

## EDUCATION

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### Princeton University

Princeton, NJ

*PhD Candidate – Physics, Observational Cosmology*

*Sept 2014 – May 2020 (Expected)*

Adviser: Professor William C. Jones, P.I. SPIDER Collaboration

- Supported by an NSF Graduate Research Fellowship, awarded in 2015.

### Smith College

Northampton, MA

*BA – Physics, minor in Astrophysics; GPA: 3.8*

*Sept 2005 – May 2009*

- Graduated *cum laude* and with *Highest Honors*, Phi Beta Kappa and Sigma Xi
- Frank A Waterman Prize for Outstanding Senior in Physics<sup>1</sup>
- Junior Year Abroad: St. Edmund Hall, **Oxford University**

## EXPERIENCE

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### Princeton University

Princeton, NJ

*PhD Candidate – Physics*

*Sept 2014 – Present*

Analysis of the SPIDER-1 data set and concurrent commissioning of the balloon-borne SPIDER-2 instrument for flight from McMurdo Station, Antarctica, in December 2019.

- **Projects include:** Instrument operation code for the autonomous system (C/C++), data analysis of a large data set (Python2, includes machine learning algorithms), project management and tight teamwork, cryogenics, superconducting sensors, mission-critical component design (SolidWorks), atmospheric and magnetic modeling.
- **Coursework:** Quantum field theory, biophysics, electronics. Currently completing the Statistics and Machine Learning and Computation and Information Sciences certificates.
- **Teaching:** Assistant instructor in Physics 101 in Spring 2017. Currently creating a series of videos on uncertainty analysis to include in the physics 101 and 103 courses.
- **Outreach:** Creator and co-host of a weekly science radio show on WPRB 103.3 FM (TVR2C.com). Tutor with the Prison Teaching Initiative. Founding member of Princeton Citizen Science policy working group. Frequent speaking engagements on various science-related topics.

### Prior Physics Research

- **Fulbright Fellow, Indonesia:** High energy theory mathematical modeling in Sage alongside a research group at the Institut Teknologi, Bandung. *Oct 2013 – June 2014*
- **Research Assistant, CERN:** Testing and commissioning the Pixel detector at the core of the ATLAS detector in the Large Hadron Collider in Geneva, Switzerland as part of a Columbia University research team. *Summer 2013*
- **Summer Undergraduate Research Fellow, Caltech:** Theoretical cosmology research modeling the potential noise in future LSST weak gravitational lensing measurements (IDL). *Summer 2007*

### United States Peace Corps

Northern Uganda

*Science Education Volunteer*

*Feb 2011 – Apr 2013*

- **Secondary School Teacher:** Mathematics, Physics, and Computing Teacher, St. Mary's College Lacor, Northern Uganda. Side project in reproductive health education.
- **GirlTech Uganda, Creator and Co-director:** Professional development program for girls in science and tech. Operated annually since creation in August 2012, and currently in line for expansion Africa-wide. Learn more at Facebook.com/GirlTechUganda.
- **Technical Peace Corps Volunteer Trainer:** Secondary science education, December 2012.

### US Dept Of Justice, Vaccine Injury Compensation Program

Washington, DC

*Vaccine Litigation Paralegal*

*Aug 2009 – Dec 2010*

- **Duties:** To assist lawyers in understanding the science involved in their work, as well as research, documentation, and argument for cases at the US Court of Federal Claims.

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<sup>1</sup>Full list of honors, awards, and publications available upon request.