Curriculum Vitae

Jonathan A. Zawislak

Univ. of Miami (UM) / Cooperative Institute for Marine and Atmospheric Studies (CIMAS)
NOAA / Atlantic Oceanographic and Meteorological Laboratory / Hurricane Research Division
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EDUCATION:

2013 *PhD Atmospheric Sciences* University of Utah
Dissertation titled, "Necessary and Sufficient Conditions for Tropical Cyclogenesis"
Chair: Dr. Edward J. Zipser

2008 *M.S. Meteorology* University of Utah
Thesis titled, "Observations of 7 African Easterly Waves in the East Atlantic during 2006"
Chair: Dr. Edward J. Zipser

2006 *B.S. Meteorology* Pennsylvania State University

PROFESSIONAL EXPERIENCE:

April 2019 – Present **Associate Scientist**
Univ. of Miami/CIMAS, NOAA/AOML/HRD

July 2017 – March 2019 **Assistant Scientist**
Univ. of Miami/CIMAS, NOAA/AOML/HRD

October 2014 – July 2017 **Research Assistant Professor**
Dept. of Earth and Environment, Florida International University

July 2015 – Present **Adjunct Assistant Professor,**
Dept. of Atmospheric Sciences, Univ. of Utah

July 2014 – October 2014 **Research Assistant Professor,**
Dept. of Atmospheric Sciences, Univ. of Utah

July 2013 – June 2014 **Postdoctoral Research Associate**,
Dept. of Atmospheric Sciences, Univ. of Utah

June 2006 – June 2013 **Graduate Research Assistant**,
Dept. of Atmospheric Sciences, Univ. of Utah

FUNDED RESEARCH PROPOSALS:

2016 – 2021 **NASA ROSES, New (Early Career) Investigator Program in Earth Science**:
PI, "The Relationship between Precipitation and Environmental Forcing during Tropical Cyclone Formation"

2017 – 2021 **NASA ROSES, Weather and Atmospheric Dynamics**:
PI, "Why do tropical cyclones evolve toward symmetry before intensification? An observational and modeling study"

2020 – 2023 **NASA ROSES, Weather and Atmospheric Dynamics**:
PI, "Using Aircraft and Satellite Observations to Characterize African Easterly Wave Variability and Environmental Factors Associated with Downstream Tropical Cyclogenesis"

2020 – 2023 **Office of Naval Research, Departmental Research Initiative: Tropical Cyclone Rapid Intensification**:
Co-PI, "Investigating interactions between the tropical cyclone inner core and near environment and their impacts on intensity change"

PUBLICATIONS:

Alvey, G., M. Fischer, P. Reasor, R. Rogers, *J. Zawislak*, 2021: Processes Underlying the Vortex Repositioning during Dorian's (2019) Early Stages that Increased its Favorability for Rapid Intensification. *Monthly Weather Review*, in press.

Zawislak, J. and co-authors, 2020: Accomplishments of NOAA's Airborne Hurricane Field Program and a Broader Future Approach to Forecast Improvement. *Bulletin of the American Meteorological Society*, in press.

Homeyer, C. R., A. O. Fierro, B. A. Schenkel, A. C. Didlake, Jr., G. M. McFarquhar, J. Hu, A. V. Ryzkhov, J. B. Basara, A. M. Murphy, and *J. Zawislak*, 2020: Polarimetric Signatures in Landfalling Tropical Cyclones. *Monthly Weather Review*, 149(1), 131–154.

Rogers, R. F., P. D. Reasor, *J. A. Zawislak*, L. T. Nguyen, 2020: Precipitation Processes and Vortex Alignment during the Intensification of a Weak Tropical Cyclone in Moderate Vertical Shear. *Monthly Weather Review*, 148, 1899–1929.

Zawislak, J., 2020: Global Survey of Precipitation Properties Observed during Tropical Cyclogenesis and Their Differences Compared to Nondeveloping Disturbances. *Monthly Weather Review*, 148, 1585–1606.

Rogers, R. F., C. S. Velden, *J. Zawislak*, and J. A. Zhang, 2019: Tropical Cyclones and Hurricanes: Observations. Reference Module in Earth Systems and Environmental Sciences*, Elsevier,* doi: 10.1016/B978-0-12-409548-9.12065-2.

Alvey III, G. R., E. Zipser, and *J. Zawislak*, 2020: How Does Hurricane Edouard (2014) Evolve Toward Symmetry before Rapid Intensification? A Cloud-resolving Ensemble Study. *Journal of Atmospheric Science*, 77, 1329–1351.

Nguyen, L. T., R. Rogers, *J. Zawislak*, and J. Zhang, 2019: Assessing the Influence of Convective Downdrafts and Surface Enthalpy Fluxes on Tropical Cyclone Intensity Change in Moderate Vertical Wind Shear. *Monthly Weather Review*, 147, 3519–3534.

Tao, C., H. Jiang, and *J. Zawislak*, 2017: The Relative Importance of Stratiform and Convective Rainfall in Rapidly Intensifying Tropical Cyclones. *Monthly Weather Review*, 145, 795–809.

Zawislak, J., H. Jiang, G. R. Alvey III, E. J. Zipser, R. F. Rogers, J. A. Zhang, and S. N. Stevenson, 2016: Observations of the Structure and Evolution of Hurricane Edouard (2014) during Intensity Change: Part I: Relationship between the Thermodynamic

Structure and Precipitation. *Monthly Weather Review,* 144, 3333–3354.
Rogers, R. F., J. A. Zhang, *J. Zawislak*, H. Jiang, G. R. Alvey III, E. J. Zipser, S. N. Stevenson, 2016: Observations of the Structure and Evolution of Hurricane Edouard (2014) during Intensity Change: Part II: Kinematic Structure and the Distribution of Deep Convection. *Monthly Weather Review*, 144, 3355–3376.
Alvey III, G. R., *J. Zawislak*, and E. Zipser, 2015: Precipitation Properties Observed during Tropical Cyclone Intensity Change. *Monthly Weather Review*, 143, 4476–4492.
Susca-Lopata, G., *J. Zawislak*, E. Zipser, R. Rogers, 2015: The Role of Environmental Conditions and Precipitation Evolution in the Rapid Intensification of Hurricane Earl (2010). *Monthly Weather Review*, 143, 2207–2223.
Zawislak, J., and E. J. Zipser, 2014: A Multisatellite Investigation of the Convective Properties of Developing and Nondeveloping Tropical Disturbances. *Monthly Weather Review*, 142, 4624–4645.
Zawislak, J., and E. J. Zipser, 2014: Analysis of the Thermodynamic Properties of Developing and Nondeveloping Tropical Disturbances Using a Comprehensive Dropsonde Dataset. *Monthly Weather Review*, 142, 1250–1264.
Braun, S. A., and coauthors, 2013: NASA's Genesis and Rapid Intensification Processes (GRIP) Field Experiment. *Bulletin of the American Meteorological Society*, 94, 345–363.
Zawislak, J., and E. J. Zipser, 2010: Observations of Seven African Easterly Waves in the East Atlantic during 2006. *Journal of the Atmospheric Sciences*, 67, 26–43.
Cifelli, R., T. Lang, S. A. Rutledge, N. Guy, E. J. Zipser, *J. Zawislak*, and R. Holzworth, 2010: Characteristics of an African Easterly Wave Observed during NAMMA. *Journal of the Atmospheric Sciences*, 67, 3–25.
Rauber, R. M., and coauthors, 2007: In the Driver's Seat: RICO and Education. *Bulletin of the American Meteorological Society*, 88, 1929–1937.
Young, G. S., and *J. Zawislak*, 2006: An Observational Study of Vortex Spacing in Island Wake Vortex Streets. *Monthly Weather Review*, 134, 2285–2294.

FIELD PROGRAM EXPERIENCE:

2016 – 2021 NOAA/AOML/Hurricane Research Division, Hurricane Field Program
Currently serving as HFP Deputy Director and have previously served as HFP Field Program Director (2018 and 2019). Responsibilities include Lead Project Scientist, Radar Scientist, and Dropsonde Scientist on NOAA P-3 and G-IV missions.

2021 NASA Convective Processes Experiment -- Aerosols and Winds
Aug. 19 - Sep. 13; St. Croix, USVI
Mission Scientist

2015 – 2016 NOAA Sensing Hazards with Operational Unmanned Technology (SHOUT)
Sept. 2015, Feb. 2016, Aug. –Sept. 2016; NASA Armstrong Flight Research Center, CA
Mission Scientist

2012 – 2014 NASA Hurricane and Severe Storm Sentinel (HS3)
August – September; NASA Wallops Flight Facility, VA
Mission Scientist

2011 Center for Severe Weather Research (CSWR) Doppler on Wheels
Radar Operator

2010 NSF Persistent Cold-Air Pool Study (PCAPS) Experiment
December 2010 - January 2011; Salt Lake City, UT
NSF Sounding Observations of Lake Effect Precipitation Experiment (SOLPEX)
October 2010 – January 2011; Salt Lake City, UT
Rawinsonde operator

2010 NASA Genesis and Rapid Intensification Processes (GRIP) Experiment
August 15 – September 25; Ft. Lauderdale, Florida
Forecaster, Mission Scientist, Dropsonde Scientist

2009 NCAR ASP Summer Colloquium, "Exploring the Atmosphere using Observational Instruments and Techniques
June 1-12; Boulder, Colorado
Graduate Student Participant

2006 NASA African Monsoon Multidisciplinary Analyses Experiment (NAMMA)
August 12 – September 5; Sal, Cape Verde
Forecaster

2005 ARM Boundary Layer Cloud Intensive Operations Period (IOP)
July 11 – August 7; ARM North Slope of Alaska, Atqasuk, Alaska
Rawindsonde operator

2005 Rain in Cumulus over the Oceans (RICO) Experiment
December 29, 2004 –January 15, 2005
Rawindsonde operator

TEACHING EXPERIENCE:

2018 – Present	**Guest Lecturer,** courses at University of Miami/RSMAS (Meteorological Instrumentation and Hurricane Meteorology)
2008, 2010, 2012, 2014	**Teaching Assistant**, Tropical Meteorology. Class in Dept. of Atmospheric Sciences, Univ. of Utah
2007 – 2008	**Teaching Assistant**, Synoptic Meteorology I/II, Classes in Dept. of Meteorology, Univ. of Utah

OTHER PROFESSIONAL ACTIVITIES:

2017 – Present	Co-chair, NOAA/AOML/HRD Data Display, Archival and Legacy Working Group
2014 – 2019	Chair [2016-2017]**,** Participant, NASA Global Hydrology Resource Center (GHRC), Distributed Active Archive Center (DAAC), Users Working

Group (UWG)

2021 – Present Associate Editor, American Geophysical Union, *Journal of Geophysical Research (JGR) - Atmospheres*

Reviewer for journals: American Meteorological Society, American Geophysical Union, Quarterly Journal of the Royal Meteorological Society, Tropical Cyclone Research and Review

HONORS AND AWARDS:

2020 Department of Commerce, NOAA Gold Medal, Personal and Professional Achievement, "for courage, dedication, and heroism during the search and rescue efforts for the marine vessel *Bourbon Rhode* and crew on 27 and 28 September 2019"

2019 AOML/CIMAS Recognition as AOML/HRD Hurricane Field Program Director

2018 AOML/CIMAS Recognition as Hurricane Field Program Director

2018 AOML/CIMAS Recognition for Participation in activities during Hurricane Irma

PROFESSIONAL SOCIETY MEMBERSHIPS:

American Meteorological Society
American Geophysical Union
European Geosciences Union

EDUCATIONAL OUTREACH:

2007 – Present Volunteer for U.S. F.I.R.S.T. (For Inspiration and Recognition of Science and Technology) Robotics Program