

WENQING ZHOU

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EDUCATION

Duke University

Durham, NC, USA

- Ph.D. Student in Ecology
- Advisor: Dr. Liyin He

2025-Present

Wuhan University

Wuhan, China

- M.Eng. in Hydrology and Water Resources
- Advisor: Dr. Liping Zhang
- GPA: 3.67/4.00 (WES: 3.86/4.00), Average score: 92.26/100
- Thesis: Impacts of the Development of the Yangtze River Delta Urban Agglomeration on Summer Humid Heatwaves

2022-2025

Hohai University

Nanjing, China

- B.Eng. in Hydrology and Water Resources Engineering (Dayu)
- GPA: 4.74/5.00 (WES: 3.81/4.00), Average score: 90.38/100
- Thesis: Runoff Response to Climate and Land Use Change in Karst Catchments

2018-2022

RESEARCH INTERESTS

Terrestrial ecosystems, Extreme events, Land-atmosphere interactions, Urban hydrometeorology

PUBLICATIONS

- **Zhou, W.**, Zhang, L., Zhang, Q., Li, Y., Wang, G., Tang, Z., Li, X., Bao, Z., Cao, H., & Jia, B. (2025). Decrease in urban-rural differences of nighttime humid heatwaves in the Yangtze River Delta, China. *Atmospheric Research*, 316, 107956. <https://doi.org/10.1016/j.atmosres.2025.107956>
- **Zhou, W.**, Zhang, L., Wang, G., Zhang, Q., Cao, H., Zhang, H., Jia, B., Tang, Z., Li, X., & Liu, L. (2024). Impacts of urban expansion on air temperature and humidity during 2022 mega-heatwave over the Yangtze River Delta, China. *Science of The Total Environment*, 951, 175804. <https://doi.org/10.1016/j.scitotenv.2024.175804>

RESEARCH EXPERIENCES

Future Population Exposure Risk to Humid Heat

Mar.2025- Apr.2025

Researcher, Supervised by Prof. Liping Zhang, Wuhan University

- Evaluated the capability of CMIP6 models in sumulating humid heat and conducted bias correction to the projected humid heat under different socio-economic scenarios.
- Analyzed the spatiotemporal evolution of daytime and nighttime humid heatwaves under different future scenarios.
- Projected future population exposure risk to humid heatwaves by integrating population and urban expansion data.
- Compared urban and rural exposure risks to reveal potential disparities under different future scenarios.

Diurnal Impacts of Urban Expansion During Extreme Heatwaves

Oct.2023- May.2024

Researcher, Supervised by Prof. Liping Zhang, Wuhan University

- Investigated the urban heat island and urban dry island effects during the 2022 summer heatwaves over the Yangtze River Delta, China.
- Evaluated the impacts of urban expansion over the last two decades on diurnal heat and moisture during extreme heatwaves.
- Conducted a quantitative attribution of air temperature changes during daytime and nighttime based on surface energy balance.
- Analyzed the interactions between heat and moisture changes due to urbanization.

Regional Urban-Rural Differences of Nighttime Humid Heatwaves

Mar.2023-Aug.2023

Researcher, Supervised by Prof. Liping Zhang, Wuhan University

- Analyzed the spatiotemporal evolution of nighttime humid heatwaves over the Yangtze River Delta, China.
- Identified the decreasing trends of urban-rural differences in nighttime humid heatwaves during the rapid urbanization phase.
- Explained the narrowing urban-rural contrasts in terms of statistics across timescales and physical mechanisms.

CONFERENCES

- Decrease in Urban-Rural Differences of Nighttime Humid Heatwaves in the Yangtze River Delta, China, American Geophysical Union (AGU) Fall Meeting (talk), 2023, San Francisco, CA, USA
- Attendee, China Water Forum, 2023

HONORS & AWARDS

Competition Prizes

Third Prize, Chinese Post-Graduate Mathematical Contest in Modeling	2023
Honorable Prize, American Mathematical Contest in Modeling	2021
Individual Excellence Award, Zhou Peiyuan's Mechanics Competition	2021
Second Prize, Jiangsu Provincial Mechanics Competition	2021
First Prize, Chinese Mathematics Competition	2019-2020
Second Prize, Higher Mathematics Competition of Jiangsu Province	2019

Honors

Yellow River Scholarship	2024
Second Class Scholarship of Wuhan University	2024
Outstanding Individual in the Innovation and Practice Competition Series	2023
Outstanding Graduate Student of Wuhan University	2023
First Class Scholarship of Wuhan University	2023
Academic Excellence Scholarship of Hohai University	2020-2022

SKILLS

Language: Mandarin (Native), English (TOEFL: 102)

Technical: Matlab, Python, ArcGIS, WRF-UCM