Modeling Tsunami Loading on Bridges using OpenSees PFEM

Tuesday, December 8
11:00am - 12:00pm PST

PacTrans Webinar Series Presents: Modeling Tsunami Loading on Bridges using OpenSees PFEM

Registration Link: https://washington.zoom.us/webinar/register/WN_2S9jN59mSqigy393FQKFCg

Description

Recent tsunami events, as well as predictions for the Cascadia Subduction Zone, have stressed the potential impact of tsunamis on the transportation infrastructure. Efforts are underway to develop design specifications for bridges subjected to tsunami loading. Approximate loading equations based on numerical simulations play a key role in developing loading equations. This webinar gives a brief overview of proposed tsunami loading equations, then gets into the details of numerical modeling of bridge response to tsunami loading using the particle finite element method (PFEM) in OpenSees.

Presenters

Michael H. Scott
Professor
Civil and Construction Engineering
Oregon State University

Michael H. Scott is the Glenn Willis Holcomb Professor of Structural Engineering at Oregon State University. He is a developer of the OpenSees finite element software framework. His teaching and research interests are in nonlinear structural analysis and computer methods for engineering applications.

Minjie Zhu
Research Associate
Civil and Construction Engineering
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Dr. Minjie Zhu is a Research Associate in the School of Civil and Construction Engineering at Oregon State University. He developed modules in OpenSees for fluid-structure interaction (FSI) using the particle finite element method (PFEM). In addition to FSI, his research interests include numerical methods and computational mechanics.