

# UNC's Dr. Rick Luettich Receives ASCE's 2025 International Coastal Engineering Award

The American Society of Civil Engineers (ASCE) has announced that UNC's Dr. Rick Luettich, has been awarded the 2025 International Coastal Engineering Award together with Dr. Joannes Westerink of the University of Notre Dame for their "national leadership in coastal storm hazards and the development and maintenance of ADCIRC for surge and tidal modeling." Luettich is an Alumni Distinguished Professor in the Department of Earth, Marine and Environmental Science and the Department of Environmental Sciences and Engineering. He directs UNC's Center for Natural Hazards Resilience and has led the Department of Homeland Security-funded Coastal Resilience Center of Excellence (CRC) since 2015.



## Background and Impact

Dr. Luettich and co-awardee Westerink initiated development of the ADCIRC coastal circulation and storm surge modeling system in the 1990s and have since led its continued development and applications in multiple areas of coastal science and engineering. In addition, ADCIRC is widely used by academia, governmental agencies, and the private sector for flood hazard assessments, climate studies, mitigation design, event forensics, and forecasting. Examples of societally significant ADCIRC applications include the Federal Emergency Management Agency's (FEMA's) Risk Map Program in support of the National Flood Insurance Program, designs for major coastal flood protection projects by the US Army Corps of Engineers (USACE), the National Oceanographic and Atmospheric Administration's (NOAA's) Coastal Ocean Reanalysis database, US Coast Guard search and rescue, and the National Weather Service's Global Surge and Operational Forecast System.

ADCIRC advancement and application have received funding from multiple federal agencies including the USACE, NSF, NOAA, FEMA, the National Ocean Partnership Program, and the DHS CRC. Sustained funding through the CRC has been critical for ADCIRC development, maintenance, and provision as a significant resource for the hazards science and engineering community.

