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Other - Joint Coastal Faculty Position with Civil and Environmental Engineering

**Modeling of Coastal Flood Hazards****Yefei Bai, University of Hawaii**

Postdoctoral Fellow

Digital Media Center Theatre  
November 12, 2013 - 11:00 am**Abstract:**

The populated coastal region is vulnerable to the impact from nature-caused hazards, such as storm surge and tsunami. Numerical modeling provides powerful tool in order to better prepare for, respond to, and recover from these disasters. The presentation demonstrates the capability of two numerical packages in modeling hurricane and tsunami impact on the Hawaiian Islands through their implementation in externally funded project and real-time tsunami event. An interoperable model package is utilized in the Hawaii Catastrophic Hurricane Operation Plan project funded by FEMA to generate storm-induced flooding inundation map for execution of unified Federal and State response. Five historical trans-pacific tsunami events are reconstructed through modeling of Non-hydrostatic Evolution of Ocean Waves for generation of tsunami inundation map funded by NTHMP. Persistent surge impact around the Hawaiian Islands induced by the 2011 Tohoku tsunami is analyzed for impact evaluation of harbor operation and maritime safety.

**Speaker's Bio:**

Dr. Yefei Bai is currently a Postdoctoral Fellow in Ocean and Resources Engineering at the University of Hawaii. He received his Ph.D. from the University of Hawaii under the direction of Prof. Kwok Fai Cheung in May of 2012 with his dissertation on "Depth-integrated Free-surface Flow with Non-hydrostatic Formulation." Dr. Bai has worked on several projects since receiving his Ph.D. including the Office of Naval Research "Environment for Design of Advanced Marine Vehicles and Operations Research," the FEMA "Hawaii Catastrophic Hurricane Planning Project," and the National Tsunami Hazard Mitigation Program "Tsunami Inundation Mapping."

