Michael H. Scott
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Proposal Role

Prof. Scott will oversee the integration of modules from the OpenSees finite element framework in NIST-CORE and detailed simulations of building response to earthquake, tsunami, storm surge, and wind loading using OpenSees.

Experience Related to the Investigation

Since joining the faculty at Oregon State University in 2004, Prof. Scott has continued his role as one of two core developers of the OpenSees finite element framework. His initial contributions to the OpenSees framework were focused on earthquake engineering applications, but more recently Prof. Scott has extended the framework for load rating of bridges, gusset plate evaluation, and simulation of fluid-structure interaction. Prof. Scott leads sessions at the annual OpenSees users and developers workshop.

Education

- Ph.D., Structural Engineering, University of California, Berkeley, 2004
- M.S., Structural Engineering, University of California, Berkeley, 1999
- B.S., Civil Engineering, North Carolina State University, 1998

Honors/Awards

2009 NSF CAREER Award

2009 ASCE Croes Medal

2011 ASCE Associate Editor Award

Number of Scholarly Products: 81 Number of Citations: 1648

(from Google Scholar 8/25/2014: http://scholar.google.com/citations?user=jwa3XqcAAAAJ)

Related Publications

Zhu, M. and Scott, M.H. "Improved Fractional Step Method for Simulating Fluid-Structure Interaction by the PFEM." *International Journal for Numerical Methods in Engineering*, 99(12):925-944, September 2014.

Zhu, M. and Scott, M.H. "Modeling Fluid-Structure Interaction by the Particle Finite Element Method in OpenSees." *Computers and Structures*, 132:12-21, February 2014.

McKenna, F., Scott, M.H., and Fenves, G.L. "Nonlinear Finite Element Analysis Software Architecture Using Object Composition." *Journal of Computing in Civil Engineering*, 41(1):95-107, January 2010.

Scott, M.H. and Haukaas, T. "Software Framework for Parameter Updating and Finite Element Response Sensitivity Analysis." *Journal of Computing in Civil Engineering*, 22(5):281-291, September 2008.

Scott, M.H., Kidarsa, A., and Higgins, C. "Development of Bridge Rating Applications Using OpenSees and Tcl." *Journal of Computing in Civil Engineering*, 22(4):264-271, July 2008.