http://schultz.physics.ucdavis.edu **Kasey W. Schultz** kwschultz@ucdavis.edu

## Education

**University of California, Davis** 2012 → Present
M.S. in Physics — Dec 2013
Ph.D in Physics — Jun 2017, expected

**University of Miami**, Coral Gables, FL 2008 → 2012
B.S. in Physics, Applied Mathematics. *Cum Laude*

## Research

Department of Physics, **University of California, Davis**
*Graduate Student Researcher* June 2013 → 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 → 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

**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), [click here for online pre-print]

**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), [click here for e-print]

## 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 → 2013
Led a total of 5 discussion labs (30 students each) for introductory thermal physics

Department of Biology, **Barry University**, Miami Shores, FL
*Physics and Math tutor* 2012
Tutored MBRS and RISE students in calculus and calculus-based physics

Department of Physics, **University of Miami**
*Physics Lab tutor* 2011 → 2012
Helped students with a range of undergraduate physics courses

Department of Mathematics, **University of Miami**
*Math Lab tutor* 2009 → 2010
Helped students with calculus, differential equations, linear algebra

## Computing Skills

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

**Modules & Libraries**: Proficient with Git, Matplotlib.

**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 → 2012
Full academic scholarship to the University of Miami (UM), 30 annually.

Foote Fellow 2008 → 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 → 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.