

Hybrid Simulation Workshop: Welcome to *nees@berkeley*

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nees@berkeley

The George E. Brown, Jr. Network for Earthquake Engineering Simulation



Welcome to *nees@berkeley*!

- ◆ We specialize in hybrid simulation
- ◆ We also do conventional structural tests using:
 - A reconfigurable reaction wall
 - A reconfigurable test frame (REPEAT)
 - An array of actuators
 - A high-channel-count data acquisition system
 - Multiple digital cameras
 - A laser-based geometry scanner
 - Tools for processing and visualizing test data

Purpose of this Workshop

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

Agenda (Day 1)

9-noon: Hybrid Simulation Basics

12:30-1:15 Lunch

1:15-5:30: Hybrid Simulation and
OpenSees: Implementation at
nees@berkeley

5:30-6:30: Lab tour

7:00-....: Dinner at the Durant Hotel

Agenda (Day 2)

9:00-11:30 Hybrid simulation hands-on: part 1

11:30-12:30 Structural modeling and simulation
in OpenSees

12:30-1:15pm Lunch

1:15-2:15 OpenSees solution algorithms

2:15-4:15 Hybrid simulation hands-on: part 2

4:15-5pm Workshop review and conclusion

Thank you!

Development and operation of the nees@berkeley equipment site is sponsored by NSF.

<http://nees.berkeley.edu>

This workshop would not be possible without help from Ms. Nancy Nelson and Ms. Ninh Trinh: thank you!



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