Yijie Zhu

Department of Geosciences, Florida Atlantic University
777 Glades Road, Boca Raton, FL, 33431
yijiezhu@fau.edu

EDUCATION

University of South Florida 2022
Ph.D., Geography, Environmental Science and Policy

University of Toronto 2017
M.EnvSci., Climate Change Impact Assessment

University of Waterloo 2016
B.S., Earth Science & Business

China University of Geosciences (Beijing) 2016
B.B.A., Earth Science & Business

RESEARCH EXPERIENCE

Assistant Professor Aug. 2023 –Current
Department of Geosciences, Florida Atlantic University

Topical Cyclone Researcher (Postdoctoral Fellow) Oct. 2022 – Jun. 2023
Cooperative Institute for Research in the Atmosphere, Colorado State University
Supervisors: Dr. Galina Chirokova & Dr. Mark DeMaria

Visiting Scientist (remote) Mar. 2022 – May 2022
Capacity Center for Climate and Weather Extremes, National Center for Atmospheric Research
Host: Dr. James Done
Project: *Investigating Key Environmental Factors Controlling the Slow Inland Movement of 1999 Odisha Cyclone and 2017 Hurricane Harvey*

Graduate Assistant
School of Geosciences, University of South Florida Aug. 2018 – Aug. 2022
Supervisor: Dr. Jennifer Collins
Dissertation: *Inland Tropical Cyclone Intensity Decay in the Continental United States*

Research Assistant Sept. 2017 – May 2018
Department of Earth and Environmental Sciences, University of Waterloo
Advisor: Dr. Stephen Evans
Project: *An Energetic Perspective on Natural Hazard Assessment*

Graduate Researcher Sept. 2016 – Aug. 2017
Department of Physical and Environmental Sciences, University of Toronto
Co-Advisors: Dr. James MacLellan & Dr. Neil Comer
Thesis: *Establishing a Climate Service-Delay Baseline for a Regional Transportation Network in Southern Ontario: Analysis of Historic, Weather-Induced Regional Transit Delays as a Foundation for Climate Impact Assessment*

Undergraduate Researcher Nov. 2015 – Jun. 2016
Department of Earth and Environmental Sciences, University of Waterloo
Advisor: Dr. Stephen Evans
Senior Thesis: *Northwestern Pacific Typhoons and Earthquakes in the Philippines, 1959 – 2013: An Assessment of Hazards Properties and Corresponding Impacts*

PEER-REVIEWED PUBLICATIONS

Journal Articles

Paul, D., Panda J., Sarkar A., Kumar S., **Zhu Y. -J.** & Collins J. (2024). Comparing the atmospheric and ocean characteristics associated with two distinctly intensified pre-monsoon tropical cyclones over Bay of Bengal. ***Quarterly Journal of the Royal Meteorological Society***. (Accepted)

Zhu, Y. -J., Collins J. M., Muller, J. & Klotzbach, P. J. (2023). Accumulated Cyclone Energy-Based Tropical Cyclone Return Periods in Florida. ***Annals of the American Association of Geographers***, *113*(9), 2013–2030.

Polen, A, Collins J. M., Dunn E., Murphy S., Jernigan I., McSweeney K., **Zhu Y. -J.** (2023). How Post-Immunization COVID-19 Context Affected Residents' Evacuation Behavior During Hurricane Ida. ***Weather, Climate, and Society***, *15*(3), 541–555.

Zhu, Y. -J., Collins J. M., Klotzbach, P. J., & Schreck, C. J. (2022). Hurricane Ida (2021): Rapid intensification followed by slow inland decay. ***Bulletin of American Meteorological Society***, *103*(10), E2354–E2369.

Collins, J., Polen, A., Dunn, E., Jernigan, I., McSweeney, K., Welford, M.,…& **Zhu, Y.-J.** (2022). Hurricanes Laura and Sally: A case study of evacuation decision-making in the age of COVID-19, ***Weather, Climate, and Society***, *14*(4), 1231–1245.

Zhu, Y. -J., Collins J. M., & Klotzbach, P. J. (2021). Nearshore hurricane intensity change and post-landfall dissipation along the United States Gulf and East Coasts. ***Geophysical Research Letters***, *48*(17), e2021GL094680.

Zhu, Y. -J., Collins, J. M., & Klotzbach, P. J. (2021). Spatial variations of North Atlantic landfalling tropical cyclone wind speed decay over the continental United States. ***Journal of Applied Meteorology and Climatology***, *60*(6), 749–762.

Zhu, Y. -J., & Collins, J. M. (2021). Recent rebounding of the post-landfall hurricane wind decay period over the continental United States. ***Geophysical Research Letters***, *48*(6), e2020GL092072.

Zhu, Y. -J., Hu, Y., & Collins, J. M. (2020). Estimating road network accessibility during a hurricane evacuation: A case study of hurricane Irma in Florida. ***Transportation Research Part D: Transport and Environment***, 102334.

Book Chapters

Zhu, Y. -J., & Collins J. M. (2021). The response of hurricane inland penetration to the nearshore translation speed. In *Hurricane Risk in a Changing Climate*. In Vol. 2. J.M. Collins. and J. Done, Eds., Springer

Zhu, Y. -J., & Evans, S. G. (2019). Mapping tropical cyclone energy as an approach to hazard assessment. In *Hurricane Risk* (pp. 71–87). In Vol. 1. J.M. Collins. and K. Walsh, Eds., Springer

NON-PEER-REVIEWED PUBLICATIONS

Muller, J., Paxton, C., Collins, J. M., & **Zhu, Y. -J.** (2022). Michael Mann in Great Figures of the Sustainability Field. Chapter 161. In *Brinkmann, R. Global Handbook of Sustainability*. Palgrave Publishing Company.

ONGOING PROJECTS

Zhu, Y. -J., Done J., Collins J. M. Stalling Cyclones: A case study of 1999 Odisha Cyclone and 2017 Hurricane Harvey.

Morales, I., Muller, J., Rotz, R., **Zhu, Y. -J.** Adhikari, P., Collins, J. Landsea, C. The geomorphologic effects of historic hurricane storm surge on Hutchinson island.

CONFERENCE ABSTRACTS

Zhu, Y. -J., & Collins, J. M. (2023). "Recent rebounding of the post-landfall hurricane wind decay period over the continental United States." American Association of Geographers (AAG) Annual Meeting, Denver, CO, March 23–27, 2023.

Zhu, Y. -J., & Collins, J. M. (2022). "Inland tropical cyclone decay rate in the continental United States." Symposium on Hurricane Risk in a Changing Climate, Key Largo, FL, June 6–9, 2022.

Zhu, Y. -J., Hu, Y., & Collins, J. M. (2020). "Estimating road network accessibility during a hurricane evacuation: A case study of hurricane Irma in Florida." American Association of Geographers (AAG) Annual Meeting, Denver, CO, April 6–10, 2020. (Cancelled due to COVID-19)

Zhu, Y. -J., & Evans, S. G. (2018). "Mapping a typhoon energy cell in the Western North Pacific: implications for geohazard risk in the Philippines." AOGS-EGU Joint Conference, Tagaytay, Philippine, February 5–8, 2018.

Zhu, Y. -J., & Evans, S. G. (2017). "Hazard (earthquake and typhoon) energy - impact interactions in the Philippines 1959-2013." American Association of Geographers (AAG) Annual Meeting, Boston, MA, April 5–9, 2017.

HONORS AND ASSISTANTSHIPS

Outstanding Dissertation Award, University of South Florida	Nov. 2023
Gilbert White Dissertation Award, HRD Specialty Group, American Association of Geographers	Mar. 2023
MS Amlin Early Career Poster Award, 2022 Symposium on Hurricane Risk in a Changing Climate	Jun. 2022
Climate Specialty Group Student Spotlight, American Association of Geographers	Jun. 2022
Dewey Stowers Merit Award, West Central Florida Chapter of the American Meteorological Society	2020–2022
Student Travel Award, 2022 Symposium on Hurricane Risk in a Changing Climate	Nov. 2019
Tharp Endowed Scholarship, University of South Florida	2019–2022
Graduate Assistantship, University of South Florida	2018–2022
Research Assistantship, University of Waterloo	Sept. 2017–May 2018
Research Paper Fellowship, University of Toronto	May 2017–Sept. 2017
Graduate Student Travel Grant, University of Toronto	Feb. 2017
Teaching Assistantship, University of Toronto	Jan. 2017–May 2017
Term Dean's Honor List, University of Waterloo	2015–2016
Chinese Universities Program Scholarship Award, University of Waterloo	Jun. 2014
Second Prize Professional Scholarship for Outstanding Students, China University of Geosciences	Mar. 2014
National Scholastic Undergraduate Innovative Training Program, China University of Geosciences	2014–2016

TEACHING EXPERIENCE

Instructor

EVR3114 Climate Change: Myths, Realities, Solutions --Florida Atlantic University
GEO4930/6938: Climate Data Applications --Florida Atlantic University

Teaching Assistant/Lab Instructor

GIS4043 Introduction to GIS -- University of South Florida

Teaching Assistant

GEO2200 Physical Geography -- University of South Florida
MET4106 Climate Studies -- University of South Florida
EVR4114 Climate Change -- University of South Florida
EVR2001 Introduction to Environmental Science -- University of South Florida
EESB02 Principle of Geomorphology -- University of Toronto

PROFESSIONAL SERVICES AND AFFILIATIONS

Peer-Reviewer: *Journal of Climate (1)*; *Environmental Research Letter (2); Natural Hazards (2); Environmental Research: Climate (2)*; *Journal of Applied Meteorology and Climatology (1);* International *Journal of Disaster Risk Reduction (3); Transportation Planning and Technology (1)*

Vice-President, West Central Florida Chapter of the American Meteorological Society	2020–2021
Secretary, West Central Florida Chapter of the American Meteorological Society	2019–2020
Corresponding Secretary, West Central Florida Chapter of the American Meteorological Society	2018–2019
Member, American Meteorological Society	2018–present
Member, American Association of Geographers	2016–present

OTHER SERVICES TO THE DISCIPLINE

Organizing Committee and Webmaster for the 2022 and 2024 Symposium on Hurricane Risk in a Changing Climate

Florida Pinellas County Medical Reserve Corps for Hurricane Evacuation

RESEARCH TOOLSET AND RELEVANT SKILLS

Python (e.g., extract/manipulate reanalysis/real-time data and visualization using *arcpy*, *xarrays*, *netCDF4*, *pandas*, *cdsapi, cartopy, matplotlib, sklearn, etc.*); **ArcGIS** (e.g., geoprocessing scripting, raster/spatial analysis, mapping); **Unix/Linux Command Line Tool** (e.g., scripting and submitting model simulation jobs on the Linux server/supercomputer); **WRF model** (single/nested domain simulation using reanalysis/model data input); **SLOSH model** (configuring and simulating the storm surge height from historical cyclone data); **R** (e.g., multivariate regression analysis); **Scilab (**fundamental scripting for regression analysis); **Excel (**e.g., data filtering/manipulation). **DataGraph** (data visualization); **Adobe Illustrator/Indesign** (posters and brochures for conferences and symposiums); **HTML** (build/design website layout).