

## EDUCATION

### Northeastern University

*Ph.D. in Marine and Environmental Sciences*

- Advisor: Prof. Cristina Schultz
- Dissertation: Linking Terrestrial Inputs, Coastal Benthic Fluxes, and Carbon Dynamics: A Multi-Scale Study from the Plum Island Estuary to the Gulf of Maine

Boston, USA  
2024 - Present

### China University of Geosciences (Beijing)

*M.E. in Geological Engineering*

Beijing, China  
2018 - 2021

### Zhejiang University

*B.E. in Environmental Engineering*

Hangzhou, China  
2013 - 2017

## POSITIONS

### Chinese Academy of Sciences

*Research Associate, Nanjing Institute of Geography and Limnology*

Nanjing, China  
2021 - 2024

### China University of Geosciences (Beijing)

*Lab Manager, MC-ICP-MS Laboratory*

Beijing, China  
2019 - 2020

## PUBLICATIONS

1. Wu, Y., Chen, S., **Ye, Q.**, Hua Li. Jiang, L., Chang, Y., Huang, W., Liu, C., Ma, S., Jiang R., Fei, D., Xu, H., Shi, X., and Chen, K., 2024. Coverage and diversity of submerged macrophytes drives sediment bacterial community in Dongshan Bay, Lake Taihu. (2024.10.31: Submitted to *Freshwater Biology*)
2. Wu, Y., **Ye, Q.**, Chen, S., Chen, K., Ma, S., Chang, Y. and Shi, X., 2024. Response of phytoplankton functional group to spring drought in a large subtropical reservoir. *Journal of Oceanology and Limnology*, pp.1-11.
3. Wu, Y., **Ye, Q.**, Chen, S., Jiang, L., Chen, K., Ma, S., Chang, Y., Liu, J. and Shi, X., 2024. Climate changes drive phytoplankton community through complementarity and selection effects in a large mesotrophic reservoir. *Journal of Oceanology and Limnology*, pp.1-15.
4. Chen, S., Jiang, L., Ma, S., Wu, Y., **Ye, Q.**, Chang, Y., Ye, Y. and Chen, K., 2024. Response of a submerged macrophyte (*Vallisneria spiralis*) to water depth gradients and sediment nutrient concentrations. *Science of The Total Environment*, 912, p.169154.
5. Yu, C., Wang, H., Blaustein, R.A., Guo, L., **Ye, Q.**, Fu, Y., Fan, J., Su, X., Hartmann, E.M. and Shen, C., 2022. Pangenomic and functional investigations for dormancy and biodegradation features of an organic pollutant-degrading bacterium *Rhodococcus biphenylivorans* TG9. *Science of The Total Environment*, 809, p.151141.

**Northeastern University**

2024 - 2029

*Department of Marine and Environmental Sciences*

As a Ph.D. student working with Prof. Cristina Schultz, I'm dedicated to evaluating the influence of benthic processes and terrestrial input on coastal nutrient cycles and water quality. In particular, I am:

- Compiling and integrating data from long-term observational records, hydrological datasets, and high-resolution ocean biogeochemistry models to build a comprehensive database for analyzing nutrient fluxes, oxygen dynamics, and sediment properties.
- Investigating the relationships among key environmental factors in PIE, particularly the role of benthic processes in regulating nutrient cycling and oxygen availability.
- Comparing patterns across estuaries by examining how PIE's nutrient fluxes, oxygen dynamics, and sediment properties differ from other northeastern U.S. estuaries, while exploring connectivity between these coastal systems.
- Assessing the impact of extreme events (e.g., storms, heatwaves) on estuarine dynamics and developing guidelines for future long-term monitoring and data integration to improve our understanding of estuarine resilience.

**Chinese Academy of Sciences**

2021 - 2024

*Nanjing Institute of Geography and Limnology*

As a research associate working with Prof. Kaining Chen and Prof. Xiaoli Shi, I focused on exploring the relationships between phytoplankton and the water column in lakes and reservoirs. In these projects, I:

- Investigated the mechanisms behind algal blooms caused by changes in nutrient concentrations, meteorological and hydrological conditions with long-term monitoring data series.
- Studied the impact of global warming on drinking water sources.

**China University of Geosciences (Beijing)**

2018 - 2021

*Institute of Earth Sciences*

The title of my master's thesis is An Improved Method for Precise Selenium Isotope Determination. Under the guidance of Prof. Jianming Zhu, I:

- Improved the testing method for precise selenium isotope determination.
- Tested and reported the selenium isotope ratios of a series of standard samples.

**Zhejiang University**

2016 - 2017

*College of Environmental and Resource Sciences*

The title of my undergrad's thesis is Hormesis Response of Polychlorinated Biphenyls to *Escherichia Coli*. Under the guidance of Prof. Chaofeng Shen, I:

- Established a microplate based, high throughput test method for *E. coli* growth.
- Identified the types of PCBs that can show the hormesis response on *E. coli* growth and investigated the mechanisms.

## INTERESTS

- Relationships between climate change, human activities, and aquatic system.
- Environmental complex systems modeling using **R** and **Python**.
- Large-scale dataset modeling and simulation.
- Environmental sustainability and environmental geochemistry.

TEACHING	<p><b>Northeastern University</b>  <i>Teaching Assistant, Department of Marine and Environmental Sciences</i></p> <ul style="list-style-type: none"> <li>Served as the instructor of 2 sections of Lab for Biostatistics (ENVR 2501), an undergraduate course, each with 19 students.</li> <li>Presented a one-hour lecture per section on advanced statistical methods in <b>R</b> (Bayesian/frequentist approaches, linear/generalized linear models, mixed-effects models, multivariate statistics, and ensemble modeling), followed by a two-hour Q&amp;A session every week.</li> <li>Provided hands-on guidance, working closely with students on real-world data analysis to ensure they developed strong practical skills in <b>R</b>.</li> </ul>	Spring 2024
ACADEMIC SERVICES	<p><b>Freshwater Biology</b>  <i>Peer Reviewer</i></p> <ul style="list-style-type: none"> <li>Evaluated and provided feedback on manuscripts related to freshwater ecosystems, assessing scientific rigor, methodology, and ecological significance.</li> </ul>	2024
SCHOLARSHIPS	<ul style="list-style-type: none"> <li>Full Scholarship Ph.D. Program, Northeastern University.</li> <li>Second-Class Academic Scholarship, China University of Geosciences.</li> </ul>	2024 2019, 2020
SKILLS	<p><b>Programming &amp; Software</b></p> <ul style="list-style-type: none"> <li>Proficient in <b>R</b> and <b>Python</b> for data analysis and computational tasks.</li> <li>Experienced in large-scale modeling in high-performing computing environment.</li> <li>Skilled with ArcGIS, MIKE Zero, Origin, L<sup>A</sup>T<sub>E</sub>X, Microsoft Office, Adobe Creative Suite.</li> </ul> <p><b>Laboratory &amp; Field Work</b></p> <ul style="list-style-type: none"> <li>Proficient in field navigation for locating sampling sites using portable GPS devices.</li> <li>Proficient in sample collection and preservation (water, sediment, phytoplankton, zooplankton, aquatic plants, etc.).</li> <li>Proficient in chemical laboratory skills, including sample preparation and testing.</li> <li>Proficient in ultra-clean laboratory procedures such as isotope sample preparation.</li> <li>Skilled in the operation and maintenance of experimental instrumentation including UV-Spectrophotometer, Atomic Fluorescence Spectrometer (AFS), Inductively Coupled Plasma Mass Spectrometer (ICP-MS), and Multi-Collector ICP-MS (MC-ICP-MS).</li> </ul> <p><b>Languages</b></p> <ul style="list-style-type: none"> <li>Chinese: Native.</li> <li>English: Full professional proficiency.</li> </ul>	
ACTIVITIES	<p><b>Northeastern University</b>  <i>Member of the Ph.D. Student Council, College of Science</i></p> <ul style="list-style-type: none"> <li>Serve as a liaison between the Dean's Office and Ph.D. students, ensuring their concerns and suggestions were represented.</li> <li>Build community among Ph.D. students across different departments through events and programs, fostering collaboration.</li> <li>Provide a platform for sharing ideas, addressing issues, and encouraging constructive dialogue within the College.</li> </ul>	2024 - Present