S H A U N N A L . D O N A H E R

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EDUCATION

2007–2012 University of Miami, RSMAS Miami, FL

- Ph.D. in Meteorology and Physical Oceanography

Dissertation: "Tropical Cyclone Stratiform Rainbands over Land: Multi-wavelength Radar Observations and Their Educational Applications"

- GPA of 3.82
- Relevant course work included Physical Meteorology, Climate Dynamics, and doctoral courses in Teaching and Learning of Math and Science

2004-2007 University of Miami, RSMAS Miami, FL

- M.S. in Meteorology and Physical Oceanography

Thesis: "Mean Boundary Layer Structure and Turbulence associated with Fair Weather Cumulus Clouds during RICO 2005"

- GPA of 3.713
- Relevant course work included Fluid Dynamics, Global Atmospheric Circulation, Physical Oceanography, Boundary Layer Meteorology, Statistics, and Atmospheric Science

2000-2004 University of Massachusetts at Lowell Lowell, MA

- B.S. in Atmospheric Science
- GPA of 3.698
- Relevant course work included Math, Environmental Science, Chemistry, Physics, Physical Meteorology, Atmospheric Dynamics, Forecasting and Synoptic Techniques, Satellite and Radar Meteorology, Air Pollution, Methods in Meteorology, Solar Meteorology, Physical Climatology, Tropical Meteorology, Fortran Programming, and Environmental Geochemistry
- Skills learned include NWS Skywarn Training, and extensive forecasting experience using tools such as global and regional forecasting models, MOS, GARP, Bufkit

TEACHING EXPERIENCE

August 2013-present **Miami Dade College** **Miami, FL**

Professor

Dual-Enrollment Oceanography, OCE 1001

- Preparing and delivering classroom lectures for this general education science course at MAST Academy high school in Miami-Dade County. Students consist of high school juniors and seniors taking the course for college credit.
- Designing course syllabus, lectures, homework, lab activities, reviews, and exams
- Assessing homework assignments, activities, presentations, class participation, and exams
- Creating and maintaining course website

August 2012-present **Miami Dade College** **Miami, FL**

Professor

General Ed. Earth Science, ESC 1000

- Preparing and delivering classroom lectures for three sections of this science general education course each semester, including a variety of large lecture sections (75+ students), blended (face-to-face and online) sections, and mini-term sections
- Includes subjects of Earth Systems, Astronomy, Geology, Oceanography and Meteorology
- Designing course syllabus, lectures, homework, reviews, and exams
- Assessing homework assignments, class participation, and exams
- Creating and maintaining course website

January 2010- May 2012 **Miami Dade College** **Miami, FL**

Professor

Introduction to Meteorology, MET1010

- Prepared and delivered classroom lectures for four semesters of this science general education course
- Designed course syllabus, lectures, homework, reviews, and exams
- Assessed homework assignments, class participation, and exams
- Arranged for tours of the National Hurricane Center and the local NWS branch
- Created and maintained course website

2012 **Excelsior College** **Albany, NY**

Item Writer

Weather & Climate

- Contracted to write assessment questions for a new textbook, including constructing items, alternatives and rationales
- Determined cognitive level and difficulty level for each question

2012 Miami Dade College Miami, FL

Professor

Energy and the Environment (Physical Science)

- Team-taught the second half of this science general education course. Topics covered included Meteorology, Oceanography, and Geology.
- Designed course syllabus, lectures, homework, reviews, and exams
- Assessed homework assignments, class participation, and exams

2011 University of Miami, RSMAS Miami, FL

Co-Instructor

Teaching Assistant Training

- Created and implemented a new mandatory 3 day course to train new graduate student teaching assistants
- Designed course layout and forms for teaching requirements, as well as mid- and end-of-semester TA evaluations
- Presented on topics of Classroom Culture, Assessment, and Technology in the Classroom
- Gave feedback to all 45 students after their practice lectures

Fall 2007 University of Miami Miami, FL

Teaching Assistant

Weather Forecasting, MSC 243

- Assisted with developing lectures, homework assignments, and exams for meteorology majors
- Designed, conducted, and assessed weekly lab projects involving the application of physical principles to weather forecasting and the use of computer-generated forecast guidance products
- Presented several course lectures and lead forecast discussions
- Graded and created answer guides for homework assignments and exams
- Created and maintained course website

Fall 2007 University of Miami Miami, FL

Teaching Assistant

Atmospheric Dynamics II, MSC 406

- Provided review sessions for senior undergraduate meteorology students
- Assisted students with homework and projects using Matlab computing software

Spring 2007 University of Miami Miami, FL

Teaching Assistant

Meteorological Instrumentation, MSC 303

- Presented several lectures on techniques for measuring meteorological variables at the ground and in the free atmosphere, including an individually developed lecture on radar technology

Spring 2007 **University of Miami** **Miami, FL**

Teaching Assistant

Current Weather Topics, MSC 118

- Graded weekly summary reports and kept attendance during this seminar series course for introductory meteorology majors

2006-2007 **University of Miami** **Miami, FL**

Teaching Assistant

Advanced Meteorological Instrumentation, no longer offered

- Assisted with a weeklong undergraduate meteorological instrumentation course at sea on the cruise liner *Explorer of the Seas*
- Gave tours of the atmospheric and oceanographic labs to the students and general public
- Assisted students in making *in situ* measurements, instrument maintenance, data archiving, and using observations to characterize the atmospheric environment
- Took students on field trips to local meteorological-related institutions and other sites of interest, such as Hurricane Wilma damage in Cozumel

Fall 2005 **University of Miami** **Miami, FL**

Teaching Assistant

Introduction to Weather and Climate, MSC 102

- Graded homework, exams, and papers in this general education course
- Collaborated on curriculum and exam development
- Gave several lectures on severe weather topics

2003-2004 **University of Massachusetts Lowell** **Lowell, MA**

Math Tutor

- Taught algebra, pre-calculus and calculus at the campus tutoring center
- Worked with students one-on-one and in groups solving sample problems and reviewing topics

RESEARCH EXPERIENCE

2012-present **University of Miami, RSMAS** **Miami, FL**

Part-time Researcher

- Processing and analyzing collected data from field projects
- Preparing research findings for presentation at workshops, conferences, and in publications

2004-2012 **University of Miami, RSMAS** **Miami, FL**

Graduate Research Assistant

- Participated in multiple research experiments including cruises and flights
- Extensive field experience in data collection with radars, rawindsondes, and other standard meteorological instruments
- Planned and organized all stages of the research project and providing support for instrument maintenance and deployment
- Processed and analyzed collected data
- Presented research findings at workshops, conferences, and in publications
- Mentored three undergraduate students with individual research projects
- Research topics covered both synoptic and mesoscale meteorology, including tropical trade-wind cumuli, large stratus cloud decks, and hurricane rainbands
- Relevant skills included extensive use of Matlab, radar maintenance and operation, intensive knowledge of Microsoft Word, PowerPoint, and Excel, Linux, HTML editing

2003 **SUNY Stony Brook** **Stony Brook, NY**

Undergraduate Researcher

- Participated in a summer research experience for undergraduates
- Research included studying air-sea fluxes collected from regular passenger ferry crossings of Long Island sound
- Skills included data collection, quality control and analysis using Fortran

SERVICE

American Meteorological Society Member	2003-present
RSMAS Student Travel Fund Committee Representative	2008-2012
Event Weather Forecaster for University of Miami President's Office	2007-2012
Guest Speaker/Tour Guide for IMPACT High School Students	2011
RSMAS Campus Tour Guide	2008-2011
RSMAS New Student Recruitment	2005-2011
Co-Organizer and Lecturer for Student Computing Seminar	2009-2010
University of Miami Local Forecast Contest Manager	2005-2010
Guest Speaker at Gulliver Middle School	2009
Lead Tropical Forecast Discussions at NOAA Hurricane Research Division	2005-2007
Co-Organizer for Middle and High School Teacher Workshop	2006
Visiting Scientist Onboard *Explorer of the Seas*	2006
Marine Science Graduate Student Organization Secretary	2005-2006
UMass Lowell Weather Center Manager	2002-2004
UMass Lowell Residence Life Staff	2001-2004
UMass Lowell Residence Hall Association President	2002-2003
UMass Lowell Orientation Leader	2001-2003

PUBLICATIONS AND PRESENTATIONS

Albrecht, B., **S. Donaher**, I. Jo, C. Maxwell, L. Farmer, E. Williams, 2007: Teaching meteorological instrumentation on the cruise liner Explorer of the Seas. AMS 16th Symposium on Education, San Antonio,TX.

Davison, J.L., S. Bereznicki, M. Colon-Robles, V.P. Ghate, E. Grzeszczak, C.K. Henry, I. Jo, H. Lowenstein, B. Medeiros, S. Mishra, F. Morales, L. Nuyens, D. O'Donnell, E. Serpetzoglou, H. Shen, J.D. Small, E.R. Snodgrass, R. Trivej and **S. Vargas**, 2006: The RICO student mission-flights, ground operations and subsequent research. AMS 12th Conference on Cloud Physics, Madison, WI.

Donaher, S., K. Kloesel, O. Lee-Salwen, B. Albrecht, 2012: An assessment of traditional versus inquiry-based lab approaches for undergraduate meteorological instruction. AMS 21st Symposium on Education, New Orleans, LA.

Donaher, S., B. A. Albrecht, M. Fang, W. Brown, 2013: Wind profiles in tropical cyclone stratiform rainbands over land. *Mon. Wea. Rev.,* **141**, 3933-3949.

Donaher, S., B. A. Albrecht, W. Brown, M. Fang, 2013: Stratiform variability in outer tropical cyclone rainbands over land. In preparation, to be submitted to *Mon. Wea. Rev.* in 2013.

Donaher, S., 2007: Mean boundary layer structure and turbulence associated with fair weather cumulus clouds during RICO 2005. M.S. Thesis, Dept. of Meteorology and Physical Oceanography, University of Miami, 96 pp.

Donaher, S., 2008: Boundary layer structure and turbulence associated with fair weather cumulus clouds during RICO 2005. International Conference on Clouds and Precipitation, Cancun, Mexico.

Donaher, S. and B. Albrecht, 2009: Multi-wavelength radar observations of tropical cyclone rainbands over South Florida. AMS 34th Conference on Radar Meteorology, Williamsburg, VA.

Rauber, R.M., B. Stevens, J. Davison, S. Goke, O.L. Myol-Bracero, D. Rogers, P. Zuidema, H.T. Ochs III, C. Knight, J. Jensen, S. Bereznicki, S. Bordoni, H. Caro-Gautier, M. Colon-Robles, M. Deliz, **S. Donaher**, V. Ghate, E. Grzeszczak, C. Henry, A.M. Hertel, I. Jo, M. Kruk, J. Lowenstein, J. Malley, B. Medeiros, Y. Mendez-Lopez, S. Mishra, F. Morales-Garcia, L.A. Nuijens, D. O'Donnell, D. L. Ortiz-Montalvo, K. Rasmussen, E. Riepe, S. Scalia, E. Serpetzoglou, H. Shen, M. Siedsma, J. Small, E. Snodgrass, P. Trivej, J. Zawislak, 2007: In the driver's seat- RICO and education, *Bull. Amer. Meteor. Soc*., **88**, 1929-1937.

Vargas, S., 2006: Mean boundary layer structure and turbulence from ship-borne lidar data during RICO 2005. RICO Workshop, Boulder, CO.

Zheng, X., B. Albrect, H.H. Honsson, D. Khleif, G. Feingold, P. Minnis, K. Ayers, P. Chuang, **S. Donaher**, D. Rossiter, V. Ghate, J. Ruiz-Plancarte, and S. Sun-Mack, 2011: Observations of the boundary layer, cloud, and aerosol variability in the southeast Pacific near-coastal marine stratocumulus during VOCALS-Rex. *Atmos. Chem. Phys.,* **11**, 9943-9959.