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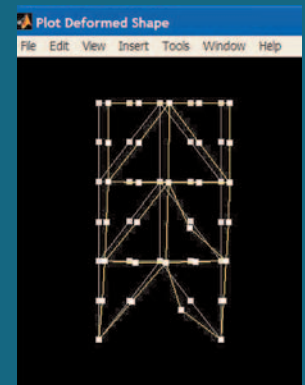
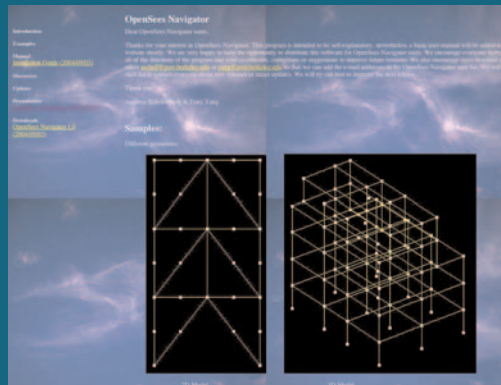
WEB SPOTLIGHT: OPENSEES NAVIGATOR

As a new regular feature, in each issue of The PEER Review we'll highlight noteworthy additions to the PEER website.

This month's **Web Spotlight** features a new tool for use with OpenSees.

OpenSees Navigator is a MATLAB-based graphical user interface that can be used to create 2D and 3D structural models for OpenSees. OS Navigator also performs post processing graphically, is flexible to use, and requires no programming skills.

OS Navigator was developed by graduate student researchers **Andreas Schellenberg** and **Tony Yang** (UCB). For more information or to download OS Navigator, visit <http://peer.berkeley.edu/OpenSeesNavigator/> •••



NEWS DIGEST

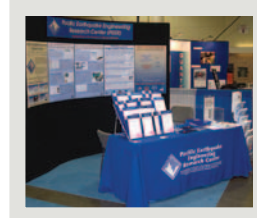
- The annual **OpenSees User Workshop** was held at



- PEER Headquarters on September 2–3, 2004. OpenSees was named the simulation platform for NEESgrid, and the community continues to grow. For information on OpenSees, see <http://opensees.berkeley.edu>
- PEER was a co-sponsor of the **International Symposium on Confined Concrete**, held in Changsha, China on June 12–14, 2004 and organized by Professors **Yan Xiao** (USC) and **Sashi Kunnath** (UCD). Keynote speakers included PEER Director **Jack Moehle** (UCB) and PEER researcher **John Stanton** (UW). http://www.usc.edu/dept/civil_eng/structural_lab/iscc.html
- The **2004 ANCER Annual Meeting** was held in Honolulu, Hawaii July 28–31, 2004. The Asian-Pacific

Network of Centers in Earthquake Research (ANCER) brings together researchers and leaders of earthquake engineering research centers in both the U.S. and Asia for collaborative meetings and research initiatives.

- During Summer 2004, PEER exhibited at 3 conferences: the **13th World Conference in Earthquake Engineering** in Vancouver, BC (photo of exhibit at right), the **SEAOC Annual Convention** in Monterey, CA and the **National Earthquake Conference** in St. Louis, MO.



- **PEER Reports policy:** this is a reminder that PEER Reports are available for FREE download as PDF files 6 months after being published. Please visit the PEER Reports webpage for a list of reports and release dates: <http://peer.berkeley.edu/Products/PEERReports/reports.html> •••

THE PEER REVIEW

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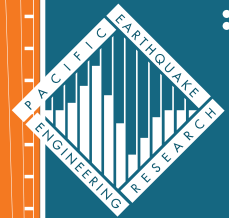
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PEER PASSES MAJOR RENEWAL REVIEW NEW THRUST AREAS ANNOUNCED FOR RESEARCH PROGRAM

The National Science Foundation recently notified PEER that it was recommending continued funding of PEER for the final three years of the original 10-year funding cycle, based on the major renewal review that was conducted during Year 7. While NSF will still perform annual reviews of the PEER program, no further major renewals are expected.

As PEER moves into the final three years of the NSF funding, increased emphasis is being directed toward formulating the research results toward products that can be more directly utilized by the engineering community. To facilitate this new emphasis, the PEER research program has been re-organized into a 4-thrust structure:

- TA I – *Building Systems*
- TA II – *Bridges and Transportation Systems*
- TA III – *Lifelines Component & Systems*
- TA IV – *Simulation & Information Technologies*

The new Building Systems Thrust Area is similar to the structure of the testbeds and combines researchers across thrust areas. The Bridges and Transportation Systems research program is directed toward further

developing the performance-based earthquake engineering (PBEE) methodology developed by PEER and demonstrating its utility through application to difficult bridge design problems.

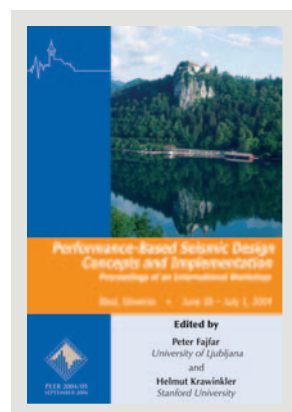
The Lifelines Components and Systems research program is directed toward increasing the reliability and safety of geographically distributed lifelines systems including transportation and utility lifelines.

The goal of TA IV is to develop new simulation models and methods for PBEE assessment and design methodologies, develop modern simulation software tools taking advantage of information technology advances, deliver the software tools to the community, and educate students in simulation methods and information technology applications in earthquake engineering.

In keeping with the objective to develop methods for engineering application, PEER is continuing and expanding its research collaborations with practicing engineers. For more information on collaborating with PEER research, please contact Dr. **Yousef Bozorgnia**, PEER's *Associate Director for Technology Transfer and Sponsored Projects* at yousef@peer.berkeley.edu. For more information on the PEER research program, see http://peer.berkeley.edu/Research/res_groups.html...

INTERNATIONAL PERFORMANCE-BASED SEISMIC DESIGN CONCEPTS AND IMPLEMENTATION WORKSHOP

With an increasing acceptance of Performance-Based Earthquake Engineering (PBEE) concepts by practicing engineers, together with extensive research, PBEE design concepts are being implemented more often in the design and upgrade of buildings, bridges, and other man-made structures. This summer, the **International Workshop on Performance-Based Seismic Design—Concepts and Implementation**, was held in



Bled, Slovenia from June 28–July 1, 2004 to help further the field of PBEE seismic design.

Building upon the success of the first workshop in this series held in 1997, the workshop organizers decided to bring together an international forum aimed at continuing dialog on the

implementation worldwide of new PBEE ideas.

observers from 14 countries addressed the following topics: loss estimation, fragility and vulnerability, and impact on risk management; implementation in engineering practice; performance-based design concepts; and integration of experimental and analytical simulations.

The workshop proceedings are being published as PEER Report 2004/05 and will be available in October 2004. Edited by Professors **Peter Fajfar** (University of Ljubljana) and **Helmut Krawinkler** (Stanford), the proceedings contain a compendium of the 43 invited papers, in addition to the workshop resolutions, conclusions, and recommendations. The proceedings are intended to assess the state of the art and state of the practice in performance-based seismic design, to define future directions for the development of performance-based earthquake engineering, and to identify important research needs.

The workshop sponsoring organizations were: PEER; Ministry of Education, Science and Sport of Slovenia; the University of Ljubljana; the Slovenian Academy of Sciences and Arts; and IBE, Ljubljana. For more information on the PEER Report Series, visit: <http://peer.berkeley.edu/Products/PEERReports/reports.html>...

At the workshop, 45 invited participants and 12

the PEER review

STUDENT LEADERSHIP COUNCIL RETREAT AND 2004-05 OFFICER ELECTIONS

The Annual PEER Student Leadership Council (SLC) Summer Retreat and Officer elections were held on September 10-12, 2004 in San Diego. The program called for both team-building activities and meetings during the weekend, including the annual election for SLC officers.

After the election results for the 2004-05 SLC officers were tallied, it was announced that **Sarah Paulsen** (UW), would be President of the 2004-05 SLC. Sarah is a Ph.D Student at the University of Washington and her advisor is Professor **Steven Kramer** (UW). She takes over for Past President **Michael Gebman**

(UCSD), who served ably over the past year and who, along with co-Chairs **Dawn Cheng** (UCSD), **Scott Brandenburg** (UCD) and **Martin Walker** (UCD), helped make the Seismic Design Competition held during the 2004 NSF Site Visit a success.

The 2004-05 SLC Officer slate is shown below. Please note: not pictured below are institutional representatives **Barbara Chang** (UCI) and **Leonardo Massone** (UCLA). For more information on the SLC, including a list of last year's (2003-04) officers, please visit the Student Leadership Council website: <http://peer.berkeley.edu/students/>...

AKIRA WADA SEMINAR



Professor **Akira Wada** (Tokyo Institute of Technology, Japan) gave a presentation at PEER headquarters on July 29, 2004. His presentation was titled

"Changes of Seismic Design of Structures in Japan After the Kobe Earthquake".

Professor Wada is a world-renowned earthquake engineering researcher and has written extensively on various earthquake engineering issues. His innovative strategies and techniques for seismic design, including the concept of "Damage-Controlled Structures" have gained worldwide attention. ...

	<p>SARAH PAULSEN <i>University of Washington</i></p> <p>President</p>		<p>MICHAEL GEBMAN <i>U.C. San Diego</i></p> <p>Past President Seismic Competition co-Chair</p>
	<p>GRIFFIN THORNOCK <i>University of Washington</i></p> <p>Vice President</p>		<p>ANNIE KWOK <i>U.C. Los Angeles</i></p> <p>Historian</p>
	<p>PENDO DUKU <i>U.C. Los Angeles</i></p> <p>Industrial Liaison</p>		<p>CASE BRADFORD <i>Caltech</i></p> <p>SWOT Analysis co-Chair Internet co-Chair</p>
	<p>JACK BAKER <i>Stanford University</i></p> <p>SWOT Analysis co-Chair</p>		<p>CURT HASELTON <i>Stanford University</i></p> <p>Internet co-Chair</p>
	<p>DONGDONG CHANG <i>U.C. Davis</i></p> <p>Seismic Competition co-Chair</p>		<p>WON LEE <i>Stanford University</i></p> <p>Seismic Competition co-Chair</p>
	<p>JUDITH MITRANI-REISER <i>Caltech</i></p> <p>Annual Retreat Chair</p>		<p>ANDRES ESPINOZA <i>U.C. Berkeley</i></p> <p>UCB Representative</p>

VISIT TO JAPANESE UNIVERSITIES, TESTING FACILITIES, AND EQ DAMAGE AREAS TRI-CENTER EARTHQUAKE FIELD MISSION

On July 18–24, 2004, PEER Education Program Director **Scott Ashford** (UCSD) led a *Tri-Center Earthquake Field Mission* trip to Japan, in which test facilities, earthquake damage, and universities were visited. Graduate students **Lijuan Cheng** (UCSD), **Andres Espinoza** (UCB), **Michael Gebman** (UCSD), **Christine Goulet** (UCLA), **Sarah Paulsen** (UW), **Martin Walker** (UCD) and Education Program Manager **Linda Nelson** attended. Graduate students and staff from MCEER, MAE, and SCEC attended, in addition to three high school science teachers.

Test facilities at the Port and Airport Research Center, Building Research Institute, Public Works Research Group, and at the National Research Institute for Earth Science and Disaster Prevention (NIED) were visited. Facilities and demonstrations at these centers included geotechnical earthquake centrifuges, laminar soil shear boxes, reaction strong walls,



The PEER delegation visits the Hanshin Expressway Museum in Kobe. Bottom row: Michael Gebman (UCSD), Lijuan Cheng (UCSD), Christine Goulet (UCLA), Andres Espinoza (UCB); Top row: Scott Ashford (UCSD), Tami Church (high school science teacher), Martin Walker (UCD), Sylvia Brown (high school science teacher), Sarah Paulsen (UW), Linda Nelson (UCSD).

shaking tables, wave simulation flumes/basins, and a rainfall simulation lab. The highlight

of the trip was the NIED E-Defense six degree of freedom earthquake shake table at Miki City, which upon completion in 2005, will be the world's largest shaking table, with a platen size of 20 m by 15 m.

The group participated in a research exchange at both Waseda University and Kyoto University. A

tour of Tokyo harbor, courtesy of the Port and Airport Research Institute, included a close up view of critical lifeline facilities, such as cable stayed bridges, and ports. The group also visited the reconstructed Hanshin Expressway, in Kobe, and a Museum with bridge columns and superstructure components damaged in the 1995 Kobe Earthquake. ●●●



The group visits the NIED E-Defense Shake Table at Miki City.

WORKING WITH THE SEISMIC SAFETY COMMISSION UPDATING CALIFORNIA'S EARTHQUAKE RESEARCH PLAN

In June 2004 the State of California's **Seismic Safety Commission** (CSSC) published "A Safer, More Resilient California: The State Plan for Earthquake Research" (CSSC Publication 2004-03), which is an update to their document "Research and Implementation Plan for Earthquake Risk Reduction in California: 1995 to 2000."

California State Law requires the CSSC to "develop a final five-year statewide earthquake research plan..." and they are also responsible for "encouraging research and helping to coordinate the earthquake safety activities of government at all levels."

To facilitate production of the updated plan, an eight-person Research Plan Update Committee was formed. PEER was well-represented in the committee, as four of the committee members had direct ties to PEER: PEER Director Professor **Jack P. Moehle** (UC

Berkeley), Institutional Board Chair Professor **Paul C. Jennings** (Caltech), Lifelines Program Investigator Professor **Thomas H. Jordan** (SCEC), and Implementation Board Member Dr. **Clifford J. Roblee** (NEESinc).

In preparing the updated plan, a wide spectrum of seismic research was surveyed; the plan is intended to serve as a guide to the State of California on how to best support the research, and to make better decisions regarding earthquake mitigation of state investments. A few elements of the PEER research program are also mentioned in the plan.

The plan may be downloaded for free in PDF format or purchased in paper format directly from the CSSC. To acquire a copy of the updated plan, or for more information on the Seismic Safety Commission, please visit: <http://www.seismic.ca.gov/> ●●●

AWARDS AND HONORS

Implementation Advisory Board **Robert E. Bachman** (Robert E. Bachman, SE) was awarded the *Building Seismic Safety Council's Honor Award* earlier this year at the BSSC Annual Meeting in St. Louis.

Professor **Anil K. Chopra** (UC Berkeley) was inducted into the *College of Fellows of the Structural Engineers Association of California* at 2004 SEAOC Convention in Monterey, California.

Professor **Jonathan P. Stewart** (UCLA) has won a *Lecturing Award* under the 2004-2005 *J. William Fulbright Scholarship Program* with Italy. He will spend four months in early 2005 lecturing at the Department of Structural and

Geotechnical Engineering at the University of Rome "La Sapienza". ●●●

