

Jiali ZHU

Email: jializ@umich.edu

Research Interests | Urban Sustainability, Urban Resilience,
Climate Change, Risk Assessment, Remote Sensing

EDUCATION

School for Environment and Sustainability, University of Michigan

Aug 2023 till now

PhD student

Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences

Sep 2020 – July 2023

M.A. in Ecology

Key courses: Spatial analysis, Urban Ecology, Urban GIS, Remote Sensing Science & Image Processing, R language and its application in ecology, Advanced Ecology, Academic Morality and Writing Norms

Thesis: Risk Assessment of Urban Flooding in Shenzhen under Climate Extremes Changes (*Preparing*)

Award: Merit Student of University of Chinese Academy of Sciences in 2021

1st Class Scholarship in 2022

School of Environment, Beijing Normal University

Sep 2016 – July 2020

B.A. in Environmental Engineering

Key Courses: Environment and Sustainable Development, Environmental Ecology Modelling, Remote Sensing of Environment, Environmental Data Analysis, Landscape Ecology, Environmental and Ecological Planning

Thesis: Analysis of Urban Storm Risk Based on Rain Island Effect and Underlying Surface Characteristics in Shenzhen

Awards: Honored graduate of Beijing Normal University, Honored graduate of Beijing

Chinese National Scholarship in 2016, 1st Class Scholarship in 2017 and 2018

Study Trips

Department of Environmental Sciences, Wageningen University & Research

Jan 2020

Faculty of Geo-Information Science and Earth Observation, University of Twente

Jan 2020

King's Summer School, King's College London

July – Aug 2018

Urban Water Systems Laboratory, Department of Urban Engineering, University of Tokyo, Japan

Jan 2018

PUBLICATIONS & CONFERENCE

Peer-reviewed Journal Papers

1. Zhou W*, **Zhu J**. Review on Nature-based Solutions and applications on urban waterlogging mitigation, *Acta Ecologica Sinica*, 2022. (*Methodology, Formal analysis, Writing-original draft*)
2. Liu S*, Wu X, **Zhu J**, et al. Evaluation of regional ecological carrying capacity coupling with landscape pattern and ecosystem services. *Chinese Journal of Eco-Agriculture*, 2019. (*Analysis, Writing*)
3. Liu S*, **Zhu J**, Xu J, et al. Effect of urbanization on the ecological footprint and their interactive coupling relationship. *Acta Ecologica Sinica*, 2018. (*Methodology, Formal analysis, Writing-original draft*)

Journal Papers under Review

4. **Zhu J**, Zhou W*, Cao J, et al. Urban rain islands or dry islands? Insights from the spatiotemporal heterogeneity of precipitation in Shenzhen, China. (*under review in Landscape and Urban Planning*)

(Conceptualization, Methodology, Formal analysis, Writing - Original Draft)

5. Yu W, **Zhu J**, Zhou W*, et al. Integrated vulnerability assessment for urban heat and flooding: links to spatial patterns of urban green. *(under review in Sustainable Cities and Society) (Methodology, Formal analysis, Mapping)*

Conference

21st China Conference on Ecology

Report: Urban Flooding Risk Analysis Based on Rainfall Heterogeneity and Underlying Surface Characteristics

PROJECTS

Project supported by National Natural Science Foundation of China (Participant) *Mar 2022 - July 2023*

Multi-objective Based Optimization for the climate-related risk reduction in urban megaregion

Focuses: 1) Built assessment model based on the Hazard-Exposure-Vulnerability framework released from the IPCC; 2) Mapped the spatial distribution of flooding risk in six major urban megaregions in China; 3) Identified the most sensitive areas to the flooding risk and making the potential strategies for risk management.

Government-Sponsored Research, Shenzhen, China (Participant) *Aug 2020 – Aug 2021*

Climate-Related Risk Analysis for the Resilience Urban Design

Focuses: 1) Identified the spatiotemporal characteristics of the precipitation based on the long-term series of meteorological observations; 2) Mapped the social vulnerability by the integrated assessment using the remotely sensed imagery and the POI data within the city of Shenzhen; 3) Evaluated the functions of the green infrastructure to the surface runoff reduction.

Undergraduates' Innovation and Program, Chinese Academy of Sciences (Leader) *Sep 2019 - Nov 2020*

Alpine Cold Vegetation Response to Climate Change in Eastern Tibet

Focuses: 1) Investigated the vegetation dynamics of scrub in eastern Tibet via remote sensing data at fine scale; 2) Mapped the tempo-spatial variations of vegetation using statistical methods; 3) Analyzed the correlation between variation and climate elements, including temperature and SPEI.

National University Student Innovation Program (Participant) *May 2017 - June 2018*

Study on The Removal of Radionuclides Cesium by FeCN/TiO₂/PVDF Composite Membrane

Focuses: 1) Synthesized FeCN/TiO₂/PVDF composite membranes for the application of radioactive Cs⁺ removal from radioactive water; 2) Investigated the optimum operating pH and Cs⁺ removal efficiency by multiple comparison experiments.

SKILLS

Languages	Chinese (Native), English (Fluent): CET-6 (598), IELTS (7), GRE (V152+Q170)
Programming	R (Proficient), Python (Familiar), Java (Familiar)
GIS & RS	ArcGIS (Proficient), Google Earth Engine (Familiar), ENVI (Familiar), eCognition (Basic)

EXTRACURRICULAR ACTIVITIES

Volunteer at Main Media Center, Beijing 2022 Olympic and Paralympic Winter Games *Jan – Apr 2022*

Swimming Team Member of Varsity Teams *2017 - 2023*

The Silver Medal of Women's 50-meter Breaststroke in the Swimming Competition for Beijing Citizens, 2022

The 2nd Prize of the 8th Campus Triathlon Competition for Beijing College Students, 2019

The Excellent Athlete of the Swimming Championships for Beijing College Students, 2018