K McMonigal

Contact information
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Education

Rosenstiel School of Marine and Atmospheric Science, University of Miami, Miami, FL
- Ph.D. program in Meteorology and Physical Oceanography August 2015-present
  Advisor: Prof. Lisa Beal

Northwestern University, Evanston, IL
- Bachelor of Arts with majors in Mathematics, Integrated Science Program, and Earth and Planetary Science, graduated with departmental honors June 2015

Research Presentations

- McMonigal, K., L.M. Beal, J.K. Willis, *Seasonality of the South Indian Ocean subtropical gyre,* Conference of Florida Graduate Schools, Tallahassee, Florida, April 2018 (poster).
- McMonigal, K. and L.M. Beal, *Meridional heat transport of the Indian Ocean across 34°S based on high resolution Agulhas Current hydrography, satellite, and Argo data*, IAPSO-IAMAS-IAGA Joint Assembly, August 2017.
- McMonigal, K. and P.A. Beddows, *Calcite Rafts – Rapid deposition of transgressive infill cave sequences as a new paleo sea level proxy,* GSA Annual Meeting, Vancouver, Canada, October 2014.

Publications

- McMonigal, K.T., L.M. Beal, *The seasonal cycle of the south Indian Ocean subtropical gyre circulation as revealed by Argo and satellite data*, submitted.
- McMonigal, K.T., P.A. Beddows, G.O. Lehn, *Formation and sedimentation of calcite rafts: A new paleo sea level record*, in prep.

Research Experience

Meteorology and Physical Oceanography Program, University of Miami, Miami, FL
Graduate Research Assistant, advisor: Prof. Lisa Beal August 2015-present
- Taking core classes in ocean and atmospheric sciences
- Learning statistical and data analysis skills
- Investigating the meridional heat transport of the Indian Ocean basin using hydrographic, Argo float, and satellite data

Earth and Planetary Science Department, Northwestern University, Evanston, IL
Undergraduate Research Assistant, Dr. Patricia Beddows December 2012- June 2015
- Evaluated the feasibility of a new high resolution method of recreating past sea level
- Conducted six weeks of field work in Quintana Roo, Mexico, including caving, surveying, and diving

Work Experience

United States Federal Government, Washington, DC
Technical Intelligence Officer Summer 2014
- Learned and applied skills with Linux, virtual machines, and automation software such as Puppet

Sea Experience

- April 2016: Oceanographic mooring deployment, CTD operations, *RV Algoa*, Agulhas System Climate Array cruise 2016, Indian Ocean, 14 days, Chief Scientist: Prof. Lisa Beal

Teaching Experience

- Lectures as a teaching assistant for undergraduate course *Climate and Global Change* with Prof. Igor Kamenkovich, lecture topics: *Methods of measuring the climate system*, *The future of clean energy* Fall 2016

Leadership

GradOUT, University of Miami August 2017-present
Co-president, advisor: Prof. Brenna Munro

- Organizing monthly professional, social, and advocacy events to engage LGBTQ+ and allied community among University of Miami graduate students
- Co-sponsoring events with LGBTQ Student Center, Graduate Student Association, Toppel Career Center

Student-Led Evaluations and Development, University of Miami August 2017-present
Committee member

- Developing surveys on professional development and mentoring for graduate students
- Presenting results to students, staff, faculty with aim of improving graduate student support

oSTEM, University of Miami 2015-2016
Founding member, vice president, advisor: Dr. Ryan Woosley

- Assisted in founding of undergraduate student group for LGBTQ+ students in science, technology, engineering, and math

Awards, Honors, and Skills

- UM Graduate Student Research Symposium awardee (Physical Sciences) April 2018
- Graduate Career Development fund awardee December 2017
- University of Miami Fellowship March 2015-present
- First place winner, best poster in Science and Engineering category, Northwestern University Undergraduate Research Exposition June 2015
- Seymour Schlanger Undergraduate Earth Science Award June 2015
- Departmental honors, Earth and Planetary Sciences June 2015
- Academic All Big Ten Student Athlete 2011-2012
- Programming experience in Matlab, Python, C++, Ruby
- Advanced SCUBA certified