16th International Symposium on Functionally Graded Materaisl, Hartford, Connecticut, USA
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Mini-Symposium Title: Hazard Vulnerability, Performance Assessment, and Risk Reduction of Coastal Structures for Resilient Communities

Organizer:

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Description:

Hazards from extreme events, such as hurricanes, may lead to catastrophic failures of critical civil infrastructures in coastal communities. As typical multi-hazard events, hurricanes produce precipitation, storm surge, wind, waves, etc. Understanding the coastal natural hazards and their impacts on coastal structures is essential to improve the safety and resilience of the community. To better evaluate the performance of the coastal and offshore structures and mitigate possible failures, novel concepts, methods, and applications are developed through analytical, experimental testing, numerical simulations, and field monitoring and testing. Besides, with an increasingly common practice of introducing tools from data science for performance prediction, modeling and management of civil structures, research platforms and cyberinfrastructure has emerged to support associated data management, multi-disciplinary collaboration, and data analytics in the hazards engineering community.

This mini-symposium will provide a forum for the dissemination of knowledge and exchange of ideas in the performance assessment and damage modeling of coastal structures subjected to single or multiple hazards. Presentations will leverage insights from physics-based models as well as data from numerical simulations, laboratory testing or field measurements. Physics-based modeling, data-driven approaches as well as hybrid approaches, are of interest.