Department of Ocean and Resources Engineering  
Seminar

Capstone Design: FEMA FIRM Modernization, Part 2  
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Abstract

As presented in the first part of this series, the Spring 2006 Ocean and Resources Engineering Capstone Design Course (ORE 783) project is the development and implementation of a probabilistic approach to model extreme wave events to simulate updating the FEMA Flood Insurance Rate Maps (FIRM). The two teams in the ORE 783 class have presented their statistical approaches to determine the 100 and 200 year return period extreme events for hurricanes, tsunamis and swells.

The results of the probabilistic approaches will be presented in this seminar. Utilizing the state of the art modeling packages implemented by the University of Hawaii, the two teams have modeled each probabilistic event and determined the maximum inundation envelope for the South Shore of Oahu. The inundation lines calculated are then compared with the actual FIRM for the project site. The seminar will end with a discussion on the feasibility of the statistical approach to determine the inundation limits.