News of the Institute

Election Results: Friedman and Wong Join Board of Directors

David Friedman of Forell/Elsesser Engineers in San Francisco, California, and Ivan Wong of URS Corporation in Oakland, California, were elected the newest members of the EERI Board of Directors in the 2011 election. To see their biographies and vision statements, visit http://www.eeri.org/site/about-us/board-of-directors.

Friedman and Wong will be formally welcomed to their new posts at the next Board Meeting in San Diego on February 9. They will each serve three years as directors, replacing Jack Moehle and Masayoshi Nakashima, whose terms are expiring. EERI extends sincere thanks to them for their years of outstanding service and dedication to the Institute.

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Last Call to Register for 2011 Annual Meeting

It’s not too late! If you have not already registered, there is still room for you to attend the 2011 EERI Annual Meeting scheduled for February 9-12, 2011, at the Hyatt Regency La Jolla, north of San Diego, California, with the theme of “Earthquakes without Borders.” Take action now — this meeting is the place to be! To register, visit http://www.eeri.org/registration/am.php. The brochure can be viewed and downloaded on the site, and it has a link to make hotel reservations.

Pre- and Post-Meeting Options: There are interesting options for you to consider both before and after the meeting itself. The program of the February 9 all-day Workshop on Challenges and Opportunities for Lifeline Systems Engineering, hosted by the Technical Council on Lifelines Earthquake Engineering (TCLEE), is accessible from the above-mentioned URL, and you can register for the workshop while registering for the Annual Meeting, for an additional $50.

Post-meeting options on Saturday afternoon, February 12, include the following:

continued on page 2

The House of Hospitality in San Diego’s Balboa Park, an Annual Meeting field trip destination.
EERI Newsletter, February 2011 Volume 45, Number 2

EERI Continues Internship Program

After a successful first round, EERI has commenced its second rotation of the Post-Graduation Internship Program. As before, two interns were chosen from a strong pool of candidates excelling in top-ranked undergraduate and graduate engineering programs.

The Institute would like to introduce Emmett Seymour and Stefanie Rae Arizabal. The two newfound coworkers are, coincidentally, both Cal Poly graduates, each obtaining their bachelor of science in Architectural Engineering. During the summer of 2009, Emmett was an REU student working on the Concrete Coalition (CC) Inventory Project. He continues to assist with the CC project as well as several others, including the Learning from Earthquakes Program, the California Earthquake Clearinghouse, and the Annual Meeting.

Stefanie graduated in December and joined the Institute in the new year. She will particularly help with EERI’s efforts in Haiti, as she is part of a group of Cal Poly students (independent of the university) who will travel to Haiti in March, where they will work with structural engineers and positively impact Port-au-Prince, implementing a holistic view of engineering.

Working on EERI projects, seminars, and publications will offer Emmett and Stefanie relevant professional experience and opportunities for networking. They are enjoying learning and working to support the Institute’s goals of advancing the practice of earthquake engineering and reducing seismic risk.

Elsesser Oral History

The oral history of Eric Elsesser, a founding principal of Forell/Elsesser Engineers of San Francisco is available online at http://www.eeri.org/site/publications-etc/oral-history. Interviewers for the 18th volume in the EERI Oral History Series were Grace S. Kang, Christopher Arnold, and Robert Reitherman. A printed version was mailed to EERI members in January. Eric spent 50 years studying and designing creative structures and being actively engaged in seismic response studies, earthquake code criteria, and research.

EERI gratefully acknowledges funding for production of the volume: $10,000 was provided by a Forell/Elsesser group consisting of the Elsesser family, F/E Engineers, the firm’s senior principal David Friedman, principals Grace Kang, Simin Naaseh, Paul Rodler, and Mason Walters, as well as former principal Jim Guthrie. The balance of funding (approximately $10,000) came from the EERI-FEMA Cooperative Agreement.

As Chris Arnold writes in his personal introduction, “Eric Elsesser’s oral history covers Eric’s life and career, revealing a brilliant student, a fruitful professional partnership, the evolution of a solid yet innovative engineering practice over several decades, the inspiration and training of a skilled staff, and the design of a succession within the office that would ensure its continued productive survival...Eric would talk about—and draw—architectural and structural concepts in a way that few engineers were able to do.” The oral history contains five pages of his sketches of structural forms and seismic systems, often generated quickly as he brainstormed in conversation.

Additional copies of Eric’s oral history can be purchased for $15 from https://www.eeri.org/cds_publications/catalog/.

Annual Meeting continued from page 1

- A Workshop on the Seismic Safety of Schools, sponsored by EERI’s Ad Hoc Committee on the Seismic Safety of Schools. Workshop goals are to address the needs of seismic zones over the entire U.S. by breaking into groups to engage with resource people, after presentations from individuals who have guided successful school retrofit programs. The agenda is available from the above-mentioned URL. There is no extra charge to attend this three-hour workshop.
- A field trip excursion to UC San Diego’s Englekirk Experimental Facilities that house the large outdoor NEES@UCSD high-performance shake table.
- A field trip consisting of a 90-minute walking tour of the heritage buildings of Balboa Park, to be led by David Marshall, president of Heritage Architecture & Planning, a firm specializing in historic buildings. He has been involved in the restoration of many of Balboa Park’s exposition buildings and was project architect for the park’s House of Hospitality reconstruction, the only building in San Diego to have won a National Trust for Historic Preservation Honor Award.

The $30 fee to participate in either field trip covers roundtrip transportation. If you wish to attend either field trip or the TCLEE Workshop and have already registered for the Annual Meeting, please contact Juliane Lane, juliane@eeri.org.
News of the Institute

EERI Endowment Fund Donors

EERI would like to thank the following donors to the Endowment Fund and acknowledge their recent contributions. EERI’s Endowment supports those innovative projects that ensure the Institute’s continuing leadership in the earthquake engineering professions.

$7,000
Degenkolb Engineers
Kinematics

$5,000
Jene Blume
David Friedman & Paulette J. Meyer

2,500-$2,700
Adam Elsesser
Forell/Elsesser Engineers
Farzad Naeim

$2,000
KPFF Consulting Engineers
Digitexx Data Systems

$1,000
John Aho
Clarence Allen
Lloyd Cluff
Carl Josephson

$500-$600
Robert Bachman
James Guthrie
James Jirsa
Grace Kang
Laurence Kornfield & Catherine Bauman
Simin Naaseh
Douglas Nyman
Thomas O’Rourke
Paul Rodler
G. Rodolfo Saragoni
Daniel Shapiro
Mason & Ellen Walters

$200-$499
John Coil
Andrew Eggenberger
Ronald Eguchi
Richard Eisner
Richard Henige
I. M. Idriss
Ayhan Irfanoglu
Paul Jennings
James Kelly
Ignatius Po Lam
George Lee

$100-$199
Donald Anderson
Goutam Bagchi
Nesrin Basoz
Jay Berger
Linda Bourque
Jonathan Bray
David Breiholz
David Cecil
Ted Christensen
Craig Comartin
William Correia
Lori Dengler

$7,000
Degenkolb Engineers
Kinematics

$5,000
Jene Blume
David Friedman & Paulette J. Meyer

2,500-$2,700
Adam Elsesser
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Farzad Naeim

$2,000
KPFF Consulting Engineers
Digitexx Data Systems

$1,000
John Aho
Clarence Allen
Lloyd Cluff
Carl Josephson

Board Election

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It is not too early to start thinking about next year’s election of a president-elect and directors. The Nominating Committee welcomes suggestions from the membership, including self-nominations. Nominees for director must have been active (or honorary) members of EERI for at least five years, and must not have been nominated to the Board in the last two years. To submit a name for consideration, send a brief note giving the name and qualifications of the potential candidate to the Nominating Committee in care of the EERI office. All submissions are confidential.

News of the Membership

Friedman Endows New Faculty Chair at UC

A major gift to the University of California at Berkeley has endowed the Faculty Chair in Earthquake Engineering Excellence within the Department of Civil and Environmental Engineering (CEE). This chair was created with generous philanthropy from newly elected EERI Board member David Friedman along with his wife Paulette J. Meyer, Phyllis Friedman, and Ted and Francis Geballe, as well as a matching gift from the William and Flora Hewlett Foundation, as part of Berkeley’s Hewlett Challenge.

Immediate past president and CEO of Forell/Elsesser Engineers and current F/E Board chair, David is one of the founding members of CEE’s Advisory Council, a committee of professional engineers, business leaders, academic leaders, and government officials who are committed to enhancing the strengths of CEE. David currently serves as the lead engineer on the seismic retrofit of California Memorial Stadium and as a trustee of the UC Berkeley Foundation. David said, “My own career... and that of my colleagues at Forell/ Elesser Engineers have been greatly enriched by the collaboration with the esteemed faculty at CEE.”

Other Amounts
Sergio Alcocer
Gilles Bureau
Claudio Chesi
Mary Comerio
James Cullen
Paul Gilbert
William Hall
Kubilay Hicyilmaz
Charlie Huyc
Jeffrey Keaton
Michael Kreger
Janiele Maffei
Roderick Murray
Yoshiaki Nakano
Sarah Nath
Terri Norton
Irvig Oppenheim
Robert Page
Gustavo Parra-Montesinos
Victor Pavon
John Robb
Marko Schotanus
Nancy Tenna Baum
Fred Turner
Alexander Uzdin
Craig Tillman
Sharon Wood
Shoichi Yamaguchi
Mehdi Zarghamee
MAE Report on Chile Earthquake

The Mid-America Earthquake (MAE) Center reconnaissance report on the Maule (Chile) earthquake of February 27, 2010 is now available from http://mae.cee.uiuc.edu/publications/2010/10-04.htm. The report includes observations of the MAE Center team on the damaged ports, buildings, bridges, and historical structures.

A detailed chapter on engineering seismology develops spectrum-compatible ground motions for various sites in Chile that are proposed for use in risk assessment studies. Two bridges and a building structure that exemplified the most commonly observed failures are selected, advanced numerical models are built, and inelastic dynamic analyses are conducted to provide further insight on the field observations. The report also features a dedicated chapter on transportation networks, roads and embankments where the performance is assessed using field data. Another chapter focuses on the role of the media and the use of social networking tools in enabling the affected population to communicate in the aftermath of the earthquake.

Guidelines on PBD Design of Tall Buildings

The PEER Center has released Guidelines for Performance-Based Seismic Design of Tall Buildings, which was developed by PEER’s Tall Buildings Initiative.

The Guidelines present a recommended alternative to the prescriptive procedures for seismic design of buildings contained in standards such as ASCE 7 and the International Building Code. They are intended primarily for use by structural engineers and building officials engaged in the seismic design and review of individual tall buildings.

Properly executed, the Guidelines are intended to result in buildings that are capable of achieving the seismic performance objectives for Occupancy Category II buildings intended by ASCE 7. Alternatively, individual users may adapt and modify the Guidelines to serve as the basis for designs intended to achieve higher seismic performance objectives.

The Guidelines were developed considering (1) such characteristics of the seismic response of tall buildings as relatively long fundamental vibration period, significant mass participation and lateral response in higher modes of vibration, and a relatively slender profile, and (2) the seismic hazard typical in the western United States, although the underlying principles are generally applicable.

The Working Group members that prepared the guidelines include EERI members Yousef Bozorgnia, C. B. Crouse, Ronald Hamburger (chair), Helmut Krawinkler, James Malley, Jack Moehle (co-chair), Farzad Naeim, and Jonathan Stewart.

As part of the launch of the Guidelines, PEER is offering one free copy of the printed version to engineering offices located in the United States (while supplies last). To receive your free copy, please submit a request via PEER’s online request form: https://peercenter.wufoo.com/forms/request-for-tall-building-design-guidelines/.


Clear as Mud: Rebuilding New Orleans

EERI members Robert Olshansky, professor of urban and regional planning at the University of Illinois, and Laurie Johnson, principal of Laurie Johnson Consulting, are co-authors of Clear as Mud: Planning for the Rebuilding of New Orleans, published last year by the American Planning Association’s Planners Press.

The book documents the people, events, actions, and challenges that shaped the recovery of New Orleans after Hurricane Katrina. The historic city had lacked sufficient mechanisms to manage community reconstruction, so it had to create an equitable and effective planning structure while addressing the concerns of state, federal, nonprofit, and private-sector stakeholders. The book explores the dynamics of the complex, oftentimes contentious planning efforts and includes usable community workshop techniques such as a simplified risk analysis process.

Clear as Mud may be purchased online at www.apaplanningbooks.com or at www.amazon.com.

Olshansky will be speaking on February 3 at 4:15 p.m. as part of the Program on Crisis Leadership at the Taubman Center for State and Local Government at Harvard’s John F. Kennedy School of Government (http://www.hks.harvard.edu/programs/crisisleadership/events).

Johnson will be a speaker during the conference on “Ideas Economy: Intelligent Infrastructure,” to be held February 16-17 in New York City at Pace University (http://ideas.economist.com/event/intelligent-infrastructure).
PEER Ground Motion Database

The new 2010 PEER Ground Motion Database Beta Version is now available online. Created to improve the usefulness of the older database released in 2005, it provides several major enhancements. All ground motion records in the database have been rotated to the fault-normal and fault-parallel directions, and have been flagged for the presence of velocity pulses. This version contains earthquake recordings only from regions with shallow crustal seismicity. There are 3,182 three-component recordings from over 1,000 stations for 104 earthquakes worldwide. Later this year, the database will be updated with additional records and metadata that will more than double the number of records.

In the new web application, the user specifies a target response spectrum and the desired characteristics of the earthquake ground motion in terms of earthquake magnitude, source-to-site distance, and other general characteristics. Based on these user requirements, the PGMD application then provides a list of acceleration time series from the database that satisfy the user-specified selection criteria. The resulting list of ground motion records is ranked by the degree of similarity to the target response spectrum. At the end of the process, the user can download the original time series, the scaled time series, the target response spectra, and the resulting response spectra for any desired earthquake records from this list. Use of the database is free and is accessible at: http://peer.berkeley.edu/peer_ground_motion_database.

NEES/E-Defense Collaboration on Tests

Two full-scale reinforced concrete structures were tested side-by-side on the E-Defense shaking table the week of December 13, 2010, as part of a NEES/E-Defense collaboration. The four-story structures had nominally identical dimensions with two bays in one direction and one bay in the other. One structure consisted of moment frames in the two-bay direction and a shear wall in the other direction. The structure was designed collaboratively according to current Japanese code with minor modifications to accommodate U.S. practice. The second structure consisted of a post-tensioned bonded frame system in the two-bay direction and a post-tensioned unbonded rocking wall system in the other direction. The project served to highlight differences between the seismic performance and damage sensitivity of conventional ductile reinforced concrete construction and innovative post-tensioned rocking systems. At the generous invitation of E-Defense and the Japanese researchers, the U.S. participants were able to examine the damage in the structures after they were shaken by all three components of the JMA-Kobe and Takanoe-Kobe motions. Japanese and U.S. researchers were able to discuss preliminary findings after the tests and agreed to plan further collaboration for analyzing the data.

The tests were attended by EERI members Katrin Beyer, Wassim Ghannoum, Jack Moehle, Richard Sause, Sri Sritharan, and John Wallace. Key Japanese participants were EERI members Susumo Kono, Masayoshi Nakashima, and Hitoshi Shiohara, as well as Takuya Nagae, Toshimi Kabeyasawa, and Taizo Matsumori.

Additional downloads available from this site include the user’s manual, a technical report describing the theory behind the application and its development, and several short video tutorials demonstrating how to use the web application for searching, selecting, and scaling ground motions in the database.
Job Opportunities

Global Earthquake Model Openings

Global Earthquake Model (GEM), whose mission is to establish uniform, open standards to calculate and communicate earthquake risk worldwide, has three positions open. English is the working language at GEM.

Seismic hazard modeler/researcher will work in collaboration with the IT development team at the GEM Model Facility at the Swiss Federal Institute of Technology in Zurich on the development of tools and software for the creation of PSHA input models and hazard assessment for the creation of regional and global models.

Senior software engineer, based at the GEM Model Facility team in Pavia, Italy, will work on the development of the open-source software system that computes all aspects of earthquake hazard, risk, and socio-economic impact. Required: familiarity with high-scale computing, strong python skills, and experience in open-source development. Regular travel between Pavia and Zurich will be required.

Post-doc position for civil or earthquake engineering Ph.D. The successful candidate in this two-year position will work at the University of Pavia on the definition and implementation of mapping schemes, such as HAZUS and PAGER, with the goal of populating the Global Exposure Database.

For complete vacancy and contact information, visit http://www.globalquake-model.org/jobs. GEM is always looking out for new scientific, technical and administrative staff.

Announcements

DFI Student & Young Prof. Paper Competition

The Deep Foundations Institute (DFI) Educational Trust has announced two paper competitions, one for young professors and one for students. Authors of the winning papers will receive travel support to present their papers at the DFI 36th Annual Conference to be held October 19-21, 2011, in Boston, Massachusetts. Abstracts of approximately 250 words are due by February 14 for both competitions. Draft papers not exceeding 10 pages are due June 6, with final papers due July 29.

The 2011 Young Professor Paper Competition is for full-time entry level faculty members of an accredited college or university, engaged in teaching or research. For more information, visit http://www.dfi.org/update/ProfCall.pdf.

Nominations Sought for Prakash Awards

The Shamsher Prakash Foundation is soliciting nominations of researchers and practitioners anywhere in the world for the two awards described below in the fields of geotechnical engineering or geotechnical earthquake engineering. Both awards include a cash prize of $1,100. All nominations will be reviewed by a judging committee of international experts. All candidates should have made significant independent contributions and show promise of future excellence.

The 2011 Shamsher Prakash Research Award is for young (age 40 or younger) engineers, scientists, or researchers. Nominations are due by March 31. The award will be announced by September 30. For information on submitting nominations, visit http://yoga10.org/research_award.html.

The 2011 Shamsher Prakash Prize for Excellence in the Practice of Geotechnical Engineering is for young engineers age 45 or younger. Nominations are due by June 30. The award will be announced by October 31. For information on submitting nominations, visit http://yoga10.org/prize_excel_MST.html.

Subscribing Member News

CSiBridge Webinar

EERI Platinum Subscribing Member Computers and Structures has released CSiBridge, a new comprehensive state-of-the-art software product for the structural and seismic analysis, design, and rating of simple and complex bridges.

Webinars to introduce the product’s features will be offered 10:00-11:30 a.m. PST Thursday, February 10, and Tuesday, February 15, for a fee of $25 per person. Participants will be guided through the model creation, loading and analysis steps as well as the design and rating processes. All CSiBridge operations are integrated across a single user interface that provides an easy-to-use and intuitive workflow environment. Bridge models are created parametrically resulting in enhanced productivity, saving engineering time while redefining the standards of accuracy and versatility.

For more information and to register, visit https://orders.csiberkeley.com/ProductDetails.asp?ProductCode=WEB_CSIBR_INTRO.
Call for Abstracts

**ESG4 Symposium**

The 4th International IASPEI/IAEE Symposium on the Effects of Surface Geology on Seismic Motion (ESG4) will be held August 23-26, 2011, at the University of California Santa Barbara.

Abstracts are welcome (deadline April 25) on the following topics: strong motion data and processing techniques, nonlinearity in soil liquefaction, microtremor techniques, site surveys, numerical simulations, empirical estimates of ground motion, case studies of ground motion, borehole array studies, $V_{S30}$ and other predictors of site response for seismic hazard, and general site response. Submitted papers will be presented in poster sessions each day.

For abstract submission instructions and more information, visit [http://esg4.eri.ucsb.edu/](http://esg4.eri.ucsb.edu/).

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**CALENDAR**

The issue containing the first appearance is indicated at the entry’s end. Items listed for the first time are shown in bold.

**2011**

**FEBRUARY**


18. Khan Distinguished Lecture, Lehigh University, Bethlehem, PA. Info: [http://www.lehigh.edu/frkseries](http://www.lehigh.edu/frkseries) (10/10, 1/11)

**MARCH**

25. Khan Distinguished Lecture, Lehigh University, Bethlehem, PA. Info: [http://www.lehigh.edu/frkseries](http://www.lehigh.edu/frkseries) (10/10, 1/11)

**AUGUST**

23-26, 4th Int’l IASPEI/IAEE Symposium on the Effects of Surface Geology on Seismic Motion (ESG4), UC Santa Barbara. See this page. (2/11)

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**2012**

**JANUARY**


**FEBRUARY**


**JULY**

3-6, Symposium on Life-Cycle Civil Engineering (IALCCE), Vienna, Austria. Info: [www.ialcce2012.org](http://www.ialcce2012.org) (12/10, 1/11)

**SEPTEMBER**

24-28, 15th World Conference on Earthquake Engineering (15WCEE), Lisbon, Portugal. Info: [www.15wcee.org](http://www.15wcee.org) (8/10)
News of the Institute

NorCal Chapter Innovation & Practice Awards

At its December holiday party, the EERI Northern California Chapter bestowed two awards for “Innovation and Exemplary Practice in Earthquake Risk Reduction” — one to an individual and one to an institution.

The individual award went to Gregory McFann, a building official with the city of Alameda. McFann had championed adoption of a soft-story ordinance, enacted in March of 2009. The ordinance requires all owners of soft-story multi-unit residential buildings to file a seismic analysis report and includes incentives to retrofit. McFann indicated that the city staff has identified some 300 soft-story buildings in Alameda and that 24 of them had been properly retrofitted since the program’s inception. The chapter also recognized McFann for his support for the Concrete Coalition in helping to identify high-risk concrete buildings in Alameda. The City of Alameda issued a press release about the award. To see coverage in the local press, visit http://www.insidebayarea.com/timesstar/localnews/ci_16975242 and http://www.alamedasun.com/index.php?option=com_content&task=view&id=7949&Itemid=10.

The institution award went to the Bay Area Rapid Transit (BART) District for its $1.2 billion Earthquake Safety Program that got underway in 2004 after studies were issued that identified critical vulnerabilities in the BART system. With more than one-quarter of the program completed, the remainder is on schedule, with an expected completion date of 2014. Included in the program are retrofits of the Transbay Tube, several train stations and parking structures, and elevated portions of the trackway, as well as evaluations of the effects of strong ground motions and surface fault rupture. BART is an EERI Subscribing Member.

Publications

Liquefaction Report Available

The report “SPT-Based Liquefaction Triggering Procedures,” by I. M. Idriss and R. W. Boulanger, is available for downloading at: http://cee.engr.ucdavis.edu/faculty/boulanger/PDFs/2010/Idriss_Boulanger_SPT_Liquefaction_CGM-10-02.pdf. The report covers a number of significant issues related to SPT-based (Standard Penetration Test) liquefaction triggering procedures, and examines the reasons for the differences among recently published liquefaction triggering correlations.

The authors hope that this report will serve as a useful resource for practicing engineers and researchers working in the field of soil liquefaction and as a useful technical supplement to the 2008 EERI monograph, Soil Liquefaction During Earthquakes.

2011 CUREE Calendar

The theme of the 2011 CUREE Calendar, “Protecting Infrastructure from Earthquakes,” deals with an important aspect of the built environment that the public often takes for granted. Because of advances in the engineering field’s ability to provide seismic protection for transportation and utility systems, the calendar shows examples of recently applied techniques as well as examples of damage. The calendar also contains a nontechnical essay on the topic by Robert Reitherman. Copies are available at no charge by e-mailing a request to curee@curee.org until the supply is depleted.