

CUREE is a nonprofit corporation devoted to the advancement of earthquake engineering research, education, and implementation.

## CUREE to Develop the NEES Consortium

The National Science Foundation (NSF) has selected CUREE, on the basis of a competitive process called for in NSF Solicitation 01-56, to develop the new organization that will manage the NEES Collaboratory. NEES, the George E. Brown, Jr. Network for Earthquake Engineering Simulation, a major initiative of the Engineering Directorate of NSF, is now in the 2000-2004 "construction phase" (see page 2). NSF plans to operate NEES for at least the following decade. The NEES Consortium that will be developed during the CUREE project will manage NEES Collaboratory activities during that 2004-2014 timespan. See page 2 for a guide to NEES terminology.

### EERI and ASCE Partners with CUREE

The Earthquake Engineering Research Institute (EERI) and the Civil Engineering Research Foundation (CERF) of the American Society of Civil Engineers (ASCE) will be subcontractor organizations to CUREE. EERI's role, directed by Susan Tubbesing,

is to organize national workshops. CERF-ASCE's role, directed by J. Peter Kissinger, is to engage engineering practitioners and other non-university constituencies in the development and operation of NEES.

### Consortium Development Plan has Ties To Other NEES Activities and the Earthquake Engineering Community

CUREE's plan for managing the \$2 million consortium development award will be broadly supportive of the overall NEES program, rather than just promote the Consortium Development project. That broader NEES effort includes the System Integration project, multiple Equipment Site awards, and the ongoing management of the overall NEES initiative provided by the NSF NEES program officers and staff. The key players in this multi-faceted NEES developmental effort are summarized in the chart on page 2. Note that other research facilities and individuals who generate or use research will have opportunities to become involved in the NEES consortium development process through workshops, Working Groups, and at other virtual or in-person venues organized by CUREE under this award.

### Consortium Development PI and Co-PI's

For the Consortium Development project, Robert Reitherman, Executive Director of CUREE, will serve as Principal Investigator. Four Co-Principal Investigators direct key aspects of the project: Professor Stephen Mahin of the University of California at Berkeley; Professor Robert Nigbor of the University of Southern California; Professor Cherri Pancake of Oregon State University; and Professor Sharon Wood of the University of Texas at Austin. As depicted in the Consortium Development project's organization chart on page 3, these Co-PI's function as Task Group Leaders, assisted by Associate Task Group Leaders who further diversify the back-

grounds involved and provide a critical mass to energize the consortium development effort. As a group, the individuals shown in the organization chart constitute the Executive Council, which has designated authority in determining key decisions as the new consortium develops.

### Participation in Working Groups: Your Chance to Shape the Consortium

Each of the four Task Groups has a number of Working Groups, or committees, which represents the grass roots level of the project where the initial shaping of alternatives for formation of the consortium will originate. The Consortium Development project will also help to define user requirements for System Intergration. The response form included here includes a description of each Working Group as a means of informing the broad earthquake engineering community about the project and recruiting active involvement. Consult the nees.org website for further information. ■

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### Network for Earthquake Engineering Simulation

*NEES does not seek incremental improvement of earthquake engineering research: It seeks to revolutionize it. NEES will bring many new things to the earthquake engineering field:*

- curated data repositories
- teleobservation and teleparticipation
- data visualization
- real-time multi-lab interaction
- a national computational infrastructure
- sharing of facilities
- rapid sharing of data and models

*If it sounds different,  
it's because it hasn't been done before.*

<http://www.nees.org>

# The Construction of NEES

## National Science Foundation (NSF)

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**Joy Pauschke:** NEES Program Director - [jpauschk@nsf.gov](mailto:jpauschk@nsf.gov)

**Tom L. Anderson:** NEES Equipment Project Coordinator - [tanderso@nsf.gov](mailto:tanderso@nsf.gov)

**Website:** <http://www.eng.nsf.gov/nees/>

## NEES Terminology

**NEES:** The George E. Brown, Jr. Network for Earthquake Engineering Simulation, a Major Research Equipment (MRE) program of the Engineering Directorate of the National Science Foundation.

**NEES Collaboratory:** the sum of the components of NEES as they operate in the research mode, scheduled to be fully functional by 2004 and operate for at least a decade.

**System Integration:** Development of the network, computer services, curated repository, and applications that tie the distributed experimental sites and researchers together, scheduled to be completed by 2004.

**NEESgrid:** The Grid-based architecture selected by the System Integration team for the network links, services, and applications to be used by the NEES Collaboratory.

**NEES Equipment Sites:** Engineering laboratories funded by NSF to create or enhance experimental facilities to be used in the NEES Collaboratory.

**NEES Consortium:** the non-profit entity that will manage the NEES Collaboratory.

## System Integration

**Thomas Prudhomme, PI**  
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**Jean-Pierre Bardet, Co-PI**  
University of Southern California

**Ian Foster, Co-PI**  
Argonne National Laboratory

**Carl Kesselman, Co-PI**  
USC/Information Sciences Institute

### GOAL

To design, develop, implement, test, and make operational the Internet-based, national-scale high performance network system for NEES, called "NEESgrid."

NEESgrid will be a layered, modular architecture that is flexible and highly extensible and will enable rapid development of new end-user applications, the introduction of new services, and the integration of new simulation software and experimental facilities as they are developed.

### WEBSITE

<http://www.neesgrid.org/>

## Consortium Development

**Robert Reitherman, PI**  
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**Stephen Mahin, Co-PI**  
University of California, Berkeley

**Robert Nigbor, Co-PI**  
University of Southern California

**Cherri Pancake, Co-PI**  
Oregon State University

**Sharon Wood, Co-PI**  
University of Texas at Austin

### GOAL

To develop the NEES Consortium and its 10-year (2004-2014) plan for managing NEES.

The broad earthquake engineering community will be engaged in this start-up process, as well as in the eventual NEES Consortium.

### WEBSITE

<http://www.nees.org/>  
<http://www.curee.org/>

## Equipment Sites, Phase 1

### Shake Table Facilities

**Michel Bruneau, PI**  
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### Geotechnical Centrifuges

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### Tsunami Wave Basin

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### Large-Scale Laboratories

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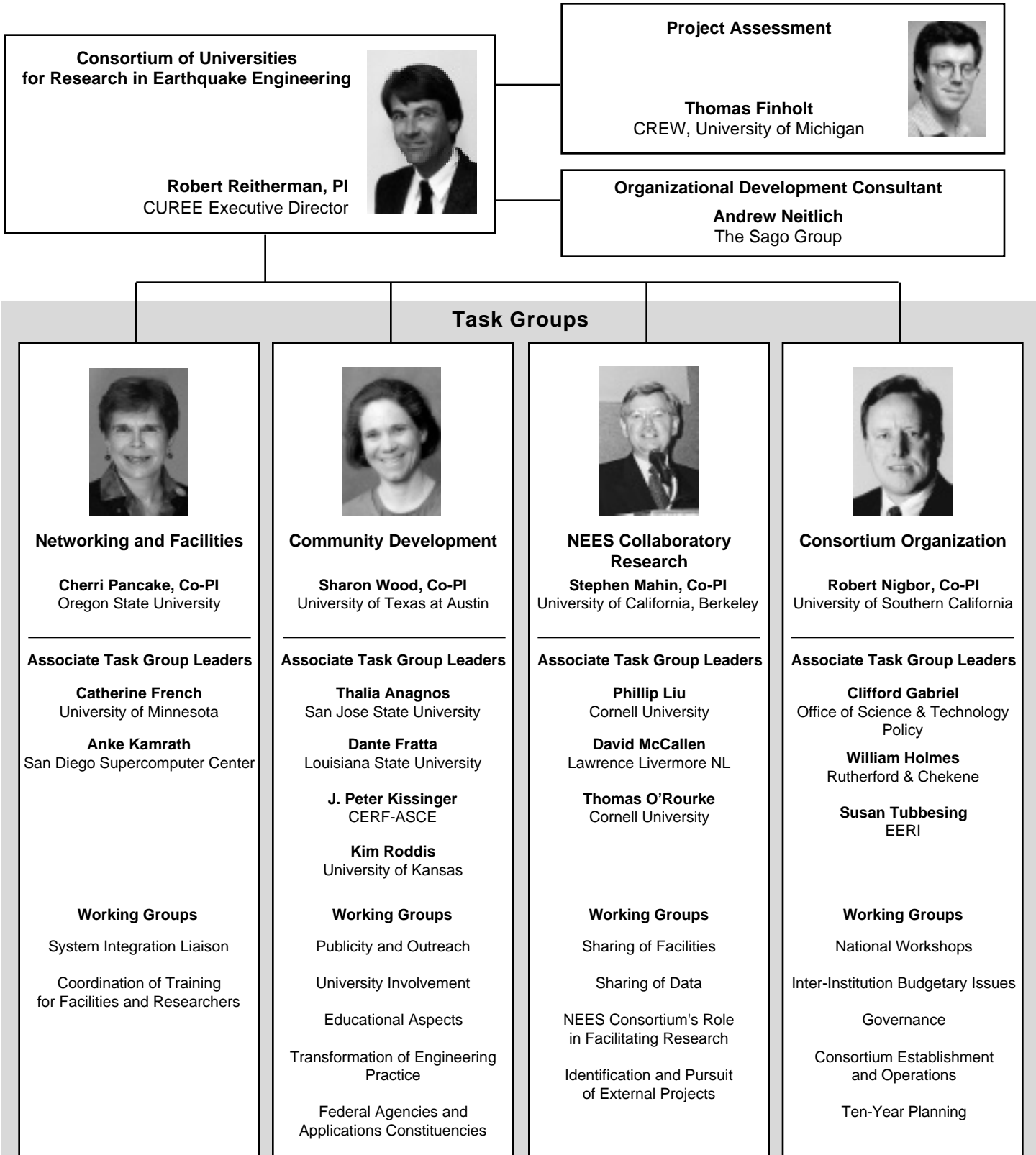
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### Field Experimentation and Monitoring Installations

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**John Wallace, PI**  
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# NEES Consortium Development Organization Chart



## New CUREE Publications

**CUREE-Caltech Woodframe Project Case Studies**  
- edited by Professor G.G. Schierle

**Northridge Earthquake Field Investigations: Statistical Analysis of Woodframe Damage**  
- Professor G.G. Schierle

For more information, please visit our website at <http://www.curee.org> (click on "publications")

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