Title: Experimental and Field-based Research Activities to Advance Tsunami Engineering

Abstract

The 2004 Indian Ocean Tsunami focused the world's attention on the tsunami threat and dramatically increased the amount of research on tsunami science and engineering. More recent tsunamis in Samoa (2009), Chile (2010) and Japan (2011) accelerated this research effort, culminating in the development of a new chapter on *Tsunami Loads and Effects* in the 2016 edition of ASCE 7, *Minimum Loads and Associated Criteria for Buildings and Other Structures*. These tsunami design provisions were developed based on past laboratory research and lessons learned from field observations of tsunami effects on coastal structures.

This webinar will show how laboratory and field-based research has led to enhancements in understanding of coastal inundation modeling, overland flow parameters, structural loading and scour effects of tsunamis. Recent and current tsunami research will be highlighted to demonstrate the capabilities of the NHERI OSU wave research laboratory.

Short bio

Dr. Robertson is Professor of Structural Engineering at the University of Hawaii. Since 2001, a considerable amount of his research has focused on the response of buildings and other structures to tsunami loads. He has participated in numerous post-tsunami reconnaissance surveys, and serves as a member of the ASCE 7 Tsunami Loads and Effects Subcommittee. ASCE has commissioned Dr. Robertson to write a *Guide to the Tsunami Design Provisions of ASCE 7-16*, the first manual that explains the background, development, and application of the tsunami provisions of Chapter 6 of the ASCE 7-16 Standard, including reference to laboratory research and field surveys that contributed to development of the tsunami design provisions.

Headshot