Shengli Zhu

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RESEARCH INTERESTS

- Hydrology and Water Resources
- Large-Scale Hydrologic Simulation and Prediction;
- Rainfall-Runoff Modeling;
- Remote Sensing;
- Cold Regions Hydrological Processes;
- Deep Learning;

EDUCATION BACKGROUND

Sep. 2022-Now   **M.S.**   *GPA*: 3.87/4

- Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences, China;

  Majoring in Hydrology and Water Resources;

  Core courses: Modern Hydrology and Water Resources (95), Geospatial Statistics and Modelling(95), Remote Sensing Science(91);

  Supervisor: Prof. Zhaofei Liu

Sep.2018-Jun.2022   **B.S.**   *GPA*: 3.91/5

- College of Geography and Environment, Shandong Normal University, China;

  Majoring in Geographic Science;

  Core courses: Physical Geography (90), Geographic Information System (95), Hydrology (87);

  Supervisor: Prof. Houfeng Liu

  Thesis: "*Spatial Characteristics and Influence of Topography and Synoptic Systems on PM2.5 in the Eastern Monsoon Region of China*".

PUBLICATIONS

- ***Zhu, S.***, Liu, Z., 2024. Comprehensive quantitative assessment of the performance of fourteen satellite precipitation products over Chinese mainland. Climate Dynamics. DOI: 10.1007/s00382-024-07237-8.
- Yang, H., Yang, F., Sun, L., Ye, Y., ***Zhu, S.***, 2023. Relationship between the North Atlantic sea surface temperature and the summer extreme high temperature in the Beijing-Tianjin-Hebei region, China. Urban Climate, 52:101683. DOI: 10.1016/j.uclim.2023.101683.
- ***Zhu, S.***, Wang, Z., Qu, K., Xu, J., Zhang, J., Yang, H., Wang, W., Sui, X., Wei, M., Liu, H., 2023. Spatial Characteristics and Influence of Topography and Synoptic Systems on PM2.5 in the Eastern Monsoon Region of China. Aerosol and Air Quality Research, 23:220393. DOI: 10.4209/aaqr.220393.

RESEARCH PROJECTS

- Disaster risk assessment of mountain ecological and hydrological changes under climate change conditions, Strategic Priority Research Program of the Chinese Academy of Sciences (XDA23090302); *RMB 3.3 million.* (***Co-investigator and student co-author***)

  - *Delineated the digital boundaries of the Hengduan Mountains region with scientific basis;*
  - *Clarified the technical route for climate ecological and hydrological zoning in the Hengduan Mountains;*
  - *Achieved hydrological zoning and climate ecological zoning in the Hengduan Mountains region;*
  - *Extracted key environmental disaster causing factors in the Hengduan Mountain area and analyzed the spatial differences of disaster environmental factors based on three-level hydrological zoning.*

- ➢ Baseflow signature behaviour of mountainous catchments around the North China Plain, Undergraduate Research Foundation of Shandong Normal University (BKJJ2020055); *RMB 4 thousand. (**Co-investigator**)*
  - – *Revealed the baseflow characteristics in the mountainous catchments around the North China Plain;*
  - – *Investigated the implication correlation between baseflow signatures and catchments properties.*
- ➢ Spatial Characteristics and Influence of Topography and Synoptic Systems on PM2.5 in the Eastern Monsoon Region of China, *Undergraduate Thesis*. (**Principle-investigator**)
  - – *Revealed urban air pollution characteristics in the eastern monsoon region of China based on the K-Means algorithm combined with the HYSPLIT backward trajectory clustering analysis;*
  - – *Clarified the possibility of inter-regional transport of pollutants in eastern China, and provided a reference for the joint prevention and control of regional haze under different synoptic weather.*

SKILLS

- ➢ Modelling: Rainfall-Runoff Simulation for Alpine Regions;
- ➢ Programming: Python, MATLAB, R;
- ➢ Software: ArcGIS, Endnote, GeoDa, SPSS, Origin, GitHub.

ACADEMIC HONORS, FELLOWSHIPS & MEMBERSHIP

➢ European Geosciences Union (EGU) Student Membership	2021-2024
➢ The Second prize of the 2023 IGSNRR director's scholarship, CAS	2023-2024
➢ The Third Prize of *the 18th SuperMap GIS Contest*	11/2020
➢ The Second-Class Fellowships of Shandong Normal University	2019-2020
➢ The Honorary Title of "Outstanding Student" of Shandong Normal University	2019-2020
➢ The Third-Class Fellowships of Shandong Normal University	2018-2019