Junhao Wang

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Education

Nanjing University of Information Science and Technology (NUIST)   September 2021 – Present

Physical Geography and Resource Environment, Bachelor of Science   *GPA: 87/100*

Relevant Coursework

- Global Change
- Cartography
- Remote Sensing Digital Image Processing
- Principles of Geographic Information Systems
- Hydrology and Water Resources
- Meteorology and Climatology
- Soil Geography
- Applied Statistical Analysis for Geoscience
- Principles of Terrestrial Ecosystem Ecology
- Analytical Chemistry

Research Experience

Climate impacts on the length of sea ice season and ecosystem response   Jul 2024 – Oct 2024

Supervisor: Prof. Paul Myers, pmyers@ualberta.ca (Canada MITACS research intern)   *Edmonton, Canada*

- Analyzed the changes in sea ice concentration and thickness and their spatial structure in Baffin Bay and Hudson Bay.
- Evaluated the changes of ice free season by looking at sea ice breakup and freeze up processes.
- Examined the correlation between sea ice changes and biogeochemistry pattern.

Land use changes and evaluation of habitat quality in China's Coastal Zone   Mar 2023 – Apr 2024

Supervisor: Prof. Chengyi Zhao, zhaocy@nuist.edu.cn   *Nanjing, China*

- Coupled the PLUS model and InVEST model to predict the spatial distribution of land use changes and quantitatively assessed the habitat quality from 2020 to 2060 under three SSP scenarios.
- Evaluated the driving forces of changes of habitat quality and contribution of land cover changes to the degradation of habitat quality.

Anthropogenic climate change Impact on runoff   Sep 2022 – Feb 2024

Supervisor: Prof. Buda Su, subd@nuist.edu.cn   *Nanjing, China*

- Revealed the changes in discharge pattern in the upper Yangtze River basin during 1900-2099 under different forcings.
- Compared the impact of anthropogenic climate change with the impact of natural variability on discharge pattern.

Achievements

Canada MITACS Globalink Research Internship Award (10,000 Canadian Dollar)	**2024**
Geospatial Big Data and GeoAI Graduate Summer School | *Excellent Student Scholar*	**2023**
NUIST First Class Scholarship	**2022**
NUIST Merit Student	**2022**

Technical Skills

Coding: R, Python, Matlab, Linux shell
Tools: ArcGIS Pro, ENVI, SPSS, Google Earth Engine
Models: SWAT Model, PLUS Model, InVest Model

Research Interests

- Hydroclimatology
- Climate change impacts and adaptation
- Ecosystem and landscape
- Arctic oceanography

Publications

- Wan, Z., Zhao, C., Zhu, J., Ma, X., Chen, J., & **Wang, J**. (2024). Assessment and Prediction of Coastal Ecological Resilience Based on the Pressure–State–Response (PSR) Model. *Land*, *13*(12), 2130. https://doi.org/10.3390/land13122130
- **Wang, J.**, Chen, Z., & Su, B.: Anthropogenic climate change impact on runoff in the upper Yangtze River basin, Journal of Flood Risk Management, in review.
- Wang, G., **Wang, J.**, Chen, J., Ma, L., Ye, K., & Zheng, G.: Impact of *Spartina alterniflora* Expansion on the Tidal Creek Formation in the mudflat of Yellow Sea, in prep.
- **Wang, J.**, Chen, J., & Zhao, C.: Identification and evaluation of land use changes induced habitat quality in China's coastal zone, in prep.