

QIURU CHEN

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Hohai University, No. 1 Xikang Road, Nanjing, Jiangsu, P.R. China

EDUCATION

Hohai University (HHU)

Nanjing, Jiangsu

M.Eng. in Hydraulic Engineering

09/2021 - 06/2024 (expected)

- Supervisor: Jiangjiang Zhang (Email: zhangjiangjiang@hhu.edu.cn)
- Thesis title: **Data Assimilation Fusion** Analysis Combined with **Deep Learning** in the Study of Seawater Intrusion.
- GPA: 3.39/4.0

North China University of Water Resources and Electric Power (NCWU)

Zhengzhou, Henan

B.Sc. in Hydrology and Water Resources Engineering

09/2017 - 06/2021

- Major courses: Watershed Hydrological Model, Hydraulics, River Hydrodynamics, Groundwater Dynamics, Hydrostatistics, Mathematical Practice and Modeling, Geographic Information System, Probability and Statistics, Operational Research, etc.
- GPA: 87.09/100

RESEARCH INTERESTS

Inverse Problem; Data Assimilation; Surrogate Modeling (Deep Learning); Uncertainty Quantification

RESEARCH EXPERIENCE

Machine Learning Based Simulation and Data Assimilation of Soil Moisture Dynamics

Research Assistant

09/2022 - Present

- Using deep learning to enhance the ensemble smoothing algorithm and integrate piezometric head and concentration, we achieved **data assimilation** of hydrogeological parameters with **reduced uncertainty**.
- Developed a deep fully convolutional encoder-decoder network with dense block structure, integrating timestep as additional inputs, for constructing a **surrogate model** for numerical simulations.

Prediction and Risk Assessment of Groundwater Quality Response to Climate Change Using Machine Learning

Research Assistant

09/2022 - 05/2023

- Gathered data on climate scenarios, hydrogeology, and water quality from publicly available literature to establish a groundwater quality database.
- Developed a **surrogate model** of groundwater quality utilizing the **random forest** algorithm to **forecast** the spatial and temporal distribution of water quality in both shallow and deep groundwater.

SKILLS

Language Skills: Mandarin (Native), English (CET-4, 530|CET-6, 441)

Programming Skills: MATLAB, Python

Technical Skills: ArcGIS, COMSOL, Mike

Interests: Badminton, Ping Pong, Hiking

AWARDS

- Postgraduate Academic Scholarship, HHU. 2023
- Postgraduate Academic Scholarship, HHU. 2021
- Outstanding Student Scholarship (twice), NCWU. 2019 - 2020
- Academic Scholarship (three times), NCWU. 2018 - 2020