Education

University of California, Davis

 $2012 \rightarrow \text{Present}$

M.S. in Physics — Dec 2013

Ph.D in Physics — 2016, expected

University of Miami, Coral Gables, FL

 $2008 \rightarrow 2012$

B.S. in Physics, Applied Mathematics. Cum Laude

Research

Department of Physics, University of California, Davis

 $Graduate\ Student\ Researcher$

June 2013 \rightarrow Present

Advisor: Prof. John Rundle

- Developing the Virtual California earthquake simulator, analyzing large data sets
- Developing Python modules for simulation data analysis, visualization and a web-based interface to the simulation data and analysis tools

Department of Astronomy, California Institute of Technology, Pasadena, CA

 $Summer\ Undergraduate\ Research\ Fellow$

Summer 2011

Advisor: Dr. Brendan Crill, NASA JPL

- Updated and expanded the data analysis pipeline for the Planck collaboration
- Identified correlations between detector model parameters using the D.O.E.'s supercomputing center NERSC

Department of Physics, University of Miami

Research Assistant

 $2009 \rightarrow 2012$

Advisor: Prof. Kevin Huffenberger

- Reconstructed the optical properties of a Cosmic Microwave Background telescope (WMAP) from its measured radiation maps
- Identified a selection bias in the WMAP point source catalog

Published Research

- M. R. Yoder, K. W. Schultz, E. M. Heien, J. B. Rundle, D. L. Turcotte, J. W. Parker and A. Donnellan. The Virtual Quake earthquake simulator: A simulation based forecast of the El Mayor-Cucapah region and evidence of earthquake predictability, Geophysical Journal International, under review (2015)
- M. R. Yoder, K. W. Schultz, E. M. Heien, J. B. Rundle, D. L. Turcotte, J. W. Parker and A. Donnellan. Forecasting earthquakes with the Virtual Quake simulator: Regional and fault-partitioned catalogs, International Association of Geodesy Symposia, under review (2015)
- K. W. Schultz, M. K. Sachs, E. M. Heien, M. R. Yoder, J. B. Rundle, D. L. Turcotte, and A. Donnellan, Virtual California: Statistics, Co-Seismic Deformations and Gravity Changes for Driven Earthquake Fault Systems, International Association of Geodesy Symposia, under review (2015)
- K.W. Schultz, M.K. Sachs, J.B. Rundle, D.L. Turcotte, Simulating Gravity Changes in Topologically Realistic Driven Earthquake Fault Systems, Pure and Applied Geophysics, doi: 10.1007/s00024-014-0926-4, in press (2014)
- **K. W. Schultz** and K. M. Huffenberger, *Stacking catalogue sources in WMAP data*. Monthly Notices of the Royal Astronomical Society, Volume 424, Issue 4, pp. 3028-3036 (2012)

Conferences & Talks

K. W. Schultz, M. K. Sachs, E. M. Heien, J. B. Rundle, J. Fernandez, D. L. Turcotte, A. Donnellan. talk: Virtual Quake: Earthquake Statistics, Surface Deformation Patterns, Surface Gravity Changes and InSAR Interferograms for Arbitrary Fault Geometries (won an OSPA award)
American Geophysical Union (AGU) Fall Meeting 2014, San Francisco, CA. Dec 2014

- K. W. Schultz, M. K. Sachs, E. M. Heien, J. B. Rundle, J. Fernandez, D. L. Turcotte, A. Donnellan. poster: Virtual California: Earthquake Statistics, Surface Deformation Patterns, Surface Gravity Changes and InSAR Interferograms for Arbitrary Fault Geometries.
 Southern California Earthquake Center (SCEC) Meeting 2014, Palm Springs, CA. Sep 2014
- K. W. Schultz, J. B. Rundle, M. K. Sachs, K. F. Tiampo, T. J. Hayes, J. Fernandez, D. L. Turcotte, A. Donnellan. talk: Monitoring Major Fault Systems from Space: Modeling Implications for Dedicated Gravity Missions. GENAH Conference. Matsushima, Japan. July 2014
- Multi-Hazards Summer School: 1 week workshop on disaster prediction, preparedness, and response hosted by IRIDeS at Tohoku University and by the Association of Pacific Rim Universities (APRU). Sendai, Japan. July 2014
- K. W. Schultz, B. Crill, talk: Separating Planck Bolometers and Beams via Simulated Planet Observations, Summer Undergraduate Research (SURF) Final Presentations. California Institute of Technology, Pasadena, CA, August 2011
- K. W. Schultz, K.M. Huffenberger, poster: Stacking Catalog Sources in WMAP Data, 217th Meeting of the American Astronomical Society. Seattle, WA, January 2011

Teaching & Tutoring	Department of Physics, University of California, Davis Teaching Assistant	$2012 \rightarrow 2013$
	Department of Biology, Barry University , Miami Shores, FL Physics and Math tutor Department of Physics, University of Miami	2012
	Department of Physics, University of Miami Physics Lab tutor	$2011 \rightarrow 2012$
	Department of Mathematics, University of Miami Math Lab tutor	$2009 \rightarrow 2010$

Computing Skills

Languages: Proficient in Python, R, C++, LATEX, Bash. Experience with SQL, HTML, Java

Modules & Libraries: Proficient with Git, Matplotlib, Numpy, Scipy.

Operating Systems: Mac OS X, Linux, Windows

Honors & Awards

Winner of an Outstanding Student Paper Award in Natural Hazards December 2014 Awarded to top 3-5% of presenters in each section at the American Geophysical Union 2014 fall meeting Member, Omicron Delta Kappa 2011 One of the highest collegiate honors along with Phi Kappa Phi and Phi Beta Kappa Isaac Bashevis Singer Scholarship $2008 \rightarrow 2012$ Full academic scholarship to the University of Miami (UM), 30 annually. Foote Fellow $2008 \rightarrow 2012$ Highest academic honor at UM, fellows freely design their curriculum, 50 annually NSF CSMS Scholarship 2010 NSF Computer Science and Mathematics for Scientists, 5 annually at UM Beyond the Book Scholarship 2010 Supported summer research, UM College of Arts and Sciences, 12 annually

National Ocean Scholarship $2008 \rightarrow 2010$

Awarded by the Consortium for Ocean Leadership, 4 in the U.S. annually

Study Abroad

Summer 2009: ACC Summer Study Abroad in China and Vietnam.

Studied environmental science, policy, and toxicology at:

- South China Agricultural University, Guangzhou, China.
- Yunnan University, Kunming, China.
- Hanoi University of Mining and Geology, Hanoi, Vietnam.