



## EARTHQUAKE ENGINEERING RESEARCH INSTITUTE NEWSLETTER

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## News of the Institute

### Videos of L'Aquila Earthquake Briefing Online

Videos from the technical briefing on the Mw6.3 Abruzzo (L'Aquila), Italy, earthquake of April 6, 2009, are accessible free online from a link on the EERI home page or by visiting <http://www.eeri.org/site/news/latest-news/635-videos-from-the-abruzzo-laquila-earthquake-technical-briefings>. The briefing took place in San Francisco on June 4, 2009.

The Abruzzo earthquake has attracted attention because (1) it was one of the best-recorded events generated by a normal fault mechanism; (2) it involved significant site effects, and (3) like California, the affected area had a large number of old, brittle RC frame buildings that were severely tested. Following are the speakers and their topics, each on a separate video:

- Paolo Bazzurro (EERI Team Leader), AIR Worldwide: Overview of the mission
- Jonathan Stewart (GEER Team Leader), UCLA: Geologic and seismotectonic setting, geotechnical issues, ground motion recordings
- Marko Schotanus, Rutherford & Chekene: Performance of RC buildings and lifelines
- H. John Price, Curry Price Court: Performance of the San Salvatore Hospital
- Mary Comerio, UC Berkeley: Performance of URM buildings and historic structures, and social impacts
- Paolo Bazzurro: Emergency management and inspection performance of industrial facilities

The teams' investigations, the briefing, and the videotaping were funded by the National Science Foundation under grant #CMMI-0758529.

## News of the Profession

### NEHRP Hearings Online

On June 11, the House Science Committee's Subcommittee on Science and Technology held hearings to reauthorize the National Earthquake Hazards Reduction Program (NEHRP). Several EERI members testified, including Past President Tom O'Rourke, NEHRP Director Jack Hayes, and Jim Harris. To view the hearings at any time, visit the House Science website: [http://science.house.gov/publications/hearings\\_markup\\_details.aspx?NewsID=2483](http://science.house.gov/publications/hearings_markup_details.aspx?NewsID=2483). A link to its right is labeled "Click here for the webcast."

On June 1, EERI Executive Director Susan Tubbesing wrote to Rep. David Wu, chair of the subcommittee, on behalf of the Board and the EERI Public Policy Committee urging his support for the NEHRP reauthorization. The authorizing legislation is set to expire at the end of the current fiscal year, on September 30, 2009. The Congress last reauthorized NEHRP in 2004 and directed the first significant changes in the program's 30-year history. These changes more clearly focused NEHRP on its mission, responsibilities, and critical outcomes. The letter did not call for major changes to the program.

Created by Congress in 1977, NEHRP provides resources and leadership to advance the nation's understanding of the serious risk earthquakes pose and the best ways to address community resilience. Through NEHRP, the federal government supports the development of seismic monitoring, mapping, basic scientific and engineering research, testing, and implementation through the development of materials for building code modifications, disaster risk reduction (mitigation) and emergency preparedness.

## News of the Institute

### Bertero Oral History

The oral history of Vitelmo V. Bertero, professor emeritus of civil engineering at the University of California at Berkeley, is available online at <http://www.eeri.org/site/publications-etc/oral-history>. A printed version of this 16<sup>th</sup> volume in the EERI Oral History Series will be mailed to EERI members later this month.

Bertero is recognized worldwide among his peers as a legend in

the field of earthquake engineering, because of his lifelong efforts to improve concrete and steel construction in seismic regions around the world through his inspired teaching and research. The book encompasses his early years in Argentina, his military service during World War II, and his college years as well as his professional life.

His extensive studies of the nonlinear behavior of structures included the correlation of advanced analytical techniques with actual performance in damaging earthquakes.

He became a specialist in defining analytical models for use in conducting seismic performance evaluations. He emphasized the importance of treating the complete structural system in developing a sound seismically resistant design, including consideration of architectural, geotechnical, and construction issues. He has received more than 70 awards and honors for his teaching and publications on the seismic-resistant design of structures, and has authored more than 360 papers and reports on this subject.

## EERI Endowment Fund Donors

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

### \$2,000

Kleinfelder Inc  
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Christopher Arnold

*In memory of Robert Preece & George Housner*  
**\$100**

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## Honors Committee Seeks Awards Nominations

EERI's Honors Committee is charged with recommending members for several awards. The committee greatly depends on nominations submitted to it by the members of the Institute. The committee now needs members' help in identifying worthy members whose contributions should be recognized.

Please nominate candidates for the George W. Housner Medal, the Special Recognition Award, and Honorary Membership. In addition, please nominate authors who deserve the 2008 Outstanding Paper award for *Earthquake Spectra*. All nominations should be accompanied by a brief justification, and they must be received by **October 1, 2009**, so the Honors Committee can complete its deliberations and forward its recommendations to the Board of Directors.

All of the awards will be presented at EERI's Annual Meeting in San Francisco in February 2010. Send your nominations to the EERI office at [eeeri@eeeri.org](mailto:eeeri@eeeri.org). Past awardees are listed on page ii of the *EERI Roster*. Complete descriptions of each award can be found at <http://www.eeri.org/site/awards/honors-awards>.

## Publication

### *Arquitectura Moderna en Zonas Sísmicas*

*Arquitectura Moderna en Zonas Sísmicas* by EERI member Teresa Guevara-Perez is a 207-page paperback book in Spanish recently published by Editorial Gustavo Gili in Barcelona, Spain. This book enhances understanding of the effects that ground motion produces on buildings, through physical concepts rather than analytical methods. The earthquake-resistant design principles are explained in a highly graphic format extensively illustrated with diagrams and photographs.

The book presents the first part of research on the topic of contemporary building and urban configurations in seismic zones developed by the author in the last five years with the support of Professor Vitelmo Bertero. The book introduces undergraduate and graduate students, practicing architects, urban planners, and nonspecialist structural engineers to basic concepts and the significant effects that architectural configurations have on the seismic performance of buildings.

The book can be ordered for €33.65 from [http://www.ggili.com/ficha\\_amp.idpublicacion=1616&id=novedades&idtema=1](http://www.ggili.com/ficha_amp.idpublicacion=1616&id=novedades&idtema=1). This website has the book's prologue by Bertero and its introduction.

## Announcement

### Recovery Act Research Grants

The National Institute of Standards and Technology (NIST) has announced a program to award research grants and cooperative agreements to support measurement science and engineering research proposals as part of implementing the American Recovery and Reinvestment Act of 2009, signed into law by President Obama on February 17, 2009.

NIST plans to award up to \$35 million (20-60 awards) to support research in areas of critical national importance. One of the focus areas is physical infrastructure, including tools, models, and methods necessary to enhance the resilience of

structures and communities to disasters (earthquakes, hurricanes, windstorms, and fires).

Specific interests include (a) laboratory test data for developing structural fragilities, improving nonlinear analytical models that assess hysteretic behavior, and validating performance-based design assessment capabilities for critical new and existing lateral force-resisting systems; (b) validated tools to evaluate structural response to extreme loads, for both new and existing buildings, from initial loading to failure; (c) validated tools to support community-scale loss estimation for natural disasters, and to assess risk mitigation and disaster resilience; (d) performance-based guidelines for cost-effective design of new buildings and rehabilitation of existing buildings that are subjected to extreme loads; and (e) experimental/

analytical investigation of steel connections and concrete members in fire exposures.

Proposals should have a duration of one to three years. Individual awards are expected to range between \$500,000 and \$1,500,000. Projects are expected to start by September of 2009. All proposals must be received no later than 3:00 p.m. Eastern Daylight Saving Time on Monday, July 13, 2009.

This program is open to U.S. institutions of higher education; U.S. nonprofit organizations; U.S. commercial organizations; and state, local, and Indian tribal governments.

For information on proposal submission, visit [http://www.nist.gov/recovery/measurement\\_program.html](http://www.nist.gov/recovery/measurement_program.html).

## News of the Membership

### Moore Award Goes to Pinkham

The Structural Engineering Institute (SEI) of the American Society of Civil Engineers (ASCE) recently awarded the 2009 Walter P. Moore, Jr., Award to EERI Honorary Member Clarkson Pinkham for his significant contributions to structural engineering design and the development of building code provisions, and especially for his extraordinary dedication as a volunteer to the advancement and practice of structural engineering for the past 40 years. The purpose of the award is to recognize technical expertise in the development of structural codes and standards.

Until his retirement last year, Pinkham was President of S.B. Barnes Associates in Los Angeles. He has extensive knowledge of the testing, design, and use of a variety of materials for such building components

as steel decks and concrete frames.

He played a critical role in developing new criteria for seismic design in California that were later incorporated into national building codes. At the time of the 1971 San Fernando earthquake, he was active on (and chaired for three years) the Seismology Committee of the Structural Engineers Association of California. At its meetings, he helped coordinate the seismic efforts of the American Concrete Institute, the American Iron and Steel Institute, the American Institute of Steel Construction, and ASCE, resulting in usable and practical code specifications.

As load factor design and metric equivalents came into practice, Pinkham was vocal in advocating their use and benefits. He strove for perfection in his committee work and never let his own interests influence his decisions for the betterment of the profession.

Pinkham served as an EERI director and was named an Honorary Mem-

ber in 2000. He is the topic of the 13th volume in the EERI Oral History Series, available free as a PDF by visiting <http://www.eeri.org/site/projects/oral-history>, or for \$15 in a printed format from the online store.



Clarkson (Pinky) Pinkham



## Learning from Earthquakes

### M7.3 Honduras Earthquake of 28 May 2009

An earthquake with a moment magnitude of 7.3 struck 63 km from the Bay Islands on the Caribbean coast of Honduras on May 28, 2009, at 02:24:45 a.m. local time. The epicenter was located at 16.733°N, 86.220°W, at a depth of approximately 10 km (6.2 miles).

At least seven people were killed, 40 injured, and hundreds made homeless. The event resulted from left-lateral strike-slip faulting on the Swan Islands transform fault, a segment of the boundary between the North America and Caribbean plates. In this region, the plate boundary accommodates about 20 mm/year slip. The aftershocks so far suggest that the event ruptured a fault segment about 140 km long and to the west of the mainshock.

The provinces that sustained most of the damage were Yoro, Cortes and Santa Barbara in the northwest as well as Intibucá in the southwest, where many houses are made of adobe. Infrastructure including bridges and electric systems also sustained damage in the cities of El

Progreso and Puerto Cortes, respectively. The central span of a major bridge at El Progreso was destroyed. Many water systems were damaged.

The Permanent Commission of Contingencies (Comisión Permanente de Contingencias — COPECO) initially issued a green alert because of aftershocks. Tremors are still affecting the region. There has been an increase in medical visits by people experiencing anxiety and stress-related symptoms. The extent of damage sustained throughout the country is still being assessed.

On June 15, the Honduran government declared a national state of emergency and allocated funds for construction materials at a cost of US\$500 for families whose homes were completely destroyed and \$150 for families with partially damaged homes.

At least five buildings were destroyed and 25 damaged in Belize to the north. The earthquake was felt in much of El Salvador and Guatemala, as well as the Bahamas, the Cayman Islands, the Virgin Islands, and parts of Colombia, Costa Rica, Cuba, Jamaica, Mexico, Nicaragua, and Panama.

Water surges were reported in

swimming pools at La Ceiba and Roatan and ground cracks and possible liquefaction were observed at Monkey River, Belize. In some coastal towns, including Puerto Cortes, slight subsidence occurred during the earthquake, causing minor floods.

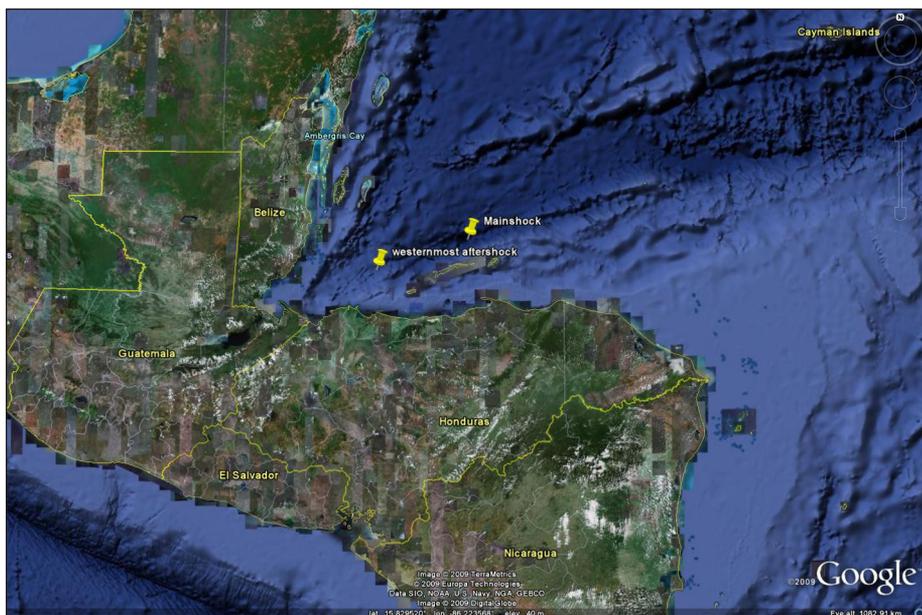
Information for this report came from the USGS (<http://earthquake.usgs.gov/eqcenter/eqinthenews/2009/us2009heak/>) and the International Federation of Red Cross and Red Crescent Societies ([http://www.reliefweb.int/rw/rwb.nsf/db900sid/MINE-7TD4PX/\\$File/full\\_report](http://www.reliefweb.int/rw/rwb.nsf/db900sid/MINE-7TD4PX/$File/full_report)), as well as from Lori Dengler, Bill McCann, and Martha Merriam.

Additional information on this earthquake will be forthcoming in a future *EERI Newsletter*.

## Call for Papers

### Experimental SE Conference

The 3rd International Conference on Advances in Experimental Structural Engineering (3AESE) will be held October 15-16, 2009, in San Francisco, California. This event will cover all aspects of experimental structural engineering, including novel testing and measuring techniques, computer-controlled experiments, and results of interesting experiments. Abstracts no longer than 300 words are due by July 10, 2009. For information about topic areas and to submit an abstract, visit <http://peer.berkeley.edu/events/2009/icaese3/index.html>. Authors will be notified by July 24, with final papers due September 1. The 3AESE is being held concurrently with two other unique events, the 2009 PEER Annual Meeting and the Loma Prieta Earthquake Commemorative Symposium, at the same venue (see Calendar, page 7). All conference registrants will be able to attend any sessions from the PEER meeting. Registration also includes registration for the Loma Prieta Symposium.



*Epicenter and fault rupture location (source: Bill McCann).*

## Publications

### ATC Publications

Copies of the following new publications can be purchased from the Applied Technology Council (ATC) online store at [www.ATCCouncil.org](http://www.ATCCouncil.org) for the prices shown plus shipping, and sales tax for California residents.

#### Gas Shutoff Valves Report

ATC recently published ATC-74, *Collaborative Recommended Requirements for Automatic Natural Gas Shutoff Valves in Italy*. Funded by the Department of Civil Protection of Italy, this 76-page report documents the results of a project initiated in 2007 to develop guidance and address issues related to the use in Italy of earthquake-actuated automatic gas shutoff devices meeting U. S. standards. The report's recommendations are based on the perspectives and experience of specialists from both countries. Its recommendations pertain to (a) new Italian seismic code provisions; (b) reducing existing post-earthquake fire risk; (c) valve qualification procedures; (d) multi-story buildings (higher than three stories); and (e) existing seismically vulnerable build-

ings. The price is \$30.

#### Living with Unstable Ground

The new publication *Living with Unstable Ground*, by EERI member Thomas L. Holzer, was produced by the American Geological Institute (AGI), in cooperation with ATC with support from the ATC Endowment Fund, the Association of Environmental & Engineering Geologists, and the U.S. Geological Survey. This document is a practical guide written to increase awareness and understanding of how structures can be built safely in areas with unstable ground and how to reduce the impact of unstable ground. It is the 11th publication in AGI's Environmental Awareness Series. Topics addressed include problem soils, slope movement, catastrophic collapse, regional ground movement, and guidelines for living with unstable ground. The price is \$10.

#### Technical Brief on RC Special Moment Frames

ATC and the Consortium of Universities for Research in Earthquake Engineering (CUREE), partners in the National Earthquake Hazards Reduction Program (NEHRP) Consultants Joint Venture, recently

collaborated on the NEHRP Seismic Design Technical Brief No.1, *Seismic Design of Reinforced Concrete Special Moment Frames: A Guide for Practicing Engineers*. The brief will assist practicing structural engineers in the application of the requirements for special concrete moment frames, as presented in the American Concrete Institute's Building Code Requirements for Structural Concrete (ACI 318). The brief emphasizes code requirements and accepted approaches to their implementation. Various sections present analysis, behavior, proportioning, and detailing requirements for special moment frames and other portions of the building that interact with them; also included are construction examples to illustrate detailing requirements for constructability.

The brief, published by the National Institute of Standards and Technology (NIST), can be downloaded at no charge from the NEHRP web site at <http://www.nehrp.gov/pdf/nistgr8-917-1.pdf>, the NEHRP Consultants Joint Venture web site at <http://www.nehrp-consultants.org/publications/index.html>, and the ATC web site, where a bound copy can also be purchased for \$15.

## Announcements

### Register for ATC-SEI Conference

Early registration is open for the inaugural Conference on Improving the Seismic Performance of Existing Buildings and Other Structures, which will feature today's best practices and how to apply them. It will be held December 9-11, 2009, in San Francisco, organized by ATC and ASCE's Structural Engineering Institute (SEI). Four concurrent tracks of technical sessions will help you earn up to 18 Professional Development Hours, covering topics that include guidelines, standards and analysis improvements; new materials

and innovative approaches; mitigation policy issues, strategies, and programs; and case study analysis. Enjoy a black-tie gala, more than 25 poster displays, and plenary and luncheon addresses by six experts.

If you register before September 30, you will save \$50. For more information on the technical sessions and to register, visit <http://www.atc-sei.org/index.html>.

#### Nominations Sought for Top Projects of Decade

ATC, SEI, and the Engineering News Record (ENR) are seeking nominations for awards recognizing the top seismic strengthening projects over the last decade (up to 10 awards). The awards will be presented on De-

cember 10, 2009, in San Francisco at the ATC-SEI-ENR Gala Awards Dinner, a black-tie event to be held in the Historic San Francisco Ferry Building. Awardees will be selected by an independent jury identified by ATC and SEI. Nominees are sought for six categories (up to two each): bridge retroft, seismic isolation, energy dissipation, concrete structures, steel structures, and masonry structures.

Nominations are due September 1, 2009. For more information about the dinner and the nominating requirements and procedures, visit <http://www.atc-sei.org/gala.html>.

## Publications

### ***Seismic Design Guide for Masonry Buildings***

EERI member and former EERI Vice President Svetlana Brzev of the Department of Civil Engineering at the British Columbia Institute of Technology and Don Anderson of the DCE at the University of British Columbia recently co-authored the comprehensive state-of-the-art *Seismic Design Guide for Masonry*

*Buildings in Canada*. This 300-page publication outlines key seismic design provisions in the *National Building Code of Canada 2005* and the CSA S304.1-04 *Canadian Standard for Masonry Design*, and provides a commentary explaining the underlying theoretical background and design rationale. The *Guide* contains twelve design examples that illustrate seismic load calculations, distribution of forces to building elements, and the design of masonry shear walls. A simple and user-

friendly presentation facilitates the application of seismic design provisions and cross-referencing of code clauses.

The *Guide* was written for practicing structural engineers, but it can serve as an excellent teaching resource for academics and civil engineering students. Development of the publication was sponsored by the Canadian Concrete Masonry Producers Association. It can be downloaded free of charge from [www.ccmpa.ca](http://www.ccmpa.ca).

## Rotational Seismology

A special issue of *The Bulletin of the Seismological Society of America* was published in May on *Rotational Seismology and Engineering Applications* (Volume 99, No. 2B). It contains 27 research articles, 11 short notes, four review articles, and six tutorials, as well as suggested notation conventions, a glossary, and suggested readings. Rotational seismology covers all aspects of the rotations induced by earthquakes, explosions, and ambient vibrations. Seismology and earthquake engi-

neering use observations and modeling of translational ground and structural motion. Although rotational effects from earthquakes have been observed for centuries, rotational ground motion has been largely ignored due to practical difficulties in its measurement and the belief that rotation is insignificant. Modern direct measurements of rotational ground motion began only about a decade ago, when affordable angular sensors became sensitive enough to detect rotations from small earthquakes, while large ring

laser gyros (intended for studying the Earth's rotation) became capable of detecting even smaller rotations from distant earthquakes.

Ring laser observations in Germany and California have demonstrated consistent measurements of rotational ground motion in the far field. Less expensive or less sensitive alternatives are now being pursued by five academic groups. For more information, visit <http://bssa.geoscienceworld.org/current.dtl>. Nonsubscribers can access articles for \$15 each.

## Subscribing Member News

### **CSI Online Training**

EERI Platinum Subscribing Member Computers and Structures is hosting the following software training programs online in July 2009. For more information and to register for all three, visit <http://orders.csiberkeley.com/SearchResults.asp?Cat=20>.

**SAFE V12**, July 9, 10 to 11 a.m. PDT, \$35 per person (group registration not available). This web demonstration will highlight the innovative features of this recently released SAFE — an integrated tool for designing reinforced and post-tensioned concrete floor and foundation systems.

**SAP2000 Introduction to Bridge Modeler**, July 9, 1 to 2:30 p.m. PDT,

\$95 individual/\$500 group. This session will introduce the steps to create a linked bridge model. **SAP2000**

**Seismic Bridge Design**, July 10, 10 a.m. to 12 noon PDT, \$95 individual/\$500 group. This course is for

users who want to become more familiar with the seismic loading and analysis of bridge models. A SAP 2000 bridge model will be used to determine demand and capacity displacements.

## Job Opportunity

### **NSF Seeks Program Director**

The National Science Foundation is seeking a Program Director for the Geomechanic and Geomaterials (GEOMM) and Geotechnical Engineering (GTE) Program within the Division of Civil, Mechanical and Manufacturing Innovation (CMMI). Program Directors solicit, receive and review research and education proposals, make funding recom-

mendations, administer awards, and collaborate with other federal agencies. This position is expected to be filled as a visiting scientist, engineer, or educator, as the appointment will be for one year. Applications will be considered until a selection is made. Required: a PhD in a relevant discipline, an established record of research and education, and managerial experience, plus six years of successful research and research administration. For more information, visit <http://www.eeri.org/site/news/jobs>.

## Job Opportunity

### Geotech Position

The U.S. Nuclear Regulatory Commission seeks a Geotechnical Engineer to work in the Office of Nuclear Regulatory Research in Rockville, Maryland. Responsibilities include conducting research programs and development of technical positions for national standards, regulatory guides, rules and regulations related to field investigations, seismic analyses, soil dynamics, foundation analysis, design, and performance-based decision-making.

For detailed job information, visit [www.usajobs.com](http://www.usajobs.com) and search by Announcement # RES/DE-2009-0015. Online applications will be accepted until July 15, 2009.

## CALENDAR

Items that have appeared previously are severely abbreviated. The issue containing the first appearance, or the most informative, is indicated at the entry's end. Items listed for the first time are shown in bold.

### AUGUST

13-14. ANKER Workshop, University of Illinois at Urbana-Champaign. Info: <http://illinois.edu/goto/ANKER> (2/09)

19-21. 2nd International Workshop on Performance, Protection and Strengthening of Structures under Extreme Loading, Hayama, Japan. Info: [www.nda.ac.jp/cc/users/fujikake/protect2009](http://www.nda.ac.jp/cc/users/fujikake/protect2009) (12/08)

### SEPTEMBER

2. Seminar on Next Generation Attenuation (NGA) Models, Oakland, CA. Info: [www.eeri.org](http://www.eeri.org). (5/09)

3. Seminar on NGA Models, Seattle, WA. Info: [www.eeri.org](http://www.eeri.org). (5/09)

10. Seminar on NGA Models, Salt Lake City, UT. Info: [www.eeri.org](http://www.eeri.org). (5/09)

11. Seminar on NGA Models, Los Angeles, CA. Info: [www.eeri.org](http://www.eeri.org).

(5/09)

13-17. 10th International Conference on Structural Safety & Reliability (ICOSSAR2009), Osaka, Japan. Info: [www.sc.kutc.kansai-u.ac.jp/icosar2009](http://www.sc.kutc.kansai-u.ac.jp/icosar2009) (2/08)

20-23. 4th International Conference on Geohazards, Sun Moon Lake, Nantou, Taiwan. Info: <http://www.engconfintl.org/9ad.html> (5/09)

23-26. SEAOC Convention, San Diego, CA. Info: <http://seaoc2009.com/> (2/09)

28-Oct. 10. Advanced School on Nonlinear Dynamics and EQ Prediction, Trieste, Italy. Info: <http://agenda.ictp.it/smr.php?2060> (4/09)

### OCTOBER

2-3. EQ Geotechnical Engineering Satellite Conference, Alexandria, Egypt. Info: [mamsakr@yahoo.com](mailto:mamsakr@yahoo.com) (12/08)

5-9. 17th International Conference on Soil Mechanics and Geotechnical Engineering, Alexandria, Egypt. Info: <http://www.2009icsmge-egypt.org/> (12/08)

15-16. PEER Annual Meeting, San Francisco, CA. Info: [http://peer.berkeley.edu/events/annual\\_meeting/2009AM/](http://peer.berkeley.edu/events/annual_meeting/2009AM/) (3/09)

**15-16. 3rd International Conference on Advances in Experimental Structural Engineering**, San Francisco, CA. See page 4. (7/09)

17. Loma Prieta Anniversary Event, San Francisco, CA. Info: [http://peer.berkeley.edu/events/2009/loma\\_prieta/](http://peer.berkeley.edu/events/2009/loma_prieta/) (3/09)

### NOVEMBER

10-15. 5th Congress on Forensic Engineering, Washington, D.C. Info: <http://content.asce.org/conferences/forensics2009/index.html> (12/08)

25-26. 7th International Probabilistic Workshop, Delft, The Netherlands. Info: [www.elsevier.com/wps/find/newsdetail.cws\\_home/NWS\\_WN\\_nt00008088/essay](http://www.elsevier.com/wps/find/newsdetail.cws_home/NWS_WN_nt00008088/essay) (3/09)

### DECEMBER

9-11. Improving the Seismic Per-

formance of Existing Buildings and Other Structures, San Francisco, CA. Info: [www.ATC-SEI.org](http://www.ATC-SEI.org). See page 5. (12/08, 7/09)

### 2010

#### FEBRUARY

3-6. EERI Annual Meeting, San Francisco, CA. Info: [www.eeri.org](http://www.eeri.org) (3/09)

#### APRIL

20-23. 2010 SSA Annual Meeting, Portland, Oregon. Info: <http://www.seismosoc.org/meetings/2009/specialsessions.html> (6/09)

#### MAY

22-27. X Chilean Conference on Seismology & EQ Engineering, Valdivia-Santiago, Chile. [www.achisina2010.uchile.cl](http://www.achisina2010.uchile.cl) (5/09)

24-29. 5th International Conference on Recent Advances in Geotechnical EQ Engineering & Soil Dynamics and Symposium in Honor of I.M. Idriss, San Diego, CA. Info: [5geoeq-conf2010.mst.edu](http://5geoeq-conf2010.mst.edu) (4/08, 1/09)

#### JULY

11-15. 5th International Conference on Bridge Maintenance, Safety and Management (IABMAS), Philadelphia, PA. <http://www.iabmas2010.org> (11/08)

25-29. 9th U.S. National & 10th Canadian Conference on EQ Engineering: Reaching Beyond Borders, Westin Harbour Castle Hotel, Toronto, Canada. Info: [2010eqconf.org](http://2010eqconf.org) (2/08, 7/08, 1/09, 3/09, 6/09)

#### AUGUST

30-Sept. 3. 14th European Conference on EQ Engineering (14ECEE), Skopje-Ohrid, Macedonia. Info: [www.eaee.boun.edu.tr/eaee.htm](http://www.eaee.boun.edu.tr/eaee.htm) (12/08)

#### SEPTEMBER

5-9. 32nd General Assembly of the European Seismological Commission (ESC 2010), Montpellier, France. Info: <http://www.esc2010.eu> (5/09)

#### 2011

#### JUNE

27-July 8. XXVth IUGG Assembly, Melbourne, Australia. Info: <http://www.iugg2011.com/> (6/09)



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## News of the Membership

### Graduate Fellowship Awarded to Eatherton

Matthew Eatherton, a Ph.D. candidate in civil engineering at the University of Illinois, Urbana-Champaign (UIUC), has been selected as the 2009-2010 NEHRP Graduate Fellow in Earthquake Hazard Reduction.

EERI awards this fellowship each year in a cooperative program with the Federal Emergency Management Agency's National Earthquake Hazards Reduction Program. The award is given to foster the participation of capable individuals in furthering the goals and practice of earthquake hazard mitigation. The fellowship provides \$12,000 for a nine-month stipend and \$8,000 for tuition, fees, and research expenses.

The fellowship applications were reviewed by Associate Professor Ellen Rathje at the University of Texas at Austin, who is chair of the EERI Student Activities Committee; Assistant Professor Scott Brandenberg at the University of California, Los Angeles; Associate Professor JoAnn Browning at the University of Kansas; Assistant Professor Terri Norton at the University of Nebraska, Omaha; and Professor Julio Ramirez at Purdue University.

Eatherton was chosen from a group of ten well-qualified applicants from the fields of social policy and structural and geotechnical engineering

at universities in Illinois, Iowa, Utah, Michigan, Georgia, and California.

After Eatherton earned an M.S. in civil engineering from the University of Missouri at Columbia in 1999, he practiced structural engineering for seven years, primarily in California. He was active on the Seismology Committee of the Structural Engineers Association of Northern California and worked with Build Change to reduce earthquake-related damage and loss of life in developing countries.

His goal is to join the faculty at a university to both share his passion for earthquake engineering and to research new topics. His research at the University of Illinois focuses on development of an innovative self-centering seismic force-resisting system. The controlled rocking system combines post-tensioning, which produces self-centering ability, with replaceable energy dissipating elements to improve significantly post-earthquake structural reparability. He has conducted large-scale cyclic and hybrid simulation tests at UIUC's NEES facility. He is currently assisting in preparations for large-scale shake table tests to be carried out at the Hyogo Earthquake Engineering Research Center in Japan in August 2009. Subsequently, he will be performing detailed system



*Matthew Eatherton*

analyses and extensive data reduction, followed by integration of the results into design recommendations, so that the new system can be implemented in practice.

His faculty advisor at UIUC, Professor Jerome F. Hajjar, indicates that Eatherton's research will contribute seminal work in the field of earthquake engineering.

## Student Resumés Online

As a service to EERI member firms and student members who are exploring the job market, 11 student member resumes have been posted on EERI's web site at <http://www.eeri.org/site/news/resumes>. Their graduation dates range from December 2008 to December 2009, with three not specified. Degrees received or expected are masters for five, PhDs for five, and bachelors for one. They represent the following universities: Carleton University (Canada), Georgia Tech (2), Notre Dame, Penn State, Purdue, UCLA (2), the University of Illinois at Urbana Champaign, and the University of Memphis (2).