EARTHQUAKE ENGINEERING RESEARCH INSTITUTE

Founded in 1948, EERI's mission is to reduce earthquake risk by (1) advancing the science and practice of earthquake engineering, (2) improving understanding of the impact of earthquakes on the physical, social, economic, political, and cultural environment, and (3) advocating comprehensive and realistic measures for reducing the harmful effects of earthquakes.

LEARNING FROM EARTHQUAKES

- EERI Reconnaissance Efforts for Mexico Earthquakes

EERI is organizing reconnaissance efforts to study impacts of the M8.1 and M7.1 Mexico earthquakes. Initial reconnaissance teams will be in the field from Sunday, October 1 – Sunday, October 8, 2017.
Gilberto Mosqueda, UC San Diego (M. EERI, 2001), and Lucy Arendt, St. Norbert College (M. EERI, 2008), will serve as EERI's Reconnaissance Leaders. Together, Mosqueda and Arendt, who represent structural engineering and social science respectively, will conduct an initial reconnaissance trip to identify the major issues coming from these earthquakes, identify gaps in current reconnaissance efforts, and suggest recommendations for further EERI reconnaissance.

EERI is sending an Earthquake Early Warning Team of two seismologists and two social scientists to focus on the implementation of the earthquake early warning system. The team members are: Scott Miles, University of Washington (M. EERI, 2009); Richard Allen, University of California, Berkeley; Elizabeth Cochran, U.S. Geological Survey; and Diego Otegui, University of Delaware. The team aims to understand how well the system worked, who it reached, how people responded to the warning, and what lessons can be learned to inform how similar warning systems are implemented in other countries.

EERI is participating in a collaborative multi-organization effort to conduct quick damage assessments of all buildings in a specific radius or several block area that catalogues structural building types, damage severity, and other details. This effort is being led by Debbie Weiser, OneConcern (M. EERI, 2017), and Jeffrey Hunt, Exponent (M. EERI, 2010).

EERI has launched a new Virtual Earthquake Clearinghouse website for the M7.1 earthquake. This new website features a new resource library that can be filtered by category and a new photo gallery with enhanced search and data download features. The interactive data map is also available to view on the site. The resource library contains content from the Virtual Earthquake Reconnaissance Team (VERT) which includes information gleaned from the media on topics such as housing, ground motion, and social impacts.

With the large number of reconnaissance efforts being organized, EERI is conducting regular coordination calls amongst the teams to share plans and information. A special thanks to Eduardo Miranda (M. EERI, 1987), whose rapid reports from Mexico City helped inform other reconnaissance efforts. EERI is also thankful to the many colleagues in Mexico, including Sergio Alcocer (M. EERI, 1987), Gustavo Ayala (M. EERI, 1977), David de Leon (M. EERI, 2012), Arturo Tena-Colunga (M. EERI, 1989), and Eduardo Reinoso (M. EERI, 2001), who have shared information about the impacts of both earthquakes. Photo Credit (top): Eduardo Miranda

NEWS OF THE INSTITUTE

2017-2018 EERI/FEMA NEHRP Graduate Fellows in Earthquake Hazard Reduction

Lohrasb Keykhosropour (M. EERI, 2016) and Kristin Ulmer (M. EERI, 2014) have been selected as the 2017-2018 EERI/FEMA NEHRP Graduate Fellows in Earthquake Hazard Reduction.

EERI awards graduate fellowships each year with support from FEMA and the 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 fellowships
Lohrasb Keykhosropour from UC Irvine (Geotechnical Engineering) and Kristin Ulmer from Virginia Tech (Geotechnical Engineering) were selected from a group of highly qualified applicants in a variety of disciplines related to earthquake science and engineering at universities across the nation. EERI’s Student Activities Committee, consisting of nine faculty members led by University of Nebraska-Lincoln Associate Professor Terri R. Norton (M. EERI, 2004), reviewed the application packages and made the final selections. The committee awarded honorable mention to candidate Angel Perez Irizarry (M. EERI, 2011) from the University of Wisconsin Madison (Structural Engineering).

Lohrasb Keykhosropour is a Ph.D. student at UC Irvine whose doctoral research is focused on developing a data-driven computational framework to determine the magnitude and distribution of seismic soil pressures for deep flexible underground structures. Keykhosropour was born and raised in Iran. He graduated from Isfahan University of Technology in 2007 with a BS in civil engineering, and from Amirkabir University of Technology in 2011 with an MS in geotechnical engineering. Having spent three years working at a geotechnical firm in Iran, he realized his passion for research and desire to pursue an academic career, and immigrated to the U.S. to work towards a Ph.D. at UC Irvine. His goal is to become a professor, teach future engineers, and continue doing research work that can be directly translated into practice.

Kristin Ulmer is currently working toward her Ph.D. in civil engineering at Virginia Tech with Professors Russell Green (M. EERI, 1993) and Adrian Rodriguez-Marek (M. EERI, 1999) as her advisors. Her doctoral research is focused on developing an energy-based liquefaction evaluation procedure through laboratory testing and analysis of liquefaction case histories. One of Ulmer’s main career goals is to become an exceptional educator and mentor to the next generation of engineers. As an undergraduate at Brigham Young University she worked as a TA and math tutor, and currently serves as a peer mentor to undergraduate women in engineering disciplines.

The Institute looks forward to highlighting Lohrasb Keykhosropour’s and Kristin Ulmer’s research at the 11NCEE and EERI 2018 Annual Meeting. To learn more about the EERI/FEMA NEHRP Graduate Fellowship, visit this link: https://www.eeri.org/about-eeri/honors-awards/graduate-fellowship/
President-Elect: 
**Laurie Johnson**, Principal and Founder, Laurie Johnson Consulting/Research, San Francisco, CA (M. EERI, 1990)

**Director A:**
**Tara C. Hutchinson**, Professor of Structural Engineering, University of California, San Diego (M. EERI, 1995)
**Keith Knudsen**, Deputy Director, Earthquake Science Center, U.S. Geological Survey (M. EERI, 2001)

**Director B:**
**Stephanie Chang**, Professor, School of Community and Regional Planning (SCARP) and the Institute for Resources, Environment, and Sustainability (IRES), University of British Columbia (M. EERI, 1994)
**Judith Mitrani-Reiser**, Director of Disaster and Failure Studies at the National Institute of Standards and Technology (NIST); Assistant Professor, Department of Civil Engineering, Johns Hopkins University, Baltimore, MD (M. EERI, 2001)

## ANNOUNCEMENTS

- **PEER, SEAOC & SEAW Seminars: TBI Guidelines for Performance-Based Seismic Design of Tall Buildings Version 2.02**


2017 Dates and Locations:
Free ATC Webinar: Improving Earthquake Performance of Manufactured Homes

The Applied Technology Council (ATC) is offering a free webinar on October 4, 2017: "Improving Earthquake Performance of Manufactured Homes." Recent earthquakes and other natural hazards have resulted in poor performance of manufactured homes, indicating that there is much room for improvement. The purpose of this webinar is to: (1) provide an overview of regulations governing design and construction of manufactured homes and home installation; (2) review relevant performance issues observed in recent earthquakes; and (3) provide available guidance for improved earthquake performance of manufactured homes.

Not available on Oct. 4? Register and receive a link to the recording after the webinar is conducted. Click here for more information and to register for the webinar.

SMIP17 Seminar on Utilization of Strong-Motion Data: October 19, 2017

Registration is Open

Date: Thursday, October 19, 2017
Location: U.C. Berkeley International House, Berkeley, California

The California Strong Motion Instrumentation Program (CSMIP) in the California Geological Survey (CGS) of the Department of Conservation established a Data Interpretation Project in 1989. This year’s seminar will include presentations on damping for ground response analysis used in non-ergodic hazard analysis, nonlinear site response analyses at California downhole array sites, building code torsional provisions, building soil-structure interactions, spatial variability of bridge foundation input motions, embankment dam deformations, improved ground motion intensity measures for record selections, and ground motions from the 2014 South Napa Earthquake. Please visit the SMIP17 website for program and registration information.
PEER Transportation Systems Research Program Request for Proposals

PEER is pleased to announce a Request for Proposals for the PEER Transportation Systems Research Program (TSRP). This request for proposals is for one- and two-year projects related to the seismic and tsunami performance of transportation systems. The proposed projects should be aligned with the current TSRP research priorities and vision. The deadline for technical proposal submissions is 11:59pm PDT, October 15, 2017. For detailed information and to submit a proposal visit: http://peer.berkeley.edu/transportation/request-for-proposals/

Nevada Working Group Workshop on Seismic Hazards, February 5-7, 2018

Nevada Working Group workshop, February 5-7, 2018, Reno, Nevada
Presentation proposals (title and brief abstract) due November 1, 2017

The 2018 Working Group on Nevada Seismic Hazards meeting is being organized by the Nevada Bureau of Mines and Geology (NBMG) and the Nevada Seismological Laboratory (NSL). Partial funding for the workshop has been provided by the U.S. Geological Survey.

The purpose of the workshop is to review ongoing earthquake hazard research in Nevada, discuss technical issues related to earthquake hazards in Nevada, and identify priorities for future research that will reduce uncertainties and improve the USGS Earthquake Hazard Model. The workshop will include technical presentations and discussions focused on: 1) Quaternary fault parameters and earthquake probabilities, 2) seismicity and geodesy, and 3) ground motions relevant to the Reno-Carson-Lake Tahoe and Las Vegas regions.

All persons with relevant expertise are invited to attend. Attendees are encouraged to present their recent relevant research, with the goal of improving the US Geological Survey hazard model as it affects hazard estimates in Nevada. Please direct all questions and send title and abstract to both John Anderson (M. EERI, 1980) (jga@unr.edu) and Rich Koehler (rkoehler@unr.edu). For more information, please visit the website.

UT Austin Texas Engineering Executive Education Upcoming Events

The Texas Engineering Executive Education department of the University of Texas at Austin is offering two upcoming events that may be of interest to EERI members:

- The 39th Annual Short Course Grouting Fundamentals and Current Practice, February 12-16, 2018: Since 1979, the Grouting Fundamentals and Current Practice course has covered pressure grouting as a method to improve geotechnical properties of soils and rock masses; and
- The Forensics Engineering Conference, February 22 - 23, 2018: Topics covered in this conference will focus on lessons learned from hurricanes, building envelopes, structural failures, foundation issues, and other case studies.
To register, click the links above. For more information about Texas Engineering Executive Education at the University of Texas at Austin, click here.

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PROFESSIONAL OPPORTUNITIES

Natural Hazards Center Postdoctoral Position in Hazards and Disaster Research

The Natural Hazards Center in the Institute of Behavioral Science at the University of Colorado Boulder seeks a Postdoctoral Research Associate for a full-time, 12-month position, with benefits, that can begin as early as January 1, 2018. The initial appointment will be for one year, with the possibility of renewal for a second year, contingent on satisfactory performance.

Please note that the application deadline is October 1, and review of applications will begin on October 15. Applications received by this date will be given first consideration, although applications will be accepted until the position is filled.

Read the full job description and apply online, or click here and search Postdoctoral Associate Job No. 10823.

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EERI Post-Graduate Internship Program Spring 2018: Application Deadline November 1, 2017

EERI is Accepting Applications for Spring 2018 Post-Graduate Internship Positions through November 1, 2017

EERI's internships are approximately six-months long, and offer engagement with a number of interesting EERI projects and Institute activities, including Learning from Earthquakes, the School Earthquake Safety Initiative, the 11th National Conference on Earthquake Engineering, and technical seminars and webinars.

Tasks are varied, although day-to-day work focuses on supporting EERI projects and staff through research, project and event coordination, and website development and maintenance. Learn more about EERI Post-Graduate internships.

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NEWS OF THE PROFESSION

Links to Recent News & Views

Nine recent articles, stories, opinions, or reports from around the web

1. **Mexico Earthquake Crumbles Concrete Buildings, Sending Deadly Warning to California** (Los Angeles Times) Seismic safety experts have long warned that brittle concrete frame buildings pose a particularly deadly risk during a major earthquake. LA Times reporter Rong-Gong Lin interviews structural engineer and EERI Vice President David Cocke (M. EERI, 1992), who explains why. [Read more]

2. **Commentary: National Earthquake Program is Vital to Utah** (Salt Lake Tribute) Walter Arabasz (M. EERI, 1990) advocates for Congressional reauthorization of NEHRP. He says losing the program would dramatically weaken the ability of earthquake scientists, engineers, emergency managers and dedicated professionals to help endangered communities throughout the nation withstand, respond to, and recover from inevitable earthquakes. [Read More]

3. **Fixing L.A. Buildings Vulnerable to Collapse is Vital Before Next Big Earthquake, (Mayor) Garcetti Says** (Los Angeles Times) Only a few local governments around the world have required that brittle concrete buildings be retrofitted, and Los Angeles was one of the first to do so in 2015. The mayor called on other cities throughout California to start looking to L.A.'s retrofit plan as a model. [Read more]

4. **Washington State Earthquake Group Favors Quick Fixes Over Major Upgrades** (The Olympian) A new report from the governor's Resilient Washington Subcabinet favors actions that are easy and cheap over those that are costly and difficult, such as: ensuring schools are seismically sound, strengthening bridges and utilities, and building tsunami refuges. [Read More]

5. **Mexico City Was Built on an Ancient Lake Bed. That Makes Earthquakes Much Worse.** (New York Times) The Mexico City earthquake was all the more destructive because of the city's unusual position atop an ancient lake bed; Animation shows how the shock waves of a hypothetical earthquake near Mexico City would spread. [Read more]

6. **1,070-Foot Salesforce Tower Elevates Seismic Design** (Engineering News-Record) The structure of the tallest building in earthquake-prone San Francisco—the 1,070-ft Salesforce Tower—is plain and simple. Still, the 1.4-million-sq-ft supertower is the city's only high-rise, without an obvious seismic system, designed to perform 25% better in a quake. [Read more]

7. **Kaikōura Canyon Shows Early Signs of Ecosystem Recovery** (press release) New Zealand National Institute of Water and Atmospheric Research (NIWA) scientists have found signs of recovery in the Kaikōura Canyon seabed, 10 months after powerful submarine landslides triggered by the November earthquake wiped out organisms living in and on the seabed. [Read more]

8. **NASA's Earthquake 'Damage Map' Shows Destruction in Mexico** (Space.com) A satellite-imagery map of damage in and around Mexico City caused by the magnitude 7.1 Raboso earthquake of Sept. 19, 2017 was produced by scientists at NASA's Jet Propulsion Laboratory and the California Institute of Technology, based on data gathered by the European Space Agency's Copernicus Sentinel-1A and Sentinel-1B satellites. [Read more]

9. **Terremoto en México Recopilación de videos 19 de Septiembre 2017** (YouTube) This 6:42 minute video compilation of scenes from Mexico City on September 19 during the M7.1 earthquake has received more than two million views. [View the video]
Follow these steps to add EERI Calendar to your own Google calendar.

1. Open Google Calendar
2. On the left, above "My Calendars," click Add + and then From URL.
3. Enter the EERI calendar's address in the field provided. EERI Calendar ics link
   https://calendar.google.com/calendar/ical/eeri.org_s9151tit0ab26dznf2epn25d7rg%40group.calendar.google.com/public/basic.ics
4. Click Add Calendar. The calendar will appear on the left side under "Other calendars."

Monday, April 27, 2020 - April 30
**SSA 2020 Annual Meeting**
SSA 2020 Annual Meeting
27-30 April 2020 — Albuquerque, New Mexico
The 2020 Annual Meeting will be held in Albuquerque, New Mexico.
Check back later for more information.

Friday, May 15, 2020 5:00 PM - May 16 2:00 AM
**2020 Los Angeles Tall Buildings Conference**
The 2020 Los Angeles Tall Buildings Structural Design Council conference will cover a variety of topics related to recent advances in structural design of tall and special buildings. Learn more: www.latallbuildings.org

Monday, September 14, 2020 - September 18
**17th WCEE**
The 17th WCEE will be hosted in Sendai, Japan, from September 14th to 18th 2020. Check http://www.iaee.or.jp/ for more information.

Sunday, February 07, 2021 - February 10
**ASCE/UCLA San Fernando Earthquake Conference**
For more information: http://lifelines2021.ucla.edu/