WAYNE STATE UNIVERSITY

Earth and Environmental Science Seminar Series

Jointly hosted by the Department of Geology and the Environmental Science Program

Microbial Community Structure Corresponds to Nutrient Gradients and Human Impact within Coastal Wetlands of the Great Lakes and Beyond

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Wednesday February 14th at 3pm | Biological Sciences Room 1167

Reception and refreshments to precede 40 – 50 min seminar followed by time for questions

Abstract: Microbes play a crucial role in supporting ecosystem health both directly by regulating the cycling of essential nutrients and also indirectly through via various mineral interactions. In this talk, we will discuss how ecosystem disturbances (e.g. temperature, pH, dissolved oxygen, or metal contamination) impact microbial communities and subsequently alter microbial function within that ecosystem. Specially, we are examining wetlands in the Laurentian Great Lakes, which has seen a 50% reduction driven by anthropogenic habitat destruction. The lab is exploring these critical ecosystems to better understand the microbial communities and biogeochemical processes they govern. We also are examining how natural forces, such as diel O_2 fluctuations, can impact community structure and function.

Biography: Deric is an Associate Professor in the Department of Biology at Central Michigan University. After completing his BS degree in Geology and Environmental Science from Central Michigan University, Deric earned his PhD from Virginian Tech. He worked as a Postdoctoral Fellow at Harvard University before coming back to his native Michigan to study the Great Lakes, as a faculty at Central Michigan University. His lab utilizes a range of techniques in microbial ecology, physiology, genomics, and geochemistry to investigate how microbes (single strains or communities) mediate biogeochemical cycles in various environments, ranging from oceans, lakes, to sediments.