Wenyue Zou

Final-year Ph.D. student Email: wenyue.zou@unil.ch
ResearchGate and Google Scholar
Expertise of Centre for Climate Extremes (ECCE)
Faculty of Geosciences and Environment, University of Lausanne

RESEARCH INTERESTS

- Storm and flood risk assessment
- Statistical/ML and dynamic modelling of extreme rainfall
- Climate extreme impact on future cities

PROFESSIONAL SKILLS

- Proficient in **predicting future changes in storm events and their impact on floods**
- Proficient in **extreme rainfall frequency analysis** and **storm stochastic modelling**
- Proficient in **geostatistical downscaling and interpolation**
- Proficient in MATLAB, Python and ArcGIS for mapping and data analysis
- Skillful in literature review and data management

PUBLICATIONS

- **Zou, W** et al., 2025. A framework to project future process-based urban floods by morphing and transposing sub-daily storm fields. (draft)
- **Zou, W.,** Wright, B., Peleg, N. 2025. Morphing sub-daily rainfall fields based on temperature shifts to project future changes in rainfall extremes. Water Resources Research, under review.
- **Zou, W** et al., 2024. Multiple-point geostatistics-based spatial downscaling of heavy rainfall fields. Journal of Hydrology. https://doi.org/10.1016/j.jhydrol.2024.130899.
- **Zou, W** et al., 2021. Spatial interpolation of the extreme hourly precipitation at different return levels in the Haihe River basin. Journal of Hydrology 598, 126273. https://doi.org/10.1016/j.jhydrol.2021.126273.
- Li, Q., Zhou, J., **Zou, W**., et al., 2020. A tributary-comparison method to quantify the human influence on hydrological drought. Journal of Hydrology. https://doi.org/10.1016/j.jhydrol.2020.125652.

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EDUCATION BACKGROUND

- **2021 - present** — **Ph.D. in Environmental Science,** Faculty of Geosciences and Environment, University of Lausanne

  Thesis: ***Future changes in rainfall properties and their effect on urban flooding***

- **2018 - 2021** — **M.sc in Physical Geography,** Faculty of Geographic Science, Beijing Normal University — GPA:3.75/4 (10%)

  Thesis： Spatiotemporal characteristics of rainfall events based on a highly dense rain-gauge network.

- **2014 - 2018** — **B.sc in Geography,** Faculty of Geographic Science, Northwest Normal University — GPA:3.84/4 (1%)

  Thesis： Spatial and temporal variation characteristics of hourly precipitation during the Warm season 1961-2012 in the Haihe River basin.

SERVICES

- 2024 — **Committee of Expertise Center for Climate Change, University of Lausanne**
- 2022 — **Teaching assistant,** Faculty of Geosciences and Environment, University of Lausanne
  - Watershed and river network modelling
- 2020 — **Teaching assistant,** Faculty of Geographical Science, Beijing Normal University
  - Meteorology and Climate Practice course
  - Assessment of climate change and its impacts
- 2023 — Student committee of CliMACT between UNIL and EPFL university
- 2021 — Student committee in Association du Corps Intermédiare, FESG, UNIL

AWARDS AND SCHOLARSHIPS

- 2021 Excellent Graduation Thesis in Beijing Normal University
- 2018, 2019 Academic Scholarship in Beijing Normal University (first class, twice)
- 2017 First prize in Scientific Research Challenge Cup at Northwest Normal University (5%)
- 2016 First prize in National College Students Mathematic Modeling Competition (10%)
- 2015 National Endeavor Scholarship (10%)