

Center for Environmental & Applied Fluid Mechanics



**“Experimental
Investigation of Particle
and Pollutant Transport
in Complex Flows”**

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Experiments are a powerful method to study the kinematic transport of pollutants in the environment, specifically those pollutants transported by turbulent flow. My research thus far has focused on using experiments to characterize the interactions of turbulence, particles, and solutes. Using large-scale facilities, these experiments are able to capture dynamics such as Earth’s atmospheric boundary layer and near-shore coastal processes. In this talk I will start with the fundamentals of particle rotation and dissolution. I will then apply the fundamental understanding to large scale questions such as the development of a model to detect the source location for a methane plume from a natural gas leak. I will expand even further to connect the transport model approach for methane to seed particle plume transport in the Great Bay Estuary, which I am investigating with an oscillating water tunnel to simulate wave motion over sediment and vegetative beds.

Spring 2023 CEA FM Seminar Series

January 27, 2023 ✦ 3:00 PM ✦ Gilman Hall 50

<https://wse.zoom.us/j/93762992307>