Particle Physics Grants (Rolling Grants) for the various departments around the UK.

2001-2007: **Particle Physics Advisory Committee** (PPUAC). PPUAC advises. PPARC on particle physics resource as well as laboratory users issues.

2002-2003: Member of the CMS **Global Calorimeter Trigger Review Panel.**

2003: Member of the CMS **Resistive Plate Chamber Trigger Review Panel.**

2002-2003: Member of the CMS **Global Trigger Review Panel.**

RESEARCH GRANTS:

2008: UK CMS Trigger SLHC grant
2006-2008: UK CMS GCT grant.
2004-2008: CMS Imperial College e-Science grant.
2012-2015: Thalis grant with Profs. P. Sphicas (Univ. of Athens) and G. Tsipolitis (National Technical University of Athens).
2012-2015: Aristia grant with Prof. P. Sphicas (Univ. of Athens).

CONFERENCE TALKS:

CMS:

1. **CMS Trigger Upgrades**, ACES Workshop, CERN, March 2011.
2. **Trigger Studies using Calorimeter Muon and Tracking Triggers,** ACES Workshop, CERN, March 2009.
3. **The CMS Trigger at the LHC and the SuperLHC.** ICHEP08, Philadelphia, Pennsylvania, Aug. 2008.
4. **First Results on the Performance of the CMS Global Calorimeter Trigger,** TWEPP 2007, Prague, September 2007.
5. **Overview of the LHC Triggers and Plans for the LHC Startup,** LHC-Forum, Coseners House, Apr. 2007.
6. **Overview of the CMS Trigger and Plans for LHC Startup,** HEP 2007, Athens, Mar. 2007.
7. **Results from Studies for a Tracking Trigger for CMS at SLHC,** SLHC Workshop, CERN, Mar. 2007.
8. **LHC Startup - Trigger commissioning,** UK Institute of Physics Workshop on LHC Startup, London, Oct. 2006.
9. **Triggering at LHC and SLHC,** HEP 2006, Ioannina, Apr. 2006.
10. **The CMS Silicon Tracker Readout System**, Nuclear Science Symposium, Rome, Oct. 04.

ZEUS:

11. **Jet Production at High Transverse Energies at HERA**, Deep Inelastic Scattering 2002, DIS2002, Krakow, Apr. 2002.
12. **Jet Physics at HERA**, 2001 Meeting of the Hellenic Society for High Energy Physics, HEP2002, Heraklion, Greece 2001.
13. **Photon Structure**, **Review talk,** International Conference on Hadron Structure, Hadron Structure 2000, Stara Lesna, Slovakia 2-8 Oct. 2000.
14. **Photon Structure at HERA**, **Review talk,** at the XIV International Workshop on High Energy Physics and Quantum Fiend Theory (QFTHEP 99), Moscow 27 May - 2 June 1999.
15. **QCD in the Photon Structure at HERA, Rapporteur talk** at QCD98, Montpellier, France, July 1998.
16. **Probing the Photon Structure via Di-Jet Production with ZEUS at HERA.** Low-x workshop. Berlin-Zeuthen, Germany, June 1998.
17. **Deep Inelastic ep Scattering at HERA, Review talk**, Electromagnetic Interactions with Nucleons and Nuclei, Santorini, Greece, October 1997.
18. **Jet Physics with ZEUS at HERA,** 1997 Meeting of the Hellenic Society for High Energy Physics, Heraklion, Greece, April 1997.
19. **Jet Physics at HERA, Review talk,** Meeting of the Division of Particles and Fields of the American Physical Society, Indianapolis, Indiana. USA, 1997.
20. **Direct and Resolved Photoproduction at HERA with Virtual and Real Photons,** Deep Inelastic Scattering and Related Phenomena, Rome, Italy, 1996.

21. **The Zeus Detector Calorimeter First Level Trigger,** Computing in High Energy Physics, San Fransisco, USA, April 1994.
22. **The ZEUS Detector Calorimeter First Level Trigger,** 1991 IEEE Nuclear Science Symposium, Santa Fe, New Mexico, USA, 1991.

CCFR:

23. **Neutrino Production of Opposite Sign Dimuons at Tevatron Energies,** 1990 Meeting of the Division of Particles and Fields of the American Physical Society, Dallas, USA, 1990.
24. **Neutrino Production of Charm Quarks,** Banf Summer School, Banf, Canada, Aug. 1988.
25. **Opposite Sign Dimuon Production at the FNAL Tevatron,** Meeting of the American Physical Society, Baltimore, USA, April 1988.