

National Advisory Committee on Windstorm Impact Reduction (NACWIR) Member



Donald T. Resio, Ph.D.

**Director, Taylor Research Engineering Institute Professor of Ocean
Engineering
University of North Florida**

Dr. Resio's expertise is in hurricane risk assessment and risk mitigation. He is a Professor of Ocean Engineering at the University of North Florida and is the Director of the Taylor Engineering Research Institute.

He earned his PhD in Environment Science, specializing in Ocean and Atmospheric Processes at the University of Virginia. His professional experience includes 26 years of government service, four years as a professor at the Florida Institute of Technology, two years as a Vice President of Oceanweather, Inc., and eight years as president of his own consulting company, Offshore & Coastal Technologies, Inc. During his time in federal service, Dr. Resio served as the Senior Technologist for the Army Corps of Engineers and directed the Army's Program for Coastal Disaster Response/Mitigation.

Dr. Resio's recent research has focused on the quantification of hazards and solutions for coastal vulnerabilities within the U.S., including the development of improved causeway/bridging replacement technologies for disaster relief, methods for sealing large breaches in levees, and improved risk estimation methods for coastal flooding that combine hydrologic and oceanic effects. He was selected as co-leader of the post-Katrina Interagency Performance Evaluation Taskforce and led the Risk Analysis team for the South Louisiana Hurricane Protection Project. This team developed a new technical approach for hurricane risk assessment, including the assessment of climatic variability on tropical cyclones, which serves as part of the foundation for much of the approach to risk along all U.S. coastlines today. Dr. Resio led an effort sponsored by the Nuclear Regulatory Commission (NRC) to extend his approach to the estimation of hazards for licensing Nuclear Power Plants in coastal areas, which is now the basis for new NRC regulations being considered for implementation within the U.S. Under the sponsorship of the Department of Homeland Security, Dr. Resio led a team of researchers in the development of innovative methods for the rapid repair of levee breaches. This work offers new options for improved flood mitigation in many areas of the U.S. and is now being implemented in a full-scale deployment in Lake Okeechobee, Florida.

Dr. Resio has published many articles in leading international journals, including an invited article in *Physics Today*, entitled "Modeling the Physics of Hurricane Storm Surges," and has been the keynote speaker at many national and international conferences on ocean and atmospheric physics and statistics. He served as a U.S. delegate to the United Nations (UN) World Meteorological Organization-International Ocean Commission Joint Technical Commission for Oceanography and Marine Meteorology in the area of climate effects and the ocean. He also served as an interagency representative on the White House Disaster Reduction Subcommittee and serves as a reviewer for many national and international efforts to quantify coastal hazards and risks, including a recent week-long review of the Indian Institute of Technology's (New Delhi) program on cyclone flooding in the north Indian Ocean. Dr. Resio served as the co-chair of the UN World Meteorological Organization Coastal Inundation and Flooding Demonstration Project from 2008 to 2016, where he led an international group of scientists and engineers in an effort to mitigate current and future flooding risks around the world. Dr. Resio has authored or co-authored over 100 conference publications and report, has been the principal organizer of several national and international conferences.