

Hybrid Simulation Workshop

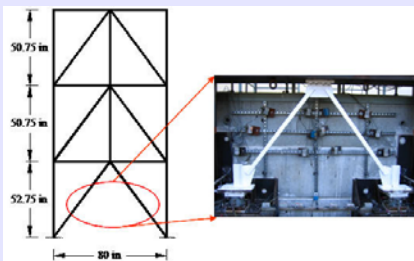
April 26 -27, 2007

UC Berkeley, Richmond Field Station, *nees@berkeley* Equipment Site

Workshop URL: <http://nees.berkeley.edu/workshop/>



Hybrid test of the zipper frame



Hybrid simulation model of the zipper frame

Hybrid simulation is a method for examining the seismic response of structures using a hybrid model comprised of both physical and numerical sub-structures. This workshop on hybrid simulation is for NEES researchers, both current and future. Attendees will:

1. Learn the basics of the hybrid simulation method.
2. Learn about OpenSees, OpenFresco and Navigator, our basic tools.
3. Conduct a hybrid simulation at the *nees@berkeley* Equipment Site using MTS hardware.
4. Be able to use hybrid simulation in their NEES and non-NEES projects.
5. Be prepared to develop new hybrid simulation tests and algorithms.

We will review the basics of hybrid simulation, including similitude requirements for model design, model implementation (including integration methods), and simulation result interpretation. Then, we will demonstrate how hybrid simulation is implemented at *nees@berkeley* using our hardware with OpenSees and OpenFresco software. In cooperation with MTS, we will demonstrate the most recent implementation of OpenFresco on the MTS FlexTest hardware. The attendees will have a unique opportunity to develop a hybrid model and, with the help of our staff, implement and run a hybrid simulation at *nees@berkeley*. Throughout the workshop, we will demonstrate how to use the *nees@berkeley* Equipment Site hardware and software portfolio and how to process and archive hybrid simulation data.



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Workshop URL: <http://nees.berkeley.edu/workshop/>