

# Timothy Cohen - Curriculum Vitae

Contact Institute for Fundamental Science

Department of Physics University of Oregon 475 Willamette Hall Eugene, OR 97403 USA

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# Interests Theoretical particle physics and cosmology beyond the Standard Model

- New models of physics at the weak scale
- Large Hadron Collider phenomenology and machine learning
- Dark matter models and measurements
- Theoretical investigations and applications of Effective Field Theory

# Positions University of Oregon, Eugene, OR USA

Associate Professor of Physics

• September 2020 – present

Assistant Professor of Physics

• September 2015 - 2020

#### Princeton University, Princeton, NJ USA

# Institute for Advanced Study, Princeton, NJ USA

LHC Theory Initiative Postdoctoral Research Associate

• September 2014 – September 2015

# SLAC National Accelerator Laboratory, Menlo Park, CA USA

Research Associate

• September 2011 – September 2014

## EDUCATION The University of Michigan, Ann Arbor, MI USA

Ph.D., Physics, May 2011

- Dissertation Title: New Models of Dark Matter and Prospects for Measurements
- Advisor: Professor Aaron T. Pierce
- Area of Study: Particle Phenomenology

M.S., Physics, December 2009

# The University of Alabama in Huntsville, Huntsville, AL USA

B.S., Physics, May 2006, summa cum laude

B.S., Mathematics, May 2006, summa cum laude

B.A., Music with jazz studies emphasis, May 2006, summa cum laude

#### Funding

#### Department of Energy

- 2018 2021, DE-SC0011640: \$1104k co-PI with Graham Kribs and Spencer Chang
- 2017 2018, DE-SC0018191: \$91k

# Princeton University DataX

• 2019-2020, DATAX-19-010: \$125k co-PI with Mariangela Lisanti

#### **National Science Foundation**

• 2014-2016, LHC Theory Initiative Postdoc Fellowship, PHY-0969510: \$150k

#### TEACHING

# University of Oregon

- PHYS 666 Quantum Field Theory III, Spring 2019, Spring 2020
- PHYS 665 Quantum Field Theory II, Winter 2019, Winter 2020
- PHYS 634 Quantum Field Theory I, Fall 2018, Fall 2019, Fall 2020
- PHYS 152 The Physics of Sound and Music, Spring 2018
- PHYS 415 Quantum Physics II, Winter 2018, Winter 2017, Winter 2016
- PHYS 414 Quantum Physics I, Fall 2017, Fall 2016, Fall 2015

# University of Michigan

- PHYSICS 140 Introductory Physics with Calculus I Discussion Instructor, Winter 2009, Winter 2010
- PHYSICS 127 Introductory Physics without Calculus II Discussion Instructor, Winter 2008
- PHYSICS 521 Introduction to Elementary Particle Physics Teaching Assistant, Winter 2008
- PHYSICS 241 Introductory Physics with Calculus II Laboratory Instructor, Fall 2007, Winter 2008, Fall 2009
- PHYSICS 141 Introductory Physics with Calculus I Laboratory Instructor, Fall 2006, Winter 2007
- Tutor in Physics Help Room, Fall 2007 to Winter 2010

### AWARDS

# **Princeton University**

• LHC Theory Initiative Postdoctoral Fellowship, 2014

#### University of Michigan

• Marcellus L. Wiedenbeck Award for Excellence in Teaching, 2009

#### **NASA**

• Undergraduate Student Research Program, 2004

## **National Science Foundation**

• Research Experience for Undergraduates Program, 2003

#### University of Alabama in Huntsville

- Highest Academic Achievement Award for the College of Science, 2005
- Member of Sigma Pi Sigma Physics Honor Society, 2005

#### SUPERVISION

#### Postdoctoral Scholars

- Anna Maria Taki [Fall 2019 present]
- Xiaochuan Lu [Fall 2018 present]
- Bryan Ostdiek [Fall 2015 Fall 2019]
- Marat Freytsis [Fall 2015 Summer 2018]
- Gilly Elor [Fall 2016 Winter 2018]

#### **Graduate Students**

• Joel Doss [Summer 2016 - present]

# DEPARTMENTAL SERVICE

#### Thesis Committees

- Joel Doss [PhD, advisor, current]
- Cameron Dennis [PhD, current]
- Nicu Istrate [PhD, chair, current]
- Sofiane Merkouche [PhD, current]
- Amanda Steinhebel [PhD, current]
- Tom Tong [PhD, chair, defended Spring 2020]
- Johan Bonilla [PhD, defended Fall 2019]
- John Myers [PhD, defended Spring 2019]
- Jacob Bieker [Honors College, defended Winter 2018]
- Christopher Jackson [PhD, defended Winter 2017]
- Ryan Quitzow-James [PhD, defended Winter 2016]

## **Departmental Committees**

- Graduate Studies Committee [Fall 2020 present]
- Climate and Diversity Committee [Fall 2020 present]
- Faculty Advisor for Women in Physics Group [Fall 2020 present]
- Institute for Fundamental Science leadership committee [Winter 2020 present]
- Curriculum Committee [Fall 2019 present]
- Society for Physics Students faculty mentor [Fall 2018 Fall 2019]
- Center for High Energy Physics leadership committee [Fall 2018 Fall 2019]
- Institute of Theoretical Science leadership committee [Fall 2018 Fall 2019]
- Graduate Recruitment committee [Winter 2016 present]
- Faculty search committee (experimental astrophysics) [Fall 2016]

# Professional Duties

- Referee for Physical Review Letters
- Referee for Physical Review D
- Referee for Journal of High Energy Physics
- Referee for Physical Letters B
- Referee for Physics of the Dark Universe Journal
- Referee for European Physics Journal C
- Referee for International Journal of Modern Physics A
- Grant reviewer for the US Department of Energy
- Grant reviewer for US-Israel Binational Science Foundation
- Fellowship reviewer for Swiss National Science Foundation

## INVITED SEMINARS

- 2020: All Things EFT<sup>V</sup>, TUM Munich<sup>V</sup>, University of Chicago<sup>V</sup>, Carnegie Mellon University<sup>V</sup>, CERN Cosmo Coffee<sup>V</sup>, Princeton University, Israel Institute for Advanced Studies Winter School (lectures on EFTs)
- 2019: University of Maryland, University of Toronto, SLAC, University of Cincinnati (colloquium), Tel Aviv University
- 2018: TASI at University of Colorado Boulder (lectures on EFTs), University of Michigan, University of California Santa Barbara, PIKIO 2018 (plenary), Lewis and Clark (colloquium), TIFR in Mumbai workshop, University of California Davis, TRIUMF workshop, University of California Irvine, PHENO Symposium (plenary)
- 2017: Fermilab LPC, (Re)interpretation conference at Fermilab, Princeton, University of California Berkeley, SLAC, Caltech
- 2016: University of Texas at Austin, MIT, Boston University, University of California San Diego, KITP workshop in Santa Barbara "Experimental Challenges for the LHC Run II", SUSY 2016 (plenary) in Melbourne, MC4BSM Workshop at University of Chinese Academy of Sciences in Beijing, KITPC workshop in Beijing "Hints of New Physics at the LHC Run 2", CERN Theory Institute 2016 "Charting the Unknown: interpreting LHC data from the energy frontier", ICTP Trieste conference "A First Glance Beyond the Energy Frontier"
- 2015: TRIUMF Workshop "Discoveries at the Dawn of LHC Run II", University of Chicago Workshop "Higgs Effective Theory", ATLAS Hadronic Final State Forum 2015 at the University of Washington, Fermilab (colloquium), University of Illinois Urbana Champaign, LBNL "Workshop on Dark Matter Detection"
- 2014: Cornell University, Institute for Advanced Study, Weizmann Naturalness Workshop, University of Michigan, University of Minnesota, University of Chicago, University of Oregon (colloquium, seminar), Fermilab, Lectures at IHEP in Beijing
- 2013: MIT, Harvard University, University of California Berkeley, New York University, Institute for Advanced Study, University of California Davis, University of California Santa Cruz, Princeton University, Boston University, Snowmass at CERN
- 2012: University of Maryland, Johns Hopkins University, University of California Berkeley, Rutgers University, Fermilab, University of California Irvine
- 2011: TRIUMF, SLAC, Harvard University, Cornell University
- 2010: University of California Davis, Carnegie Mellon University

 $<sup>^{</sup>V}\mathrm{Seminar}$  was delivered virtually

# ACTIVITIES & OUTREACH

# University of Oregon

- Co-organizer of BSM PANDEMIC virtual seminar series [Summer 2020 present]
- Co-organized MIAPP workshop "The Weak Scale at a Crossroads: Lessons from the LHC and Beyond" [Summer 2019]
- Co-organized UO ITS workshop "Explorations Beyond the SM" [Spring 2018]
- Contestant for UO "Physics Slam" [Winter 2018]
- Co-organized "Machine Learning for Jet Physics" workshop at LBNL [Fall 2017]
- Lectured for "Meet a Scientist Day" at the Science Factory in Eugene [Winter 2017]
- Co-organized UO ITS workshop "New Lampposts for Dark Matter" [Spring 2017]
- Lectured for QuarkNet [Summer 2016, 2017]
- Co-organized UO ITS workshop "Emerging New Physics at the LHC" [Spring 2016]
- Co-organized Aspen Center for Physics workshop "The Many Faces of Naturalness" [Summer 2016]

# Princeton/IAS

• Co-organized Aspen Center for Physics Winter Conference "Exploring the Physics Frontier with Circular Colliders" [January 2015]

#### SLAC

• Co-organized "Workshop on Physics at a 100 TeV Proton Collider" [April 2014]

# University of Michigan

- Organized High Energy Theory Student Journal Club, Summer 2007 to Winter 2010
- Presented for Physics Graduate Student Symposium, 2007, 2008, 2009