Marybeth C. Arcodia, Ph.D.

Assistant Professor
University of Miami
Rosenstiel School Department of Atmospheric Sciences email: marcodia@earth.miami.edu
Frost Institute for Data Science & Computing website: marybetharcodia.wixsite.com/earth

EDUCATION

2021 **Ph.D., Atmospheric Sciences**
University of Miami Rosenstiel School of Marine, Atmospheric, and Earth Science (RSMAS)
Dissertation: Subseasonal Variability of ENSO-Modulated MJO Teleconnections and the Regionalized North American Impacts; *Advisor*: Dr. Ben P. Kirtman

2014 **B.A., Mathematics**
Georgetown University

ACADEMIC APPOINTMENTS

2025-present **Assistant Professor,** University of Miami
- Tenure-track appointment jointly affiliated with the Rosenstiel School of Marine, Atmospheric, and Earth Science Department of Atmospheric Sciences and the Frost Institute of Data Science & Computing

2024- 2025 **Research Scientist Scholar I**, Colorado State University (CSU) Department of Atmospheric Science
- Apply explainable artificial intelligence (XAI) and climate science techniques to develop decadal climate projection services through stakeholder guidance and foundational science

2022-2023 **Postdoctoral Researcher**, CSU Department of Atmospheric Science
- Investigated sources of climate predictability on subseasonal to decadal (S2D) timescales using and machine learning and XAI data science methods

2022-2023 **Sustainability Leadership Fellow,** CSU School of Global Environmental Sustainability
- Selected for professional development program which provides innovative training for early career scientists to effectively communicate sustainability-related research

2016-2021 **Graduate Research Assistant**, University of Miami RSMAS
- Analyzed teleconnection patterns affecting extreme precipitation and coastal flooding events in North America from interference between MJO and ENSO using reanalysis datasets and climate models

RESEARCH & PROFESSIONAL EXPERIENCE

2021-2022 **Scientific Consultant,** Miami Herald
- Performed statistical analyses to assess hyper-regionalized regional flooding rates and future flooding scenarios in coastal Florida cities

2017-2018 **Scientific Consultant**, Miami Children's Museum
- Provided expertise on sea level rise, climate change and local impacts to advise on creation of museum theatrical and hands-on exhibits for children

2015-2016 **Retirement Plan Administrator**, American Retirement Plan Services, LLC (Baltimore, MD)
- Third party administrator of retirement plans, requiring proficiency in plan valuation and performance

2014 **Research Assistant**, Georgetown University Children's Digital Media Center
- Collaborated with team of professional staff and research assistants to design an Intelligent Agent to teach early math skills and examine media characters' influence on healthy food choices

2013 **Research Intern**, National Crime and Punishment Museum (Washington D.C.)
- Conducted forensic analysis research and designed an interactive workshop based on blood stain pattern analysis, bullet trajectory analysis, and respective error calculations

TEACHING & MENTORING EXPERIENCE

2022, 2023 **Mentor**
Research Experience for Undergraduates (REU) hosted by CSU
• Mentored undergraduate intern. Designed research project, assisted with coding, held weekly meetings.

2022- present **Mentor**
CAMP (CSU Atmos Science Dept & Cooperative Institute for Research of the Atmosphere Mentoring Program)
• Mentoring program to connect graduate students, postdocs, and professors

2020-2022 **Founder and Mentor**
Graduate-Undergraduate Mentoring Program (GUM)
• Established and participated in RSMAS mentoring program created to connect graduate and undergraduate STEM students to foster inclusion and retention in the geosciences

2018, 2019 **Teaching Assistant**
University of Miami RSMAS
Course: Introduction to Weather and Climate (Professor Lisa Murphy)
• Lectured on global atmospheric circulation and ENSO. Administered and evaluated student assessments.
• *Awarded TA Excellence Award*.
Course: Physics of Climate (Professor Amy Clement)
• Lectured on MJO and climate dynamics. Led Matlab tutorial. Created and evaluated student assessments.

2017-2021 **Tutor**
Tutorial Resources
• Taught and mentored middle and high schools in private tutoring sessions in Math (Algebra through AP Calculus), Science (Physics, Chemistry, Biology, Environmental Science), History, and English/Literature

2014-2015 **Volunteer Elementary School Teacher**
WorldTeach, Inc.
• Served as a 2nd grade classroom teacher for 15 students in the impoverished rural capitol island, Weno, of Chuuk in the Federated States of Micronesia

2011 **Tutor and Mentor**
Georgetown University Center for Multicultural Equity and Access
• Selected to conduct weekly lectures to discuss Calculus I with 11 first-generation college students

PUBLICATIONS

In Review/ Submitted

[16] Thapa, Laura, **Marybeth C. Arcodia**, Elizabeth A. Barnes, 2025. "Digestible Pieces: comparing three options for partitioning the Northeast Pacific Coast for S2S sea surface height prediction", submitted to Artificial Intelligence for the Earth Systems.

[15] Furtado, Jason*, Maria Molina*, **Marybeth C. Arcodia***, and co-authors (* denotes equal contribution). 2025. "Taking the Garbage Out of Data-Driven Prediction Across Climate Timescales". Submitted to BAMS. Preprint available here.

[14] **Arcodia, Marybeth C.**, Richard Karp, and Elizabeth A. Barnes, 2025. "An explainable machine learning prediction system for early-warning of heat stress on Florida's Coral Reef", submitted to Environmental Research Communications. Preprint available here.

[13] **Arcodia, Marybeth C**. and Elizabeth A. Barnes, 2025. "Identifying the Timing of Regional Summertime Minimum Temperature Threshold Crossings and the Potential Subsequent Climate Evolutions", submitted to Earth's Future. Preprint available here.

[12] Ennis, Kelsey E., Elizabeth A. Barnes**, Marybeth C. Arcodia,** Martin A. Fernandez, Eric D. Maloney, 2025. "Turning Up the Heat: Assessing 2-m Temperature Forecast Errors in AI Weather Prediction Models During Heat Waves", submitted.

[11] Mayer, Kirsten J. Sebastian Lerch, Catherine de Burgh-Day, and **Marybeth C. Arcodia** (under review): Machine Learning for S2S Prediction, Chapter in "Sub-seasonal to Seasonal Prediction: The Gap Between Weather and Climate Forecasting", second edition

[10] Richter, J. Everette Joseph, **Marybeth Arcodia**, and coauthors. Earth System Predictability Across Time Scales for a Resilient Society: A Research Community Perspective. 2025. Submitted to *BAMS*.

Peer-Reviewed

[9] Weston Anderson; **Marybeth Arcodia**; Dillon Amaya; Emily Becker; John Callahan; Jason Furtado; Benjamin Kirtman; Sanjiv Kumar; Michelle L'Heureux; Sarah Larson; Dan Li; Maria Molina; Matt Newman; Kathleen Pegion; Andrew Robertson; Erin Towler; Baoqiang Xiang. "The Critical Need for Hindcast Infrastructure in Climate Science and Sectoral Applications" (2025). Bulletin of the American Meteorological Society.

[8] Kirtman, B. P., **Arcodia, M. C**., Becker, E. J., Besong, K., Boyd, J. S., Daher, H., Gifford, I., Infanti, J., Kaiser, J., Kramer, S., Larson, S. M., Laurindo, L. C., Lopez, H., Malloy, K., Martinez, C., Papazian, K., Pegion, K., Perlin, N., Schuler, C., Schoenwald, V., Siqueira, L. S. P., Zavadoff, B., & Zhang, W. (2025). A simplified-physics atmosphere general circulation model for idealized climate dynamics studies. Bulletin of the American Meteorological Society, 106(10), E2073–E2086. https://doi.org/10.1175/BAMS-D-24-0196.1

[7] **Arcodia, Marybeth**, Elizabeth A. Barnes, Paul J. Durack, Patrick W. Keys, Juliette Rocha, 2025. "Sea Surface Salinity Provides Subseasonal Predictability for Forecasts of Opportunity of U.S. Summertime Precipitation". Journal of Geophysical Research: Atmospheres 130, no. 6 (2025): e2024JD042402.

[6] Laís G. Fernandes, Matthew C. Wheeler, Alice M. Grimm, **Marybeth C. Arcodia**, Chapter 17 - Ocean–atmosphere interactions: Madden–Julian Oscillation and El Niño–Southern Oscillation, Editor(s): Bin Guan, Atmospheric Oscillations, Elsevier, 2025, Pages 335-362, ISBN 9780443156380, https://doi.org/10.1016/B978-0-443-15638-0.00017-4.

[5] **Arcodia, M.**, E. Becker, and B.P. Kirtman (2024*). "*Subseasonal Variability of U.S. Coastal Flooding from MJO and ENSO Teleconnection Interference", *Weather and Forecasting*. https://doi.org/10.1175/WAF-D-23-0002.1

[4] **Arcodia, M.**, Barnes, E., Mayer, K.J., Lee, J., Ordonez, A., Ahn, M. (2023) "Assessing decadal variability of subseasonal forecasts of opportunity using explainable AI." *Environmental Research: Climate*, *2*(4), 045002. https://doi.org/10.1088/2752-5295/aced60

[3] **Arcodia, M.** and B.P. Kirtman (2023). "Using simplified linear and nonlinear models to assess ENSO-modulated MJO teleconnections" *Climate Dynamics*, 1-21. https://doi.org/10.1007/s00382-023-06864-x

[2] Clement, A., Troxler, T., Keefe, O., **Arcodia, M.,** Cruz, M., Hernandez, A., Moanga, D., Adefris, Z., Brown, N., Jacobson, S. (2023) "Hyperlocal Observations Reveal Persistent Extreme Urban Heat in Southeast Florida." *Journal of Applied Meteorology and Climatology*. https://doi.org/10.1175/JAMC-D-22-0165.1

[1] **Arcodia, M.**, Kirtman, B.P., and L. Siqueira (2020). "How MJO Teleconnections and ENSO Interference Impacts U.S. Precipitation", *Journal of Climate*, 33(11), 4621-4640. https://doi.org/10.1175/JCLI-D-19-0448.1

Additional Publications

- **Arcodia, M.** (2024) Using explainable AI to identify long-term variations in short-term forecast opportunities. The Academic. https://theacademic.com/explainable-ai-identify-long-term-variations-in-short-term-forecast/
- **Arcodia, M.**, E., C. Connolly, F. Davenport, Z. Carlo Frontera, E. Gordon, D. Hueholt, A. Mamalakis and E. Valkonen (2022) "Applied Machine Learning Tutorial for Earth Scientists". https://doi.org/10.5281/zenodo.6686879
- **Arcodia, M.**, E. Becker, and B.P. Kirtman (2021). "Florida Coastal Flooding Today, Tomorrow, and the Coming Decades: A Flooding Report funded by the Miami Herald". https://zenodo.org/record/8257128
- **Arcodia, M.**, B.P Kirtman, L. Siqueira (2020) "US precipitation modulated by MJO-ENSO teleconnection interference". US CLIVAR Variations Research Highlights.

Blogs

- **Arcodia, M**, Kelsey Malloy, Victoria Schoenwald, and Kurt Hansen. (2025) "The View From Our Window: Celebrating 5 years of Seasoned Chaos and S2S Research"
- **Arcodia, M.** and Kelsey Malloy (2023) "A Sprinkle of Monsoon Magic". Seasoned Chaos Blog.
- **Arcodia, M.** and Breanna Zavadoff (2022) "What are teleconnections? Connecting Earth's climate patterns via global information superhighways". NOAA Climate.gov ENSO Blog.
- **Arcodia, M.** (2022) "How Forecasts of Opportunity Help Communities Prepare for Climate Disasters". CSU School of Global Environmental Sustainability HUMANnature Blog.
- **Arcodia, M.** (2022) "Demystifying Machine Learning in Climate Science". Seasoned Chaos Blog.
- Hansen, K., Schoenwald, V., **Arcodia, M.,** Besong, K., Malloy, K. (2022) "CSI:SC- The Spring Predictability Barrier". Seasoned Chaos Blog.
- **Arcodia, M.** (2021) "The More We Learn, the Less We Know: An Introduction to Chaos". Seasoned Chaos Blog.

- Hansen, K., Schoenwald, V., **Arcodia, M.**, Besong, K., (2021) "Things are Getting Heated: The Science behind the Polar Vortex and Stratospheric Warmings". Seasoned Chaos Blog.
- Hansen, K., Schoenwald, V., **Arcodia, M.**, Besong, K., Malloy, K. (2020) "Seasoned Chaos presents… the North Atlantic Oscillation!". Seasoned Chaos Blog.
- Hansen, K., Schoenwald, V., **Arcodia, M.**, Besong, K., Malloy, K. (2020) "Round 2: Welcome to the Seasoned Chaos Casino".
- Hansen, K., Schoenwald, V., **Arcodia, M.**, Besong, K., Malloy, K. (2020) "Round 1: ENSO is King". Seasoned Chaos Blog.
- **Arcodia, M.** (2020) "Catch a wave: how waves from the MJO and ENSO impact U.S. rainfall". NOAA Climate.gov ENSO Blog.
- **Arcodia, M.** (2020) "What Can the Tropics Tell Us About Next Week's Weather?". Seasoned Chaos Blog.

FUNDING

2024-2026 *Improving Week 3-4 precipitation forecasts by leveraging forecasts-of-opportunity identified via explainable machine learning*
Role: Lead PI
Collaborators: Elizabeth Barnes (CSU); Dan Collins (Climate Prediction Center; CPC), Emerson LaJoie (CPC)
Agency: NOAA Weather Program Office Climate Testbed

2023-2026 *Identifying and leveraging large-scale sources of predictability of regional sea-level extremes with explainable machine learning*
Role: co-PI; Lead PI: Elizabeth Barnes (CSU)
Agency: NOAA Climate Program Office Earth System Science and Modeling Research for Coastal Inundation

INVITED PRESENTATIONS AND LECTURES

2025 *Coming Full Circle: Harnessing Data Science to Advance Climate Prediction Through Forecasts of Opportunity*
University of Miami COMPASS Seminar

2025 *Leveraging Data Science Tools to Identify Subseasonal Forecasts of Opportunity*
CSU Department of Civil and Environmental Engineering Invited Lecture Series

2025 *Exploring Sea Surface Salinity as a Predictor for U.S. Summertime Precipitation*
CATALYST-PCMDI Telecon Webinar Series

2024 *Identifying Subseasonal Forecasts of Opportunity Using Explainable AI*
NOAA Week 3-4/S2S Webinar Series

2024 *Identifying Subseasonal Forecasts of Opportunity Using Explainable AI*
Commodity Weather Group

2024 *Identifying Subseasonal Forecasts of Opportunity Using Explainable AI*
Commodity Weather Group

2024 *Sea Surface Salinity Provides Subseasonal Predictability for Forecasts of Opportunity of U.S. Summertime Precipitation*
NOAA Climate Prediction Center Seminar

2024 *Leveraging Data Science to Advance Climate Predictability Across Timescales*
University of Miami Rosenstiel School and Institute for Data Science and Computing Seminar

2024 *Colors of Noise, Effective Sample Size, Regression Dilution*
Guest Lecture for CSU Course Objective Analysis

2024 *Florida Coastal Flooding: Today, Tomorrow, and the Next Ten Years*
Guest Lecture for CSU Course Sea Level Rise and A Sustainable Future

2023 *Identifying Subseasonal Forecasts of Opportunity Using Explainable AI*
US CLIVAR Predictability, Predictions, and Applications Interface (PPAI) Webinar Series

2023 *Improving Climate Predictions Beyond Weather Timescales*
Colorado Climate Services Summit

2023 *MJO Teleconnections*
Guest lecture for CSU Tropical Meteorology course

2023 *Identifying Subseasonal Forecasts of Opportunity Using Explainable AI*
NOAA Physical Sciences Laboratory Seminar

2023 *Regionalized U.S. Climate Impacts from Subseasonal Variability of MJO-ENSO Teleconnection Interference*
NOAA Climate Prediction Center Seminar

2023 *ENSO Predictions with Machine Learning*
Guest Lecture for the University of Oklahoma School of Meteorology Course Climate Dynamics
2023 *Advancing Subseasonal to Decadal Climate Predictability with Data Science*
University of Oklahoma School of Meteorology
2023 *Assessing Low Frequency Variability of Tropically-Driven Subseasonal Predictability using Explainable Machine Learning*
NCAR Global & Climate Dynamics Seminar
2023 *Advancing Subseasonal to Decadal Climate Predictability with Data Science*
University of Michigan Department of Climate and Space Sciences and Engineering
2022 *Subseasonal Forecasts: Science & applications of long-range forecasting*
Panelist for webinar hosted by InterMET.digital
2022 *Climate Change: Facts, Fiction, and the Unknown*
Guest lecture for University of Miami Adaptation in Climate Change course
2022 *Weather and Climate Science through Datasets*
Guest lecture for University of Miami Master of Science in Climate and Health course.
2021 *Climate Change: Facts, Fiction, and the Unknown*
Guest lecture for University of Miami Adaptation in Climate Change course
2021 *Weather and Climate Science through Datasets*
Guest lecture for University of Miami Master of Science in Climate and Health course.
2021 NOAA Hurricane Research Department Tropical Map Discussion Briefing
2020 NOAA Hurricane Research Department Tropical Map Discussion Briefing
2020 *A Whirlwind Tour of Hurricanes and Climate Change: Facts, Fiction, and the Unknown*
University of Texas Marine Science Institute Guest Lecture Series

CONFERENCE PRESENTATIONS

2025 **Arcodia, M.**, E. Barnes. "A Storyline Approach to Explore Impacts of Regional No-Return Temperature Thresholds Using Explainable Neural Network Predictions". AMS Annual Meeting, New Orleans, LA. (talk)
2025 **Arcodia, M.**, E. Barnes, R. Karp. "An explainable machine learning prediction system for early-warning of coral bleaching on Florida's Coral Reef". AMS Annual Meeting, New Orleans, LA. (talk)
2024 **Arcodia, M.**, E. Barnes. "A Storyline Approach to Explore Impacts of Regional No-Return Temperature Thresholds Using Explainable Neural Network Predictions". AGU Fall Meeting, Washington, D.C. (talk)
2024 **Arcodia, M.**, E. Barnes, P. Durack, P. Keys, J. Rocha. "Sea Surface Salinity Provides Forecasts of Opportunity for U.S. Summertime Midwest Precipitation". AGU Fall Meeting, Washington, D.C. (***invited talk***)
2024 **Arcodia, M.**, E. Barnes, P. Durack, P. Keys, J. Rocha. "Sea Surface Salinity Provides Forecasts of Opportunity for U.S. Summertime Midwest Precipitation". US CLIVAR Micro2Macro Workshop, Laramie, WY. (poster)
2024 **Arcodia, M.**, E. Barnes, P. Durack, P. Keys, J. Rocha. "Sea Surface Salinity Provides Forecasts of Opportunity for U.S. Summertime Midwest Precipitation". CESM Earth System Predictability Across Timescales, Boulder, CO. (poster)
2024 **Arcodia, M.**, E. Barnes, P. Durack, P. Keys, J. Rocha. "Sea Surface Salinity Provides Forecasts of Opportunity for U.S. Summertime Midwest Precipitation". US CLIVAR Confronting ESM with Observations Workshop, Boulder, CO. (poster)
2024 **Arcodia, M.**, E. Barnes, P. Durack, P. Keys, J. Rocha. "Sea Surface Salinity Provides Forecasts of Opportunity for U.S. Summertime Midwest Precipitation". AMS Annual Meeting, Baltimore, MD. (talk)
2023 **Arcodia, M.**, B.P. Kirtman, E. Becker. "Subseasonal Variability of U.S. Coastal Flooding". AMS Annual Meeting, Denver, CO. (talk)
2023 **Arcodia, M.,** E. Barnes, K.J. Mayer, J. Lee, A. Ordonez, M. Ahn. "Assessing Decadal Variability of Subseasonal Forecasts of Opportunity using Explainable AI". AMS Annual Meeting, Denver, CO.
2023 Tekoe, A., Gordon, E., **Arcodia, M.** Investigating Predictable Decadal Internal Variability in the North Atlantic Subpolar Gyre using the MPI-ESM-LR. AMS Annual Meeting, Denver, CO. (poster)
2023 Sun, L., Richter, J., **and co-authors.** "Disentangle the North American Monthly Precipitation Predictive Skill from Different Time-scales and Initial Conditions". NCAR CESM Workshop.
2023 **Arcodia, M.,** E. Barnes, K.J. Mayer, J. Lee, A. Ordonez, M. Ahn. "Assessing Decadal Variability of Subseasonal Forecasts of Opportunity using Explainable AI". NCAR CESM Workshop (poster).
2022 **Arcodia, M.,** E. Barnes, K.J. Mayer, J. Lee, A. Ordonez, M. Ahn. "Assessing Decadal Variability of Subseasonal Predictability using Explainable Machine Learning". NOAA Climate Diagnostics and Prediction Workshop.

2021 **Arcodia, M.** and B.P. Kirtman. "Using a Linear Baroclinic Model to Assess MJO Teleconnections". Australian Meteorological and Oceanographic Society Annual Meeting (virtual).
2021 **Arcodia, M.** and B.P. Kirtman. "Using a Linear Baroclinic Model to Assess MJO Teleconnections". AMS Annual Meeting (virtual; e-poster).
2020 **Arcodia, M.**, B.P. Kirtman, E. Becker. "Coastal Flooding Today, Tomorrow, and the Next Ten Years in East Coast U.S. Cities". AGU Fall Meeting (virtual; e-poster).
2019 **Arcodia, M.,** B.P. Kirtman, L. Siqueira. "U.S. Precipitation Modulated by Subseasonal Tropical Variability". AGU Fall Meeting, San Francisco, CA.
2019 **Arcodia, M.** and B.P. Kirtman. "U.S. Precipitation Modulated by Subseasonal Tropical Variability". Graduate Climate Conference, Woods Hole, MA.
2019 **Arcodia, M.** and B.P. Kirtman. "Tropical Intraseasonal Variability and the Effects on the Northern Mid-latitudes". George Mason University Earth Systems Modeling Symposium, Fairfax, VA.
2019 **Arcodia, M.** and B.P. Kirtman. "The MJO and its Teleconnections Analyzed with the NCEP-NCAR Reanalysis Dataset". AMS Annual Meeting, Phoenix, AZ (poster).
2018 **Arcodia, M.** and B.P. Kirtman. "The MJO and its Teleconnections". AMS Student Conference, Austin, TX (poster).
2017 **Arcodia, M.** and B.P. Kirtman. "The MJO and its Teleconnections". NASA JPL Center for Climate Sciences Summer. School, Pasadena, CA.

AWARDS & HONORS

2022 Elected as a Sustainability Leadership Fellow at CSU School of Global Environmental Sustainability
2021 1st place: 3-Minute Thesis 5th Annual Competition hosted by the University of Miami (2021)
2020 RSMAS Best Student Publication (Millero Prize), in recognition of "How MJO Teleconnections and ENSO Interference Impacts U.S. Precipitation" (*Journal of Climate, 2020)*
2020 2nd place Best Presentation of Scientific Content & 3rd place Best Overall Seminar; RSMAS Student Seminar Series
2020 International Day of the Girl Invited Panelist hosted by University of Miami Athletics
2018 Teaching Assistant Excellence Award (*Introduction to Weather and Climate Course)*
Travel funding awards: Graduate Climate Conference (2019), George Mason University Earth Systems Modeling Symposium (2019), NASA JPL Center for Climate Sciences Summer School (2017)

MEDIA

2025 Interview with Newsweek on La Nina updates
2025 Interview with IDSC Magazine on my XAI work at University of Miami
2024 Interview with All Hands and Hearts on Hurricane Milton and the 2024 Hurricane Season
2024 Interview with Eos reporter, Grace van Deelen, on record-breaking temperatures and El Niño
2023 Interview with Fox Weather on strong El Niño impacts
2023 Interview with Science News writer, Nikk Osaga, on record-breaking heat
2023 Interview with Reuter's writer, Gloria Dickie, on global El Niño impacts
2023 Interview with San Francisco Chronicle writer, Jack Lee, on California's extreme weather
2022 Interview with UC Boulder Waterdesk Writer, Tom Yuslman, on La Niña's impact on the jet stream
2022 Interview with CNN Meteorologist, Allison Chinchar, on atmospheric rivers impact on California extreme weather
2021 Interview with WLRN: S Florida NPR Affiliate J. Staletovich on Seasoned Chaos Blog
2020 Interview with New York Times Climate Reporter, Henry Fountain, on record-breaking temperatures
2020 Interview with Austin, TX news station meteorologist, David Yeomans, on La Niña impacts
2019 Interview with Miami Times Writer, Wyatt Kopelman, on climate change and politics

PROFESSIONAL SERVICE

2024-present Member, US CLIVAR Predictability, Predictions, and Applications Interface (PPAI) Panel
2023- present Member, US CLIVAR Working Group on Climate Data and Predictions for Coastal Solutions
2023- present CSU/CIRA Diversity, Equity, and Inclusion Committee
2024 Session Chair, "Artificial Intelligence for Actionable Insights for Climate Science". AMS Annual Meeting.
2024 Session Chair, "Improvements to Subseasonal-to-Seasonal (S2S) Predictions using Novel Statistical and Artificial Intelligence/Machine Learning (AI/ML) Methods". AMS Annual Meeting.

2023	Session Chair, "Improvements to Subseasonal-to-Seasonal (S2S) Predictions using Novel Statistical and Artificial Intelligence/Machine Learning (AI/ML) Methods". AGU Fall Meeting.
2023	Session Chair, "World Through My Eyes: Braiding Reasonable Accommodations Into Daily Living (BRAID Living)". AMS Annual Meeting.
2020	Session Chair, "Living in a World of Rapid Global Environmental Changes: The Intersection of Environmental Disasters, Human Health, and Vulnerable Populations". AMS Annual Meeting.
2019- present	AMS Board on Representation, Accessibility, Inclusion, and Diversity (BRAID) - Sub-Committee Involvement: Accessibility Committee (co-chair), Women in Atmospheric Sciences Committee, Women in Science Scholarship Review Board, Lorenz Teaching Excellence Award Review Board, Award for Distinguished Science Journalism in the Atmospheric and Related Sciences
2019- present	Writer, Editor: Seasoned Chaos blog on S2S forecasting for scientists and non-scientists - Website: seasonedchaos.github.io
2016- present	Georgetown University Alumni Admissions Interviewer
2019-2020	Organizing Committee and Session Chair: Miami 2020 Climate Symposium

Reviewer: Journal of Climate, Weather and Forecasting, Nature: Scientific Reports, Artificial Intelligence for the Earth Systems, Bulletin of the AMS, NSF Proposal, AGU Textbooks, Geophysical Research Letters, Climate Dynamics, Earth's Future, Stochastic Env Research and Risk Assessment, Env. Research Letters, and more

Member: American Meteorological Society, American Geophysical Union, American Association for the Advancement of Science

OUTREACH & COMMUNITY SERVICE

2025	Helped lead atmospheric science-focused machine learning tutorial for North Carolina A&T University Physics Department, including lecture and coding material
2023	Disaster Relief: Volunteered in Maui for wildfire relief for two weeks with nonprofit, All Hands All Hearts
2023- present	Nerd Nite Boss: organizer of monthly community event with speakers on open topics to promote community engagement and knowledge sharing
2022- present	Letters to a Pre-Scientist Pen Pal (program to connect students to STEM professionals via written letters)
2021- present	Climate Science Advisor for The Hive Initiative, an international climate action non-profit
2021- present	Southeast Florida Schools Lecturer - Outreach talks to elementary school students on climate change
2021-2022	Sea Turtle Conservation: conducted endangered sea turtle nest surveys in Miami with nonprofit, MORAES
2018-2020	Merchandise Chair: RSMAS Marine Science Graduate Student Organization
2019-2020	RSMAS New Student Professional Development Planning Committee
2018-2020	RSMAS Student Seminar Committee
2017-2020	Student Coordinator and CaneContact for prospective and incoming RSMAS graduate students
2017-2020	Lecturer for "Canes on Canes" and "Students for Students" - Outreach talks to local students and educators on hurricane preparedness, climate change and impacts
2020	Climate Café Series Organizer and Speaker - Webinar series to on the different facets of climate science happening at RSMAS
2019	100 Great Ideas Incubator Selections Committee - Evaluated competitive proposals for local resilience projects
2017-2019	Volunteer and coordinator at local science education and related events including: - ArtSea Ocean Kids, Green Education Fair, Miami Climate Hackathon, Miami-Dade Sea Level Rise Workshop

PROFESSIONAL DEVELOPMENT

2024	Identifying Active Learning Approaches that Align with Course Goals, CSU Institute for Learning and Teaching.
2023	Equitable Hiring Practices Workshop. CSU Walter Scott, Jr. College of Engineering ENgage Series.
2022	Biased Data, Biased Model Workshop. CSU Social Responsibility Course.
2022	Mythbusting in the Classroom: Science of Learning and Teaching". CSU Institute for Learning and Teaching.
2020.	NCAR Artificial Intelligence for Earth System Science Week-long Summer School and Hackathon.
2020	NCAR Community Earth System Model (CESM) Tutorial.

2019 RSMAS Writing Workshop.
2019 Building Professional Relationships that Thrive: Mentoring Actively Mentoring Workshop.
2018 NCAR NCL (NCAR Command Language) Workshop.
2017 NASA Jet Propulsion Lab Center for Climate Sciences Summer School.
