

Jingjing Wu

CURRICULUM VITAE

POSTDOCTORAL ASSOCIATE · DEPARTMENT OF CIVIL AND ENVIRONMENTAL ENGINEERING

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Education

Clarkson University, Department of Civil and Environmental Engineering

Potsdam

PHD IN CIVIL AND ENVIRONMENTAL ENGINEERING

2015 - 2021

Advisor: Dr. Shane W. Rogers

Dissertation Topic: "Bioextractive Aquaculture as an Alternative Nutrient Management Strategy for Water Resource Recovery Facilities: Comprehensive Evaluation Based on Techno-Economic Analysis and Life Cycle Assessment"

Committee members: Stefan J. Grimberg, Susan E. Powers, Nichole N. Price, Xuan Chen

Clarkson University, Department of Civil and Environmental Engineering

Potsdam

MASTER OF SCIENCE IN CIVIL AND ENVIRONMENTAL ENGINEERING

2013 - 2015

Advisor: Dr. Shane W. Rogers

Ocean University of China, College of Marine Life Sciences

Qingdao

BACHELOR OF SCIENCE IN BIOLOGICAL SCIENCE

2008 - 2012

Professional Experience

2022-Present	Postdoctoral Associate , Department of Civil and Environmental Engineering, Rice University, Houston, TX, U.S.A. (Advisor: Dr. Lauren B. Stadler)
2021-2022	Postdoctoral Research Associate , Department of Civil and Environmental Engineering, Clarkson University, Potsdam, NY, U.S.A. (Advisor: Dr. Shane W. Rogers)
2022.3-2022.5	Visiting Scientist , Bigelow Laboratory for Ocean Sciences, East Boothbay, Maine, U.S.A.
2013-2021	Graduate Research Assistant , Department of Civil and Environmental Engineering, Clarkson University, Potsdam, NY, U.S.A.
2012.3-2012.6	Undergraduate Research Assistant , Department of Ecology, Ocean University of China, Qingdao, Shandong, China
2010-2012	Undergraduate Research Assistant , Department of Biology, Ocean University of China, Qingdao, Shandong, China

Publications

Jingjing Wu, Michael X. Wang, Todd J. Treangen, Katherine B. Ensor, Loren Hopkins, Lauren B. Stadler. Sensitivity, throughput, and cost analysis of concentration methods for multi-target pathogen wastewater monitoring. *ACS ES&T Water* (2025)

Jingjing Wu, Katherine B. Ensor, Loren Hopkins, Lauren B. Stadler. Assessment and Application of Genexpert Rapid Testing for Respiratory Viruses in School Wastewater. *Environmental Science Water Research & Technology* (2025)

Sarah Javornik Cregeen, Mike Tisza, Blake Hanson, Marissa Cook, Anil Surathu, Rebecca Schneider, **Jingjing Wu**, Kirstin Short, Kaavya Domakonda, Loren Hopkins, Matt Ross, Joseph Petrosino, Jennifer Deegan, Lauren B. Stadler, Eric Boerwinkle, Anthony Maresso. Sequencing-based Detection of Measles in Wastewater. *American Journal of Public Health* (2025)

Jingjing Wu, Michael X. Wang, Prashant Kalvapalle, Michael Nute, Todd J. Treangen, Katherine Ensor, Loren Hopkins, Rachel Poretsky, Lauren B. Stadler. Multiplexed detection, partitioning, and persistence of wild type and vaccine strains of measles, mumps, and rubella viruses in wastewater. *Environmental Science & Technology* (2024)

Katherine B. Ensor, Julia C. Schedler, Thomas Sun, Rebecca Schneider, Anthony Mulenga, **Jingjing Wu**, Lauren B. Stadler, Loren Hopkins. Online trend estimation and detection of trend deviations in sub-sewershed time series of SARS-CoV-2 RNA measured in wastewater. *Scientific Reports* (2024)

Jingjing Wu, Shane W. Rogers, Rebekah Schaumann, Nichole Price. A Comparison of multiple macroalgae cultivation systems and end-use strategies of *Saccharina latissima* and *Gracilaria tikvahiae* based on techno-economic analysis and life cycle assessment. *Sustainability* (2023)

Jingjing Wu, Shane W. Rogers, Rebekah Schaumann, Chris Higgins, Nichole Price. Bioextractive aquaculture as an alternative nutrient management strategy for water resource recovery facilities. *Water Research* (2022)

Honors & Awards

2021	The Phalanx Distinguished Service Award , Clarkson University	
2011	Ocean University of China Third-class Scholarship , Ocean University of China	¥ 500
2010	Ocean University of China Third-class Scholarship , Ocean University of China	¥ 500
2010	Student Research Training Program Fellowship , Ocean University of China	¥ 2,600
2009	Excellent Speaker of the Science, Culture and Art Festival for College Students , Ocean University of China	
2009	Outstanding member of Student Union , Ocean University of China	
2009	Ocean University of China Third-class Scholarship , Ocean University of China	¥ 500

Teaching & Mentoring Experience

TEACHING

Spring 2025	Workshop Instructor - Wastewater Surveillance for Pathogen: Data Generation and Application , (as part of "Rice University Environmental Data Science Academy"), Rice University	Houston
Spring 2025	Teaching Assistant - CEVE 316 Urban Water Systems Lab - Process Modeling Module , (Instructor: Dr. Lauren Stadler), Rice University	Houston
Fall 2020	Invited Speaker - CE 479/579 Water and Wastewater Treatment Design , (Instructor: Dr. Shane Rogers), Clarkson University	Potsdam
Spring 2020	Teaching Assistant - ES330 Fluid Mechanics , (Instructors: Dr. Weiming Wu, Dr. Abui Baki, and Dr. Andrea Ferro), Clarkson University	Potsdam
Fall 2019	Teaching Assistant - CE 479/579 Water and Wastewater Treatment Design , (Instructor: Dr. Shane Rogers), Clarkson University	Potsdam
Spring 2019	Teaching Assistant - ES330 Fluid Mechanics , (Instructors: Dr. Weiming Wu, and Dr. Abui Baki), Clarkson University	Potsdam
Fall 2018	Guest Lecturer - CE 479/579 Water and Wastewater Treatment Design , (Instructor: Dr. Shane Rogers), Clarkson University	Potsdam

MENTORING AND RESEARCH ADVISING

2025	Angelika Contreras , NSF-RET mentee, HUMBLE ISD
2024	Tobenna Esomeju , Undergraduate researcher, Rice University
2024	Christian Diaz , Undergraduate researcher, Rice University
2019-2022	Rebekah Schaumann , Honors program student, Clarkson University
2018-2020	Maddison Bredehoeft , Honors program student, Clarkson University
2019	Angelika Sonne , NSF-REU student, California State University, San Diego
2018	Sasha Gallimore-Repole , Honors program student, Clarkson University
2018	Alexandra Hauke , NSF-REU student, North Carolina A&T State University
2017	Paige Hval , NSF-REU student, Loyola Marymount University

Presentations

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| 2025 | <i>Tracking Candida auris in communities via wastewater: Facility-level surveillance and targeted sequencing</i> , Southeast Regional Wastewater Surveillance Workshop, Houston, TX, U.S.A. | Oral presentation |
| 2025 | <i>Wastewater surveillance for Candida auris in nursing homes and downstream wastewater treatment plants in Houston, TX</i> , Association of Environmental Engineering & Science Professors (AEESP) Research and Education Conference, Durham, NC, U.S.A. | Poster presentation |
| 2024 | <i>Multiplexed detection, partitioning, and persistence of wild type and vaccine strains of measles, mumps, and rubella viruses in wastewater.</i> , Wastewater Disease Surveillance Summit, Atlanta, GA, U.S.A. | Poster presentation |
| 2024 | <i>Wastewater surveillance for measles: Assay development, application, and action plan.</i> , NSF RCN webinar, Virtual | Invited oral presentation |
| 2023 | <i>Houston's wastewater monitoring of SARS-CoV-2, influenza, RSV, and mpox for infectious disease surveillance.</i> , SIMB Annual Meeting, Minneapolis, MN, U.S.A. | Invited oral presentation |
| 2022 | <i>Comparison of multiple macroalgae cultivation systems and end-use strategies based upon life cycle assessment.</i> , Coast-Cow-Consumer 1st Friday Research Forum, Virtual | Invited seminar presentation |
| 2022 | <i>Bioextractive macroalgae cultivation for nutrient management as a potential alternative to advanced wastewater treatment nutrient removal processes in water resource recovery facilities.</i> , ASLO Aquatic Sciences Meeting, Virtual | Poster presentation |
| 2022 | <i>Comparison of multiple macroalgae cultivation systems and end-use strategies based upon technoeconomic analysis and life cycle assessment.</i> , ASLO Aquatic Sciences Meeting, Virtual | Oral presentation |
| 2021 | <i>Nutrients and pathogen export from application of manure to frozen ground.</i> , DEMOCRATIA-AQUA-TECHNICA Conference, Virtual | Oral presentation |
| 2019 | <i>Seaweed cultivation as an alternative nutrient management strategy for wastewater treatment and recovery facilities: a case study in Boothbay Harbor, Maine.</i> , ASLO Aquatic Sciences Meeting, San Juan, PR, U.S.A. | Oral presentation |
| 2018 | <i>Macroalgae cultivation in wastewater discharge plumes for nutrient management as a potential alternative to wastewater treatment nutrient removal processes.</i> , North East Graduate Student Water Symposium (NEGSWS), Amherst, MA, U.S.A. | Poster presentation |
| 2018 | <i>Impact of multiple wastes on biomethane potential of anaerobic co-digestion of cow manure.</i> , New York Water Environment Association Conference Annual Meeting & Exhibition, New York City, NY, U.S.A. | Oral presentation |

Professional Service & Community Engagement

PROFESSIONAL SERVICE

- 2025 **Journal reviewer**, Green Chemistry (number of papers reviewed: 2)
- 2025 **Journal reviewer**, ACS ES&T Water
- 2025 **Journal reviewer**, Discover Applied Sciences
- 2024 **Journal reviewer**, Environmental Science & Technology (number of papers reviewed: 2)
- 2024 **Student presentation evaluator**, Rice University SSPB Summer Research Symposium
- 2022 **Journal reviewer**, Environmental Science Water Research & Technology
- 2022 **Student presentation evaluator**, ASLO Aquatic Sciences Meeting

COMMUNITY ENGAGEMENT

- 2020-2021 **Graduate Researcher**, COVID-19 surveillance in diverse communities at upstate New York, conducted at Clarkson University in Potsdam, NY
- Assistant Workshop Organizer**, Small-scale Anaerobic Digester Workshop: Farmer education and outreach program regarding the potential use of anaerobic digestion on small farms, conducted at the Cornell Cooperative Extension Farm in Canton, NY.