Landon Lehman

CONTACT INFORMATION

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Notre Dame, IN 46556 USA

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EDUCATION

University of Notre Dame, Notre Dame, IN

Ph.D. candidate, August 2015 to present

M.S., Physics, August 2015

Adviser: Adam Martin

Graduate student, August 2012 to present

Purdue University, West Lafayette, IN

B.S., Physics, May 2012

Minor in Mathematics

Vincennes University, Vincennes, IN

Enrolled in Chemistry and Secondary Science Ed. progams

Transferred to Purdue University in 2010

PUBLICATIONS

[1] Landon Lehman and Adam Martin. "Low-derivative operators of the Standard Model effective field theory via Hilbert series methods." arxiv:1510.00372. Journal of High Energy Physics, Volume 2016, Issue 2. doi: 10.1007/JHEP02(2016)081.

[2] Landon Lehman and Adam Martin. "Hilbert Series for Constructing Lagrangians: Expanding the phenomenologist's toolbox." arxiv:1503.07537. Physical Review D **91**, 105014 (2015). doi: 10.1103/PhysRevD.91.105014.

[3] Landon Lehman. "Extending the Standard Model Effective Field Theory with the Complete Set of Dimension-7 Operators." arxiv:1410.4193. Physical Review D **90**, 125023 (2014). doi: 10.1103/PhysRevD.90.125023.

[4] Joseph Bramante, Antonio Delgado, Landon Lehman, and Adam Martin. "Boosted Higgses from chromomagnetic b's: BSM $b\bar{b}h$ at high luminosity." arxiv:1410.3484. Physical Review D **93**, 053001 (2016). doi: 10.1103/PhysRevD.93.053001.

[5] Joseph Bramante, Sean Downes, Landon Lehman, and Adam Martin. "Clearing the Brush: The Last Stand of Solo Small Field Inflation." arxiv:1405.7563. Physical Review D **90**, 023530 (2014). doi: 10.1103/PhysRevD.90.023530.

[6] Carlos Alvarado, Landon Lehman, and Bryan Ostdiek. "Surveying the Scope of the $SU(2)_L$ Scalar Septet Sector." arxiv:1404.3208. Journal of High Energy Physics, Volume 2014, Issue 5. doi: 10.1007/JHEP05(2014)150.

Talks

[1] "Taking the Measure of Effective Field Theories." Physics Seminar, University at Buffalo, The State University of New York, March 1, 2016.

[2] "Generating functions for EFT operators." APS Prairie Section Fall Meeting 2015, University of Notre Dame, November 21, 2015.

[3] "Generating functions for EFT operators." Composite Higgs Program, Fermilab (Fermi National Accelerator Laboratory), October 28, 2015.

[4] "Hilbert Series for Constructing Lagrangians." Phenomenology 2015 Symposium, University of Pittsburgh, May 4, 2015.

[5] "Surveying the Scope of the $SU(2)_L$ Scalar Septet Sector." 2014 Spring GPS Conference, University of Notre Dame Department of Physics, April 28, 2014.

Teaching Experience

Purdue University, West Lafayette, IN

Math Teaching Assistant **Fall 2011**

- Taught a computer lab for MA 366 (Ordinary Differential Equations).
- Students used Matlab and Maple to work with differential equations.
- Graded weekly assignments.

Physics Help Center Tutor **Spring 2011 and Fall 2011**

- Tutored for PHYS 172 (Modern Mechanics).
- Tutored for PHYS 272 (Electric and Magnetic Interactions).
- Identified common misconceptions.
- Provided understandable explanations of physics concepts.

University of Notre Dame, Notre Dame, IN

ROTC Physics and Math Tutor **Fall 2015 to Fall 2016**

- Provide weekly tutoring sessions for ROTC cadets.
- Answer questions and provided instruction regarding introductory physics and math courses.

Physics Lab Teaching Assistant **Fall 2016**

- Assist students in carrying out physics labs.
- Grade lab reports.
- Explain concepts of experimental design to guide students in understanding physics.

Undergraduate Research

Purdue University, West Lafayette, IN

Partial differential equations research **Summer and Fall 2011**

- Supervised by Dr. Svitlana Mayboroda (currently at University of Minnesota)
- Numerical simulation of Anderson localization with MATLAB
- Learned about eigenvalue problems in infinite-dimensional vector spaces

Atomic and optical physics research **Summer and Fall 2011**

- Supervised by Dr. Daniel Elliott
- Studied electric and magnetic interactions driving transitions in cesium
- Worked with vacuum system, lasers, optical systems, and machine shop equipment

Awards

University of Notre Dame

- Arthur J. Schmitt Leadership Fellowship in Science and Engineering
- Society of Schmitt Fellows website