

Zhiyue “Philip” Wang

Assistant Professor

“Municipal wastewater treatment and nutrient management is a grand engineering challenge complicated by climate change, water scarcity, and public health considerations.”

In Fall 2022, Dr. Wang was welcomed to the WRRC ohana, and jointly appointed to the Department of Civil and Environmental Engineering. His research focuses on environmental biotechnologies for biological nutrient removal, contaminant remediation, and resource recovery from municipal wastewater. His areas of expertise are processing engineering, environmental chemistry and microbiology, and mathematical modeling of microbial metabolisms. He hopes to find innovative solutions to emerging environmental issues in Hawaii, including cesspool replacement for on-site wastewater treatment and water reclamation for freshwater security.



EDUCATION

- BS, Chemistry and Biological Chemistry, Nanyang Technological University
- MS, Environmental Engineering and Science, Stanford University
- PhD, Environmental Engineering and Science, Stanford University

INTERESTS

- Wastewater treatment processes
- Biological nitrous oxide production
- Microbial encapsulation
- Metabolic modeling for microbial interactions

CURRENT PROJECT

- Recovery of organics in wastewater for bioplastic production
- Decentralized wastewater treatment to replace cesspools