

# 2023 DARCY LECTURE

## CEE GRADUATE SEMINAR SERIES

“Please check your assumptions at the coastline: 15 years of wading through salt”

Alicia Wilson, Ph.D.

*Professor of Hydrogeology at the University of South Carolina*

January 30, 2023 | 4:00 p.m.

On-Campus Location: Campus Center Ballroom B

[Webex Link: Click here](#)



### About the Speaker

Dr. Alicia Wilson is a professor of hydrogeology in the School of the Earth, Ocean, and Environment at the University of South Carolina. She specializes in coastal hydrogeology, with a particular focus on coastal ecohydrology and submarine groundwater exchange. A fellow of the Geological Society of America, Wilson has served as the chair the GSA Hydrogeology Division and the Director of the School of the Earth, Ocean, and Environment. She is a recipient of the University of South Carolina's Mungo Undergraduate Teaching Award. Wilson holds a Ph.D. from the Johns Hopkins University, an MS from Stanford University, and a BA from Dartmouth College. She held a National Research Council Postdoctoral Research fellowship at the USGS in Reston, VA, and held a postdoc at the University of California, Santa Barbara.

### Seminar Abstract

The field of hydrogeology is well known for its roots in water supply and contaminant remediation, but hydrogeologists are a highly adaptable group who can make critical contributions to — and learn from — a wide range of other fields. This talk describes 15 years of progress in understanding the ecohydrology of salt marshes, including everything from how to construct a well in a setting where water levels rise and fall by meters every day to the influence of groundwater flow on plant zonation and carbon cycling. Current research in salt marsh ecohydrology reaches in multiple directions, including the importance of crab burrows for solute and gas exchange in the root zone, the impact of stressors like drought and sea level rise on salt marsh migration, and the role of salt marshes as buffers for development. Carbon budgets for salt marshes are another area of continuing research. Future research will bring improved knowledge of biogeochemical cycling in salt marshes and has the potential to bring advanced ecohydrologic models that address salt marsh migration and restoration as well as atmospheric exchange.