

Curriculum Vitae

Ricardo Eusebi

Education and Training

University of Buenos Aires	Physics	Licenciado	2000
University of Rochester	Particle Physics	Ph.D.	2000-2005
Fermi National Accelerator Laboratory	Particle Physics	Research Associate	2005-2006
Fermi National Accelerator Laboratory	Particle Physics	Lederman Fellow	2006-2009

Appointments

- 2015 – present: Associate Professor, Texas A&M.
- 2009 – 2015: Assistant Professor, Texas A&M.
- 2001 – 2005: Research assistant at University of Rochester
- 2001 – 2001: Teaching assistant at University of Rochester
- 2000 – 2000: Guest scientist, Fermilab.

Research and Professional Activities

2014-2016: co-leader of the JET and MET Performance Studies for the upgraded CMS detector. 2011-present: Search for Higgs Boson at CMS using the Matrix Element analysis. 2011-present: Search for High Mass Higgs Bosons at CMS.

2011-2013: co-leader of the Jet Energy Corrections group at CMS. Our group is in charge of producing the calibration of the calorimeter sub-detector and currently with the goal of achieving the world's more accurate calibrations to enhance the Higgs and Supersymmetry searches.

2010-present: Research and Development of Diamond as a suitable new detector technology for the next generation of pixel detectors at CMS.

2010-2014: Working on the characterization of possible technologies for the next generation of pixel detectors at CMS. This work is currently being carried by my group both at our new Lab in Texas A&M University and at Fermilab where my postdoc operate the pixel telescopes in the test beam and test stands.

2007-2008: Project co-leader of the silicon project. The silicon group, with more than 16 members, is in charge of the maintenance and well being of the CDF silicon detector, the most sensitive piece of equipment in the CDF detector.

2007-2010: Project co-leader of the diamond project at CDF; the diamond project serves as one of the beam abort systems at CDF. The beam abort systems monitors the proton-antiproton beams of the Tevatron accelerator for evidence of instabilities, which if allowed to grow can lead to catastrophic failures capable of damaging the accelerator or the CDF detector.

2007-2008: Creator of the Silicon Auto-Recovery system (SAR). The SAR is an intelligent program designed to automatically recover CDF's silicon microstrip vertex detector to its data-taking condition in the event of a system failure.

2003-2004: Creator of the J-IMON, an online Silicon Current Monitor. This program made a large amount of information readily available to the shift crew. It is one of the basic programs running in the CDF control room for

monitoring the condition of the CDF's silicon detector.

2003-2005: Designed and built the long-term burn-in and thermal cycling test facilities for the CMS Tracker Outer Barrel (TOB). All the rods used in the CMS TOB detector were tested in these burn-in facilities.

Publications in the last few years

- CMS collaboration, "*CMS Jet Energy and Resolution in the 8 TeV pp data*" CMS-PAS-JME-13-004 (2015)
- CMS collaboration, "*Technical Proposal for the Phase-II Upgrade of the CMS Detector*" CERN- LHCC-2015-010 ; LHCC-P-008.
- CMS collaboration, "*CMS JEC Run 1 legacy performance plots*". CMS-DP-2015-44 (2015)
- CMS collaboration, "*Measurements of WW Boson Production and Limits on Charged aTGCs at CMS*" Published proceedings at DOI:10.3204/DESY-PROC-2014-04/184 (2015)
- Bhaskar Dutta, Ricardo Eusebi, Yu Gao, Tathagata Ghosh, Teruki Kamon. "*Exploring the Doubly Charged Higgs of the Left-Right Symmetric Model using Vector Boson Fusion-like Events at the LHC*". ArXiv:1404.0685 (2014). Phys Rev. D 90, 055015 (2014)
- CMS collaboration. "*Measurement of the Sum of WW and WZ Production with W + dijet events in pp collisions at sqrt(s) = 7 TeV*" Eur. Phys. J. C 73 (2013) 73:2283
- "*Operational Experience, Improvements, and Performance of the CDF Run II Silicon Vertex Detector*". Nuclear Inst. and Methods in Physics Research, A 729 (2013) 153-181
- CMS collaboration. "*Search for a standard-model-like Higgs boson with a mass in the range 145 to 1000 GeV at the LHC*" Eur. Phys. J. C (2013) 73:2469
- D Menascea, et al "*Tracking performance of a single-crystal and a polycrystalline diamond pixel detector*" Journal of Instrumentation, 8, P06006
- CMS collaboration. "*Study of the Dijet Mass Spectrum in W + 2 jets Events*". Phys. Rev. Lett. 109 (2012) 251801
- CMS collaboration. "*Jet energy corrections and uncertainties in CMS: reducing their impact on physics measurements.*". Proceedings of CALOR 2012 Conference. New Mexico. (2012).
- T. Aaltonen et al. CDF collaboration. "*Search for standard model Higgs boson production in association with a W boson using a matrix element technique at CDF in pp collisions at = 1.96 TeV*". Phys. Rev. D. 85 072001 (2012).

Group members

Graduate students: Alexx Perloff, Andrea Delgado, and Sifu Luo. Krystal Sanchez, ex-graduate student, Texas A&M University.

Postdocs and engineers: Marco De Mattia, engineer, Denis Rathjens, postdoc. Former postdocs: Ilya Osipenkov, Sinjini Sengupta, postdoc.