MEMBER PROFILE

Emilie DeRochie

River Strategy Coordinator, River Institute & M.Ed. Student, Lakehead University

About my work

Currently, I am an educator and the coordinator for the St. Lawrence River Strategy. For the River Strategy, I work closely with colleagues at the Mohawk Council of Akwesasne and groups along the Upper St. Lawrence River to develop a framework for inclusive and equitable communication and collaboration on shared goals related to the river. As an educator, I teach Biology for St. Lawrence College's Environmental Technician program and develop education materials for the Great River Rapport. I am also currently an M.Ed. student at Lakehead University in Environmental and Sustainability Education.

Inspiration for this work

I was inspired to enter this type of work because I grew up on the St. Lawrence River and I have always loved river. During my undergraduate degree, I also worked at the River Institute in the summers where I supported the education team and Ph.D. Candidate (UQAM) Cristina Charette's fieldwork. Through these experiences I became passionate about environmental education and freshwater ecology.

Something else about myself

Outside of work and school, I love to spend time on the water and in wetlands collecting and pressing plants. I particularly enjoy the challenge of pressing macrophytes!



Why I joined IAGLR

I joined IAGLR to stay up to date on the latest research and news pertaining to the Great Lakes-St. Lawrence River Basin and to expand my network.

MEMBER PROFILE

Ali Reza Shahvaran

M.Sc. Student, Earth Science (Water), University of Waterloo

About my work

My research focuses on modeling and monitoring algal blooms using remote sensing data for western Lake Ontario, including satellite and drone imagery. I develop remote sensing-derived Chlorophyll-a (Chl-a) models by training them with in-situ matchups. Chl-a, a green pigment in phytoplankton, is the most common parameter for detecting eutrophication in aquatic remote sensing. After training the models and preprocessing the images, I generate Chl-a concentration maps that aid in understanding algal bloom patterns. The outcomes of my research help characterize the spatial and temporal dynamics of algal blooms in the western basin of Lake Ontario over the last 20 years, informing decision-making and nutrient management plans, especially in the Greater Toronto Area.

Inspiration for this work

The awe-inspiring beauty of Earth, as seen from space, has always been a source of motivation for me. Transforming raw images of our planet into meaningful information for environmental stewardship is a rewarding and fascinating experience.

Something else about myself

In my free time, I appreciate cinema as an art form, enjoy reading fantasy novels, and aspire to explore acrylic painting when time permits.

Why I joined IAGLR

Joining IAGLR as an early-career researcher with a background in environmental engineering offers me an ideal scientific community



for networking and learning. IAGLR presents opportunities to present my research at annual international conferences, publish my work in the *Journal of Great Lakes Research*, and collaborate with like-minded researchers on projects contributing to the sustainable management of the Great Lakes ecosystem.