Yachen Li

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Richland, WA

EDUCATION

Rutgers University, New Brunswick New Brunswick, NJ
- MS, Operational Oceanography. GPA:3.9/4.0 08/2022 - 10/2023

Nanjing University of Information Science and Technology Nanjing, China
- BS, Marine Technology 09/2016 - 06/2020

Saint Louis University St. Louis, MO
- Summer Scholar Program: Geographic Information Systems 07/2018 - 08/2018

PROFESSIONAL EXPERIENCE

Pacific Northwest National Laboratory Richland, WA
Post-Master Research Associate 10/2023 - present

- Developing and deploying ocean thermal energy harvesting system to power remote environmental monitoring devices.
- Deploying underwater vehicles in marine environments to monitoring water quality autonomously.

Rutgers University, Rutgers Center for Ocean Observing Leadership New Brunswick, NJ
Master Researcher 08/2022 - 10/2023

- Endurance line research:
  - Prepared, deployed, and recovered Teledyne Slocum autonomous underwater gliders in Fall and Spring.
  - Carried out **10**+ shipboard sampling with CTDs (Sea Bird, Castaway, RBR), ADCP, and Side Scan Sonar.
- Ocean Modeling/Visualization:
  - Operated ocean dynamic models with HPC platforms and UNIX environment: Regional Ocean Modeling System (ROMS)
  - Processed, visualized, and analyzed multi-sourced geographic dataset, i.e., Glider measurements, Satellite images, Side scan sonar data, Ocean model output.
- Geography Data Analysis:
  - Empirical Orthogonal Function, Harmonic Analysis, Spectral Analysis, Optimal Interpolation.
  - Operated particle tracking model ROMSPath and compared with Drifter data to validate.

The Hong Kong Polytechnic University, Department of Land Surveying and Geo-Informatics Hong Kong, China
Project Assistant 09/2021 - 04/2022

- Collaborated on developing a Marine Water Quality Monitoring System for Environment Protection Department.
- Reviewed and complied the methodologies for water quality monitoring and resolution of marine environmental incidents.
- Conducted oil spill trajectory modeling OpenDrift to provide technical support for oil spill management.
- Processed and analyzed **2** years water quality and satellite data to develop retrieval models of water quality parameters.

Tsinghua University, Shenzhen Key Laboratory for Marine IntelliSense and Computation Shenzhen, China
Marine Database Engineer 09/2020 - 09/2021

- Provided ocean dynamic simulation for a Nuclear Power Station for Marine Environment Detection and Warning.
- Established a FVCOM regional ocean model by combing observation data and analyzing key physical processes.
- Applied a particle trajectory model OpenDrift in the forecast system to simulate the fate of plankton and pollutants.
- Compiled a manual for the model development and a series of SOPs for the entire simulation.
- Team Bronze Medal, member, the International Exhibition of Inventions of Geneva.

PUBLICATION

Deng Z., A.L. Salalila, A.E. Copping, J.J. Martinez, and **Y. Li**. 2024. "Environmental Monitoring and Risk Assessment for Marine Energy Systems." In Encyclopedia of Renewable Energy, Sustainability, and the Environment. [Unpublished]

Yachen Li, Alexander Lopez, Karen Bemis, Robert Chant. **"Estuarine Particles Simulations: The Connection Between Delaware Bay and Offshore Wind Lease Areas,"** OCEANS 2023 - MTS/IEEE U.S. Gulf Coast, Biloxi, MS, USA, 2023, pp. 1-8, doi: 10.23919/OCEANS52994.2023.10337104

Yachen Li, Shengqiang Wang, Deyong Sun, Hongbo Jiao, Hailong Zhang. **Assessing typhoon impacts on phytoplankton in the East China Sea based on satellite remote sensing data[J].** *Chinese Journal of MARINE ENVIRONMENTAL SCIENCE*, 2022, 41(4): 519-525, doi: 10.12111/j.mes.20200260 (In Chinese)