



**EARTHQUAKE ENGINEERING
RESEARCH INSTITUTE
NEWSLETTER**

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News of the Institute

EERI Statement to NEHRP Advisory Committee

EERI President Tom Tobin and Executive Director Jay Berger attended the November 9-10, 2011, meeting of the Advisory Committee on Earthquake Hazards Reduction (ACEHR) in Washington, D.C. Tobin made the following statement.

Thank you for the opportunity to speak on behalf of the Earthquake Engineering Research Institute. As you know, EERI and its leaders from the 1960s and 1970s were instrumental in creating the National Earthquake Hazards Reduction Program (NEHRP), and since then the Institute has enjoyed a supportive and collaborative relationship with the NEHRP agencies.

While our nation is faced with serious challenges because of the earthquake risk, it is important to take a few minutes to celebrate the progress made and to recognize that because of NEHRP, Americans live and work in safer buildings and are better prepared than ever before. Since NEHRP's inception in 1977, it has funded work that has improved our understanding of the earthquake risk nationwide and the vulnerability of people, buildings, and

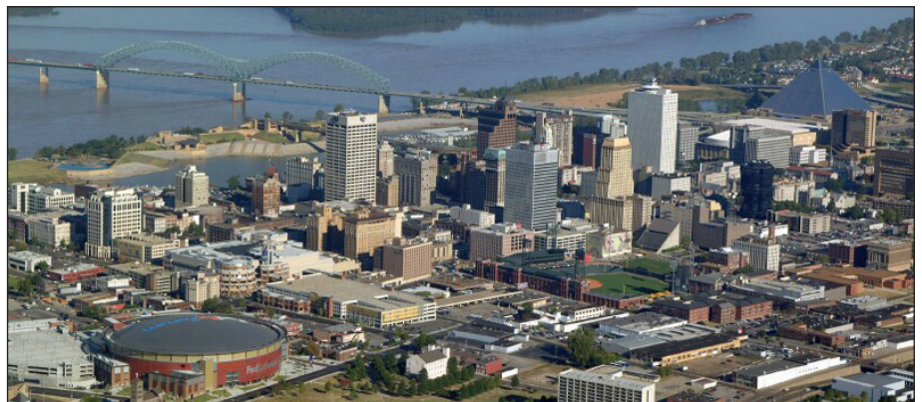
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**2012 Annual Meeting/NEC Program &
Call for Poster Abstracts**

The 2012 EERI Annual Meeting/National Earthquake Conference (NEC) Program Committee, co-chaired by Oliver Boyd, Rich Eisner, and Shaham Pezeshk, is finalizing a program that promises to have many engaging sessions for a multidisciplinary group of attendees. As one of the bicentennial events marking the 200th anniversary of the series of strong earthquakes that struck the New Madrid seismic zone in late 1811 and early 1812, the meeting will be held April 10-13 at the historic Peabody Hotel in downtown Memphis, Tennessee. With the theme of "Learning from the Past to Protect the Future," the meeting is jointly hosted by EERI and the FEMA regional earthquake consortia, and will consist of both plenary and concurrent sessions to ensure an abundance of offerings. (The consortia consist of the Western States Seismic Policy Council, the Central U.S. Earthquake Consortium, the Northeast States Emergency Consortium, and the Cascadia Region Earthquake Workgroup.)

Subthemes for each day will focus on Learning from Earthquakes (4-11), Assessing Vulnerabilities (4-12), and Building Resilience (4-13). Afternoon time slots on both April 11 and 12 will each feature six concurrent sessions

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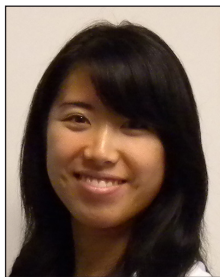


Downtown Memphis (photo: <http://www.city-data.com/picfilesv/picv15919.php>).

News of the Institute

New EERI Intern

As part of the 4th rotation of EERI's internship program, a new intern was chosen from another strong pool of candidates.



Tammy Chang

Tammy Chang, who graduated with a Master's degree in structural engineering, mechanics, and materials from the University of California, Berkeley, replaced a previous 4th round intern, Zach Craig, who was offered and accepted a position with the Florida office of Thornton Tomasetti.

Tammy is currently working with intern Mariana Chavez on updating the Earthquake Clearinghouse website with current information, creating a new website for the Learning for Earthquakes Program, developing building tutorials, and creating photo albums of past earthquake events, as well as other projects as needed.

Working on these projects offers Tammy relevant professional experience, exposure to the multidisciplinary aspects of earthquake engineering. Her work also benefits EERI's mission to gather and disseminate information about earthquake risk reduction and to advocate for realistic measures to reduce the harmful effects of earthquakes.

2012 Annual Meeting/NEC *continued from page 1*

covering topics such as the performance of unreinforced masonry and critical structures in recent earthquakes; advances in clearinghouses; geotechnical lessons; preparedness, response, and recovery lessons; advances in early warning; barriers to mitigation and retrofitting; incorporating aftershocks in risk analysis; nuclear power plants; and network analysis.

To view a matrix of the preliminary program, visit the meeting website <http://2012am.eeri.org/> and click on the [Program](#) tab. Registration will open in mid-December. Watch for more information in future newsletters and in the program brochure coming your way soon!

Poster Abstracts & Travel Grant Applications

Individuals interested in participating in one of the 2012 Annual Meeting/NEC poster sessions are invited to submit abstracts, not exceeding two pages in length, to the organizing committee. They should be e-mailed by **January 23, 2012**, to Juliane Lane at juliane@eeri.org. Presenters will be notified in late February of acceptance. For abstract formatting information, visit <http://2012am.eeri.org/>.

Wednesday (April 11) poster session, 6:00-7:30 p.m.: This session will be held in the vicinity of the Undergraduate Seismic Design Competition and will emphasize student posters — those in the competition, those done by graduate student researchers, and others covering EERI student chapter activities.

Thursday (April 12) poster session, 6:00-7:30 p.m.: Abstracts are particularly encouraged that address one of the above-mentioned topics being emphasized during the program. Academic posters are encouraged that target advanced research nearing completion focusing on technology transfer to practitioners. Practitioner posters are encouraged that target innovative applications of research in practice or identified code-based needs for research.

Annual Meeting Travel Scholarships: Several scholarships are available to assist student members and younger EERI members (out of school no more than three years) to attend the meeting, thanks to support from FEMA. Financial support will be contingent upon participation in one of the poster sessions (see above), either through the applicant's own research project, or as a representative of a student chapter depicting the chapter's activities. To apply, e-mail a letter of request by **January 23, 2012**, to the Student Activities Committee in care of Juliane Lane at juliane@eeri.org. Applicants should describe their current involvement in earthquake engineering, or a related field, and their status as students or professionals.

EERI Endowment Donors

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

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News of the Institute

Jon Bray Selected as 2012 Joyner Lecturer

EERI member Jonathan D. Bray, a professor in the Department of Civil Engineering at the University of California, Berkeley, has been selected as the 2012 William B. Joyner Lecturer. Bray will deliver this lecture on April 13 during the 2012 EERI Annual Meeting in Memphis, Tennessee, (see page 1) and at the Seismological Society of America (SSA) Annual Meeting to be held April 17-19 in San Diego, California.

Bray was chosen because of his scientific and engineering research on liquefaction effects, the effects of surface fault rupture, and the safe siting and design of facilities near active faults. As Joyner lecturers are chosen on the basis of their work at the interface of earthquake science and earthquake engineering, Bray has extensive experience serving at this interface, having published many papers on the interactions of buildings on or near surface faulting events.

Bray is the chair of the NSF-sponsored Geo-Engineering Extreme Events Reconnaissance (GEER) program, which has a goal to improve post-earthquake understanding and turn disaster into knowledge. He has been honored as the recipient of the David and Lucile Packard Foundation Fellowship (1992-1997) to advance science and engineering toward improved seismic safety.

A past member of the EERI Board of Directors, Bray has served as a member of an expert panel for the development of a liquefaction-induced seismic deformation screening tool for dams and levees for the U.S. Corps of Engineers. He served as a panel member reviewing surface fault rupture and ground motion hazards for Caltrans, and as an advisor on the effects of fault rupture on the performance of Aviemore Dam, New Zealand. His career is an outstanding example of how to make a difference to improve seismic safety.

Given annually since 2003, the William B. Joyner Memorial Lectures were established by the SSA in cooperation with EERI to honor Bill Joyner's distinguished career at the U.S. Geological Survey and his abiding commitment to the exchange of information at the interface of earthquake science and earthquake engineering.



Jonathan D. Bray

News of the Profession

Nominations for WSSPC Awards

Nominations for the 2012 National Awards in Excellence and the Western States Seismic Policy Council (WSSPC) 2012 Lifetime Achievement Award are due at the WSSPC office **December 30, 2011**. All awards will be presented at the 2012 National Earthquake Conference, to be held April 10-13 at the Peabody Hotel in Memphis, Tennessee (see page 1).

The purposes of the Awards in Excellence are to recognize and facilitate the exchange of exemplary programs, projects, and products that have significantly contributed to addressing earthquake risk reduction through demonstrated achievements in earthquake mitigation, preparedness, response and recovery.

The Awards in Excellence are given every year by WSSPC. Every fourth year the award nominations are solicited nationally in partnership with the Northeast States Emergency Consortium (NESEC), the Central U.S. Earthquake Consortium (CUSEC), and the Cascadia Region Earthquake Workgroup (CREW).

The Lifetime Achievement Award will recognize an outstanding leader in earthquake risk reduction still practicing professionally. The recipient will have demonstrated an extraordinary career-long commitment, level of service, and contribution to earthquake risk reduction.

Nomination forms and information on the submission process are available at the WSSPC website at <http://www.wsspc.org/awards/nominations.shtml>.

University of Colorado, Boulder) for Director B.

Your informed vote will greatly benefit EERI. Thank you in advance for voting in this election.

Remember Online Voting!

If you are a regular EERI member, a young professional or honorary member, you have until January 1, 2012, to cast your ballot online in the EERI Board of Directors election. During November, all eligible members were e-mailed a link to the ballot. From his link, you can access the biographies and vision statements of the candidates that were published in the October *EERI Newsletter*. If you prefer to vote by paper ballot, contact Juliane Lane

at juliane@eeri.org or call 510/451-0905 immediately.

The terms of Past President Farzad Naeim and directors William Anderson and Reginald DesRoches will expire in 2012. The nominee for President-Elect is Ian Buckle of the University of Nevada, Reno. Nominated to fill the two director slots are Jerome Hajjar (Northeastern University, Boston, Massachusetts) and Roberto Leon (Georgia Institute of Technology, Atlanta) for Director A, and Lucy Arendt (University of Wisconsin at Green Bay) and Kathleen Tierney (Natural Hazards Center,

Learning from Earthquakes Eastern Turkey EQ Update

An M_w 7.1 (USGS) earthquake in the Van region of eastern Turkey on Sunday, 23 October 2011, at 1:41 p.m. local time, claimed 604 lives. The town of Ercis, population ~80,000 and located about 30 km NNW from the estimated epicenter, was hit hardest with 191 buildings subject to rescue and recovery operations. The main city of Van, population ~400,000 and located about 25 km SW from the estimated epicenter, was relatively spared with no more than six building collapses reported. While there have been numerous aftershocks in the primary faulting region, believed to be an oblique-thrust faulting zone, on 9 November 2011 an M_w 5.7 (USGS) earthquake occurred about 15 km south of the main city of Van. This latter event claimed 40 lives, caused further damage in Van, including 25 additional building collapses (22 of which were condemned following the quake

on October 23), and brought life in the city to a standstill.

EERI members Ricardo Hernandez (Degenkolb Engineers), Ayhan Irfanoglu (Purdue University), Rafael Alaluf (EQRM Int'l, Istanbul), and Cemalettin Donmez (Izmir Institute of Technology) traveled to the region 26 October-1 November. They joined reconnaissance teams from Middle East Technical University (Ankara) and Dicle University (Diyarbakir) to inspect buildings in Ercis and Van. The team found that the vast majority of buildings were made of reinforced concrete, and that many of the damaged buildings suffered from fundamental design errors, including inadequate lateral-

load-resisting systems, soft stories at ground level (open and tall ground stories for commercial use), floor torsion (Figure 1), mezzanine-level construction resulting in disproportionate loading of structural elements (Figure 2), flexible joist floors with infills, and captive columns. The team also found widespread substandard construction practices, including inappropriate reinforcing detailing and poor quality concrete, suggesting the absence of proper inspection and quality control during the construction process.

EERI members will be notified when a report by the team is posted on <http://www.eqclearinghouse.org/2011-10-23-eastern-turkey/>.



Figure 1. A heavily damaged six-story building in Ercis. The structural layout resulted in excessive floor torsion. The flexible joist floors with block infills had cracks around columns at every floor level. The columns failed at the base of the ground story (photo: A. Irfanoglu).



Figure 2. A newer building in Ercis with a typical tall ground story and mezzanine level for commercial use (photo: A. Irfanoglu).

Forensic Disaster Analysis at CEDIM

The Center for Disaster Management and Risk Reduction Technology (CEDIM, www.cedim.de) — an interdisciplinary research center founded by the German Research Centre for Geoscience (GFZ) and Karlsruhe Institute of Technology (KIT) — has embarked on a new style of disaster research known as Forensic Disaster Analysis (FDA). The notion has been coined by the Integrated Re-

search on Disaster Risk initiative (IRDR, www.irdrinternational.org) launched by the ICSU (International Council for Science) in 2010. This approach to studying natural disasters aims at uncovering their root causes through in-depth investigations that go beyond reconnaissance reports and case studies, in order to help build an understanding of how natural hazards do, or do not, become disasters.

In adopting this approach, CEDIM adds a real-time component to the

assessment and evaluation process. Most if not all relevant aspects of disasters are considered and jointly analysed. This includes the impact (human, economy, and infrastructure), comparisons with recent historic events, social vulnerability, reconstruction, and long-term impacts on livelihood. The FDA mode is thus best characterized as “event-based research” through systematic investigation of critical issues arising after a disaster across interrelated areas.

continued on next page

Learning from Earthquakes

M5.6 Oklahoma EQ of November 5, 2011

Contributed by EERI member Lisa Holliday of the University of Oklahoma.

An M5.6 earthquake struck Oklahoma at 11:53 p.m. EST, with an epicenter between the towns of Meeker and Prague, at N35.54 W96.75 at a depth of 5 km. Residents near Meeker described the shaking as violent and terrifying. There were no deaths or serious injuries, but buildings were damaged in the area and a power outage occurred. Several historic unreinforced masonry buildings on Main Street in Meeker were severely damaged, and many chimneys and brick veneers collapsed. Several houses

were damaged severely, and residents consider them destroyed (Figure 1).

Although some buildings were heavily damaged, some unreinforced masonry buildings were untouched. Adobe construction is uncommon in Oklahoma, but an adobe house built in 1938 located about six miles from the epicenter survived the quake undamaged.

At Meeker High School, classes were disrupted as crews cleared the fallen building contents and ceiling tiles. Classes were also disrupted at St. Gregory's University in nearby Shawnee, Oklahoma, where the



Figure 1. A severely damaged home in Meeker, Oklahoma.

turrets on the historic Benedictine Hall collapsed. Several highways buckled. Oklahomans are not accustomed to earthquakes of this magnitude and very few residents affected had insurance coverage for earthquake damage.

Call for Comments

DRR Themes & Issues

Over the past four years, the information management unit of the United Nations International Strategy for Disaster Reduction (UNISDR) secretariat has been collecting and classifying information relating to the domain of disaster risk reduction (DRR). In support of the Hyogo

Framework for Action (HFA), a ten-year plan adopted in January 2005 by 168 governments, the ISDR secretariat developed an information portal on DRR called PreventionWeb at www.preventionweb.net. It aims to provide a common platform for institutions to connect, exchange experiences, and share information on DRR. In April 2011, comments were solicited on a draft Disaster Risk Reduction Themes & Issues

paper. The document has the aim of promoting a better understanding of DRR and the development of an internationally recognized information classification and exchange standard. These comments have contributed to version 2.1, now open for comment until 15 December 2011 at <http://groups.preventionweb.net/scripts/wa-PREVENTIONWEB.exe?A0=DRRIM-L>.

Forensic Analysis

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Time-criticality is important, as many pieces of information emerge within the first days. Interaction with the many actors is most intensive and open during these days. User interest (e.g., emergency services, tourism industry, economic cooperation agencies, and relief agencies) is also at a peak at this initial stage. During this window, media can be fed with science-based information that can help promote mitigation and preparedness measures. Initial hypotheses (with little information after the first day) on loss evolution and implications can be tested in the fol-

lowing days, significantly accelerating understanding. Issues relevant to reconstruction can be identified at an early stage through comparisons with previous earthquake experience in the region.

The FDA approach requires (a) availability of global data bases regarding previous earthquake losses, such as socio-economic parameters and building stock information; (b) leveraging platforms such as the EERI clearinghouse, relief-web, and local and international sources; and (c) rapid access to critical information (e.g., crowdsourcing techniques) to improve understanding of the complex dynamics of disasters. With this

approach, a team of scientists from seismology, earthquake engineering, social sciences, and economics can analyze and synthesize the data and generate a portrait of the disaster, with the aim of revealing the main characteristics and causes of loss, the conditions and role of relief operations, the short-term and long-term impacts on regional and national scale, boundary conditions, and trajectories of the reconstruction process.

The M7.1 Van earthquake (eastern Turkey) of 23 October 2011 served as an example for a forensic approach (all documentation available on www.cedim.de).

News of the Institute

Short Course on Pile Foundations

The EERI San Diego Chapter, the ASCE Geo-Institute San Diego, and the Deep Foundations Institute are cosponsoring a one-day Short Course on Analysis, Design and Testing of Pile Foundations, to be held Friday, March 30, 2012, in Carlsbad, CA 92008, near San Diego. Seven Professional Development Hours will be available to participants. To register online, visit <https://www.eeri.org/registration/register.php>.

The course instructor is Bengt H. Fellenius, formerly professor of civil engineering at the University of Ottawa, an internationally recognized foundation engineering consultant and the author of more than 300 technical papers. Registration fees will be \$225 for members of cosponsoring organizations, \$300 for nonmembers, and \$125 for students.

The course will cover the topics (1) settlement analysis and accelerating settlement with wick drains; (2) analysis of load transfer and capacity of piles; (3) the static loading test; and (4) the design of pile foundations. Case histories will be incorporated into all topics.

Calls for Abstracts

DFI Annual Conference and SuperPile 2012

DFI Annual Conference: The Deep Foundations Institute (DFI) has issued a call for papers for its 2012 Annual Conference, scheduled for October 16-19 in Houston, Texas, on the theme of "Foundations and Ground Improvement Techniques: Adapting them to an Ever-Changing Environment." For suggested topics, visit <http://www.dfi.org/conferencedetail.asp?id=193>. Abstracts not exceeding 300 words are due online at www.dfi2012submissions.org by December 9, 2011. EERI is a cooperating organization for the conference.

SuperPile 2012: DFI is calling for abstracts for SuperPile 2012, scheduled for May 16-17 in Portland, Oregon, on the subjects of driven piles, augered cast-in-place/drilled displacement piles, micropiles, marine construction, testing and evaluation of foundation systems, seismic design, and drilled shafts. Potential speakers should email proposals not exceeding 300 words to Katie Criqui at kcricqui@dfi.org by December 16, 2011. For more information, visit <http://dfi.org/conferences.asp>.

Publications

Global Platform for DRR Proceedings

The 82-page *Proceedings of the Third Session of the Global Platform for Disaster Risk Reduction and World Reconstruction Conference*, held 8-13 May 2011 in Geneva, are now available online at <http://www.preventionweb.net/globalplatform/2011/documents/GP2011-Proceedings.pdf>. One printed copy will be sent to each participating government and organization. Translations into Arabic, Chinese, French, Russian, and Spanish will become available in the future. There were 2,600+ participants at the Third Session, including representatives from more than 163 governments, 25 intergovernmental organizations, 65 nongovernmental organizations, the private sector, academic institutions, and United Nations agencies. Under the theme "Invest Today for a Safer Tomorrow — Increase Investment in Local Action," the Third Session underscored the necessity of building resilience in local communities. Ways to connect the issue of risk reduction with sustainable development were highlighted, and critical future steps were identified.

News of the Profession

Global Earthquake Model News

GEM's Scientific Framework: The Global Earthquake Model has produced a new framework with the main components consisting of hazard, exposure, vulnerability, risk and impact analysis, and decision-making tools. To submit comments on this new framework, visit <http://www.nexus.globalquakemodel.org/secretariat/posts/revisiting-gems-scientific-framework>.

OpenQuake Alpha Testing Services (OATS): Through the recently introduced OATS service, users can readily access the most recent alpha release of OpenQuake, GEM's open-source hazard and risk calculation software. If you are familiar with using a command-line interface and have some experience with running calculations, you can request a trial account by visiting <http://openquake.org/getstarted/>. OATS allows users to run demos and light calculations and produce output. OpenQuake Book aims to provide an explanation of the scientific basis and the methodologies adopted in the implementation of OpenQuake. Version 0.1 of the book was recently released and will continue to be updated. To download the book and provide feedback, visit <http://www.nexus.globalquakemodel.org/gem-model-facility/posts/the-science-behind-openquake>.

GEM Nexus: GEM has developed the platform GEM Nexus for the earthquake risk assessment community to collaborate, share, discuss, and make suggestions regarding the development of uniform and open databases, standards, regional models, and tools. Many EERI members are Nexus users. To follow the groups, provide feedback on the work being carried out, and connect with others, visit <http://www.nexus.globalquakemodel.org/users>.

News of the Membership

Ashford Named Interim CE Dean at OSU

EERI member Scott Ashford, professor and head of the School of Civil and Construction Engineering at Oregon State University, has been selected as interim dean of OSU's College of Engineering. Ashford takes over for Ron Adams, who stepped down to become OSU's first executive associate vice president for research. Ashford is expected to serve as interim dean for the next year.

An alumnus of OSU, Ashford joined the engineering faculty in 2007. His research focus has been on enhancing public safety and reducing economic loss from earthquakes, tsunamis and coastal hazards. He traveled to Japan following the March 11 tsunami and contributed to the EERI-GEER report posted on the clearinghouse site.

After working in private industry for seven years — mostly with CH2M-HILL — Ashford earned his Ph.D. from the University of California Berkeley. He served on the faculties of the Asian Institute of Technology in Thailand for two years and the University of California San Diego for 11 years, before returning to OSU.

IABSE Award for Les Robertson

The International Association for Bridge and Structural Engineering (IABSE) has given its 2011 International Award of Merit in Structural Engineering to EERI member Leslie E. Robertson of Leslie E. Robertson Associates in New York City. The award is conferred for outstanding contributions with special reference to their usefulness to society.

The citation indicates that Robertson's "work in the realm of tall buildings is unsurpassed. A global innovator, his theories and work on

Chopra, Hendron, Rizzo, Wieland Honored by Dam Construction Magazine

The four EERI members below have been included on the list of the "20 people who have made the biggest difference in dam engineering over the last 10 years," published in the magazine *International Water Power & Dam Construction*. The list was compiled using nominations from contacts and readers around the world. Final selections were made by the *IWP&DC* editorial team and industry experts. For more information, visit <http://www.waterpowermagazine.com/story.asp?storyCode=2059002>

Anil K. Chopra, professor of structural engineering in the Department of Civil and Environmental Engineering at the University of California, Berkeley, pioneered methods for earthquake response analysis of structural systems, including dynamic interaction with soils and fluids. He has been instrumental in encouraging students to study a number of tough issues associated with concrete dams (gravity and arch) since the 1980s. He serves as a consultant to numerous governmental and private organizations and has authored more than 300 papers, the EERI monograph *Earthquake Dynamics of Structures, A Primer*, and the textbook, *Dynamics of Structures: Theory and Applications to Earthquake Engineering*.

Alfred (Skip) Hendron works as a consultant on the design and construction of dams around the world with active projects in Africa, Southeast Asia, and the Western Hemisphere. Most notably he is the primary consultant to the U.S. Federal Energy Regulatory Commission (FERC), which has regulatory authority over all non-federally owned hydroelectric dams in the U.S. In this role, he has direct influence over the design and construction of new dams and the remediation and rebuilding of existing dams that are under FERC jurisdiction.

Paul C. Rizzo, founder of new EERI Subscribing Member Paul C. Rizzo Associates, has made a tremendous impact in dam engineering through his involvement with FERC, his dedication to numerous panels and committees, and his commitment to dam safety. He is an internationally recognized expert in geotechnical, civil, and seismic engineering. He has more than 44 years of experience related to a wide range of projects including dams, waterfront facilities, pumped storage facilities, and power plant structures. Rizzo has built his firm into one of the leading consultants in dam safety.

Martin Wieland has more than 38 years of experience in the analysis and design of complex civil engineering projects, and is a leading expert in the fields of earthquake engineering and structural dynamics. He is the author of over 200 technical papers and is a member of many international professional organizations. He chairs both the Committee on Seismic Aspects of Dam Design of the International Commission on Large Dams and the Earthquake Committee of the Swiss Committee on Dams. He has a primary interest in disseminating existing experiences and knowledge to other engineers.

skyscrapers, museums, bridges, and long-span roofs provide practical technological breakthroughs which transformed architects' and developers' dreams into buildable concepts. Shown in his concern for beauty, culture, technical innovation and the environment, he receives the award 'for forging the future of

structural engineering through inspirational designs which render architectural dreams into reality."



EERI Statement to NEHRP

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infrastructure. NEHRP serves all Americans, and all Americans are better off because of NEHRP.

There is more to be done. Americans remain unnecessarily at risk. Our cities and states are not resilient. Earthquake scenarios and recent experiences in New Zealand and Japan show that lives will be lost, government disrupted, commerce delayed, and recovery will be long, painful, and expensive when the next major earthquake occurs. As we grow in population and become economically more complex and increasingly dependent on linked social and infrastructure investments, and as we become more interdependent as a society, the cumulative risk from earthquakes grows. A robust NEHRP is needed to inform efforts to address this risk.

The human toll from injuries and loss of wealth, dislocation, disruption in work and education, the inability to finance recovery, and the dashed and delayed dreams will not be acceptable. The economic effects of earthquakes can be significant, can impact our security on a national scale, and can be permanent, as billions of dollars in economic infrastructure and market share are lost. The effects will be long lasting. Consider the disruption from the modest M5.8 August 23, 2011, Virginia earthquake. It was merely a gentle knock on the door, a reminder that the earthquake hazard is widespread, but as a nation we are not prepared. Lessons emerging from recent earthquakes in Chile, New Zealand, and Japan demonstrate the value of using our knowledge, but also give rise to new lessons in the earth sciences, engineering, social sciences, and public policy. We have a great deal to learn, and we have to apply our knowledge more assertively. Our work is not done.

On behalf of EERI, a partner in the quest to carryout the NEHRP mission, I want to express the following concerns for consideration by the

committee:

1. Enhance the Learning from Earthquakes Program.

The Learning from Earthquakes (LFE) Program remains one of the most important and visible approaches to observe real events as they affect all elements of our society — humans, organizations, utility and transportation systems, and buildings, and to observe the critical interdependencies of an increasingly complex world. Damaging earthquakes might be the ultimate multidisciplinary event requiring interdisciplinary evaluation. Key to the approach is responding quickly with an organized, trained, and managed multidisciplinary team. Learning about interdependent and complex damage and its effects on people and institutions requires observations made immediately and over time. Our learning from earthquakes gives us insights needed to reduce and manage risk and to choose best pathways to speed recovery.

The LFE Program is in trouble. Since 1973, EERI has administered a robust LFE Program using funds from the National Science Foundation (NSF). EERI has provided leadership by planning responses, qualifying and training responders, and selecting participants from multiple disciplines as required by the event. EERI has a standing committee, a manual, and a manager who can assure as much as possible a rapid, coordinated, and fruitful approach. Our multidisciplinary teams consisting of researchers and practitioners work interdisciplinarily and report quickly through written reports that are disseminated to the profession and through briefings. Peer-reviewed manuscripts based on data that are collected beginning with the initial days following earthquakes are published in *Earthquake Spectra*, and when the lessons are extensive, special issues are printed and disseminated. Our special issue on the Haiti earthquake was released in October, and special issues on the Chile and Japan earthquakes are in the works. NSF funds that made

the EERI responses possible for more than thirty years have been more than matched with valuable time donated by EERI members before, during, and after going into the field. We will continue with our commitment.

However, a new funding source is needed. NSF is supporting individual “rapid” grants. While EERI-supported investigators can apply for these grants after events occur, EERI is no longer able to provide the planning and organization needed, or to publish the results in *Earthquake Spectra*. The grants are too small to support multidisciplinary teams, and too slow to support an immediate response, no longer planned and managed in the field. Practitioners lacking strong research credentials are on their own and disconnected from the academic research community more than ever.

We urge your committee to help find a new way to support the LFE Program within the next few months.

2. NEHRP needs to be reauthorized.

There is deep concern in the technical and government communities regarding reauthorization. The NEHRP-enabling statute expired at the end of FY2009. A bill to reauthorize NEHRP, S. 646, by Senators Boxer and Feinstein, was ordered from the Senate Committee on Commerce, Science, and Transportation. There is a committee print dated October 31, 2011, drafted by Congresswoman Biggert to reauthorize the program. It will be marked up next week by the House Science Subcommittee on Technology and Innovation. It could pass the House in a few weeks. The measures have some differences. Both would reauthorize the program for three years, make minor changes in language, and authorize funding for FY 2012, 2013 and 2014. The draft House language reduces authorized funding to reflect recent budget proposals by the Administration, while the Senate version has higher authorization levels. EERI

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EERI Statement to NEHRP

continued from page 8

believes that although it is not politically astute to expect appropriations at the longstanding authorization levels, the authorized levels do represent a significant policy statement that a more aggressive, better-funded program is in the public interest. Reauthorization is a policy statement that NEHRP, with increased funding, is needed to reduce earthquake risk; it is not an appropriation or spending commitment. The proposed authorization levels are a fraction of the amounts needed and justified in numerous reports.

Members of Congress question authorization levels when the agencies fail to ask for funding. We urge this committee and the agency leaders to seek adequate funding within the Administration. Cabinet officers and agency directors can ask for additional funding and have discretion to fund or cut earthquake programs. It takes your influence as the national advisory committee to articulate the earthquake threat to agency heads who not understand the program's importance. We all — NEHRP agencies, this advisory committee, EERI, and others — have failed in communicating this need and justifying how NEHRP serves Americans. We urge this advisory committee to seek the appropriate authorization levels, and urge the NEHRP agencies to seek a better-funded program, because it is in the public interest. If you do not speak out, who will?

3. Restore FEMA funds.

Internal funding cuts made during FY2011 by FEMA to state and local grants and for developing performance-based engineering guidelines undercut an already underfunded effort to put our knowledge to work. About \$10 million is needed to revise and update out-of-date guidance in the "yellow book" series. There is no question that government at all levels faces unprecedented funding challenges, but it is this committee's obligation to make the case for needed funding. You understand the signifi-

NEES News

NEEShub Project Warehouse: Data Updates

The Project Warehouse on the NEEShub is the centralized data repository for sharing and publishing earthquake engineering research data from experimental and numerical studies. The data in the Project Warehouse are associated with research projects funded by a variety of agencies and include experiments performed at NEES and non-NEES equipment sites. Two highlighted projects, which take advantage of data viewing within the NEEShub using the tool inDEED, are summarized below.

Development of a Performance-Based Seismic Design Philosophy for Mid-Rise Woodframe Construction (<http://nees.org/warehouse/project/138>), PIs: John Van de Lindt (Univ. of Alabama), Rachel Davidson (Univ. of Delaware), Andre Filiatrault (SUNY Buffalo), David Rosowsky (Texas A&M Univ.), Michael Symans (Rensselaer Polytechnic Institute).



The NEESWood project developed a new seismic design approach for mid-rise woodframe construction. Various configurations of a full-scale two-story wood frame townhouse building were subjected to seismic loading on the two tri-axial shake tables of the NEES@Buffalo equipment site. As the largest full-scale three-dimensional shake table test ever performed in the U.S., the results of

this series of tests serve as a benchmark for both woodframe performance and nonlinear models for seismic analysis of woodframe structures. Data available from the experiments include accelerations, displacements, and forces measured during the tests.

Study of Surface Wave Methods for Deep Shear Wave Velocity Profiling Applied to the Deep Sediments of the Mississippi Embayment (<http://nees.org/warehouse/project/164>), PI: Brent Rosenblad (Univ. of Missouri).



This project investigated the shear wave velocity (V_s) structure of the Mississippi Embayment using a variety of active and passive surface wave measurement methods at 11 sites in Arkansas, Tennessee, and Missouri. The active-source measurements were performed using

the low-frequency field vibrator of the NEES@UTexas equipment site. The unprocessed data, the processed dispersion curves, and the derived shear wave velocities are available. Shear wave velocity information for these sites is also available in the NEES Shear Wave Velocity Profiles Database (<http://nees.org/resources/2262>).

cance of the earthquake threat to our nation. We urge you to ask FEMA restore these funds this Fiscal Year.

4. Influence NEHRP priorities and expenditures.

Appropriations are limited, so establishing priorities for a program that best serves Americans is necessary. This committee, with your broad representation, varied experiences,

and knowledge of the nationwide earthquake risk, should identify priorities for the program.

The NEHRP agencies provide essential support for the nation's readiness and safety — its resilience. We need NEHRP to continue its crucial work with appropriate funding levels and strategic direction.

Opportunity

University of Memphis Faculty Position

The Department of Civil Engineering at the University of Memphis invites applications for a tenure-track faculty position at the Assistant or Associate Professor level in structural engineering. This position requires a specialization in structural engineering with expertise in one or more of the following areas: performance-based seismic design, life-cycle analysis, engineering seismology, structural health monitoring using sensor networks, hazard mitigation and improvement of structural performance under extreme loading conditions such as earthquakes and blasts, and seismic rehabilitation of existing infrastructure. To receive full consideration, applications should be submitted by January 31, 2012. For more information, visit <http://www.memphis.edu/ce/>.

Subscribing Member Opportunities

Openings at AIR Worldwide, RMS

AIR Worldwide in Boston, Massachusetts, a provider of risk modeling software and consulting services, seeks an engineer whose main responsibility will be to develop vulnerability models assessing building performance in extreme flood events, incorporating the latest modeling technologies into risk assessment software tools, and to develop a deep understanding of repair or remediation strategies and costs following extreme floods. Required: an advanced degree in civil engineering. Desired: strong programming skills and an understanding of stochastic modeling of natural hazards or risk assessment. For more information, visit <http://www.air-worldwide.com/Careers.aspx>.

Risk Management Solutions in Newark, California, seeks a Model Product Manager in Asia/Pacific Earthquake Models. Responsibilities include serving as the principal intermediary between insurance clients and RMS modeling teams in the design and calibration of technical catastrophe loss modeling solutions, principally focusing on earthquake models for the Asia/Pacific region. Required: an advanced degree (Masters) in earthquake engineering; at least 5 years postgraduate experience in applications of scientific and engineering knowledge; strong skills in problem solving, analysis, and communication. For more information, visit <http://www.rms.com/careers/jobs/job.asp?req=12142&title=Model Product Manager - Asia/Pacific Earthquake Models>.

Announcement

ROSE School Prize 2012

The Eucentre Foundation in Pavia, Italy, has announced the 3rd edition of the ROSE School Prize, given by the Centre for Post-Graduate Training and Research in Earthquake Engineering and Engineering Seismology. The prize rewards professionals and academics at any stage of their career who have demonstrated exceptional creativity and innovation capacity in the fields of earthquake engineering and engineering seismology, and who have achieved extraordinary research and professional achievements and demonstrated uncommon skills in education. Individuals in government, private firms, academia, and the international community are encouraged to nominate eligible candidates. Nominations must be e-mailed to prize.nomination@roseschool.it on or before December 30, 2011. For nomination information, visit <http://www.roseschool.it/prize/home.html>.

Publications

WSSPC Tsunami Report

The Tsunami Hazard Mitigation Committee of the Western States Seismic Policy Council recently published the report, *Tsunami Hazard Mitigation and Preparedness: A Perspective from State and Territory Tsunami Programs in the High Tsunami Risk Pacific Region*, with contributions from Alaska, American Samoa, California, Guam, Oregon, and Washington.

Accessible from the WSSPC website's home page at www.wsspc.org, the report documents the importance and effectiveness of the state and territorial tsunami programs to prepare local communities at high risk for future damaging tsunamis. The states' roles are critical in educating and preparing the public for tsunamis, which have cost the Pacific U.S. states and territories 392 lives and over \$1.6 billion in damage since 1946. Currently, state tsunami programs are funded through the National Tsunami Hazard Mitigation Program (NTHMP) authorized by the Tsunami Warning and Education Act of 2006. The act is due to sunset in September 2012. The Pacific Rim states and territories support its reauthorization.

Announcement

EMI/PMC 2012

The 2012 Joint Conference of the Engineering Mechanics Institute and 11th ASCE Joint Specialty Conference on Probabilistic Mechanics and Structural Reliability (EMI/PMC 2012) will be held June 17-20 at the University of Notre Dame in South Bend, Indiana. The conference provides a major forum on all research fields of mechanics, probabilistic methods and materials. Many of the topics to be covered have direct application in earthquake engineering. For more information, visit <http://www.nd.edu/~emipmc12/>.

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.

2011

DECEMBER

1-3. Int'l Conf. on EQ Analysis & Design of Structures, Coimbatore, India. <http://www.psgtech.edu/eqads2011/> (6/11)

5-9. American Geophysical Union (AGU) Fall Meeting, San Francisco, CA. <http://sites.agu.org/fallmeeting/> (12/11)

6-7. Geotechnical Short Course, Virginia Tech, Blacksburg, VA. www.cpe.vt.edu/gee/ (9/11)

11-15. 5th Int'l Conf. Structural Health Monitoring of Intelligent Infrastructure (SHMII-5), Cancun, Mexico. www.shmii.unam.mx (4/11)

14. NEES-EERI Research to Practice Webinar on Shear-Wave Velocity Profiling, 11:30 a.m.–1:00 p.m. PST (2:30 p.m.–4:00 p.m. EST). See this page. (12/11)

2012

JANUARY

9-11. Behavior of Steel Structures in Seismic Areas (STESSA 2012), Santiago, Chile. www.ingcivil.uchile.cl/stessa2012 (11/10)

22-25. 7th Gulf Seis. Forum, Jeddah, Saudi Arabia. <http://7gsf.info/> (10/11)

FEBRUARY

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

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

30 Short Course on Analysis, Design, and Testing of Piles, Carlsbad, CA. See page 6. (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)

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

17-19. Seismological Society of America Annual Meeting, San Diego, CA. <http://www.seismosoc.org/meetings/2012/index.php> (10/11)

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

MAY

16-17. SuperPile 2012, Portland, OR. See page 6. (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. See page 10. (12/11)

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)

SEPTEMBER

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. See this page. (8/10, 8/11, 11/11, 12/11)

OCTOBER

3-6. Symp. on Life-Cycle Civil Eng.

(IALCCE), Vienna, Austria. www.ialcce2012.org (12/10, 1/11)

16-19. Deep Foundations Institute (DFI) Annual Conference, Houston, TX. See page 6. (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> (12/11)

News of the Institute

NEES-EERI Webinar: Shear-Wave Velocity Profiling

"Shear-Wave Velocity Profiling" is the third in a series of free Research to Practice Webinars co-produced by the Network for Earthquake Engineering Simulation (NEES) and EERI. The webinar is scheduled for Wednesday, December 14, 2011, 11:30 a.m.–1:00 p.m. PST (2:30 p.m.–4:00 p.m. ET). To register, visit nees.org/webinar. Participants can earn 1.5 PDH credits. For more information, see page 12 of the November *Newsletter*.

Announcement

15WCEE Blind Test Challenge

Technical and scientific community members planning to attend the 15th World Conference on Earthquake Engineering in September 2012 are invited to participate in the 15WCEE Blind Test Challenge. Competing teams will predict the nonlinear seismic behavior of two reinforced concrete structures, geometrically identical, designed for low and high ductility levels according to the EC8 provisions. For more information, visit www.15wcee.org (select the [programme](#) link, then the [challenge](#) link). The deadline for teams to register is December 16, 2011.



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EERI Newsletter, December 2011 Volume 45, Number 12

News of the Institute

Renew Your EERI Membership Online

During November, all nonstudent members were e-mailed first membership renewal notices for 2012. The message provided a link that took you to a personal page showing your contact information, with options for selecting chapter membership and making a voluntary contribution.

If you did not receive this message, please e-mail Membership Coordinator Juliane Lane, juliane@eeri.org,

and she will resend the message with your personal link.

The year 2011, like 2010, was an extraordinary year for large damaging earthquakes. Each time EERI teams were there to capture critical lessons for our community. Despite limited funding from NSF, EERI's Learning from Earthquakes Program remains vital and productive. To keep you informed, virtual clearing-houses, briefings, and reports are quickly produced for each event.

Earthquake Spectra continues to gain prestige and accolades. EERI members will receive two free special issues of *Spectra* in 2012 on

the Chile and Japan earthquakes. EERI works to ensure that Congress and federal agencies establish comprehensive policies and provide sufficient funding to support the necessary research and implementation programs. As a member-powered organization, EERI remains a dynamic and successful technical society only as a result of your contributions, whether through participation at EERI events, engagement in projects, or by paying membership dues. If you have not already done so, we hope you will continue supporting EERI and renew your membership for 2012. Also, please encourage your colleagues to join EERI!

Remember EERI Before Tax Year Ends

December brings the last chance for you to reduce April's tax burden by making a donation to the EERI Endowment Fund. The generosity of members has allowed EERI to create many valuable programs since the Endowment's inception in 1994. Your gift will enable EERI to build on this substantial foundation by supporting innovative projects, independently of government funding, for which traditional funding is not available.

Many recent Endowment initiatives have gained importance within the earthquake professions and throughout many seismically vulnerable areas of the world. Projects funded in 2011 include a white paper identifying issues associated with alteration-based seismic upgrade triggers and laying out a rationale for potential code-based changes; the devel-

opment of a framed infill network to disseminate ways to make beneficial use of infill walls in new structures and retrofit construction; and support for the World Housing Encyclopedia.

The 2012 dues statement has a line to make a donation, or to donate online, visit www.eeri.org/ and click on

the link at the bottom of the page.

Under the Pension Protection Act of 2006, members aged 70.5 years and older may make donations from IRAs without claiming the distributions as income. Please consider discussing this opportunity to support the EERI Endowment with your tax advisor.

News of the Profession

Joseph Penzien Memorial Fund

A fellowship fund has been established in the name of the late EERI Honorary Member Joseph Penzien for the purpose of supporting graduate engineering students enrolled in the Department of Civil and Environmental Engineering at the University of California, Berkeley. Preference will be given to students in need who have chosen the field of

structural engineering and structural mechanics. The goal is to raise \$500,000 to qualify for a named graduate fellowship.

To make a contribution, please send checks payable to UC Berkeley College of Engineering, indicating Joseph Penzien Memorial Fund on the memo line, to the attention of Enid C. Pollack Sr., Development Director, UC Berkeley College of Engineering, 210 McLaughlin Hall, Berkeley, CA 94720-1722. For more information, email epollack@berkeley.edu.