

CURRICULUM VITAE

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CONTACT INFORMATION

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PERSONAL INFORMATION

Date of birth: 24 August 1976
Place of birth: Athens, Greece
Nationality: Greek
Spoken languages: Greek (native), English (excellent), French (basic)
Hobbies & interests: Chess, Music (classical guitar), History

EDUCATION

Ph.D. Physics, National and Kapodistrian University of Athens, 2006
Thesis: *“Search for solar axions in the CAST experiment with the Micromegas detector”*

M.Sc. Nuclear and Particle Physics, National and Kapodistrian University of Athens, 2002
Thesis: *“Baryonic fluctuations at the QCD critical point”*

Diploma Physics, National and Kapodistrian University of Athens, 1999

CAREER

October 2011 - present Staff, European Organization for Nuclear Research (CERN), Geneva, Switzerland

June 2007 - September 2011 Research Associate, Fermi National Accelerator Laboratory (Fermilab), Batavia, IL, USA

May 2006 - May 2007 Military Service (compulsory)

October 2002 - April 2006 Ph.D. fellow, National Center for Scientific Research “Demokritos”, Institute of Nuclear Physics, Agia Paraskevi, Attiki, Greece

SCIENTIFIC COLLABORATIONS

- 2007 - present Compact Muon Solenoid (CMS), European Organization for Nuclear Research (CERN), Geneva, Switzerland
- 2003 - 2011 Cern Axion Solar Telescope (CAST), European Organization for Nuclear Research (CERN), Geneva, Switzerland
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LEADERSHIP EXPERIENCE

CMS Experiment

- 2014 - 2016 Co-convenor of the jet and missing transverse energy group (appointed, term starts on Sep. 2014)
- 2014 - 2015 Co-leader of the jet and missing transverse energy trigger group
- 2011 - 2012 Co-convenor of the Standard Model Physics group
- 2010 - 2011 Co-convenor of the Quantum Chromodynamics group
- 2009 - 2010 Co-leader of the jet energy calibration working group
- 2008 - 2009 Co-leader of the QCD high p_T jets working group

CAST Experiment

- 2005 - 2006 Contact person for the Micromegas detector
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COMMITTEES

1. Reviewer in Physics Letters B (PLB)
2. Reviewer in European Physical Journal C (EPJC)
3. Reviewer of the QCD section in the Particle Data Book (2012 update)
4. CMS analysis review committees
 - **TOP-14-001 (chair):** "[*Measurement of the top-quark mass in \$t\bar{t}\$ events with lepton+jets final states in \$pp\$ collisions at \$\sqrt{s} = 8\$ TeV*](#)"
 - **TOP-14-002 (chair):** "[*Measurement of the top-quark mass in \$t\bar{t}\$ events with all-jets final states in \$pp\$ collisions at \$\sqrt{s} = 8\$ TeV*](#)"
 - TOP-13-014: "[*First combination of Tevatron and LHC measurements of the top-quark mass*](#)"
 - **JME-13-006 (chair):** "[*Identifying Hadronically Decaying \$W\$ Bosons Merged into a Single Jet*](#)"
 - JME-13-005: "[*Pileup jet identification*](#)"
 - **JME-13-002 (chair):** "[*Performance of quark/gluon discrimination using \$pp\$ collision data at \$\sqrt{s} = 8\$ TeV*](#)"
 - HIN-13-001: "[*Studies of dijet transverse momentum balance and pseudorapidity distributions in \$pPb\$ collisions at \$\sqrt{s_{NN}} = 5.02\$ TeV*](#)"
 - **SMP-12-022 (chair):** "[*Study of hadronic event-shape variables in multijet final states in \$pp\$ collisions at \$\sqrt{s} = 7\$ TeV*](#)"
 - **EXO-12-049 (chair):** "[*Searches for light- and heavy-flavour three-jet resonances in \$pp\$ collisions at \$\sqrt{s} = 8\$ TeV*](#)"
 - EXO-11-058: "[*Search for Extra Dimensions using the Monophoton Final State*](#)"
 - SUS-11-003: "[*Search for Supersymmetry at the LHC in Events with Jets and Missing Transverse Energy*](#)"
 - SUS-10-011: "[*Search for Supersymmetry in Events with \$b\$ Jets and Missing Transverse Momentum at the LHC*](#)"
 - SUS-10-003: "[*Search for Supersymmetry in \$pp\$ Collisions at 7 TeV in Events with Jets and Missing Transverse Energy*](#)"
 - QCD-10-013: "[*First Measurement of Hadronic Event Shapes in \$pp\$ Collisions at \$\sqrt{s} = 7\$ TeV*](#)"
 - JME-09-007: "[*Measurement of the Jet Energy Resolutions and Jet Reconstruction Efficiency at CMS*](#)"
 - JME-09-002: "[*Jet Plus Tracks Algorithm for Calorimeter Jet Energy Corrections in CMS*](#)"
 - PFT-09-001: "[*Particle-Flow Event Reconstruction in CMS and Performance for Jets, Taus, and MET*](#)"

CONFERENCE ORGANIZATION

1. Session convener, DIS2014, Warsaw, Poland
 2. Session convener, SM@LHC 2013, Freiburg, Germany
 3. Session convener, ISMD 2012, Kielce, Poland
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TEACHING EXPERIENCE

- 2010 - 2013 Co-supervision (unofficial) of PhD students (3)
1. Sanmay Ganguly, TIFR, India
Thesis: "Measurement of the inclusive jet cross-section in pp collisions at 8 TeV"
 2. Ozlem Kaya, Bogazici University, Turkey
Thesis: "Measurement of the inclusive jet cross-section in pp collisions at 7 TeV"
 3. Bora Isildak, Bogazici University, Turkey
Thesis: "Measurement of the dijet mass cross-section in pp collisions at 7 TeV"
- 2011 - 2013 Supervision of CERN fellows (2)
- 2011 - 2012 Supervision of CERN summer students (3)
- 2007 - 2009 Participation in the Fermilab educational program: "Saturday Morning Physics"
- 2002 - 2006 Undergraduate diploma students assistant supervisor, NCSR Demokritos, Institute of Nuclear Physics
- 1999 - 2002 Teaching assistant in the undergraduate physics lab (mechanics, thermodynamics, electromagnetism), National and Kapodistrian University of Athens, Department of Physics
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HARDWARE EXPERIENCE

- instrumentation of micro-pattern gaseous detectors for low-energy photon detection in the CAST experiment
 - instrumentation of micro-pattern gaseous detectors for medical imaging applications
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SOFTWARE EXPERIENCE

- design and maintenance of the jet-energy calibration software of the CMS experiment (2008-2011)
 - analysis tools for high-energy physics
 - detector simulation toolkits
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PHYSICS ANALYSIS

- search for the Higgs boson decaying to a b-anti-b quark pair
- precision QCD measurements with jets
- searches for new physics beyond the standard model in multijet final states
- searches for dijet resonances
- properties of hadronic jets
- search for solar axions
- phenomenology of critical phenomena in heavy-ion collisions

SEMINARS

1. **“Standard model physics results from CMS”**, 16/11/2012, Humboldt University, particle physics seminar, Berlin, Germany
 2. **“QCD results from the CMS experiment”**, 08/11/2011, CERN EP/PP Seminar, Geneva, Switzerland
 2. **“High- p_T QCD results from CMS”**, 04/08/2011, TH-LPCC Summer Institute on LHC Physics, CERN, Geneva, Switzerland
 3. **“Search for new Physics with dijets in the CMS detector with pp collisions at $E_{cm} = 7TeV$ ”**, 22/11/2010, High Energy Physics & Cosmology Seminars 2010, National Technical University of Athens, Greece
 4. **“Jets”**, 13/01/2009, US CMS JTERM III, Fermilab, IL, USA
 5. **“Jet energy corrections”**, 21/02/2008, LHC Physics Center (LPC) Physics Forum, Fermilab, IL, USA
 6. **“Jet corrections and dijet balance”**, 12/10/2007, US CMS First Physics Workshop, Fermilab, IL, USA
 7. **“Looking for Axions at CERN”**, 13/06/2006, Summer School, NCSR “Demokritos”, Agia Paraskevi, Attiki, Greece
 8. **“New developments in micropattern particle detectors with noble gas: the Micromegas detector”**, 13/06/2005, Summer School, NCSR “Demokritos”, Agia Paraskevi, Attiki, Greece
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TALKS AT CONFERENCES & WORKSHOPS

CMS Experiment

1. **“QCD from LHC” - INVITED TALK (personal invitation)**
QCD@LHC, DESY, Hamburg (Germany), 2013
2. **“QCD Experiment” - INVITED TALK (personal invitation)**
HEP 2013: EPS HEP 2013, Stockholm (Sweden)
3. **“Experimental Tests of QCD” - INVITED TALK (personal invitation)**
Blois2013: Rencontres de Blois on “Particle Physics and Cosmology”, Blois (France), 2013
4. **“Recent CMS Results” - INVITED TALK (invitation via CMS)**
Current developments in High Energy Physics, The Annual Meeting of the Hellenic Society for the study of High Energy Physics HEP 2012, Ioannina (Greece)
5. **“Hard QCD Results from CMS” - INVITED TALK (invitation via CMS)**
PLHC2011, Perugia, Umbria (Italy)
6. **“Jet and Multijet Results from CMS” - INVITED TALK (personal invitation)**
Jet reconstruction and spectroscopy at hadron colliders, Pisa, Toscana (Italy)
7. **“Jet Energy Scale and Jet Resolution” - INVITED TALK (personal invitation)**
Physics at the Terascale, German LHC Physics Workshop 2010, Hamburg (Germany)

8. “Search for new Physics in the dijet mass spectrum and dijet ratio in pp Collisions at $\sqrt{s} = 7$ TeV” - INVITED TALK (invitation via CMS)

ICHEP 2010: 35th ICHEP conference, 2010, Paris (France)

9. “First Jet Results from CMS with 900 GeV and 2.36 TeV collisions at LHC”

Current developments in High Energy Physics, The Annual Meeting of the Hellenic Society for the study of High Energy Physics HEP 2010, Thessaloniki (Greece)

10. “CMS prospects of physics studies with jets” - INVITED TALK (personal invitation)

Joint ICTP-INFN-SISSA Conference: Topical Issues in LHC Physics, 2009, Miramare, Trieste (Italy)

11. “Jet studies at CMS and ATLAS” - INVITED TALK (invitation via CMS)

Moriond/QCD: XLIVth Recontres de Moriond on QCD and High Energy Interactions, 2009, La Thuile, Aosta Valley (Italy)

CAST Experiment

12. “Search for solar axions with the CAST experiment”

Current developments in High Energy Physics, The Annual Meeting of the Hellenic Society for the study of High Energy Physics HEP 2006, Ioannina (Greece)

13. “Performance of the Micromegas detector in the CAST experiment”

7th International Conference on Position Sensitive Detectors (PSD7), 2005, Liverpool (UK)

14. “The CAST experiment”

Current developments in High Energy Physics, The Annual Meeting of the Hellenic Society for the study of High Energy Physics HEP 2004, Chios (Greece)

OTHERS

15. “Baryonic fluctuations at the QCD critical point”

10th International Workshop on Multi-particle production, 2002, Crete (Greece)

Selected Publications

1. (principal contributor & editor) “Search for the standard model Higgs boson produced in vector boson fusion, and decaying to bottom quarks”, **CMS Physics Analysis Summary HIG-13-011**, 2013, (journal publication under preparation)
2. (co-author) “Event shapes and azimuthal correlations in Z+jets events in pp collisions at $\sqrt{s}=7$ TeV” **Phys.Lett. B722 (2013) 238-261**
3. (principal contributor & editor) “Measurement of differential jet cross section in proton-proton collisions at $\sqrt{s}=7$ TeV with the CMS detector” **Phys.Rev. D87 (2013) 112002**, ([Topcite 50+](#))
4. (editor) “Searches for dijet resonances at hadron colliders”, R. Harris and K. Kousouris, **Int.J.Mod.Phys. A26 (2011) 5005-5055**
5. (principal contributor & editor) “Determination of jet energy calibration and transverse momentum resolution in CMS”, **JINST 6 (2011) P11002**, ([Topcite 250+](#))
6. (principal contributor) “Search for dijet resonances in 7 TeV pp collisions at CMS”, **Phys.Rev.Lett. 105 (2010) 211801**, ([Topcite 100+](#))
7. (principal contributor) “The Micromegas detector of the CAST experiment”, **New J.Phys. 9 (2007) 170**
8. (principal contributor) “An improved limit on the axion-photon coupling from the CAST experiment”, **JCAP 0704 (2007) 010**, ([Topcite 100+](#))
9. (principal contributor) “Critical opalescence in baryonic QCD matter”, N.G. Antoniou et al., **Phys.Rev.Lett. 97 (2006) 032002**
10. (principal contributor) “First results from the CERN axion solar telescope (CAST)”, **Phys.Rev.Lett. 94 (2005) 121301**, ([Topcite 250+](#))