# FALKO JUDT

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National Center for Atmospheric Research

#### **RESEARCH INTERESTS**

predictability and dynamics of high impact weather, tropical meteorology, tropical cyclones, numerical weather prediction

### PROFESSIONAL EXPERIENCE

Scientist II, Mesoscale and Microscale Meteorology Laboratory National Center for Atmospheric Research	2022–present
Scientist I, Mesoscale and Microscale Meteorology Laboratory National Center for Atmospheric Research	2018–2022
<b>Postdoctoral Fellow</b> , Advanced Study Program National Center for Atmospheric Research	2016–2017
<b>Postdoctoral Fellow</b> Department of Ocean Sciences, University of Miami	2015
<b>Research Assistant</b> Division of Meteorology and Physical Oceanography, University of Miami	2007–2014
EDUCATION	
<b>Ph.D. in Meteorology &amp; Physical Oceanography</b> Rosenstiel School of Marine and Atmospheric Science University of Miami, Miami, Florida Advisor: Shuyi S. Chen, Ph.D.	2014
M.S. in Meteorology & Physical Oceanography Rosenstiel School of Marine and Atmospheric Science University of Miami, Miami, Florida Advisor: Shuyi S. Chen, Ph.D.	2009
Exchange Student at the University of Miami	2006-2007
<b>Vordiplom</b> (intermediate exam) in Physics & Meteorology University of Leipzig, Leipzig, Germany	2005
AWARDS AND HONORS	
<b>NCAR Accelerated Scientific Discovery Compute Allocation</b> (1,000,000 GPU-he Project Title: Global Convection-Permitting Simulations with GPU-MPAS	ours) 2022
Outstanding Publication Award National Center for Atmospheric Research	2020
Paper of the Year Award Mesoscale and Microscale Meteorology Laboratory	2020
Early Career Scientist Best Poster Award	2017

5th WGNE Workshop on Systematic Errors in Weather and Climate Models

NCAR Strategic Capability Computing Support (3,000,000 Yellowstone core-hours) Project Title: A Global High-Resolution Predictability Experiment with MPAS	2016
NCAR Advanced Study Program Postdoctoral Fellowship	2015
NOAA Climate and Global Change Postdoctoral Fellowship 201	5 (declined)
Best Student Seminar in Meteorology and Physical Oceanography Rosenstiel School of Marine and Atmospheric Science	2014
<b>Outstanding Poster Presentation</b> 94th American Meteorological Society Annual Meeting	2014
<b>Koczy Fellowship</b> (Support for an outstanding graduate student in his/her final year) Rosenstiel School of Marine and Atmospheric Science	2013
<b>Best Student Paper in Meteorology and Physical Oceanography</b> Rosenstiel School of Marine and Atmospheric Science	2011

### **REFEREED PUBLICATIONS**

Chen, X., C. M. Rozoff, R. F. Rogers, K. L. Corbosiero, D. Tao, J.-F. Gu, **F. Judt**, E. A. Hendricks, Y. Wang, M. M. Bell, D. P. Stern, K. D. Musgrave, J. A. Knaff, and J. Kaplan, 2023: Research Advances on Internal Processes Affecting Tropical Cyclone Intensity Change from 2018–2022. *Trop. Cyclone Res. Rev*, accepted.

Rios-Berrios, R., **F. Judt**, G. H. Bryan, B. Medeiros, and W. Wang, 2023: Three-Dimensional Structure of Convectively Coupled Equatorial Waves in Aquaplanet Experiments with Resolved or Parameterized Convection. J. Climate, **36**, 2895–2915, https://doi.org/10.1175/JCLI-D-22-0422.1.

Rotunno, R., C. Snyder, and F. Judt, 2023: Upscale versus up-amplitude growth of forecast-error spectra. J. Atmos. Sci., 80, 63–72, https://doi.org/10.1175/JAS-D-22-0070.1.

Stuart, N., G. Hartfield, D. M. Schulz, Katie Wilson, G. West, R. Hoffman, G. Lackmann, H. Brooks, P. Roebber, T. Bals-Elholtz, H. Obermeier, F. Judt, P. Market, D. Nietfeld, B. Telfeyan, D. DePodwin, J. Fries, E. Abrams, J. Shields, 2022: The Evolving Role of Humans in Weather Prediction and Communication. *Bull. Amer. Meteor. Soc.*, 103, E1720–E1746, https://doi.org/10.1175/BAMS-D-20-0326.1.

Nystrom, R., and **F. Judt**, 2022: The consequences of surface-exchange coefficient uncertainty on an otherwise highly predictable major hurricane. *Mon. Wea. Rev.*, **150**, 2073–2089, https://doi.org/10.1175/MWR-D-21-0320.1.

Rios-Berrios, R., G. Bryan, B. Medeiros, and **F. Judt**, 2022: Differences in Tropical Rainfall in Aquaplanet Simulations with Resolved or Parameterized Deep Convection. J. Adv. Model. Earth Syst., 14, e2021MS002902, https://doi.org/10.1029/2021MS002902.

Judt, F., and R. Rios-Berrios, 2021: Resolved Convection Improves the Representation of Equatorial Waves and Tropical Rainfall Variability in a Global Nonhydrostatic Model. *Geophys. Res. Let.*, 48, e2021GL093265, https://doi.org/10.1029/2021GL093265.

Judt, F., D. Klocke, R. Rios-Berrios, B. Vanniere, F. Ziemen, L. Auger, J. Biercamp, C. Bretherton, X. Chen, P. Düben, C. Hohenegger, M. Khairoutdinov, C. Kodama, L. Kornblueh, S.-J. Lin, M. Nakano, P. Neumann, W. Putman, N. Röber, M. Roberts, M. Satoh, R. Shibuya, B. Stevens, P. L. Vidale, N. Wedi, and L. Zhou, 2021: Tropical Cyclones in Global Storm-Resolving Simulations. J. Meteor. Soc. Japan, 99, 579–602, https://doi.org/10.2151/jmsj.2021-029.

Wu, C.-C., L.-Z. Shen, and **F. Judt**, 2021: The Role of Surface Heat Fluxes on the Size of Typhoon Megi (2016). *J. Atmos. Sci.*, **78**, 1075–1093, https://doi.org/10.1175/JAS-D-20-0141.1.

Judt, F., 2020: Atmospheric Predictability of the Tropics, Middle Latitudes, and Polar Regions Explored through Global Storm-Resolving Simulations. J. Atmos. Sci., 77, 257–276, https://doi.org/10.1175/JAS-D-19-0116.1.

Stevens, B., M. Satoh, L. Auger, J. Biercamp, C. Bretherton, X. Chen, P. Düben, F. Judt, M. Khairoutdinov, D. Klocke, C. Kodama, L. Kornblueh, S.-J. Lin, P. Neumann, W. Putman, N. Röber, R. Shibuya, B. Vanniere, P.-L. Vidale, N. Wedi, and L. Zhou, 2019: DYAMOND: The DYnamics of the Atmospheric general circulation Modeled On Non-hydrostatic Domains. *Progress in Earth and Planetary Science*, 6, 61, https://doi.org/10.1186/s40645-019-0304-z.

Satoh, M., B. Stevens, F. Judt, M. Khairoutdinov, S.-J. Lin, W. Putman, and P. Düben, 2019: Global Cloud-Resolving Models. *Curr. Clim. Change Rep.*, 5, 172–84, https://doi.org/10.1007/s40641-019-00131-0.

Fox, K. R., and **Judt**, **F.**, 2018: A Numerical Study on the Extreme Intensification of Hurricane Patricia (2015). *Wea. Forecasting*, **33**, 989–999, https://doi.org/10.1175/WAF-D-17-0101.1.

Judt, F., 2018: Insights into Atmospheric Predictability through Global Convection-Permitting Model Simulations. J. Atmos. Sci., 75, 1477–1497, https://doi.org/10.1175/JAS-D-17-0343.1.

Zadra, A., K. Williams, A. Frassoni, M. Rixen, A. Adames, J. Berner, F. Bouyssel, B. Casati, H. Christensen, M. Ek, G. Flato, Y. Huang, **F. Judt**, H. Lin, E. Maloney, W. Merryfield, A. van Niekerk, T. Rackow, K. Saito, N. Wedi, and P. Yadav, 2018: Systematic Errors in Weather and Climate Models: Nature, Origins, and Way Forward. *Bull. Amer. Meteor. Soc.*, **99(4)**, ES67-ES70, https://doi.org/10.1175/BAMS-D-17-0287.1.

E. A. D'Asaro, A. Y. Shcherbina, J. M. Klymak, J. Molemaker, G. Novelli, C. M. Guigand, A. C. Haza, B. K. Haus, E. H. Ryan, G. A. Jacobs, H. S. Huntley, N. J. M. Laxague, S. S. Chen, **F. Judt**, J. C. McWilliams, R. Barkan, A. D. Kirwan, Jr., A. C. Poje, and T. M. Ozgokmen, 2018: Ocean Convergence and the Dispersion of Flotsam. *Proc. Natl. Acad. Sci. U. S. A.*, **115(6)**, 1162–1167, https://doi.org/10.1073/pnas.171845311.

Judt, F., and S. S. Chen, 2016: Predictability and Dynamics of Tropical Cyclones Rapid Intensification Deduced from High-Resolution Stochastic Ensembles. *Mon. Wea. Rev.*, 144, 4395–4420, https://doi.org/10.1175/MWR-D-15-0413.1.

Judt, F., S. S. Chen, and M. Curcic, 2016: Atmospheric Forcing of the Upper Ocean Transport in the Gulf of Mexico: From Seasonal to Diurnal Scales. J. Geophys. Res. Oceans, 121, 4416–4433, https://doi.org/10.1002/2015JC011555.

Judt, F., S. S. Chen, and J. Berner, 2016: Predictability of Tropical Cyclone Intensity: Scale-Dependent Forecast Error Growth in High-Resolution Stochastic Kinetic-Energy Backscatter Ensembles. *Quart. J. Roy. Meteor. Soc.*, 142, 43–57, https://doi.org/10.1002/qj.2626.

Chen, S. S., B. W. Kerns, N. Guy, D. P. Jorgensen, J. Delano, N. Viltard, C. Zappa, **F. Judt**, C.-Y. Lee, and A. Savarin, 2016: Aircraft Observations of Dry Air, ITCZ, Convective Cloud Systems and Cold Pools in MJO During DYNAMO. *Bull. Amer. Meteor. Soc.*, **97**, 405–423, https://doi.org/10.1175/BAMS-D-13-00196.1.

Judt, F., and S. S. Chen, 2015: A New Aircraft Hurricane Wind Climatology and Applications in Assessing the Predictive Skill of Tropical Cyclone Intensity using High-Resolution Ensemble Forecasts. *Geophys. Res. Let.*, **42**, 6043–6050, https://doi.org/10.1002/2015GL064609.

Coelho E., P. Hogan, G. Jacobs, P. Thoppil, H. Huntley, B. Haus, B. Lipphardt, Jr., A. D. Kirwan,

Jr., E. H. Ryan, J. Olascoaga, G. Novelli, F. Beron-Vera, A. C. Haza, A. C. Poje, A. Griffa, T.M. Ozgokmen, D. Bogucki, S. Chen, M. Curcic, M. Iskandarani, **F. Judt**, N. Laxague, A. J. Mariano, A. J. H. M. Reniers, C. Smith, A. Valle-Levinson, and M. Wei, 2015: Ocean Current Estimation Using a Multi-Model Ensemble Kalman Filter During the Grand Lagrangian Deployment Experiment (GLAD). *Ocean Model.*, **87**, 86–106, https://doi.org/10.1016/j.ocemod.2014.11.001.

Judt, F. and S. S. Chen, 2014: An Explosive Convective Cloud System and its Environmental Conditions in MJO Initiation Observed during DYNAMO. J. Geophys. Res. Atmos., 119, 2781–2795, https://doi.org/10.1002/2013JD021048.

Jacobs, G. A., B. Bartels, D. Bogucki, F. J. Beron-Vera, S. S. Chen, E. F. Coelho, M. Curcic, A. Griffa, M. Gough, B. K. Haus, A.C. Haza, R. W. Helber, P. J. Hogan, H. Huntley, M. Iskandarani, **F. Judt**, A. D. Kirwan Jr., N. Laxague, A. Valle-Levinson, B. Lipphardt, A. Mariano, H. E. Ngodock, G. Novelli, M. J. Olascoaga, T. M. Ozgokmen, P. G. Thoppil, A. C. Poje, A. J. H. M. Reniers, C. D. Rowley, E. H. Ryan, S. R. Smith, P. L. Spence, and M. Wei, 2014: Data Assimilation Considerations for Improved Ocean Predictability during the Gulf of Mexico Grand Lagrangian Deployment (GLAD), *Ocean Model.*, **83**, 98–117, https://doi.org/10.1016/j.ocemod.2014.09.003.

Judt, F., and S. S. Chen, 2013: Reply to "Comments on 'Convectively Generated Potential Vorticity in Rainbands and Formation of the Secondary Eyewall in Hurricane Rita of 2005". J. Atmos. Sci., 70, 989–992, https://doi.org/10.1175/JAS-D-12-0151.1.

Judt, F., and S. S. Chen, 2010: Convectively Generated Potential Vorticity in Rainbands and Formation of the Secondary Eyewall in Hurricane Rita of 2005. J. Atmos. Sci., 67, 3581–3599, https://doi.org/10.1175/2010JAS3471.1.

#### SUBMITTED MANUSCRIPTS

**Judt, F.**, R. Rios-Berrios, and G. H. Bryan: Marathon vs. Sprint: Two Modes of Tropical Cyclone Rapid Intensification in a Global Convection-permitting Simulation. Submitted to *Mon. Wea. Rev.* in February 2023. Interim decision: major revision.

#### MANUSCRIPTS IN PREPARATION

**Judt, F.**: An Object-based Approach to Atmospheric Predictability. To be submitted to *J. Atmos. Sci.* 

**Judt**, **F.**, R. Rios-Berrios, and co-authors: Insights into Atmospheric Predictability with Convection-Permitting Aquaplanet Simulations. To be submitted to *J. Atmos. Sci.* 

**Judt, F.,** R. Rios-Berrios, W. Wang: Three-Dimensional Structure of Convectively Coupled Equatorial Waves in Global Simulations with Resolved versus Parameterized Convection. To be submitted to *J. Meteor. Soc. Japan.* 

Judt, F., and co-authors: An Intercomparison of Tropical Waves in the DYAMOND Models. To be submitted to *J. Meteor. Soc. Japan.* 

#### NON-REFEREED PUBLICATIONS

Judt, F., 2017: How strong can a hurricane get? *Physics Today*, doi:10.1063/PT.6.1.20170908a. http://physicstoday.scitation.org/do/10.1063/PT.6.1.20170908a/full/

Judt, F., 2014: Predictability of Tropical Cyclone Intensity. *Open Access Dissertations*. Paper 1350. http://scholarlyrepository.miami.edu/oa\_dissertations/1350 Judt, F., and S. S. Chen, 2014: Rapid Intensification in Tropical Cyclones: Understanding Physical Processes and Forecast Uncertainly Using High-resolution Stochastic Ensembles. *31st Conference on Hurricanes and Tropical Meteorology*, San Diego, CA, Amer. Meteor. Soc., 14D.9

Judt, F., 2009: Convectively Generated Potential Vorticity in Rainbands and Secondary Eyewall Formation in Hurricanes (2009). *Open Access Theses*. Paper 214. http://scholarlyrepository.miami.edu/oa\_theses/214

#### TECHNICAL PRESENTATIONS

#### **Invited Talks**

2023: Keynote: The Global Hydroclimate. NCAR Water Systems Retreat, 28 Apr 2023, Boulder, CO.

2023: Tropical Weather Systems in MPAS With and Without Resolved Convection. Joint Workshop of Global-Storm Resolving Analysis and the 2nd EarthCARE Satellite Modeling Workshop, 28 Mar 2023, Shuzenji, Japan.

2022: Progress in Tropical Weather Prediction with Global km-scale Models. ECMWF Annual Seminar, 15 Sep 2022, Reading, UK.

2022: How far out can we predict the weather? 2022 ASP Colloquium-Workshop, 14 July 2022, Boulder, CO.

2022: The EarthCARE Satellite—The first Doppler Radar in Space. NEw Observational Technologies and Advanced Conops (NEOTAC) Seminar, 5 May 2022, remote.

2022: The Global Hydroclimate—Reasons why global models are ideal tools to simulate the water cycle. NCAR Water Systems Retreat, 3 March 2022, remote.

2022: Tropical Cyclone Prediction with Global Storm-Resolving ( $\Delta x \leq 5 \text{ km}$ ) Models STEP Annual Workshop, 3 February 2022, remote.

2021: How far into the future can we predict the weather? Insights into Atmospheric Predictability With Global Storm-Resolving Simulations Atmospheric Science Seminar Series-University of Wyoming, 26 October 2021, Laramie, WY.

2021: Middle-Latitudes vs. Tropics: Who Wins the Predictability Competition? 2021 ASP Virtual Colloquium–Workshop, 5 August 2021, remote.

2021: Insights into Atmospheric Predictability With Global Convection-Permitting Simulations Meteorologisches Kolloquium Ludwig-Maximilians-Universität, München, 29 June 2021, remote.

2021: Progress in Tropical Weather and Climate Prediction with Global Storm-Resolving Models. Annual Meeting of the Japanese Geophysical Society, 4 June 2021, remote.

2021: Progress in Tropical Weather and Climate Prediction with Global Storm-Resolving Models. *Seminar at University of Hohenheim*, 18 May 2021, remote.

2021: Atmospheric Predictability Investigated With a Global Storm-Resolving Model. OCP Seminar at Lamont-Doherty Earth Observatory, 12 March 2021, remote.

2020: Global Storm-Resolving Modeling. NCAR Water Systems Retreat, 1 February 2020, Boulder, CO.

2020: Atmospheric Predictability of the Tropics, Middle Latitudes, and Polar Regions Explored Through Global Storm-Resolving Simulations.

AMS Annual Meeting, 4 January 2020, Boston, MA.

2019: Atmospheric Predictability Explored Through Global Storm-Resolving Simulations. *WWGNE-PDEF Workshop*, 3 September 2020, Boulder, CO.

2019: Insights into Atmospheric Predictability with Global Storm-Resolving Simulations. IUGG 2019, 11 July 2019, Montreal, Canada.

2019: Global Cloud-Resolving Models. Workshop on Future Physics in Global Models, 14 June 2019, Boulder, CO.

2018: Tropical Cyclones in Global Convection-Permitting MPAS Simulations. 2nd GEWEX Convection-Permitting Climate Modeling Workshop, 5 September 2018, Boulder, CO.

2018: Insights into Atmospheric Predictability Through Global Cloud-Resolving Model Simulations Seminar at Monash University, 23 February 2018, Melbourne, Australia.

2017: Using Stochastic Ensembles to Quantify the Predictability of Hurricane Intensity. 2nd Boulder Stochastics Meeting, 22 August 2017, Boulder, CO.

2017: To what extent can we predict the weather? Seminar at the University of Oklahoma, 4 May 2017, Norman, OK.

2017: For how long can we predict the weather? *MMM Seminar*, 19 April 2017, Boulder, CO.

2016: Predictability of Tropical Cyclone Intensity. *MMM Seminar*, 24 March 2016, Boulder, CO.

2015: Using Stochastic Ensembles to Better Understand Hurricane Predictability. *Hurricane Ensemble Workshop*, 17 November 2015, Miami, FL.

2015: Predictability of Tropical Cyclone Intensity. Seminar at the National Hurricane Center, 19 February 2015, Miami, FL.

2014: Rapid Intensification in Tropical Cyclones - Physical Mechanisms from High-Resolution Models and Ensembles.

Prediction of Tropical Cyclone Rapid Intensity Change (RIC) Workshop, 18–20 November 2014, Miami, FL.

#### Conference Presentations (within the last three years, not including invited talks)

2023: "Marathon" vs. "Sprint": Two Modes of Tropical Cyclone Rapid Intensification in a Global Cloud-Resolving Simulation. 103rd AMS Annual Meeting, Denver, CO. [talk]

2022: Insights Into Atmospheric Predictability Through Global Cloud-resolving Simulations. 2022 AOGS Virtual Meeting, remote. [talk]

2022: Two Types of Rapid Intensification in a Global Cloud-Resolving Model. 35th Conference on Hurricanes and Tropical Meteorology, New Orleans, LA. [talk]

2022: Resolved Convection Improves the Representation of Equatorial Waves and Tropical Rainfall Variability in a Global Nonhydrostatic Model. *35th Conference on Hurricanes and Tropical Meteorology*, New Orleans, LA. [poster]

2022: Resolved Convection Improves the Representation of Equatorial Waves and Tropical Rainfall Variability in a Global Nonhydrostatic Model. *102nd AMS Annual Meeting*, remote. [talk]

2021: Resolved Convection Improves the Representation of Equatorial Waves and Tropical Rainfall Variability in a Global Nonhydrostatic Model. 2021 AGU Fall Meeting, remote. [e-poster]

2021: Tropical Cyclone Prediction with Global High-Resolution Models. 34th Conference on Hurricanes and Tropical Meteorology, remote. [talk]

### RESEARCH EXPERIENCE

# National Center for Atmospheric Research

Scientist I/II

- $\cdot\,$  Conducting basic research to improve the prediction of high-impact weather.
- $\cdot\,$  Using next-generation global weather models, including the Model for Predication Across Scales (MPAS) to investigate the predictability of hurricanes and other severe weather phenomena on time scales from days to weeks.
- · Developing new techniques to analyze data from high-resolution model simulations. Collaborating within NCAR and the scientific community to further understanding of atmospheric predictability, dynamics of extreme weather phenomena, numerical weather prediction and tropical meteorology research.

# National Center for Atmospheric Research

ASP Postdoctoral Fellow

 $\cdot$  Analyzed error growth in convection-allowing global model simulations to investigate atmospheric predictability from convective to planetary scales.

# University of Miami

 $Post doctoral \ Associate$ 

- $\cdot$  Examined the predictability and dynamics of tropical cyclone rapid intensification with stochastic numerical model ensembles.
- $\cdot$  Evaluated output from a coupled ocean-wave-atmosphere model with buoy observations to better understand atmosphere-ocean interactions in the Gulf of Mexico.

# University of Miami

Research Assistant

- · Ph.D.-Thesis research: Quantified the predictability of tropical cyclone intensity with high-resolution numerical model ensembles.
- Investigated interactions between deep convection and the environment during initiation of the Madden-Julian Oscillation (MJO) using field experiment observations.
- $\cdot\,$  M.S.-Thesis research: Examined numerical model output and aircraft observations to highlight the role of convectively generated potential vorticity in the secondary eyewall formation in Hurricane Rita of 2005.

# University of Miami

 $International \ Research \ Scholar$ 

 $\cdot$  Analyzed numerical model output and aircraft observations to study vortex Rossby waves and their impact on the intensity changes of Hurricanes Rita and Katrina of 2005.

# TEACHING & MENTORING EXPERIENCE

### National Center for Atmospheric Research Research Mentor

· Mentoring of Advanced Study Program postdocs.

2015-2015

2016-2017

2018-present

2008-2014

2007

2021-2023

### National Center for Atmospheric Research

Research Mentor

· Designed a research project for and mentored an undergraduate student through the Significant Opportunities in Atmospheric Research and Science (SOARS) program.

# National Center for Atmospheric Research

**Research** Mentor

· Co-mentored an undergraduate student through the NCAR Earth System Science Internship (NESSI) program.

# University of Miami

Teaching Assistant

· Prepared lectures and graded homework/exams for MSC 243 Introduction to Weather Forecasting (undergraduate level).

Instructor: Sharanya Majumdar, Ph.D.

### FIELD WORK EXPERIENCE

Grand Lagrangian Deployment (GLAD), Surfzone Coastal Oil Pathways Experiment (SCOPE), Lagrangian Submesoscale Experiment (LASER) Miami, FL 2012, 2013, 2016

· Provided daily weather/ocean current/wave forecasts to assist with ship/aircraft operations and drifter deployments in the Gulf of Mexico.

### Dynamics of the Madden-Julian Oscillation (DYNAMO)

Diego Garcia, British Indian Ocean Territory

- · Processed dropsondes in realtime onboard NOAA's WP-3D research aircraft (6 flights, 200 dropsondes, 52:30 h total flight hours).
- · Briefed PI team/aircraft crew with daily weather reports to optimize flight plans.

### Weather In-Situ Deployment Optimization Method (WISDOM) Florida Keys

• Prepared and launched super-pressure balloons that observe data-sparse regions to improve hurricane track forecasts.

### LEADERSHIP ACTIVITIES & COMMUNITY SERVICE

Co-Convener, AOGS 2023 Meeting, Singapore	2023
Co-Organizer and Session Chair, 35th Conference on Hurricanes and Tropical Metleans, LA	teorology, New Or- 2022
Co-Organizer and Session Chair, NCAR Water System Retreat	2022
Editor, Journal of the Meteorological Society of Japan	2019– $2020, 2022$ –
Organizer, Thompson Lecture Series, Advanced Study Program, NCAR	2017
Convener and Session Chair, 2016 AGU Fall Meeting, San Francisco, CA	2016
Organizer, Research Review Seminars Series, Advanced Study Program, NCAR	2016
President, Greater Miami Chapter of the AMS	2009 – 2015
Student Seminar Committee (Rosenstiel School of Marine and Atmospheric Science	e) $2012-2014$

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2016-2019, 2022-2023

2009

2020

2008-2010

2011

### **EDUCATION & OUTREACH**

Participated in the 1st Colorado Science Day at the State Capitol in Denver, CO	2018
Participated in the <i>Canes on Canes</i> outreach program, a lecture series that presents	2012-2015
hurricane information and preparedness techniques in an approachable way	
Provided weather forecasts for the University of Miami's Special Project and Events Office	2012-2015
Led map discussions at NOAA's Hurricane Research Division in support	2009-2015
of various field programs	
Reviewed American Meteorological Society/Industry Minority Scholarship applications	2009–2015
Guided campus tours for prospective students on behalf of the Rosenstiel School	2010-2011
of Marine and Atmospheric Science Advancement Office	
Judged high school students' research projects at the 2010 Miami-Dade County Science Fa	ir <i>2010</i>
Participated in an Outreach Video Campaign for the University of Miami	2009
[available online at http://www.youtube.com/watch?v=ygWJCK2Ww4A]	
Speaker at the Rosenstiel School of Marine and Atmospheric Science	2008
Hurricane Preparedness Colloquium in Anticipation of Hurricane Ike	

### **PROFESSIONAL ASSOCIATIONS & ACTIVITIES**

American Meteorological Society (AMS), Member	2007-present
Greater Miami Chapter of the AMS, Member	2007 – 2015
American Geophysical Union (AGU), Member	2007-present
Deutsche Meteorologische Gesellschaft (DMG), Member	2005-present
Reviewer for: Journal of the Atmospheric Sciences, Monthly Weather Review, .	Journal of Geophysical
Research, Geophysical Research Letters, Journal of Climate, Journal of Ocean En	ngineering and Science

#### TECHNICAL STRENGTHS

Languages:English, French, Spanish, and German (native)Computer Languages:MATLAB, NCL, Python, Fortran, shell scriptingOperating Systems:Macintosh, Windows, Linux and UNIX