

SHAUNNA L. DONAHER
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EDUCATION

- University of Miami, RSMAS** **2007–2012** **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
- University of Miami, RSMAS** **2004-2007** **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
- University of Massachusetts at Lowell** **2000-2004** **Lowell, MA**
- B.S. in Atmospheric Science
 - GPA of 3.698
 - Relevant course work included Calculus, Differential Equations, 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, Bufrkit
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TEACHING

Emory University

Atlanta, GA

Senior Lecturer

September 2017-present

Lecturer

August 2014-August 2017

- Preparing and delivering classroom lectures and/or labs for the courses listed below
- Designing course syllabus, lectures, lab activities, reviews, and exams
- Creating and maintaining Blackboard/Canvas course web sites
- Assessing assignments, class participation, and exams
- Writing recommendation letters and advising students in classes
- Promoting ENVS and environmental science awareness to GER students

Living in the Anthropocene, ENVS120

- Spring 2022
- Spring 2021 (online)
- Spring 2020
- Spring 2019
- Spring 2018
- Fall 2016
- Fall 2015

Meteorology with Lab, ENVS129

- Maymester 2015
- Spring 2015
- Fall 2014

First-year Seminar, ENVS190

- Fall 2021 (*Natural Disasters: Science vs Hollywood*)
- Fall 2020 (*Natural Disasters: Science vs Hollywood*) (online)
- Fall 2019 (*Natural Disasters: Science vs Hollywood*)
- Spring 2015 (*Natural Disasters and the Environment*)

Atmospheric Science with Lab, ENVS229

- Fall 2022
- Fall 2021 (online)
- Maymester 2021 (online)
- Spring 2021 (online)
- Fall 2020 (online)
- Maymester 2020 (online)
- Fall 2019
- Maymester 2019
- Fall 2018
- Maymester 2018
- Maymester 2017
- Spring 2017
- Fall 2016
- Maymester 2016
- Fall 2015

Physical Oceanography, ENVS239

- Summer 2021 (online)
- Summer 2020 (2 sessions online)
- Summer 2019 (online)
- Spring 2019
- Spring 2017

Earth Systems Science, ENVS331

- Spring 2022
- Spring 2020
- Spring 2018
- Spring 2016

ENVS Senior Capstone, ENVS490

- Fall 2022
- Spring 2022
- Fall 2021
- Spring 2021 (co-taught)

**Miami Dade College
Adjunct Professor**

August 2012-June 2014

Miami, FL

- Prepared and delivered classroom lectures for the courses below
- Developed and implemented blended courses (ESC1000)
- Taught dual-enrollment high school courses (OCE1001)
- Created and maintained course web sites
- Designed course syllabus, lectures, reviews, and exams
- Assessed assignments, class participation, and exams

General Ed. Earth Science, ESC 1000

- Summer 2014
- Spring 2014 (x2)
- Fall 2013
- Spring 2013 (x3)
- Fall 2012 (x3)

Introduction to Meteorology, MET1010

- Fall 2013
- Spring 2013
- Fall 2012
- Summer 2010
- Spring 2010

Introduction to Oceanography, OCE1001

- Spring 2014
- Fall 2013

Energy and the Environment, PSC1000 (Team-Taught)

- Summer 2012

University of Miami, RSMAS **2011** **Miami, FL**

Co-Instructor of Teaching Assistant Training Workshop

- 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

University of Miami **2005-2007** **Miami, FL**

Teaching Assistant

- Assisted with developing lectures, homework assignments, and exams
- Developed lab activities (MSC243)
- Presented several course lectures, lead labs (MSC243), guided field learning
- Created and maintained course web sites
- Graded assignments
- Held office hours and lead tutoring sessions

Weather Forecasting, MSC 243

- Fall 2007

Atmospheric Dynamics II, MSC 406

- Fall 2007

Meteorological Instrumentation, MSC 303

- Spring 2007

Current Weather Topics, MSC 118

- Spring 2007

Advanced Meteorological Instrumentation, no longer offered

- Spring 2007
- Spring 2006

Introduction to Weather and Climate, MSC 102

- Fall 2005

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

Emory University	2015-present	Atlanta, GA
	<ul style="list-style-type: none">• Advised student directed reading: <i>Mangrove Forest Ecology, Functionality and Current Status: A Review</i> (Spring 2022)• Advised student directed reading: <i>Synthesis of Select Research (1985-2021) on the Past, Present, and Future of the Atlantic Meridional Overturning Circulation</i> (Fall 2021)• Advised student directed reading: <i>Earth Systems</i> (Fall 2020)• Honors thesis chair for Katelyn Boisvert (<i>The Impact of Urbanization on Environmental Systems and Applications to Urban Sustainability: A Case Study of the Atlanta Metro Region, Georgia</i>) (Fall 2019-Spring 2020)• Advised student directed reading: <i>Earth Systems</i> (Fall 2019)• Advised student research project: <i>Proxies Utilized to Measure Variability in El Niño Southern Oscillation (ENSO)</i> (Spring 2019)• Advised student directed reading: <i>Emergency Management and Natural Disasters</i> (Spring 2019)• Advised student research project: <i>Comparison of Urban Heat Island Impacts in Oklahoma</i> (Spring 2019)• Advised student research project: <i>Systems Interactions and Hydropower Generation in the Colorado River Basin</i> (Fall 2018)• Advised student research project: <i>A Potential Influence on Atmospheric Instability: Investigating the Frequency and Severity of Turbulence During the El Niño Southern Oscillation (ENSO)</i> (Spring 2018)• Advised student directed reading: <i>Evolution of the Scientific Opinion on the Effect of Global Warming on Hurricanes: 1990-2018</i> (Spring 2018)• Advised student directed reading: <i>Climate Change and Tides</i> (Spring 2018)• Advised student research project: <i>Quantifying the Climatology of Atlanta from 1930-2016</i> (Spring 2017)• Participated in Cloud System Evolution in the Trades (CSET) field campaign and created educational module for broader impacts (Summer 2015-Spring 2016)• Advised student research project: <i>Impacts of ENSO on 20 California locations over 60 Years</i> (Fall 2015)• Advised student research project: <i>Evaluation of the Accuracy of the ENVS Weather Station</i> (Spring 2015)	
University of Miami, RSMAS	2012-2016	Miami, FL
Part-time Researcher		
	<ul style="list-style-type: none">• Processed and analyzed collected data from field projects• Prepared research findings for presentation at workshops, conferences, and in publications	
University of Miami, RSMAS	2004-2012	Miami, FL
Graduate Research Assistant		
	<ul style="list-style-type: none">• Participated in multiple research experiments including cruises and flights• Extensive field experience in data collection with radars, rawinsondes, 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

SUNY Stony Brook

2003

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

ENVS Director of Undergraduate Studies	Fall 2022-present
Emory College GER Implementation Group	Spring 2022-present
ENVS Diversity and Inclusion Committee	Fall 2020-present
Advisory board for See My Clouds Weather App	Fall 2020-present
Faculty Mentoring Committee for Michael Page	Fall 2018-present
Chair, Faculty Mentoring Committee for Carrie Keogh	Fall 2018-present
Faculty Advisory Board, Emory Climate Analysis and Solutions Team	Fall 2016-present
ENVS Undergraduate Curriculum Committee (Chair 2018-present)	Fall 2015-present
Manager of ENVS Weather Station	Fall 2014- present
Lead events at Atlanta Science Festival	Spring 2015, Spring 2016, Spring 2022
Director of ENVS Minors	Spring 2015-Spring 2022
Honors Thesis Committee Member: Eden Yonas	Fall 2021-Spring 2022
Emory College GER Working Group	Fall 2020-Spring 2021
Emory College Administrative Review Committee	Fall 2020-Spring 2021
Emory College Undergraduate Curriculum Committee Co-Chair	Fall 2020-Spring 2021
Emory College Undergraduate Curriculum Committee	Fall 2019-Spring 2021
Honors Thesis Committee Chair: Katelyn Boisevert	Fall 2019-Spring 2020
Ad-hoc committee to evaluate sustainability minors in college	Fall 2019-Fall 2020
ENVS New Faculty Search Committee	Fall 2019-Spring 2020
Emory College Abroad Committee	Spring 2020
Lead student tour of Georgia Aquarium with Residence Hall	February 2020
Lead tour of ENVS for Westminster Academy	August 2019
Interview with AJC Journalist re: Weather/Climate	May 2019
Honors Thesis Committee Member: Jiaming (Jasmine) Xu	Fall 2017-Spring 2018
Dean's Scholarship Review Committee	Summer 2017 and 2018
Evaluated textbook questions for <i>Meteorology Today</i>	Summer 2018
Interview with Wired Journalist re: Weather Stations	March 2018
Review of Climate Guide for ThinkProgress	February 2018
Review of Chapters in <i>Weather: A Concise Introduction</i>	June 2017
ENVS New Faculty Search Committee	Fall 2016-Spring 2017
Honors Thesis Committee Member: Qianru (Vicky) Wu	Fall 2016-Spring 2017
Climate@Emory: Leader of Teaching and Engaged Learning	Fall 2014-Fall 2016
Review of Chapters in <i>Essentials of Meteorology</i> 8 th Edition	Fall 2016
ENVS Director of Undergraduate Studies	Spring 2016
Lead Dynamic Planet event at Georgia Science Olympiad	Spring 2016, Spring 2017
Co-planner of ENVS Seminar Series	Spring 2015
Grant reviewer for NSF Geoscience REU	Fall 2014
American Meteorological Society Member	2003-2014
RSMAS Student Travel Fund Committee Representative	2008-2012
Event Weather Forecaster for University of Miami President's Office	2007-2012
Item Writer, <i>Weather & Climate</i> Textbook	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 <i>Explorer of the Seas</i>	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

PROFESSIONAL DEVELOPMENT

Online Teaching Continuous Improvement Process

- Summer 2021-present

LTF Mentorship Program

- Spring 2021-present

Member of Women in Science at Emory (WISE)

- Spring 2019-present

Organizer / member of Anthropocene Faculty Group

- Spring 2015-present

Member of Science Education Research Journal Club (ScERJ)

- Fall 2014-present

Co-organizer of Green Lunch Seminar Series

- Fall 2018-Spring 2019

Writing Across Emory Workshop on Digital Media in Teaching

- Fall 2018

Emory College Online Teaching Strategies Workshop

- Completed Summer 2018; with continued ongoing training and panel service

Active member of Academic Learning Community on Environmental Humanities

- Spring 2017

Attended Energy in Georgia Workshop at Georgia Tech

- Summer 2016

Attended Communicating Climate Workshop at Georgia Tech

- Spring 2015

Attended SoTL 101: An Introduction to the Scholarship of Teaching and Learning

- Spring 2015

Coursera MOOC on Stem Teaching w/ local discussion group (Completed with -Statement of Accomplishment

- Fall 2014

PUBLICATIONS AND PRESENTATIONS

- Donaher, S.**, 2021: Greenhouse Gases, Climate Modeling, and Future Changes in the Earth System. *Invited Talk*. Hosted by Emory Climate Analysis and Solutions Team, Atlanta, GA.
- Donaher, S.**, 2021: Developing Climate Literacy in a General Education Science Class. *Invited talk*. Georgia Climate Conference, Jekyll Island, GA.
- Donaher, S.**, 2020: Feedbacks in the Earth System. *Invited talk*. TEDxEmory.
- Donaher, S.**, 2020: Greenhouse Gases, Climate Modeling, and Future Changes in the Earth System. *Invited Talk*. Hosted by Emory Climate Analysis and Solutions Team, Atlanta, GA.
- Donaher, S.**, 2019: Greenhouse Gases, Climate Modeling, and Future Changes in the Earth System. *Invited Talk*. Hosted by Emory Climate Analysis and Solutions Team, Atlanta, GA.
- Albrecht, B. A., V. Ghate, J. Mohrmann, R. Wood, P. Zuidema, C. Bretheron, C. Schwartz, E. Eloranta, S. Glinke, **S. Donaher**, M. Sarkar, J. McGibbon, A. Nugent, R.A. Shaw, J. Fugal, P. Minnis, R. Paliknoda, L. Lussier, J. Jensen, J. Vivekanandan, S. Eillis, P. Tsai, R. Rilling, J. Haggerty, T. Campos, M. Stell, M. Reeves, S. Beaton, J. Allison, G. Stossmeister, S. Hall, S. Schmidt, 2019: Cloud System Evolution in the Trades (CSET): Following the Evolution of Boundary Layer Cloud Systems with the NSF–NCAR GV. *Bull. Amer. Met. Soc.* <https://doi.org/10.1175/BAMS-D-17-0180.1>
- Donaher, S.**, 2018: Climate Change and Theatre. *Invited Panelist*. Hosted by Emory University Department of Theatre and Dance, Atlanta, GA.
- Donaher, S.**, 2018: Hurricanes in a World of Changing Climate. *Invited Talk*. Hosted by Emory Faculty Science Council, Atlanta, GA.
- Donaher, S.**, 2018: Natural Disasters in a World of Changing Climate. *Invited Talk*. Hosted by Emory Green Lunch Seminar Series, Atlanta, GA.
- Donaher, S.**, 2018: Teacher's Guide to The Cloud Machine. (supplementary book material).
- Donaher, S.**, 2016: Energiewende: Energy Revolution Panel. *Invited Panelist*. Hosted by Emory University German Culture Club and the German Consulate, Atlanta, GA.
- Donaher, S.**, 2016: Earth Science and our Evolving Geological Landscapes. *Invited Talk*, Living in the Anthropocene: How humans are changing the world. Atlanta Science Festival, Atlanta, GA.
- Jung, E., B. A. Albrecht, G. Feingold, H. H. Jonsson, P. Chuang, and **S.L. Donaher**, 2016: Aerosols, Clouds, and Precipitation in the North-Atlantic Trades Observed During the Barbados Aerosol Cloud Experiment. Part I: Distributions and Variability. *Atmos. Chem. Phys.*, 16, 8643-8666.

- Donaher, S.,** B. A. Albrecht, and P. Zuidema, 2016: Creation of a Teaching Module based on the CEST Field Campaign. American Meteorological Society's 25th Annual Educational Symposium on Education, New Orleans, LA.
- Donaher, S.,** 2015: Cloud System Evolution in the Trades (CSET) *Educational Module*. Online at <http://cseteducation.weebly.com>.
- Donaher, S.,** 2015: Defining the Anthropocene: Who, what, when? *Invited Talk*, Emory University Environmental Science Seminar Series, Atlanta, GA.
- Donaher, S.,** B. A. Albrecht, M. Fang, W. Brown, 2014: Wind structure in stratiform rainbands over land. *Mon. Wea. Rev.*, **141**, 3933-3949.
- 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.
- Zheng, X., B. Albrecht, 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.
- 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.
- 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.
- 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.
- 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
- 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.

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.

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

MEDIA APPEARANCES

“Science experiments that will chill out your kids.” *National Geographic*. February 19, 2021.