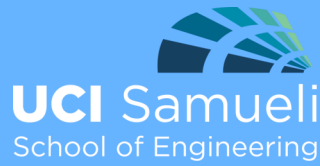




**Presented By:**  
**Ben Hodges, Ph.D.**  
Associate Professor  
University of Texas, Austin  
Department of Civil, Architectural  
& Environmental Engineering



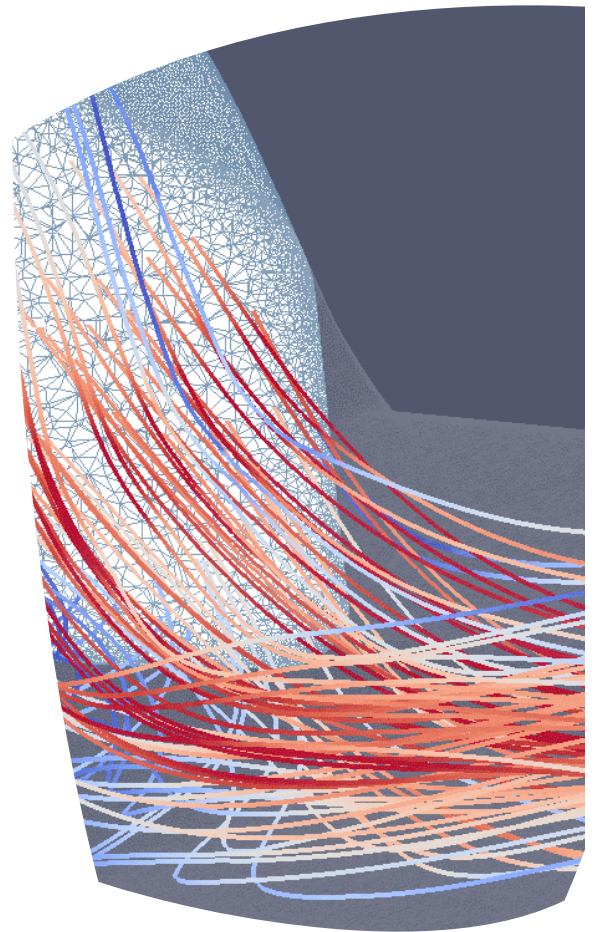
Department of  
Civil and Environmental  
Engineering

# Environmental Engineering *Seminar Series*

*Friday, October 16th 2015*  
*MDEA*  
*1:30PM - 2:30PM*

## An Eclectic Mix Of Environmental Fluid Mechanics Problems

Environmental fluid mechanics modeling crosses a wide range of topics and scales where we attempt to capture dynamical motions in the natural environment. In this presentation, we will consider issues associated with (1) the far-field conditions of a desalination brine discharge that can lead to hypoxia; (2) river network modeling at continental scales with the full Saint-Venant equations; and (3) how the seemingly trivial change from transporting concentration to transporting mass can lead to efficient time-stepping in a numerical model. The common thread is the need to look at the deficiencies in existing models and use these as the springboard for creating the next generation models.



### Speaker Bio

Dr. Ben R. Hodges is Associate Professor and Reistle Centennial Fellow in the Department of Civil, Architectural, and Environmental Engineering at the University of Texas in Austin. He did his doctoral work with Robert Street in the Environmental Fluid Mechanics Laboratory at Stanford and was a post-doctoral fellow with Jorg Imberger at the Center for Water Research in the University of Western Australia. His research is in numerical models for environmental fluid mechanics, focusing on model errors developed in the structure of the discrete equations and how these errors effect practical modeling applications in the environment.