

**EARTHQUAKE ENGINEERING
RESEARCH INSTITUTE
NEWSLETTER**

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**EARTHQUAKE ENGINEERING
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News of the Institute

**Election Results: Buckle, President-Elect;
Leon and Tierney Elected to Board**



Ian G. Buckle



Roberto Leon



Kathleen Tierney

Ian G. Buckle of the University of Nevada, Reno, received the endorsement of the voters to be President-Elect of EERI. Roberto Leon of the Virginia Polytechnic Institute, Blacksburg, and Kathleen Tierney of the Natural Hazards Center at the University of Colorado, Boulder, were elected the newest members of the Board of Directors in the 2012 election.

Buckle, Leon, and Tierney will assume their new posts as of February 28, 2012, the date of the first Board Meeting of the year in Oakland, California. Buckle will serve one year as president-elect, followed by two years as president and one additional year as past president. He will take up the position vacated by past president Farzad Naeim of John A. Martin & Associates, who is leaving the Board after four years of service. Tom Tobin

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For Your Bucket List: Peabody Memphis

Put the grand hotel experience and duck parades found nowhere else on your bucket list and register now at <https://www.eeri.org/registration/am.php> for the 2012 EERI Annual Meeting/National Earthquake Conference (NEC), to be held April 10-13 at the Peabody in Memphis, Tennessee. Collaboratively organized by EERI and the FEMA regional earthquake consortia with the theme *Learning from the Past to Protect the Future*, the conference offers a concentrated brew of learning opportunities that will energize and invigorate your commitment to earthquake risk reduction.

Memphis envisions itself as a regional leader in the green and sustainability movements. This vision coincides with the 1811-12 earthquakes' bicentennial and a nationwide consciousness of community resiliency. The South Main Historic District of Memphis is an inspiring example of downtown revitalization. Like many neighborhoods elsewhere, it is economically challenged and seismically vulnerable yet culturally important. Such

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Ducks parade twice daily on the red carpet of the Peabody Memphis lobby.

Obituary

John F. “Jack” Meehan, 1920-2011

Former EERI member John F. “Jack” Meehan died late in 2011 at the age of 91. A graduate in 1942 of the University of California, Berkeley, Jack spent much of his working life in California’s Field Act program for the seismic safety of public school buildings. After working for structural engineer John A. Blume, in 1949 he joined the Schoolhouse Section of the California Division of Architecture. The section had been established by the state legislature after the 1933 Long Beach earthquake. For about ten years he was its research director, until the Reagan administration stopped funding the program. Jack worked in various grades of state service from structural engineering associate to chief structural engineer. From 1984 to 1987, he headed the Structural Safety Section of the Office of the State Architect, after which he retired from state service to become a consulting structural engineer in Sacramento.

He played a quietly effective role both within and outside the state bureaucracy. Jack made many earthquake site visits, starting with the 1952 Bakersfield earthquake and continuing until after his retirement. He made effective use of what he learned in helping promote improved seismic design of public schools and hospital buildings. His observations and photographs of 1964 Anchorage earthquake damage reversed the attitude of the Architect Office’s top management regarding the value of earthquake site visits.

Jack was also active in the regional and statewide structural engineers associations as well as EERI. For a time he managed EERI’s Learning from Earthquakes Program, and made overseas trips on behalf of U.S. foreign aid and information agencies. He served a term as SEAOC state president in 1967 and was one of the co-authors of the “Blue Book,” the code used statewide for earthquake engineering. He was vice-president of EERI in 1970 and president of the Applied Technology Council in 1976.

Jack was interviewed by the EERI Oral History Series founder, the late Stanley Scott. Jack’s oral history is among the as-yet unpublished manuscripts in the series and gives a good accounting of the wide-ranging activities sponsored to facilitate Field Act work.

News of the Profession

CTBUH Seed Funding Request for Proposals

The Council on Tall Buildings and Urban Habitat (CTBUH) has issued a call for proposals for its 2012 International Research Seed Funding initiative, culminating with an award of US\$20,000.

The goal of the funding is to assist researchers in developing projects and ideas, in conjunction with the CTBUH, to a level to secure additional funding. Research proposals can come from any discipline relating to tall buildings or urban habitat. There are no institutional or geographic restrictions. Proposals are due by May 15, 2012.

To express your interest in participating, to discuss the suitability of your proposal in more detail, or to ask any questions, contact: research@ctbuh.org. For more information and to access the submission form, visit <http://ctbuh.org/TallBuildings/ResearchDivision/ResearchSeedFunding/tabid/3053/language/en-US/Default.aspx/>.

The winning proposal will be recognized at the CTBUH 9th World Congress to be held September 19–21, 2012, in Shanghai, China.

News of the Institute

EERI Endowment Donors

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

\$12,000

Degenkolb Engineers

\$7,000

California Earthquake Authority

\$2,000

KPFF Consulting Engineers Risk Management Solutions

\$500

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R. Jay Love
Douglas Nyman
Thomas D. O’Rourke
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Gustavo Parra-Montesinos
Charles Real
Patrick Wilson

Obituary

Michael Gaus, 1928-2012

Former EERI member Michael Gaus passed away on January 3, 2012, in Seattle. Mike had been a trailblazing advocate of earthquake engineering for his entire career.

Two years after receiving his Ph.D. in 1959 from the University of Illinois at Urbana-Champaign, he embarked on a 28-year stint at the National Science Foundation. As program director of the Natural Hazards Research, Applied Science and Research Applications Directorate (1978-1982) and later as program director of the Structural Mechanics Program (1982-1985), Mike took the lead in championing the "center approach" in earthquake engineering research, and gained NSF approval to open a national competition to create what became the National Center for Earthquake Engineering Research (NCEER), established in 1986 and headquartered at the University at Buffalo (UB), New York. A decade later, two more earthquake engineering centers were formed, the Pacific Earthquake Engineering Research Center at the University of California, Berkeley, and the Mid-America Earthquake Center at the University of Illinois at Urbana-Champaign. One notable achievement of the centers that Mike was most proud of was the inclusion of social science research and perspectives into traditional engineering solutions. Mike had earlier been instrumental in creating the Council on Tall Buildings and Urban Habitat, which was founded in 1969 by Lynn S. Beedle at Lehigh University through funding from NSF.

After a sabbatical year in 1989, he left NSF and began a second career as a research professor in the Department of Civil, Structural and Environmental Engineering (CSEE) at UB. From 1990-2000, he mentored graduate students while conducting research and teaching in construction management and use of new technologies such as computer-aided design and GIS in mitigation of natural hazards. He trained and mentored generations of students and faculty, who are now leading professionals in many universities and industries, both in the U.S. and throughout the world. His many students remember him fondly as a talented and thoughtful teacher. Mike is survived by his wife Dorothy, two daughters, and four grandchildren.

Mike requested that contributions in his memory be directed to the CSEE Department at UB. For more information, visit <http://www.civil.buffalo.edu/about-csee/news-and-events/news/article:obituary-michael-gaus/>.

Annual Meeting/National Earthquake Conference

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neighborhoods have come back into fashion and are experiencing reinvestment as sites of vibrant culture, strong communities, small businesses, art galleries, and good food. They represent opportunities for hazard mitigation measures that must not be missed. You will have the opportunity to learn more about the South Main Historic District Seismic Retrofit and Conservation Demonstration Project at a workshop the evening of April 10.

The conference registration fee of \$450 will increase to \$550 after March 15th. By now all EERI members should have received the conference brochure in the mail with information on all sessions and speakers. It is also accessible from the registration site along with a link to make hotel reservations. The group room rate of \$149 single/double expires March 23rd, but EERI's room block could fill up earlier, so take action now!

News of the Institute

GHI Sponsors New E-Affiliate Members

GeoHazards International (GHI), an EERI Subscribing Member and California nonprofit working to reduce earthquake and tsunami risk in the world's most vulnerable communities, recently named 120 students and professionals it would sponsor as EERI E-affiliate members in 2012.

The sponsorees hail from 34 developing countries, including eleven countries currently without an EERI member: Algeria, Armenia, Bhutan, Ghana, Haiti, Nepal, Nigeria, Oman, Tanzania, Tunisia and Vietnam. Selected from 250 applicants, they represent an impressive and diverse group of individuals, from students to seasoned professionals with decades of experience. In making the selection, GHI sought gender, geographic and professional diversity.

The group includes architects, geotechnical engineers, geophysicists, government officials, a journalist, planners, policy makers, seismologists, structural engineers and social scientists, united by their desire to learn more about advances in earthquake science, engineering and policy and to serve as advocates for seismic safety in their communities.

GeoHazards International is proud to sponsor these new EERI members and looks forward to continuing the initiative in 2013. Watch for articles in future *Newsletters* highlighting some of the new members' accomplishments.



California Auditor Finds Sloppy Oversight of School Construction

This article is excerpted from a December 8, 2011, report by Erica Perez and Corey G. Johnson at <http://californiawatch.org/dailyreport/audit-sloppy-oversight-increases-risk-unsafe-school-buildings-13964>.

State regulators charged with overseeing school construction in California have failed to ensure that the buildings children occupy are safe, according to a state auditor's report. It found that the Division of the State Architect has limited authority to penalize school districts for not complying with the Field Act — California's landmark earthquake safety law for public schools — and that its oversight is "neither effective nor comprehensive."

State auditors found nearly a quarter of school construction projects completed during the last three fiscal years were not certified as safe by the state. California Watch's report revealed that at least 20,000 projects had been completed without receiving final Field Act certification.

The state audit, which was limited in scope, found more than 16,000 projects still lack certification. Legislators had called for the audit in May after a California Watch investigation.

Evan Westrup, a spokesman for Gov. Jerry Brown, said "...the governor appointed a new State Architect and directed him to immediately review the division's work and streamline operations."

School board members, builders, architects, and inspectors can be charged with felonies for failing to follow the Field Act's provisions. School board members could face additional criminal charges if a student or staff member dies or is injured by earthquake damage at a school without Field Act certification. But the law does not give regulators authority to penalize school districts

NEES News

Experiments to Test How Skyscraper Foundations Resist Earthquakes

Beginning this year, engineers from the University of California at Davis will be conducting the first rigorous tests of how steel columns that secure skyscrapers to their foundations resist earthquakes. The experiments will be carried out in the earthquake simulation laboratory at the Richmond Field Station in Berkeley, part of the national Network for Earthquake Engineering Simulation (NEES) sponsored by the National Science Foundation.

Several EERI Subscribing Members are partners in the project, including Degenkolb Engineers, Simpson Gumpertz & Heger, Walter P Moore, Ruthertford & Chekene, Forell/Elsesser, and Skidmore Owings & Merrill. The research is funded by grants totaling \$570,000 from the Charles Pankow Foundation and the American Institute for Steel Construction.

In smaller buildings, steel support columns typically end in a metal plate that is bolted to a concrete foundation. Flexing of the metal plate allows it to absorb earthquake shaking without breaking free. But in high-rise buildings of 40 to 50 stories, the forces involved become so large they would pull the bolts free. Instead, the steel pillars that support skyscrapers are embedded in concrete. "Without scientific backing, we could be over- or under-engineering these foundations," said Amit Kanvinde, UC Davis professor of civil and environmental engineering and leader of the project. His team will construct experiments with 10- to 20-foot-wide concrete footings and 20-foot-tall steel columns.



A foundation being tested during a simulated earthquake. The photo is from a one-minute flash video by Amit Kanvinde/UC Davis. To view the video, visit http://news.ucdavis.edu/search/news_detail.lasso?id=10054.

for occupying uncertified buildings, the report said. Still, auditors found, the state rarely uses the enforcement tools it does have.

Senate Majority Leader Ellen M. Corbett, D-San Leandro, said she would call a hearing of the Select Committee on Earthquake and Disaster Preparedness to explore the audit's findings.

In a prepared statement, the California Coalition of Professional Construction Inspectors said the group would closely monitor the issues raised in the report. "Project inspectors have a great deal of responsibility and no authority," the statement says. "Historically some ... project inspectors have been removed

from projects by representatives of school districts without concurrence of the design professionals..."

The agency will discuss the option of pursuing legislation that would change the Field Act to prohibit occupancy where safety concerns have been identified. The state architect's office will issue additional policies to help ensure consistent use of stop-work orders and orders to comply. The agency also will better classify and prioritize projects that have been completed without state certification. Field engineers will be required to make in-person contact with project inspectors and will receive training on oversight.

News of the Membership

Andrew Whittaker Elected MCEER Director

EERI member Andrew S. Whittaker, a former member of the Institute's Board of Directors, has been elected to a two-year term as the director of MCEER, a national research center focused on multi-hazard engineering headquartered at the University at Buffalo (UB), New York. A faculty member at UB since 2001 and chair of the Department of Civil, Structural and Environmental Engineering, Whittaker becomes the sixth director in the Center's 25-year history. He was elected by the MCEER Management Council, a group of University at Buffalo faculty members who oversee MCEER's operations.

As the current director of the National Science Foundation's (NSF) George E. Brown Jr. Network for Earthquake Engineering Simulation

(NEES) facility at UB since 2009, Whittaker brings substantial experience in earthquake engineering and organizational leadership to his new MCEER post. Since 2005, he has served as president of the Consortium of Universities for Research in Earthquake Engineering (CUREE). His research and professional interests are in earthquake and blast engineering. Whittaker is also a recognized structural engineering expert in the seismic resilience of nuclear power structures.

Whittaker succeeds EERI member Andre Filiatrault, also a professor at UB, who stepped down to focus more on his research interests. Over the past three years, Filiatrault has led MCEER in continuing to advance its expanded scope of multi-hazard engineering and disaster

resilience. He also led the initial phase of development of the MCEER public-private initiative Experimental Campus for Large Infra-



Andrew Whittaker

structure Protection, Sustainability and Enhancement (ECLIPSE). The campus has been home to the MCEER Full-Scale Bridge Project, focused on studying the properties of seismic isolation bearings under a wide variety of climatic conditions over time. Filiatrault served as the driving force behind the continuing UniQ-UB/MCEER Earthquake Engineering Seminar series, a joint effort with Haiti's Quisqueya University (UniQ) in Port-au-Prince to help the island nation rebuild following the January 2010 earthquake.

Opportunities

USGS Seeks Senior Science Advisor

The U.S. Geological Survey (USGS) seeks candidates for the full-time position of Senior Science Advisor for Earthquake and Geologic Hazards. The position is responsible for the planning and implementation of monitoring, assessment, and research activities supported by the Program for Earthquake Hazards, Global Seismographic Network, and Geomagnetism. The incumbent also serves as a primary spokesperson with national media and coordinates high-level briefings. Required: specialized experience directly related to the duties and education requirements for the physical sciences, geophysics, or geology job series. For more information and to apply, visit <http://www.usajobs.gov/>. The application deadline is February 21, 2012.

University of Memphis Position

The Center for Earthquake Research and Information (<http://www.ceri.memphis.edu>) and the Department of Civil Engineering (<http://www.memphis.edu/ce>) at the University of Memphis invite nominations and applications for a tenure track position in **engineering seismology** at the Assistant Professor level to begin August 2012. Desired areas of research interest include source characterization, wave propagation, site response characterization, and loss estimation. Required: a Ph.D. in engineering or a closely related field and a demonstrated record or strong promise of research productivity. The successful candidate is expected to mentor M.S. and Ph.D. graduate students and teach undergraduate and graduate courses. For more information and to apply, visit <http://workforum.memphis.edu>. Applications submitted by February 15, 2012 will receive full consideration.

Subscribing Member Posting AIR Seeks Senior Seismologist

EERI Subscribing Member AIR Worldwide in Boston, Massachusetts, is seeking a Senior Seismologist. AIR models the risk from natural catastrophes and terrorism in 50 countries.

Requirements for this position include the ability to develop regional seismic hazard models by collecting and processing earthquake-related data, writing seismicity-related computer codes, documenting and presenting the results, knowledge of probabilistic analysis techniques, strong scientific communication and presentation skills, five or more years of practical experience, and a Ph.D. in seismology or a related field.

For more information and to apply, visit <http://www.air-worldwide.com/Careers.aspx>.

Summary of the Minutes of the Board of Directors Meeting of September 6-7, 2011

Call to order: President Thomas Tobin called the meeting to order at 4:00 p.m. on September 6, 2011. Also present were Directors William Anderson, David Friedman, Marshall Lew, Joseph Maffei, Farzad Naeim, Ellen Rathje, and Ivan Wong, Executive Director Jay Berger, and Publications Manager Eloise Gilland. Special Projects Manager Marjorie Greene and *Spectra* Managing Editor Liz Stalnaker were present for portions of the meeting.

Secretary/Treasurer for 2012: The Board unanimously approved Lew's recommendation of Janiele Maffei to serve as the next EERI Secretary/Treasurer.

Secretary/Treasurer's Report
Overview of Revenue and Expense and Investment Reports: Lew reported that the revenue for the year has been better than forecast in the 2011 budget, although the projected deficit of \$204,400 is not closed completely. Berger said it had been closed by two-thirds as a result of grants received and cost savings, and estimated that the deficit at year's end should be around \$60,000.

The combined balance sheet showed a year-to-date positive revenue for Association Programs of \$175,850 as of July 31, 2011. Adding this to the opening fund balance for Association Programs (January 1, 2011) results in a total fund balance of \$559,887. Association Program liabilities as of July 31, 2011, were \$161,321, resulting in total assets of \$721,208. The Endowment Fund's total assets on July 31, 2011, were \$1,591,320. The balance for the combined Association and Endowment Programs is \$2,312,528.

Finance Committee recommendations for 2012: The Board reviewed

Lew's memo of September 2 containing several Finance Committee recommendations following its review of the draft 2012 budget. Considering what EERI needs in order to maintain financial stability for several years ahead, not just 2012, the recommendations are as follows: (1) Given the increasing costs of services, an 8% dues increase in all membership categories for 2012. There has been no increase for three years. (2) A salary increase for the staff averaging 3%. The staff has not had an annual increase in the last 2 years (3) Consider alternative means of delivery to members of some traditional print products.

2012 Budget: The Board reviewed the 2012 preliminary budget worksheet, which projects a deficit of \$203,448. If dues were increased by 8% for regular, retired, and young professional members, and if *Spectra* subscriptions were also increased by 8%, the deficit would be reduced by \$35,366. If the *Newsletter*, *Roster*, and *Spectra* were not printed and mailed, the deficit would be reduced by \$90,000. The Board approved of increasing dues by approximately 8% across most membership categories. The deficit cannot be reduced in one year, and a dues increase is among a range of deficit-reduction options. The best option is to recruit new members to achieve income growth.

IT Plan progress: Berger reported that good progress is being made on the IT Plan for 2011. With help from the three EERI interns, much was accomplished over the past two months. The last phases, to be completed by the end of the year, are a new online store and the revamping of the members-only area.

Funding proposals submitted in 2011: The Board reviewed the table summarizing 19 funding proposals submitted since the February Board meeting.

NSF RAPID Researcher Workshop proposal: Berger reported that EERI was awarded a \$49,000 grant by NSF to organize and manage a

workshop for RAPID awardees on emerging research needs coming from the New Zealand and Japan earthquakes and tsunami.

World Bank projects: Berger indicated that negotiations with the World Bank on the collaboration between EERI and the Bank's Global Facility for Disaster Reduction and Recovery (GFDRR) are near completion, with three tasks identified for a total value of \$280,000 over two years.

FEMA Cooperative Agreement: Berger reported that FEMA recently accepted EERI's Statement of Work for the 2011-2012 Cooperative Agreement in the amount of \$355,000. The agreement provides support for the technical seminar series, maintenance of the Mitigation Center, the Seismic Design Competition, the Oral History Series, special issues of *Spectra*, the Graduate Student and Housner Fellowships, the 2012 National Earthquake Conference (NEC), and EERI student and regional chapters.

Housner Fellows Program: Tobin reported that the Housner Fellows Management Committee has completed development of the Housner Fellows Program for the Board to approve. The Board authorized the Housner Fellows Program as described in the program description and approved of Kenneth Stokoe as an additional member of the Housner Fellows Management Committee.

Virginia earthquake: Greene reported that Anderson and Jim Beavers are co-leaders of the Virginia Earthquake Reconnaissance Team. A report will be published online. A two-page summary of major lessons will be given to the federal agencies and every member of congress.

SPI projects for 2012: The Board reviewed a message from Sharon Wood, chair of the Special Projects and Initiatives Committee, indicating that the committee recommended that for 2012 only, endowment funds be used to support the Learning

from Earthquakes Program because of the large number of important earthquakes in 2010 and 2011. The Board approved a motion to ask Greene to assemble a list of identifiable projects focusing on the Virginia earthquake in consultation with Anderson and Beavers.

Regional chapters: Wong said a new EERI Salt Lake City Regional Chapter is getting launched. Salt Lake City has a good core group, as 97 people have expressed interest in joining a chapter, including members of SEAU and emergency managers. Wong said Portland, Oregon, will have an EERI chapter soon, as 44 people have indicated interest after 100 were contacted. Wong has talked to staff and members of the Cascadia Region Earthquake Working Group (CREW) and the Structural Engineers Association of Washington, and all were in favor of an EERI chapter in Washington state. CREW is interested in establishing a memorandum of understanding with EERI. Wong will also explore the idea of a regional chapter in Atlanta with DesRoches and another in Charleston, S.C., with his and EERI's contacts in the area. Anderson will do the same in Washington, D.C. Tobin said a group in New York City has scheduled a chapter-organizing meeting for November 10.

Spectra editor honorarium: Berger said the editor of *Earthquake Spectra* receives a \$600 honorarium for each issue published. This rate has been in place for at least six years. The Board approved a motion increasing the *Spectra* editor honorarium to \$1,000. Naeim pointed out that Polat Gulkan's term as editor expires at the end of 2012.

Special issues of EQS on New Zealand and Japan: Berger reported that he is participating in preliminary discussions with Gulkan, Masayoshi Nakashima, Jack Moehle, and Greene regarding publication of a special issue of *Earthquake Spectra* on the March 11, 2011, Japan earthquake and tsunami. The Japanese will produce many volumes on

the event in their language, but are also interested in an English language summary of 15-20 papers.

Tobin has e-mailed the president of the New Zealand Society of Earthquake Engineering expressing EERI's commitment to working collaboratively with NZSEE on the publication of a special issue of *Spectra* on the Christchurch earthquakes, and made suggestions about how it would complement an issue of the *NZSEE Bulletin*.

Earthquake Spectra transition from AIP: Stalnaker reported that the top two priorities in the process of transitioning *Spectra* away from the AIP publishing platform are: (1) to continue using the current peer-review management software, and (2) to focus on replacing the production services and online hosting by AIP's Scitation; the latter will no longer be available after June 2012.

The Board unanimously approved the plan as outlined by Stalnaker and Berger to: (1) immediately initiate a contract with eJournal press to provide the peer review management software, ensuring a seamless transition; (2) seek two proposals for a package of production services and initiate a contract with the top choice by October 15; and (3) hire a consultant for the limited services of assistance with evaluating the proposals for production services and with selection of an online hosting platform.

World Bank project with Japan assistance: Berger reported that he, Greene, and Tobin were recently informed in a phone call with several staff members of the World Bank that Japanese officials would like the World Bank to provide support in documenting lessons from Tohoku and sharing their experience with the rest of the world. The World Bank requested EERI's help in creating a Global Advisory Group to help determine what worked and what did not during the earthquake and tsunami, to identify gaps in existing knowledge, and to provide

general advice to the Japanese program.

Publication Policy Committee: Rathje reported that during the recent Publication Policy Committee conference call, a social scientist said that while *Spectra* is not the preferred journal for social scientists in earthquake-related fields, special issues do lend themselves to the social sciences. Maffei suggested a social science theme issue or monograph. Tobin suggested a monograph on how to use social science to reduce risk.

Adjourn: Tobin adjourned the meeting at 12:00 noon on September 7, 2011.

2012 EERI Election Results

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will remain president in 2012 for the second year of his two-year term, and will become past president next year. Leon and Tierney will each serve three years as directors, replacing William Anderson and Reginald DesRoches, whose terms are expiring.

EERI extends thanks to Naeim, Anderson, and DesRoches for their years of outstanding service and dedication to the Institute. Thanks also to members who took the time to consider all the outstanding candidates and cast votes — not an easy decision! You have helped influence EERI's future course.

It is not too early to start thinking about next year's election. 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

SEAOC Excellence Awards for EERI Members

Firms in which EERI members are employed received the Excellence in Engineering Awards in the categories listed below at the September 2011 Structural Engineers Association of California Convention in Las Vegas.

Study/Research/Guidelines

Award of Merit to the Applied Technology Council of Redwood City for *FEMA P-695: Quantification of Building Seismic Performance Factors* (ATC-63 Project)

Award of Excellence to the Pacific Earthquake Engineering Research Center (PEER) at the University of California, Berkeley, for *Guidelines for Performance-Based Seismic Design of Tall Buildings*

Special-Use Structures

Awards of Merits to (1) ZFA Structural Engineers of Santa Rosa for Cyclisk, Santa Rosa; (2) ARUP of Los Angeles for Playa Vista Bandshell; (3) Moffatt & Nichol of San Diego for the Port Pavilion on Broadway Pier, San Diego

Award of Excellence to HNTB Corporation of Oakland for the BART Earthquake Safety Segment 1 Core System, Oakland

Historic Preservation

Award of Merit to Rutherford & Chekene of San Francisco for the retrofit of Bowles Hall for Hayward fault offset, University of California, Berkeley

Retrofit / Alteration

Awards of Merit to (1) Degenkolb Engineers of San Francisco and The Crosby Group of Redwood City for the Caltrans District 4 Headquarters Seismic Upgrade, Oakland; (2) OLMM Consulting Engineers of Oakland for the Seismic Retrofit and Rehabilitation of Terminal 2 at the San Francisco International Airport

New Construction

Awards of Merit to (1) Skidmore, Owings & Merrill LLP of San Francisco for Huawei Technologies Corporate Campus, Shanghai, China, (2) AECOM of Orange for the Army National Guard Readiness Center, Arlington, Virginia

Awards of Excellence to Nabih Youssef Associates and Forell/Elsesser Engineers for the Dolby Regeneration Medicine Building, University of California, San Francisco

Sustainable Design

Award of Excellence to Buehler & Buehler Structural Engineers of Sacramento for the ISO Headquarters, Folsom

Landmark Structures

Awards of Excellence to (1) HNTB Corporation of San Jose for the Mary Avenue Bicycle Footbridge, Cupertino; (2) Skidmore, Owings & Merrill LLP of San Francisco, for the Tianjin World Financial Center, China

Humanitarian Award to Miyamoto International of Los Angeles and West Sacramento for a damage assessment project and for 120,000 yellow-tagged structures for the Haitian Ministry of Public Works, Port-Au-Prince, Haiti.

Higgins Award for Bruneau

EERI member Michel Bruneau, professor of civil, structural, and environmental engineering (CSEE) at the University at Buffalo (UB) and a past director of MCEER, is the 2012 recipient of the T.R. Higgins Lectureship Award, which is presented annually by the American Institute of Steel Construction (AISC) in recognition of outstanding contributions to the engineering literature on fabricated structural steel.

Bruneau is being honored for his papers on steel plate shear wall design published in AISC's *Engineering Journal* and the *Proceedings of the Canadian Conference on Earthquake Engineering*.

A prolific author, Bruneau's research includes the evaluation and retrofit of existing steel bridges and buildings subjected to large destructive forces up to collapse, as well as the development of new multi-hazard-resistant design concepts. He has participated on many expert peer review panels, project advisory committees, special project design teams, conference advisory committees and journal editorial boards. He has received several awards for his technical work and for his latest novel (see page 7 of the July 2010 *Newsletter*).

The Higgins Lectureship Award, which includes a \$15,000 prize, will be presented at the 2012 Steel Conference (www.aisc.org/nascc) at the Gaylord Texan Convention Center in Dallas, April 18-21. The award is named for Theodore R. Higgins, a former AISC director of engineering and research, who was widely acclaimed for his many contributions to the advancement of engineering technology related to fabricated structural steel. Many EERI members have been previous recipients of the award.

Calls for Abstracts

IDRC & Tsunami Symposium in Davos

4th International Disaster and Risk Conference (IDRC-Davos): The Global Risk Forum (GRF) based in Davos, Switzerland, addresses global issues on risk reduction and disaster management. It is sponsoring the 4th IDRC-Davos, to be held August 26-30, 2012, and anticipates about 1,000 participants. The GRF invites submission of abstracts not to exceed 300 words for sessions, workshops, oral and poster presentations, and pre- and post conference events. The deadline is February 29. For more information, visit <http://www.idrc.info/>.

Tsunami Symposium: Tsunami Society International (TSI) invites submissions of abstracts of papers to be presented orally at the 5th International Tsunami Symposium (ITS Davos 2012), to be held August 31–September 1, 2012, in Davos, Switzerland. It will focus primarily on tsunami risk analysis and disaster management. The ITS will follow a 90-minute plenary tsunami session organized by TSI during the IDRC main conference, which will introduce the need for a holistic approach in addressing the worldwide array of tsunami risks. The deadline is February 25 for submission to TSI (**postmaster@tsunamisociety.org** and **drgeorgepc@yahoo.com**) of abstracts not to exceed 300 words. Full papers may be submitted later for publication in separate extended proceedings. For more information, visit <http://www.tsunamisociety.org/5thTsunamiSymposiumDAVOS2012.pdf>.

7th Int'l Conf. on Case Histories in Geotech Eng.

A call for papers has been issued for the 7th International Conference on Case Histories in Geotechnical Engineering (7ICCHGE) and Symposium in Honor of Clyde Baker, to be held April 29-May 4, 2013, in Wheeling (near Chicago), Illinois. One-page abstracts are due by April 15, 2012. For information on session themes and submission instructions, visit <http://7icchge.mst.edu/>.

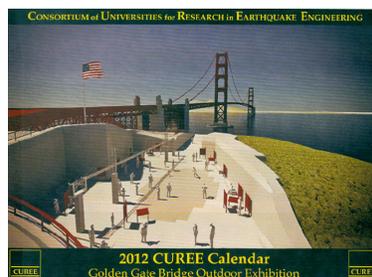
Publication

2012 CUREE Calendar

The theme of the 2012 CUREE Calendar, "Golden Gate Bridge Outdoor Exhibition," highlights engineering for non-engineers and the use of the bridge as a learning resource. CUREE is the lead designer of exhibits that will be installed at the visitor area at the San Francisco side. The project is funded by a \$3 million award from the National Science Foundation. The International Conference on Public Works for Public Learning, organized by CUREE and hosted by the Golden Gate Bridge, Highway and Transportation District, will be held June 20-22, 2012, in San Francisco. The keynote speaker will be G. Wayne Clough, Secretary of the Smithso-

nian Institute and a former EERI Board member. Other examples of successful civil engineering monuments will also be showcased.

For more information and to register for the conference, visit www.publicworksforpubliclearning.info. Copies of the calendar are available at no charge by mailing a request to **curee@curee.org** until the supply is depleted.



2012 CUREE Calendar cover.

Announcement

Disaster Mitigation Scholarships

The StormStruck: A Tale of Two Homes® Scholarship Program offers five \$1,500 scholarships aimed at master's and doctorate students seeking degrees in areas related to disaster mitigation.

The scholarships will be awarded for three consecutive terms beginning 2012/2013 through 2014/2015. The application deadline is **February 15, 2012**.

The following five scholarships are available:

- **RenaissanceRe® Risk Management**, for research on the identification and assessment of risk as it relates to natural disaster liabilities.
- **Simpson Strong-Tie® Structural Engineering & Construction**, for research on resilient construction materials or techniques.
- **State Farm® Financial Services**, for research on financial analysis, investment management, or corporate finance as they relate to mitigating the effects of natural disasters, responding to them, or recovery from them.
- **The WeatherPredict Consulting Inc. Meteorology**, for research on meteorology or meteorological risk modeling as it relates to natural disasters.
- **FLASH Social Science**, for research on behavior change, societal effects, or other social aspects as they relate to natural disaster mitigation or preparation.

For more information and to apply, visit <http://www.flash.org/scholarship/>.



Publications

Natural Hazard Mitigation Policy

Springer recently announced publication of a new book, *Natural Hazard Mitigation Policy: Implementation, Organizational Choice, and Contextual Dynamics*, by Daniel J. Alesch and EERI members Lucy Arendt and William J. Petak. The first volume in a new series provisionally titled "Environmental Hazards," it focuses on the importance of taking steps to reduce the impact of adverse unanticipated consequences arising from implementation. The 238-page book is an interdisciplinary analysis of California's efforts to ensure that acute care hospitals survive earthquakes and continue to function in the aftermath. As a case study of SB 1953, it evaluates the history and perspectives of key stakeholders and the outcomes of complex organizational decision making. It is available from Amazon.com for \$129.00 plus shipping.

System Identification for Structural Health Monitoring

EERI member Izuru Takewaki of Kyoto University's Department of Architecture and Architectural Engineering, Japan, has recently authored the hardcover book *System Identification for Structural Health Monitoring* with M. Nakamura and S. Yoshitomi, published by WIT Press. This 272-page volume is the first textbook on smart techniques of civil and mechanical system identification using records from limited locations. To overcome the difficulty of instrumentation of all stories above a specific story in multi-storied buildings, the book explains a unique system identification theory for a shear building model. It shows that unique identification of story stiffness and viscous damping coefficients is possible when acceleration records at the floors just above and below a specific story are available. The book can be ordered online for \$234.00 at <http://www.witpress.com/978-1-84564-628-8.html>.

Calculating Catastrophe

Imperial College Press recently published *Calculating Catastrophe* by EERI member Gordon Woo of Risk Management Solutions, an EERI Subscribing Member. It explains to a general readership the underlying philosophical ideas and scientific principles that govern catastrophic events, both natural and man-made. This book will be of particular value to those engaged in public and corporate policy and the financial markets. Woo was trained in mathematical physics at Cambridge, MIT, and Harvard, and has advanced the insurance modeling of catastrophes. It is available in both hardcover (\$76) and paperback (\$29) formats from Amazon.com.

Announcement

Nominations Sought for Prakash Awards

The Shamsheer 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 2012 Shamsheer Prakash Research Award is for young (age 40 or under) engineers, scientists, or researchers. Nominations are due by March 31, 2012. The award will be announced by September 30, 2012. For information on submitting

Dynamics of Structures, 4th Edition

Prentice Hall recently published the 4th edition of *Dynamics of Structures: Theory and Applications to Earthquake Engineering*, by EERI member Anil K. Chopra. The principal new features include:

- A new chapter on nonclassically damped systems that arise in several practical situations, e.g., structures with supplemental energy-dissipating systems or on a base isolation system, soil-structure systems, and fluid-structure systems.
- Two chapters on numerical evaluation of dynamic response have been rewritten to offer an integrated presentation of nonlinear static and dynamic analysis.
- The chapter on earthquake analysis of linear systems now includes two topics of practical interest: (1) a response spectrum method to estimate a structure's peak response to multicomponent excitation; and (2) equations based on response spectra to determine an envelope that bounds the trajectory of joint responses of all forces that control the seismic design of a structural element.
- Relevant chapters have been updated to reflect current editions of building codes for designing new buildings and current standards for evaluating existing buildings.

The 944-page book can be ordered from www.pearsonhighered.com/.

nominations, visit http://yoga10.org/research_award.html.

The 2012 Shamsheer Prakash Prize for Excellence in the Practice of Geotechnical Engineering is for young engineers age 45 or under. Nominations are due by June 30, 2012. The award will be announced by October 31, 2012. For information on submitting nominations, visit http://yoga10.org/prize_excel_MST.html.

CALENDAR

The issues containing the first and subsequent appearances are indicated at the entry's end. Items listed for the first time are shown in bold.

2012

FEBRUARY

15. NEES-EERI Webinar on Concentrically-Braced Frames, <https://nees.org/webinar>. See page 12.

15-18. 4th Int'l Conf. Grout/Deep Mix, New Orleans, LA. www.dfi.org/conferencedetail.asp?id=163. (5/10, 1/12)

17. Khan Distinguished Lecture, Lehigh Univ., Bethlehem, PA. <http://www.lehigh.edu/~infrk/> (11/11)

MARCH

3-4. Int'l Symp. One Year after the 2011 Eastern Japan EQ, Kenchiku-kaikan Hall, Tokyo. Info: kawashima.k.ae@m.titech.ac.jp (8/11)

23. Khan Distinguished Lecture, Lehigh Univ., Bethlehem, PA. <http://www.lehigh.edu/~infrk/> (11/11)

30. Short Course on Analysis, Design, and Testing of Piles, Carlsbad, CA. <https://www.eeri.org/registration/register.php> (12/11)

APRIL

10-13. EERI Annual Meeting/Nat'l EQ Conf., Memphis, TN. <http://2012am.eeri.org/>. See page 1. (5/11, 9/11, 11/11, 12/11, 1/12, 2/12)

13-15. New Zealand Soc. for EQ Eng. Annual Conf., Christchurch, NZ. conference.nzsee.org.nz/ (10/11)

17-19. Seismological Soc. of America Annual Mtg., San Diego, CA. www.seismosoc.org/meetings/2012/index.php (10/11, 1/12)

18-20. The Steel Conference, Grapevine, TX. <http://www.aisc.org/nascc> (2/12)

19. Liquefaction State-of-the-Art Forum: Consequences and Mitigation. See page 12. (2/12)

20. Khan Distinguished Lecture, Lehigh Univ., Bethlehem, PA. <http://www.lehigh.edu/~infrk/> (11/11)

MAY

16-17. SuperPile 2012, Portland, OR.

dfi.org/conferences.asp (12/11)
18-21. Int'l Conf. on EQ Eng.: Research Challenges, Harbin, China. e-mail Ms. Bing Bai, iceer2012@iem.cn. (9/11)

28-30. 2nd Int'l Conf. PBD in EQ Geotech. Eng., Taormina, Italy. <http://addon.webforum.com/issmge/view.asp?EventID=2160> (5/11)

JUNE

17-20. 11th ASCE Joint Specialty Conf. on Probabilistic Mechanics & Structural Reliability (EMI/PMC 2012), South Bend, IN. <http://www.nd.edu/~emipmc12/> (12/11)

18-22. Short Course on Grouting Fundamentals and Current Practice. See this page. (2/12)

20-22. Int'l Conference on Public Works for Public Learning, San Francisco, CA. www.publicworksforpubliclearning.info (2/12)

JULY

8-12. 6th Int'l Conf. on Bridge Maintenance, Safety and Management (IABMAS 2012), Lake Como, Italy. www.iabmas2012.org (12/10, 1/11)

AUGUST

26-30. 4th International Disaster and Risk Conference (IDRC-Davos). See page 9. (2/12)

31-September 1. 5th International Tsunami Symposium (ITS Davos 2012). See page 9. (2/12)

SEPTEMBER

12-15. SEAOC Convention, Santa Fe, NM. <http://convention.seaoc.org/> (2/12)

19-21. Council on Tall Buildings & Urban Habitat (CTBUH) World Cong., Shanghai, China. <http://www.ctbuh.org/shanghai2012/> (11/11)

19-21. 18th IABSE (Int'l Ass'n for Bridge & Structural Eng.) Cong., "Innovative Infrastructures: Toward Human Urbanism," Seoul, Korea. www.iabse.org/Seoul2012 (12/11)

24-28. 15th World Conf. on EQ Eng. (15WCEE), Lisbon, Portugal. www.15wcee.org/ (8/10, 8/11, 11/11, 12/11)

OCTOBER

3-6. Symp. on Life-Cycle Civil Eng. (IALCCE), Vienna, Austria. www.ialcce.org/

ialcce2012.org (12/10, 1/11)

15-17. 8th Int'l Conf. on Structural Analysis of Historical Construction (SAHC 2012), Wrocław, Poland. www.sahc2012.org (1/12)

16-19. Deep Foundations Institute (DFI) Annual Conf., Houston, TX. www.dfi.org/conferencedetail.asp?id=193 (12/11)

2013

APRIL

29-May 4. 7th Int'l Conf. on Case Histories in Geotech. Eng. to Commemorate Legacy of Ralph B. Peck, Symp. in Honor of Clyde Baker, Wheeling, IL (Chicago area). <http://7icchge.mst.edu>. See page 9. (12/11, 2/12)

MAY

19-23. 4th Session of the Global Platform for Disaster Risk Reduction, Geneva Switzerland. <http://www.internationaldisasterconference.com/>. (1/12)

AUGUST

18-23. 22nd Int'l Conference on Structural Mechanics in Reactor Technology (SMiRT-22), San Francisco, CA. www.smirt22.org (2/12)

Announcement

Grouting Fundamentals Short Course

The Colorado School of Mines in Golden is hosting the 33rd Annual Short Course on Grouting Fundamentals and Current Practice June 18-22, 2012, co-sponsored by Graz University of Technology. The course covers injection grouting as a method to improve soil settlement and strength characteristics and to decrease permeability of soil and rock masses. Field demonstrations will be included.

For more information and to register, visit: <http://csmospace.com/events/grouting/>.



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EERI Newsletter, February 2012 Volume 46, Number 2

News of the Institute

NEES-EERI Webinar on CBFs

Scheduled for Wednesday, **February 15, 2012**, 11:30 AM – 1 PM PST (2:30 PM – 4 PM EST), “**Improving Seismic Performance of Concentrically Braced Frames**” is the fourth in a series of “Research to Practice” Webinars co-produced by the Network for Earthquake Engineering Simulation (NEES) and EERI. There is no cost to attend. To register, visit <https://nees.org/webinar>. PDHs will be available from EERI after the webinar for \$30.

While concentrically braced frames (CBFs) are practical and economical for seismic design, their inelastic performance is more complex and less well understood than many other structural systems. The NEES small group research project, *International Hybrid Simulation of Tomorrow's Braced Frame Systems*, investigated these issues using experimental and analytical research methods. The results were combined to develop a new design method that balances the inelastic action within the CBF. Professors Charles Roeder and Dawn Lehman, University of Washington, will present the experimental results, analytical modeling effort, and the resulting design and analysis models that are appropriate for immediate use in the design office. Most importantly, a balanced design procedure for the gusset plates, which significantly improves the seismic performance of the system, will be presented. The impact of the proposed system on improved seismic performance will be emphasized throughout the webinar.

The researchers studied more than 40 large-scale specimens and investigated current design methods and improved design. All specimens were analyzed with both elastic and inelastic models using the ANSYS and OpenSees computer programs. The combined analytical studies have resulted in practical yet accurate modeling and evaluation procedures.

Call for Proposals

Exhibit on Seismic Design at DX Toronto

An exhibition will be held at the Design Exchange (DX) in Toronto, Canada, in November/December 2012 on innovative approaches to seismic design. Curators Effie Bouras of Mechanik Design Office, Arizona, and Professor Ghyslaine McClure of McGill University, Quebec, are seeking completed earth-

quake-resistant building projects and research that engage innovative approaches to seismic design requirements. Proposals are sought that do not sacrifice a design aesthetic for conventional structural solutions. Featuring drawings, models and various multimedia platforms, the exhibition aims to convey the cutting-edge character of some of the most creative projects around the world, featuring elegant structural solutions to seismic problems while remaining true to the de-

Announcement

DFI Liquefaction Forum

On April 19, 2012, the Ground Improvement Committee of the Deep Foundations Institute (DFI) is hosting a forum in St. Louis, Missouri, on “Liquefaction State of the Art: Consequences and Mitigation,” a one-day series of one-hour lectures given by seven leaders in the study of earthquake-induced liquefaction. All speakers are EERI members: Edward Kavazanjian (overview), Brady R. Cox (lessons learned from recent earthquakes), Ross Boulanger (ground improvement), Russell Green, (mitigation through use of stone columns), Kyle Rollins (blast-induced liquefaction in foundation testing), Scott Olson (lateral spreading), and Billy Camp (DFI mitigation document).

As EERI is a cooperating organization, the registration fee for EERI members is \$395, a \$100 discount off the nonmember rate. PDH certificates will be available. For more information and to register, visit <http://dfi.org/conferencedetail.asp?id=208>.

signers' vision.

The deadline for submissions is June 1, 2012. Please send your proposals, which may include building models (along with dimensions), drawings, video media, etc., to info@mechanikllc.com with “DX exhibit” in the subject line.” The DX website (www.dx.org) will list the exhibit mid-year.