

CMS Spokesperson Candidate: Term 2020-2022

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Education:

1996 Doctorate: High Energy Physics, University of Geneva

1989 Doctorate: Ph.D. Nuclear Physics: University of Delhi

2001 EMBA Executive Master in Business Administration: International University of Geneva

Current Experience:

2016 – now: CMS Advisor to Spokesperson

2014 – 2019: CMS International Committee Member, Co-Chair from 2019

2014 – 2018: CMS Career Committee Co-Chair

2016 – 2018: Deputy CMS Engagement Office

2014 – now: Project Manager of GEM Muon Upgrade in CMS

2012 – now: Member Selection Committees at CERN

2009 – 2014 Founder and Project Coordinator of CMS Muon GEM Upgrade

Recent Experience:

2012 – 2014: RPC Upgrade Deputy Project Manager

2007 – 2013: PH Department (Flammable Gas Safety Officer) FGSO;

Coordination of R&D for high-rapidity upgrade of the CMS muon system.

2009 – 2011: Coordination of RPC gas studies. Planning and preparation of infrastructure for CMS RPC construction and Muon Labs at 904

2003 – 2008: Coordination of RPC gas studies at the GIF facility;

Construction and Coordination of CMS RPC forward stations;

Member of CMS Technical Coordination Group: YB0 cabling, first definition of control room, safety tours and emergency response procedures, coordination of MTCC (Magnet Test and Cosmic Challenge, with a CMS slice on the surface).

Previous Experience:

2001 – 2003 Development and validation of RPCs for operation at LHC.

2001 – 2002 Development of Emulsion Brick Assembly Machine for Opera.

2000 – 2001 Simulations and beam experiments in support of design of the ALICE TPC.

1999 – 2000 Contributions to the construction and calibration of the Hadron Calorimeter of CMS.

1999 – 1997 Contributions to the design and upgrade of the NA45 TPC.

1997 – 1999 Contributions to the design and construction of the tracker for the FINUDA experiment.

1989 – 1996 R&D on gas and micro-pattern gas detectors.

Selected Invited Talks at International Conferences and Workshops

2018 Keynote talk on “Personal Recognition” at ECFA Plenary meeting in ALBA Barcelona

2010, 2016 Plenary talk - Topical Seminar on Innovative Particle and Radiation Detectors Siena Italy

2013 Plenary talk - Upgrade of CMS Detector, Innovative Detectors in Particle Physics – Pisa Italy

2012 Keynote talk, Gaseous detectors Muon Tracking Triggering, XIth RPC Conference Frascati, Italy

2011 Plenary Talk – Micro Pattern Gas Detector Conference, Kobe Japan

2011, 2008 Summary Talk at IXth Workshop on Resistive Plate Chambers Frascati Italy, Mumbai India

2009 Keynote talk at IEEE Nuclear Physics Symposium and Medical Imaging Conference, CMS Muon systems, Puerto Rico, USA

2008 The readiness of the CMS detector for LHC, Dept. of Atomic Energy Symposium, Varanasi, India

2007 Gaseous Detectors – State of the art, Invited talk Quark Gluon Plasma QGP Jaipur, India

Frequent Chair and convener of gaseous detector sessions at major conferences in the field

(e.g., RPC 2011, 2017, Chair of IEEE NSS 2004, Session Convener for a few years)

Selected Invited Colloquia, Seminars and Lecture Courses

- 2017 Gaseous Detectors Trends, Status and Applications – International Physics School NCP Pakistan March.
- 2017 Course on Radiation Detectors and Applications at IIT Hyderabad and IIT Delhi, India.
- 2016 IEEE ASET Colloquium at Tata Institute of Fundamental Research, Mumbai India.
- 2015 Gaseous Detectors, CMS Upgrade School CMS DESY Hamburg, Germany.
- 2014, Repeat of 2005 Course on Particle Detectors at SERC School, BARC Mumbai, India.
- 2013 Lectures on Gas Detectors; CMS Upgrade School in Tehran, Iran 2013.
- 2012 Repeat 2010 Course on Gaseous Detectors EPFL Lausanne.
- 2012, 2009 Lectures on Particle detectors in University of Delhi India.
- 2010 Academic Course on Gaseous Detectors EPFL Lausanne.
- 2006, 2009 Colloquium; Lectures on Particle detectors in Cairo, Egypt and Bogota, Colombia.
- 2002 Micro-pattern Gaseous Detectors and Applications – NATO School USA.
- 2001 Gaseous detectors in particle physics – Snowmass, USA.

Major Achievements:

- 2013 – 2014 Fast Timing Micro-Pattern Detectors Patent.
- 2012 – now Established contact and facilitated technology transfer of GEM fabrication to Korea, India and Pakistan (partners in CMS GEM Project).
- 2015 CMS GEM Upgrade Project for LS2 approved by LHCC;
Managing a team of over 100 collaborators in collaboration with a Project Management structure with many levels of delegation from Senior Scientists, Postdocs, engineers and collaboration colleagues; A yield of over 60 PhD students with direct and indirect supervision since 2001; Hosted, integrated and mentored over 200 students from a few days to few months in my laboratory activities; Facilitator to CERN International Relations Office for Non-Member States.

Selected Miscellaneous Articles and Events

- 2016 – now Reviewer of Horizon 2020 projects of European Commission.
- 2016 Review Article Published in NIMA Special Volume for Women Achievers.
- 2016 Awarded IEEE Distinguished Lecturer.
- 2014 Awarded National Special Women Achievers Award in India, 2014
- 2006 – 2007 Contributor to CMS Times monthly Newsletter Point 5 News.
- 2004 Appointed Senior member IEEE, Contact person Asia in the IEEE Organizing committee for the International IEEE conferences on Nuclear Science and Medical Imaging; Member Transnational Committee.
- 2004 Co-Chair IEEE Nuclear Science Symposium and Medical Imaging Conference, Rome
- 1999 – 2002 Editor of Column - Physics Watch in CERN Courier
Frequent appearances in press and other media.

Selected Recent Publication Highlights:

Chief Editor: Upgrade of the Muon System of CMS with the Gas Electron Multiplier
Technical Design Report LHCC 2015-TDR-13 CMS-TDR-013
<https://cds.cern.ch/record/2021453?ln=en>

Chapter Editor: Technical proposal for the CMS Upgrade through 2020
<https://cds.cern.ch/record/2020886/files/LHCC-P-008.pdf>

Editor Special Volume on Detector Technologies: NIMA Volume 666, Pages 1-222 (21 February 2012).
<https://www.sciencedirect.com/journal/nuclear-instruments-and-methods-in-physics-research-section-a-accelerators-spectrometers-detectors-and-associated-equipment/vol/666>
