UNIVERSITY OF GEORGIA
College of Engineering

2017-2018 Lecture Series

Todd Bridges, Ph.D.
Senior Research Scientist for Environmental Science
U.S. Army Engineer Research and Development Center

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NOON - 1:30 P.M.

COVERDELL CENTER AUDITORIUM (Room 175)

Development of Natural Infrastructure for Resilient Systems

ABSTRACT

Natural infrastructure has been used for decades to support a variety of objectives in coastal and fluvial systems. Beach and dune projects have been a longstanding part of flood risk reduction strategies in the United States, Europe and elsewhere. Analogous approaches have been pursued in fluvial systems (e.g., levee setbacks). In addition, ecosystem restoration projects have developed wetlands and other habitats to restore environmental functions. In more recent years, there has been growing interest in developing a technically sound engineering approach for integrating natural and conventional (e.g., levees, seawalls, etc.) systems to achieve more comprehensive resilience. This interest has been stimulated by recent storm events, including Hurricanes Katrina, Sandy and Harvey, which have given rise to a range of studies and projects focused on the role of natural infrastructure in flood risk management. Example studies and projects will be used to highlight research needs and practical opportunities.

BIOGRAPHY

Dr. Bridges is the U.S. Army's Senior Research Scientist for Environmental Science, in which capacity he leads a number of research, development and environmental initiatives for the U.S. Army and U.S. Army Corps of Engineers. His primary areas of research activity concern 1) the science and engineering of sustainable infrastructure development 2) the development of risk and decision analysis methods applied to water resources infrastructure and environmental systems, and 3) sediment assessment and management. Dr. Bridges is the Program Manager for the Dredging Operations Environmental Research program, one of the Corps' largest civil works R&D programs, where he directs the execution of more than $6 million in research annually.

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