Yijie Zhu

Department of Geosciences, Florida Atlantic University
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Education/Employment History

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 2016
B.B.A., Earth Science & Business

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

Postdoctoral Fellow 2022 – 2023
Cooperative Institute for Research in the Atmosphere, Colorado State University
Supervisors: Dr. Galina Chirokova & Dr. Mark DeMaria

Visiting Scientist (remote) 2022
Capacity Center for Climate and Weather Extremes, National Center for Atmospheric Research
Host: Dr. James Done

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

Research Assistant 2017 – 2018
Department of Earth and Environmental Sciences, University of Waterloo
Advisor: Dr. Stephen Evans

Graduate Researcher 2016 – 2017
Department of Physical and Environmental Sciences, University of Toronto
Co-Advisors: Dr. James MacLellan & Dr. Neil Comer

Scholarship/Research/Creative Activity

Publications in Print (*Undergraduate Student; **Graduate Student; As Corresponding Author)

Refereed Journal Articles

1. **von Bose, N., **Zhu, Y. J.**, Polsky, C., & Liu, W. (2026). A Duration-Based Framework for Assessing Wind Exposure from Landfalling U.S. Tropical Cyclones. ***The Professional Geographer***, 1–9. https://doi.org/10.1080/00330124.2026.2709680

2. Herrera, D. A., Domínguez, C., Centella, A., Sánchez-Murillo, R., Hidalgo, H. G., Cook, B. I., Maxwell, J. T., Pons, D., Bregy, J. C., Sierra-Lorenzo, M., Bezanilla, A., Carrillo, C. M., **Zhu, Y.-J.**, Núñez Ocasio, K., Taylor, M., Stephenson, T., Jones, J., Hammel, J., & Holliday, K. (2026). Assessing the Role of Tropical Cyclones on Drought Characteristics in the Hurricane Region of the Americas between 1983 and 2024. ***Journal of Geophysical Research-Atmospheres,*** *131(9),* e2025JD045998.
3. **Zhu, Y.-J.**, **Etzi, R., *Spanbroek, G. (2026). Observed global increases in tropical cyclone rapid acceleration and deceleration events. ***Environmental Research Letters***, *21*, 074013.
4. Xie, Z., & **Zhu, Y.-J.** (2025). Represent tropical cyclone wind impact areas from wind radii at discrete center points in the National Hurricane Center HURDAT2 dataset. ***Papers in Applied Geography***, 1–7.
5. Paul, D., Panda, J., Mandke, S, Routray, A, **Zhu, Y.-J.** (2025). Investigating Concurrent Cyclonic Disturbances in the North Indian Ocean and Associated Large-Scale Atmospheric Influences. ***Journal of Applied Meteorology and Climatology,*** 64(9), 1271–1290.
6. 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 the Bay of Bengal. ***Quarterly Journal of the Royal Meteorological Society***, 150(761), 1926–1952.
7. **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.
8. 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.
9. **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.
10. 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.
11. **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.
12. **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.
13. **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.
14. **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.

Books

1. Collins, J. M., Done, J. M., Zhu, Y.-J. (Eds.). (2026). Tropical Cyclone Risk and Resilience. Springer Nature
2. Collins, J. M., Done, J. M., **Zhu, Y.-J.**, & Wilson, P. (Eds.). (2024). Advances in Hurricane Risk in a Changing Climate (Vol. 2). Springer Nature.

Book Chapters

1. **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
2. **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-Refereed Publications, Presentations and Proceedings

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.

Presentations and proceedings

National

Oral presentation (*Student presenting, Presenter)

1. October 22–25, 2025: Xie, Z., & **Zhu, Y. -J.** "Represent Tropical Cyclone Wind Impact Areas from Wind Radii at Discrete Center Points in the National Hurricane Center HURDAT2 Dataset." 2025 Applied Geography Conference, St. Louis.
2. March 24–28, 2025: **Zhu, Y.-J.,** Done, J, Collins, J. "The response of inland winds to sea surface warming from two storms with distinct translation speeds: Hurricane Harvey (2017) and Hurricane Alicia (1983)." American Association of Geographers (AAG) Annual Meeting, Detroit, MI.
3. *March 24–28, 2025: *von Bose, N., & **Zhu, Y.-J.** "Assessing the return period of hurricane inland wind exposure along the US coastal states." American Association of Geographers (AAG) Annual Meeting, Detroit, MI.
4. April 16–20, 2024: **Zhu, Y. -J.,** & Collins, J. M. "Recent rebounding of the post‐landfall hurricane wind decay period over the continental United States." J. Warren Nystrom Award Finalist Presentation, American Association of Geographers (AAG) Annual Meeting, Honolulu, HI.
5. March 23–27, 2023: **Zhu, Y. -J.,** & Collins, J. M. "Recent rebounding of the post‐landfall hurricane wind decay period over the continental United States." American Association of Geographers (AAG) Annual Meeting, Denver, CO.
6. April 6–10, 2020. (Canceled due to COVID-19): **Zhu, Y. -J.**, Hu, Y., & Collins, J. M. "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
7. April 5–9, 2017: **Zhu, Y. -J.,** & Evans, S. G. "Hazard (earthquake and typhoon) energy - impact interactions in the Philippines 1959-2013." American Association of Geographers (AAG) Annual Meeting, Boston, MA.

Posters (*Student presenting)

1. *May 31 – June 4, 2025: *von Bose, N., & **Zhu, Y.-J.** "Assessing the Hurricane Inland Wind Exposure Along the U.S. Coastal States." Symposium on Tropical Cyclone Risk in a Changing Climate, Clearwater, FL.
2. June 6–9, 2022: **Zhu, Y. -J.,** & Collins, J. M. "Inland tropical cyclone decay rate in the continental United States." Symposium on Hurricane Risk in a Changing Climate, Key Largo, FL.

Regional/Local

Poster (*Student presenting)

*April 24, 2026: *McElhill, L. & **Zhu, Y.-J.** "Spatio-Temporal Patterns of Post-hatchling Sea Turtle Strandings Along Florida's Coasts." Florida Marine Science Education Association (FMSEA), Destin-Fort Walton, FL.

Grants

External

Funded

2024

1. NOAA Florida Co-production Workshop, St Petersburg, FL
   Amount: $1,114: Covering registration and travel stipend

Pending

2026

1. Tropical cyclone-induced peripheral heat exposure in Florida in a warming climate
   Role: PI
   Agency: Burroughs Wellcome Fund (BWF)
   Total Amount Requested: $48,942

Not-funded

2026

1. Extreme Rainfall Effects on Canal-Aquifer Exchange and Water Quality in Boca Raton, Florida
   Role: PI
   Agency: US Environmental Protection Agency (EPA)
   Total Amount Requested: $989,151

2025

2. Collaborative Research: Understanding the effect of land-ocean temperature contrast on the intensity prediction of Florida landfalling hurricanes
   Role: PI
   Agency: National Science Foundation (NSF)
   Total Amount Requested: $362,371
3. Slower Storm Decay and Rising Seas: Enhancing Hurricane-Induced Flood Resilience for Broward County
   Role: PI
   Agency: NOAA SeaGrant
   Total Amount Requested: $190,204
4. Miami Metropolitan Area Resilience to Coastal Hazards (MARCH): Addressing hurricane-induced flooding and seawater intrusion in an urbanizing subtropical landscape
   Role: PI
   Agency: Department of Energy
   Total Amount Requested: $998,218
   Note: Agency Budget Cut without Review
5. Explorations: Experiential Training for Response to Extreme Meteorological Events using Artificial Intelligence (ExTREME AI)
   Role: Co-PI
   Agency: National Science Foundation
   Total Amount Requested: $912,500

2024

6. Understanding the effect of land-ocean temperature contrast on hurricanes' post-landfall intensity decay in Florida
   Role: PI
   Agency: Oak Ridge Associated Universities
   Amount Requested: $5,000

Internal

Funded

2026

1. Integrated Solutions for Hurricane Flooding and Seawater Intrusion in Southeast Florida
   Role: PI (Co-PIs: Dr. Weibo Liu; Dr. Xiaolang Zhang; Dr. Minghan Wei)
   Source: WLW-ECOS Interdisciplinary Research Award
   Total Amount Awarded: $80,000 ($65,000 to the team, $15,000 to the students)
   Project Period: 8/2026-2/2028

2025

2. ECOS Faculty Travel Award
   Awarded Amount: $730

2024

3. College of Science Faculty Travel Fund
   Awarded Amount: $1,000
4. ECOS Graduate Research Award
   Role: Supervisor
   Awarded Amount: $1,608
   Support M.S. Student Naomi von Bose's research project: Assessing the return period of hurricane inland wind exposure along the US coastal states

Funded Mentored Undergraduate Student Awards

2026

1. WLW-ECOS Research Fellowship Award (2026 Spring and 2026 Summer)
   Role: Supervisor
   Total Amount $28,500 ($22,500 student pay, $6000 supplies)
   a. Elsa Shortlidge: Total Amount $9500 ($7500 student pay, $2000 lab supplies)
   b. Matthew Davis: Total Amount $9500 ($7500 student pay, $2000 lab supplies)
   c. Jada Reed: Total Amount $9500 ($7500 student pay, $2000 lab supplies)

2025

2. OURI Summer Undergraduate Research Fellowship
   Role: Supervisor
   Total Amount: $4,000 ($3,100 student pay, $900 to the supervisor)

Not Funded

2026

1. WLW-ECOS Postdoctoral Fellowship
   - Student Applied: YunJae Ock
     Role: Supervisor (Co-supervisor: Zhixiao Xie)
     Total Amount Requested: $127,380
   - Student Applied: Bikram Parajuli
     Role: Co-Supervisor (Supervisor: Zhixiao Xie)

Total Amount Requested: $127,380

2025

2. I-SENSE Seed Fund
   Role: PI
   Total Amount Requested: $18,771
3. College of Science Jumpstart Postdoctoral Fund
   Student Applied: Dilek Savas
   Role: Supervisor (Co-supervisor: Zhixiao Xie)
   Total Amount Requested: $127,380

2024

4. ECOS Seed Fund
   Role: PI
   Total Amount Requested: $34,741

Courses Offered at FAU

New Courses Developed

1. MET3052: Atmospheric Hazards (in person)
2. MET4142/GEO6938: Climate Data Applications (in person)
3. MET3112: Tropical Climatology (in person)

Redesigned Course

4. EVR3114: Climate Change: Myths, Realities, Solutions (in person)
   Note: Change the entire syllabus and contents from what was offered by the previous instructor
5. EVR3114: Climate Change: Myths, Realities, Solutions (Online Version)
   Note: 2026 Summer working with the Center for Online and Continuing Education for instructional design

Major Content Update

6. ESC3704: Environmental Issues in Atmospheric and Earth Science (Online)
   Note: Updated the outdated contents and migrated the online course material to the FAU Google Site

Supervision of Graduate Students

Ph.D students

1. **Demmi Ramos**, Geosciences (Expected Graduation: 2029 Spring)
   Award:
   - Department of Geosciences Outstanding Teaching Assistant (2026)
   - FAU Presidential Fellowship (2025)
   - McKnight Doctoral Fellowship (2025)
   - Barry Goldwater Scholarship (2024)

MS students

1. **Lili McElhill**, Environmental Sciences (Expected Graduation: 2027 Spring)
   Conference Presentation:
   - **Poster:** April 24, 2026: McElhill, L. & Zhu, Y.-J. "Spatio-Temporal Patterns of Post-hatchling Sea Turtle Strandings Along Florida's Coasts." Florida Marine Science Education Association (FMSEA), Destin-Fort Walton, FL.

   Award:
   - First Place: Outstanding Student Poster Presentation at 2026 Florida Marine Science Education Association
2. **Rachel Etzi**, Geosciences (Expected Graduation: 2027 Spring)

Publication:

- Zhu, Y.-J., **Etzi, R.**, Spanbroek, G. (2025). Observed global increases in tropical cyclone rapid acceleration and deceleration events. *Environmental Research Letters*, 21, 074013.

Award:

- 2026 Spring Department of Geosciences Outstanding Graduate Student

3. **Naomi von Bose**, Geosciences (Graduated 2025 Fall, Now Scientist I at Resource Environmental Solutions, LLC)
   Thesis: Assessing the Hurricane Inland Wind Exposure Along the U.S. Coastal States
   Conference Presentation:
   - **Oral:** March 24–28, 2025: **von Bose, N.**, & Zhu, Y.-J. "Assessing the return period of hurricane inland wind exposure along the US coastal states." American Association of Geographers (AAG) Annual Meeting, Detroit, MI.
   - **Poster:** May 31 – June 4, 2025: **von Bose, N.**, & Zhu, Y.-J. "Assessing the Hurricane Inland Wind Exposure Along the U.S. Coastal States." Symposium on Tropical Cyclone Risk in a Changing Climate, Clearwater, FL.

   Publication:
   - **von Bose, N.**, Zhu, Y.-J., Polsky, C., & Liu, W. (2026). A Duration-Based Framework for Assessing Wind Exposure from Landfalling U.S. Tropical Cyclones. ***The Professional Geographer***, 1–9

   Award:
   - 2025 Symposium on Tropical Cyclone Risk in a Changing Climate Student Travel Award
   - 2024 ECOS Graduate Research Award

Supervision of Undergraduate Students

1. **Elsa Shortlidge**, Geosciences (2026 Spring through WLW-ECOS Research Fellowship)
2. **Matthew Davis**, Geosciences (2026 Spring through WLW-ECOS Research Fellowship)
3. **Gabe Spanbroek**, Geosciences (2025 Summer through OURI Summer Undergraduate Research Fellowship and Directed Independent Research; 2026 Spring through Honors Compact; 2026 Summer through GEO4915 Directed Independent Research)
   Publication:
   - Zhu, Y.-J., Etzi, R., **Spanbroek, G.** (2025). Observed global increases in tropical cyclone rapid acceleration and deceleration events. *Environmental Research Letters*, 21, 074013.
4. **Jada Reed**, Geosciences (2025 Fall through GEO4915 Directed Independent Research; 2026 Summer through WLW-ECOS Research Fellowship)
5. **Rachel Etzi**, Geosciences (2025 Summer through Directed Independent Research)
   Now an M.S. Geosciences student.
6. **Brendan Buchanan**, Geosciences (2024 Summer and 2025 Fall through GEO4915 Directed Independent Research)

Advising Activities

Ph.D. Students (as a Committee Member)

1. **Austin Scheinkman**, Geosciences (Expected 2027 Summer)
2. **Abiola A. Adebiyi**, Geosciences (Graduated 2026 Summer)
   Dissertation: Variations in River and Tidal Dune Morphology and Flow Resistance within the Fluvial-Tidal Transition of the Lower Columbia River, WA/OR, USA and Assessing the Role of Bottom Morphological Features in Mitigating Climate Change Impacts along the Coast

3. **Alanna Shapiro**, Geosciences (Graduated 2025 Summer)
   Dissertation: Examining the relationships among land surface temperature, surface urban heat islands, land cover, and societal impacts in the Miami Statistical Area

MS Students (as Committee member)

1. **Madeleine Hodges,** Environmental Science (Expected 2027 Spring)
2. **Megan M. Mascheri**, Environmental Science (Graduated 2024 Summer)
   Thesis: It's not you, it's climate change:Analyzing the contributions to climate change anxiety (cca) in South Florida

Service and Professional Development

Service to the Institution:

Department/School Service

1. Geosciences Graduate Committee (2025Fall-Current)
2. Geosciences Faculty Meeting Secretary (2025Fall-Current)
3. Geosciences Quantum Contact Person (2026 Spring-Current)
4. Geosciences Undergraduate Committee (2023Fall-2025Spring)
5. Geosciences Personnel Committee (2025Spring)
6. ECOS Graduate Student Research Awards (2026 Summer)
7. ECOS Retreat Student Poster Judge (2025 Spring; 2026 spring)

College Service

8. AI for Science Committee (2026 Spring)
9. College of Science Advisory Board, New Faculty Presentation (2024 Spring)

University Service

10. Lead: SE Florida Science Olympiad Meteorology-Division B (2026 Spring)
11. OURI Proposal Reviewer (2025 Fall)

Service to the Discipline/Profession:

1. Associate Editor: All Earth (Taylor & Francis) (2026 Spring – Current)
2. Guest Editor: MDPI Atmosphere: Large-Scale Circulation Influences on Tropical Cyclone Intensity and Track (2026 Spring – Current)
3. Grant, Book, Journal Article Peer-Review: NSF Proposal (2); NOAA FL SeaGrant Proposals (3); Journal of Climate (1); Environmental Research Letter (5); Natural Hazards (3); Environmental Research: Climate (2); Journal of Applied Meteorology and Climatology (2); International Journal of Disaster Risk Reduction (3); Transportation Planning and Technology (1); Communications Earth & Environment (1); Papers in Applied Geography (1); Book Proposal-CRC Press - Taylor & Francis Group (1).
4. Co-Organizer:
   - 2024 Symposium on Hurricane Risk in a Changing Climate, Honolulu, HI
   - 2025 Symposium on Tropical Cyclone Risk in a Changing Climate, Clearwater, FL
   - 2027 Symposium on Tropical Cyclone Risk, Monte Verita, Switzerland
5. Student Paper Judge, Climate Specialty Group, American Association of Geographers Annual Meeting (2025)
6. Vice-President, West Central Florida Chapter of the American Meteorological Society (2020-2021)
7. Secretary, West Central Florida Chapter of the American Meteorological Society (2019-2020)

8. Corresponding Secretary, West Central Florida Chapter of the American Meteorological Society (2018-2019)

Service to the Community/Public:

1. Guest lecture for Multidisciplinary Introduction to Research Methodology, FAU (11/2026)
2. Video: You're Probably Getting Hurricane Season Wrong, FAU ECOS (10/2026)
3. FAU College of Science 2026 Hurricane Season Story (08/2026)
4. Interview by the Stuart News and TCPalm Rising Air Temperatures Affect on Agriculture in Florida and/or on the Treasure Coast of Florida (04/2026)
5. Don Estridge High Tech Middle School Full Day Science Talk: "Our Wild Weather" (02/2026)
6. A.D. Henderson University School 4th Grade Exploravision Coach Session (01/2026)
7. FAU Invading Sea 2025 Palm Beach County Flooding Interview (11/2025)
8. FAU 2025 Hurricane Season Interview (10/2025)
9. FAU High School Science Talk (10/2025)
10. Content Support for a Bloomberg Article (08/2025)
11. University of South Florida Geosciences Colloquium Talk (02/2025)
12. Broken Sound Community, Boca Raton, COS Faculty Science Talk (08/2024)
13. Sunshine State Scholars 2024 Recruitment Fair (05/2024)
14. Lantana Public Library Science Talk (04/2024)
15. FAU Geosciences Colloquium Talk (01/2024)

Media Coverage:

1. LiveNow from FOX: Live Interview on Hurricane Isaias (10/2026) https://www.livenowfox.com/video/fmc-rcek5hbtse1tnq5g
2. WPTV Interview on Cloud Seeding (07/2025) https://www.wptv.com/weather/weather-news/new-law-bans-cloud-seeding-weather-modification-in-florida

Honors and Awards

1. J. Warren Nystrom Award (*Finalist*), American Association of Geographers (2024)
2. Outstanding Dissertation Award, University of South Florida (2023)
3. Gilbert White Dissertation Award, HRD Specialty Group, American Association of Geographers (2023)
4. MS Amlin Early Career Poster Award, 2022 Symposium on Hurricane Risk (2022)
5. Climate Specialty Group Student Spotlight, American Association of Geographers (2022)
6. Dewey Stowers Merit Award, West Central Florida Chapter of the AMS (2022)
7. Student Travel Award, 2022 Symposium on Hurricane Risk in a Changing Climate (2019)
8. Tharp Endowed Scholarship, University of South Florida (2019-2022)
9. Research Paper Fellowship, University of Toronto (2017)
10. Graduate Student Travel Grant, University of Toronto (2017)