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Education

Harvard University, Massachusetts, MA

Ph.D., Physics, expected May 2017

M.A., Physics, 2014

Committee: Profs. Melissa Franklin (Adviser), Masahiro Morii, Howard Georgi

California Institute of Technology, California, CA

B.A. with honors, Physics, 2012

Research Interests

Searches for new physics models with the Higgs Boson

Di-boson production and measurement at TeV scale

Charged particle prompt reconstruction

Detector operation, monitoring and upgrade development

Research Experience

Harvard University

Main analyzer, $X \rightarrow$ boosted $hh \rightarrow b\bar{b}b\bar{b}$ using ATLAS 13TeV data 2015-2016

Main developer, Improvement of Segment Seeding in Muon Reconstruction 2015-2016

Main developer, Offline Data Quality Software for Muon Reconstruction 2015-2016

Expert and organizer, Offline Muon Detector and Reconstruction Monitoring 2015

Main analyzer, Prospective study of $hh \rightarrow WW\tau\tau$ for High Lumi LHC 2014

Calibration of Prototype Micromegas Chambers at Harvard 2014

Study of Muon Segments in ATLAS detector using 8TeV data 2012-2013

California Institute of Technology

Study of Vector Boson + Jets using CMS 8TeV data 2011-2012

Design and validation of an optical sensor for telescopes 2009-2010

Design experiment and study of market convergence 2009-2010

Modeling on novel methods of space launching 2008-2009

Publications and Talks (with links)

Paper

[Search for pair production of Higgs bosons in the \$b\bar{b}b\bar{b}\$ final state](#) 2016

Public Notes

[ATLAS-CONF-2016-049](#), $hh \rightarrow 4b$ 2016 summer

[ATLAS-CONF-2016-017](#), $hh \rightarrow 4b$ 2016 spring

Public Talks

[ATLAS \$hh \rightarrow 4b\$ ICHEP Results](#), Higgs Boson and BSM, Weihai, China 2016

ATLAS Talks

[\$hh \rightarrow 4b\$, analysis ICHEP ATLAS Approval](#) 2016

[\$hh \rightarrow 4b\$, analysis ICHEP Exotics Approval](#) 2016

[\$hh \rightarrow 4b/bb\tau\tau/bbWW\$, Exotics Workshop, Grenoble](#) 2016

[Muon Segment Seeding](#), Muon Week, Software 2016

[Muon Hough Transform Tuning](#), Muon Week, Software 2015

[Muon Spectrometer and DQ Status](#), ATLAS Weekly 2015

[Muon DQ 2015 Summary](#), Muon Week, Operations 2015

[Muon DQ Pre Run II Status](#), Muon Week, Operations 2015

[Muon DQ Shifter Manual](#) 2015

Teaching Experience

Physics Department, Harvard University

Mentoring undergraduate students research during summer 2015-2016

Teaching Fellow, Physics 125, Widely Applied Physics 2014

Teaching Fellow, Physics 16, Classical Mechanics and Relativity 2013

Physics Department, California Institute of Technology

Teaching Assistant, Physics 50, Physics League 2011-2012

Honors

Harvard White Teaching Prize for Physics 16 2014

Harvard Traveling Scholar 2015-2016

Caltech Undergrad Summer Research Fellowship 2009-2012

Languages and Skills

Chinese (native), English (proficient), French (elementary)

C++, HTML, \LaTeX , Matlab, Mathematica, Python, ROOT

References

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Professor Mel Shochet
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University of Chicago
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