



NSF-Duke-NCSU-UNC

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SPEAKER/ABSTRACT

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“An Emulator Approach for Quantifying the Risk Due to Storm Surge”

Abstract:

Complex computer models of real-world processes (or simulators) are an essential ingredient to carry out uncertainty quantification in science and engineering. In coastal emergency risks assessment, storm surge is one of the most severe natural disasters that can lead to significant flooding in coastal areas and severe damages to the life and property from a hurricane. Quantifying the risk due to storm surge requires large-scale numerical simulations of hurricanes from storm surge modeling systems. A crucial need is the development of an emulator to facilitate risk quantification. This talk will present a statistical surrogate model and show some initial results.