

# TULIKA BOSE

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## Professional Preparation:

- St. Stephen's College, Delhi University, India, Physics (Honours), B.Sc. (1996).
- Cambridge University, U.K., Natural Sciences Tripos, B.A. (1998).
- Columbia University, USA, Experimental Particle Physics, Ph.D. (2006).

## Professional Appointments:

- Assistant Professor, Physics Department, Boston University (since September 2008)
- Post-doctoral Research Associate, Brown University (2006-2008)
- Graduate Research Assistant, Columbia University (1998-2005)

## Awards and Honors: Sloan Research Fellow 2012

## Synergistic Activities:

- Reviewer for: Department of Energy, Physics Letters B and Journal of High Energy Physics.
- Elected member of the committee to select the Fermilab LHC Physics Center Coordinator.
- Member of the committee to select the recipient of the Alvin Tollestrup award for outstanding postdoctoral research.
- Program Committee member and organizer of PANIC 2011; organizer of the "Computing in High Energy Physics Symposium" held during ICCMSE 2009 at Rhodes, Greece.
- Undergraduate and graduate student mentorship at Boston University (2008 – present): help organize and participate in activities coordinated through the Undergraduate Physics Society and the Women in Science and Engineering society and provide mentorship to students.
- Interact with journalists and science writers to help disseminate information about high energy physics research to a broader audience (2006–Present).  
BBC interview during the startup of the LHC 7 TeV run (March 30th, 2010): [http://www.bbc.co.uk/worldservice/news/2010/03/100330\\_mcgrath\\_bose1\\_nh\\_sl.shtml](http://www.bbc.co.uk/worldservice/news/2010/03/100330_mcgrath_bose1_nh_sl.shtml);  
Interview and Symmetry magazine article: <http://www.symmetrymagazine.org/breaking/2010/06/24/cms-exotica-hotline-leads-hunt-for-exotic-particles/>;  
Fermilab Today CMS Result of the month article: [http://www.fnal.gov/pub/today/archive\\_2011/today11-08-12\\_HeavyCousinsReadMore.html](http://www.fnal.gov/pub/today/archive_2011/today11-08-12_HeavyCousinsReadMore.html);

## Recent Positions of Responsibility:

- CMS Deputy Trigger Coordinator (2011 – 2012)

- Co-convenor of the Resonances group within the CMS Beyond Two Generations physics analysis group (2012 – present)
- Co-convenor of the CMS Electroweak Di-boson (WW, WZ, ZZ) group (2011).
- Co-convenor of the CMS Trigger Menu Integration group (2007 – 2011).
- Lead developer and initiator of the CMS Exotica hotline. This is a novel effort designed to create a "hotline" for exotic events (2010 – 2011).
- Developer of the HCAL L1 trigger emulation [2006 – 2010]
- Member of CMS Exotica/B2G Publication Committee Board (2013)
- Served as Analysis Review Committee (ARC) chair for searches for heavy stable charged particles and other exotic searches
- Primary editorial contact for the "Commissioning of the CMS High-Level Trigger using cosmic rays" publication (2009 – 2010).
- CMS L1 Trigger liaison for Hadronic Calorimeter Group (2008 – 2010).
- Co-leader of the LHC Physics Center (LPC) Physics Monte Carlo Production group (2006-2007).

#### Selected publications:

- CMS Collaboration, "Observation of a new boson at a mass of 125 GeV with the CMS experiment at the LHC", Phys. Lett. B716 (2012) 30-61.
- CMS Collaboration, "Search for a  $W'$  or Techni- $\rho$  Decaying into  $WZ$  in  $pp$  Collisions at  $\sqrt{s} = 7$  TeV", Phys. Rev. Lett 109 (2012) 071803.
- CMS Collaboration, "Search for a  $W'$  boson decaying to a bottom quark and a top quark in  $pp$  collisions at  $\sqrt{s} = 7$  TeV", Physics Letters B (2013) 1229-1251.
- CMS Collaboration, "Search for a  $W'$  boson decaying to a muon and a neutrino in  $pp$  collisions at  $\sqrt{s} = 7$  TeV", Physics Letters B 701 (2011) 160179.
- CMS Collaboration, "Search for Heavy Stable Charged Particles in  $pp$  collisions at  $\sqrt{s} = 7$  TeV", JHEP 03, 024, 2011.
- CMS Collaboration, "Commissioning of the CMS High-Level Trigger with Cosmic Rays", JINST 5:T03005,2010.
- L. Agostino et al., "Commissioning of the CMS High Level Trigger", JINST 4:P10005,2009.
- D0 Collaboration, V. M. Abazov *et al.* "Search for Long-Lived Charged Massive Particles with the D0 Detector", Phys. Rev. Lett. 102, 161802 (2009).
- D0 Collaboration, V. M. Abazov *et al.* (2008)., "Search for  $W'$  resonances decaying to a top quark and a bottom quark", Phys. Rev. Lett., 100 (211803).
- D0 Collaboration, V. M. Abazov *et al.* (2006), "Direct Limits on  $B_s$  Oscillation Frequency", Phys. Rev. Lett. , 97 (021802).