

# FRANCISCO YUMICEVA

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## EDUCATION

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- **Ph.D. Particle Physics**

University of South Carolina, Columbia SC. 2001 - 2004

*Thesis: Search for Direct CP Asymmetry in  $D^+ \rightarrow KK\pi$  Meson Decays in the BABAR Experiment.*

*Advisor: Prof. Milind Purohit*

- **M.Sc. Particle Physics**

University of South Carolina, Columbia SC. 1998 - 2001

*Thesis: Measurement of Particle Identification in the BABAR Experiment.*

*Advisor: Prof. Milind Purohit*

- **B.Sc. Equivalent Physics**

National Polytechnic University, Quito Ecuador 1992-1998

## PROFESSIONAL APPOINTMENTS

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- **Assistant Professor, Florida Institute of Technology, Melbourne FL.** **2012 - Present**  
CMS Experiment, CERN.
- **Research Associate, Fermilab, Batavia IL.** **2006 - 2012**  
CMS Experiment, CERN. Mentor: Dr. Boaz Klima, Dr. Dan Green.
- **Research Associate, College of William and Mary, Williamsburg VA.** **2004 - 2006**  
MINOS Experiment, Fermilab, IL. Supervisor: Dr. Jeff Nelson.
- **Graduate Research Assistant, University of South Carolina, SC** **1999 - 2004**  
BABAR Experiment, SLAC, CA.

## AWARDS AND RECOGNITIONS

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- Department of Physics and Astronomy Research Award. University of South Carolina. 04/2002.
- Recognition of Outstanding Graduate Work by the Graduate School. Oral Presentation. USC. 04/2002 and 04/2001.
- Recognition of Outstanding Graduate Work. Poster Presentation. USC. 04/2000.
- Awarded full scholarship to CUREA Summer Program in Astrophysics. Mt. Wilson Observatory. 08/1998.

## LEADERSHIP EXPERIENCE

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- Co-Convener of the CMS b-tagging Performance Group (2011-Present).
- Co-Convener of the CMS Top Pair BSM Group (Boosted Top Group) (2007-2009)
- Co-Leader of the LHC-Physics-Center-Fermilab top quark working group (2010-Present)
- Co-Convener of the LHC-Physics-Center (LPC) b-tagging Group (2009-2010)
- Member of CMS Analysis Review Committees for Publications. Physics Analysis Summary EXO-11-051, TOP-11-009, SUS-12-009, HIG-12-025.
- Instructor for CMS Data Analysis School.

## BRIEF SUMMARY OF RESEARCH EXPERIENCE

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- **CMS Experiment.** Mentor: Dr. Boaz Klima, Dr. Dan Green. Supervisor: Dr. Lothar Bauerdick
  - Search for four top quarks production
  - Search for  $W' \rightarrow tb$  in lepton+jets events.
  - Search for massive top pair resonances.
  - Measurement of the top pair production cross section in lepton+jets.
  - Measurement of the b-tagging efficiencies using a muon-in-jet sample.
  - Monitoring and determination of the luminous region in CMS.
  - Led the Boosted Top, b-tagging performance, and analysis working groups.
- **MINOS Experiment.** Supervisor: Dr. Jeff Nelson
  - Determination of the MINOS Far Detector off-axis position.
  - Simulation of the NuMi target and neutrino beam. Led Monte Carlo production.
  - Measurement and calibration of the Near and Far detectors magnetic fields.
- **BABAR Experiment.** Advisor: Dr. Milind Purohit
  - Search for Direct CP Asymmetry in  $D^+ \rightarrow KK\pi$  Meson Decays.
  - Search for FCNC and Lepton-Flavor Violation in D Meson di-leptons decays.
  - Measurement of Particle Identification Efficiencies and fake rates.

## OUTREACH ACTIVITIES

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- Lectures about searches for the Higgs boson. Particle Physics School, Bogota Colombia. Jul. 2012.
- Initiated the first QuarkNet program in Ecuador, South America. Two cosmic ray detectors were installed in Quito, Ecuador in June 2011.
- Several public lectures about the LHC: over 700 people in Quito (June 2011 and Nov. 2009), Batavia IL (Apr. 2011).
- Physics demonstrations at Schneider Elementary School. March 2010.
- Fermilab tours at the Saturday Morning Physics program and ask a scientist since 2006.