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.

NEWS OF THE INSTITUTE

A New Look for The Pulse and EERI Calendar of Events

Did you notice that The Pulse newsletter has a new look? The Pulse has been redesigned to be more modern and sleek, easier to read, and to adapt to different devices. We think it makes our overall brand more cohesive and identifiable for our membership, our Board, and our community.

The newsletter is a place for us to showcase our work and connect with each other. To enhance that goal, we've also updated our Calendar of Events. EERI has created its own Google calendar for events that you can add to your computer, tablet or phone to ensure you have the latest updates. Scroll down to view the calendar and directions for adding it to your device(s). You can also view the calendar on our website.

We've also added something special for those who fondly remember when The Pulse was printed and mailed. Soon to be released is Pulse Digest, a twice-yearly printed collection of recent Pulse articles. EERI regular, affiliate, retired and young professional members will receive a copy, as well as student members with a domestic U.S. mailing address. Be sure to open the envelope when it arrives in your mailbox for your free EERI sticker!

We invite you to share your upcoming events, announcements, opportunities, and major achievements with us. We also welcome your comments and feedback on the new look.
Vitor Silva to Receive 2017 EERI Shah Family Innovation Prize

Thanks to a generous gift from the Shah family, EERI annually awards the Shah Prize to young professionals and academics for creativity, innovation, and entrepreneurial spirit in the field of earthquake risk mitigation and management.

Vitor Silva (M. EERI, 2014) has been awarded the 2017 EERI Shah Family Innovation Prize. Vitor Silva is the Seismic Risk Coordinator at the Global Earthquake Model (GEM) Foundation, a non-profit organization with the goal to calculate and communicate earthquake risk worldwide. He has participated in studies in structural vulnerability and probabilistic seismic risk assessment in dozens of countries such as Portugal, Iran, Peru, Colombia, Costa Rica, and Canada. He is currently leading or participating in international programs supported by the Global Facility for Disaster Reduction and Recovery of the World Bank, the European Commission, and the United States Agency for International Development, which aim at improving the understanding of earthquake risk in regions such as Central America and the Caribbean, Europe, Sub-Saharan Africa and South-East Asia. His activities also focus on the development of tools for seismic risk assessment, and databases of vulnerability and exposure models for multi-hazard risk analysis.

As part of his role at the GEM Foundation, Vitor has conducted workshops to improve the local capacity in assessing the impact from earthquakes in various parts of the world (e.g. Pavia, Kathmandu, Bogota, Medellin, Santiago, Lima, Addis Ababa, San Jose) for more than 300 participants from 43 countries. Vitor serves as an Associate Editor of Earthquake Spectra, he is a member of the executive committee of the World Housing Encyclopedia, and has documented his research in more than 80 publications in international peer-reviewed journals, conference proceedings and book chapters.
The 2017 Shah Family Innovation Prize will be presented at EERI's 2018 70th Annual Meeting, held during the 11th National Conference on Earthquake Engineering (11NCEE) in Los Angeles, CA. To learn more about the Shah Family Innovation Prize, please visit the EERI website.

 MEMBER SPOTLIGHT

EERI Members Elected to the National Academy of Engineering

The EERI Board of Directors is honored to congratulate two longtime members, Peter Fajfar (M.EERI,1981) and Norman A. Abrahamson (M.EERI,1984), for election to the National Academy of Engineering (NAE).

Peter Fajfar is a professor of structural and earthquake engineering, Faculty of Civil and Geodetic Engineering, University of Ljubljana, Ljubljana, Slovenia. The NAE has recognized Dr. Fajfar for "leadership in the development of nonlinear structural analysis methods for earthquake engineering."

Norman Abrahamson, chief engineering seismologist, Pacific Gas & Electric Co., was recognized for "contributions to seismic hazard assessment and for leadership in engineering seismology and earthquake engineering."

Election to the National Academy of Engineering is among the highest professional distinctions accorded to an engineer. Academy membership honors those who have made outstanding contributions to "engineering research, practice, or education, including, where appropriate, significant contributions to the engineering literature" and to "the pioneering of new and developing fields of technology, making major advancements in traditional fields of engineering, or developing/implementing innovative approaches to engineering education."

In February, the NAE announced the election of Fajfar and Abrahamson among 83 new members and 16 new foreign members. This brings the total U.S. membership to 2,293 and the number of foreign
members to 262. Individuals in the newly elected class will be formally inducted during a ceremony at the NAE's annual meeting in Washington, D.C., on Sept. 30, 2018.

Read the NAE press release.

LEARNING FROM EARTHQUAKES

LEARNING FROM EARTHQUAKES

Learning from Earthquakes Webinar: Case Studies from the September 19, 2017 Mexico Earthquake

REGISTER FOR THE WEBINAR

Thursday, April 5, 2018
10:00 AM -12:00 PM PDT

Speakers: John Eidinger, Marty Hudson (M.EERI,1994), Ezra Jampole (M.EERI,2012), Prateek Shah, and Mark Yashinsky

During this free webinar, speakers who conducted reconnaissance following the September 19, 2017 Puebla-Morelos earthquake will present geotechnical and structural case studies. Case studies will include:

- Foundation failure of structure on piles by Marty Hudson, AMEC Foster Wheeler
Preliminary Reconnaissance Report on M7.3 Ezgele, Kermanshah, Iran Earthquake on November 12, 2017

READ THE FULL REPORT

The earthquake of the evening of November 12, 2017 with a moment magnitude of 7.3 was one of the most destructive earthquakes over the past two decades in Iran. This earthquake was felt over more than a half of the country and resulted in a large number of casualties in Kermanshah province (436 people according to the latest statistics published) in addition to extensive financial losses. This report includes reconnaissance observations on the performance of steel structures, concrete structures, masonry structures, nonstructural components, and also social and organizational aspects of the earthquake impacts.

Authors: Erfan Alavi (M.EERI,2014), SAZEH Consultants; Arash Mahootchian, SAZEH Consultants; Saeedeh Yadegari, SAZEH Consultants; Milad Shamsodin, International Goods Inspection Company; Masoumeh Babania Nouri, SAZEH Consultants; and Behnam Ordoubadi, SAZEH Consultants.
Photo: Collapse of exterior walls due to poor construction quality.

More resources can be found in the EERI LFE Halabjah, Iran Earthquake Clearinghouse.

Upcoming Dates for the EERI Distinguished Lecture by Dr. Lucy Jones

The EERI Regional Chapters of Washington State and Southern California will be presenting the EERI Distinguished Lecture by Dr. Lucy Jones (M.EERI, 2001): *Life Safety in the City: When There is More to Life Than Not Being Crushed*.

**EERI Washington State Regional Chapter**

**Monday, March 19, 2018**  
4:30 PM - 6:00 PM  
University of Washington  
Alder Commons Auditorium  
Seattle, Washington  
[Register](#)

**EERI Southern California Regional Chapter**

**Tuesday, April 3, 2018**  
3:30 PM - 5:30 PM  
University of Southern California  
Davidson Conference Center  
3409 Figueroa Street
EERI & State Partner Post-Earthquake Reconnaissance Workshop Series

EERI is collaborating with state partners in Oregon, Washington, and Utah to offer full-day workshops. These workshops include interactive training in two parts. EERI staff and regional chapter officers will introduce post-earthquake reconnaissance data collection and clearinghouse tools, and host a simulated field exercise. This will be followed by state-specific presentations and panel discussions by guest speakers on post-earthquake reconnaissance best practices and opportunities for integrating existing state clearinghouse and reconnaissance efforts.

UPCOMING WORKSHOPS

Oregon/DOGAMI
April 9, 2018
8:00AM - 4:30PM
Portland State Office Building
Room 1D (First Floor)
800 NE Oregon St.
Portland, OR 97232
Register for the Oregon workshop

Washington/PIEP
April 17, 2018
8:00AM - 4:30PM
Partners in Preparedness Conference
Greater Tacoma Convention Center
1500 Commerce Street
Tacoma, Washington
Register for the Washington workshop
Click “New Registration” and then “Tuesday Workshop Only”

Utah/UGS
April 18, 2018
8:00AM - 3:30PM
Utah Department of Natural Resources Auditorium
1594 W North Temple
Salt Lake City, UT
Register for the Utah workshop

7 ICEGE - Call for Abstracts

VII International Conference on Earthquake Geotechnical Engineering
June 17-20, 2019
Rome, Italy
Abstract Submission is now open!
The abstract submission deadline is May 7, 2018.
SUBMIT YOUR ABSTRACT
Visit the conference website
EERI MEMBERSHIP RENEWAL ALERT

- Last Day to Renew is March 31, 2018!

Renewal Alert: If you have not yet renewed your EERI regular, affiliate, e-affiliate, young professional, retired, or subscribing membership for 2018, you must take action before March 31, 2018 to retain your membership benefits.

Renewing your EERI membership will allow you to stay connected to your colleagues through the member directory, access EERI members-only resources including Learning from Earthquakes reports and photo galleries, keep receiving The Pulse of Earthquake Engineering, and retain access to the premier journal of earthquake engineering, Earthquake Spectra.

Please take a moment right now to renew your EERI membership online. If you need assistance processing your renewal, please don't hesitate to contact us at eeri@eeri.org or call 510-451-0905.

Every year since 1948, EERI has strived to fulfill its mission—to gather and disseminate information about earthquake risk reduction and to advocate for realistic measures to reduce the harmful effects of earthquakes. In the face of natural disasters, multidisciplinary collaborations are critical to our earthquake risk reduction mission—and so is your continued membership and support.

Together, we can reduce earthquake risk for our communities.
Earthquake Spectra: Preprint Manuscripts

Twelve (12) preprint manuscripts have been posted to the Earthquake Spectra website prior to formal publication. The papers to be published are:

- The Hysteretic Energy as a Performance Measure in Analytical Studies by Athanasia K. Kazantzi and Dimitrios Vamvatsikos (M.EERI,2002)
- A Framework to Evaluate the Benefit of Seismic Upgrading by Panagiotis Galanis, Anastasia Sycheva, Wanda Mimra, and Božidar Stojadinović (M.EERI,1992)
- Performance-based seismic slope displacement procedure by Jorge Macedo, Jonathan Bray (M.EERI,1990), Norman Abrahamson (M.EERI,1984), and Thaleia Travasarou
- Characteristics and triggering conditions for naturally deposited gravelly soils that liquefied following the 2008 Wenchuan Mw 7.9 earthquake, China by Longwei Chen, Xiaoming Yuan, Zhenzhong Cao, Rui Sun, Weiming Wang, and Huida Liu
- Modeling Diffuse Seismicity in Probabilistic Seismic Hazard Analysis: Treatment of Virtual Faults by Kenneth W. Campbell (M.EERI,1975) and Nitin Gupta
- A Centrifuge Study of Seismic Structure-Soil-Structure Interaction on Liquefiable Ground and Implications for Design in Dense Urban Areas by Peter Kirkwood and Shideh Dashti
- Field monitoring of strong ground motion in urban areas: the Kalochori Accelerometric Network (KAN), database and Web-GIS portal by Emmanouil Rovithis, Konstantia Makra, Emmanouil Kirtas, Charalampos Manesis, Dimitrios Bliziotis, and Kiriaki Konstantinidou
- April 16, 2016 Ecuador Earthquake Damage Assessment Survey by Enrique Villalobos, Chungwook Sim (M.EERI,2017), J. Paul Smith-Pardo, Pedro Rojas, Santiago Pujol (M.EERI,2009), and Michael E. Kreger (M.EERI,1985)
- Adjustment factors to account for the effect of bridge deck horizontal curvature on the seismic response of concrete box-girder bridges in California by Sujith Mangalathu (M.EERI,2013) and Jong-Su Jeon (M.EERI,2018)
- Quantifying the Epistemic Uncertainty in the Probabilistic Seismic Hazard from Two Major Faults in Western Nevada by John G. Anderson (M.EERI,1980)
Physical and Numerical Simulations of the Seismic Response of a 1100 kV Power Transformer Bushing by Guo-Liang Ma (M.EERI,2017), Qiang Xie, and Andrew S. Whittaker


To read all current preprint manuscripts posted, visit Earthquake Spectra preprints. If you have questions about Spectra, please contact Managing Editor Liz Stalnaker at liz@eeri.org

NEWS OF THE PROFESSION

Links to Recent News & Views

1. **Quake Risk: Why Old Brick Buildings Can Collapse** (Los Angeles Times) Old brick buildings are one of the deadliest structures in an earthquake. Saif Hussain (M.EERI,1995), a structural engineer who has helped write retrofit guidelines for Los Angeles and the American Society of Civil Engineers, explains why. Read more

2. **Earthquake Insurance Sales Spiked in 2017** (NY Times) For years, getting Californians to buy earthquake insurance was a difficult sell — then came the natural disasters of 2017. Read more

3. **Papua New Guinea Earthquake: Tens of Thousands Need Urgent Aid** (BBC) The full scale of the damage from the M7.5 earthquake on February 26, 2018 is not clear. The challenge is road access; many areas are still not accessible. Read more

4. **Wastewater Injection Limit Set Due to Earthquake Worries, but Oklahoma Could Get Shakier if Oil Prices Soar Again** (Tulsa World) A year ago state regulators implemented volume limits on the deepest disposal wells in a 15,000-square-mile area prone to earthquakes. But questions linger. Read more

5. **The Wicked Problem of Earthquake Hazard in Developing Countries** (EOS) Earthquake preparation in Bangladesh is a conundrum, where crucial information is missing and investments often involve painful trade-offs. Read more
USGS Authors New Report on Seismic Hazard, Risk, and Design for South America (press release) South America is one of the most earthquake-prone regions of the world and has witnessed tremendous losses throughout recorded history. A recently released USGS report provides probabilistic tools to help engineers assess seismic hazards, risk, and building code requirements, potentially saving lives and dollars. Read more

What the 1933 Long Beach Earthquake Taught us About California's Seismic Future (Long Beach Press Telegram) The magnitude 6.4 temblor that hit at 5:54 p.m. 85 years ago killed about 120 people. The devastation prompted the state to enact a series of earthquake building codes, including the Field Act of 1933, which mandated that all school buildings be earthquake resistant. Read more

90 Years Later, The St. Francis Dam Failure Remains A Vital Safety Lesson (ASDSO press release) On March 12, 1928 the St. Francis Dam failed catastrophically, what many consider the worst civil engineering disaster of the 20th century. Ninety years later, some lessons to be learned from the failure were echoed in the findings of the forensic investigation of the spillway failure at Oroville Dam in California, reiterating the importance of learning from past failures. Read more

Mexico City Earthquake Was a Rare ‘Bending’ Quake (EarthSky) Six months have passed since a magnitude 7.1 earthquake struck Mexico City, toppling 40 buildings and killing over 300. Since the damaging quake, we have been analyzing data from the national network of seismological sensors, as well as high-quality GPS stations around the country. Here's what we've learned. Read more

Share this article

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_s9151tit0ab26dnf2epn25d7rg%40group.calendar.google.com/public/basic.ics
4. Click Add Calendar. The calendar will appear on the left side under "Other calendars."
Tuesday, March 03, 2020 - March 06
**EERI 2020 Annual Meeting/Natl EQ Conference**

National Earthquake Conference & 72nd EERI Annual Meeting  
March 3 - 6, 2020  
Sheraton San Diego Hotel & Marina  
San Diego, California  
[website](#)

Wednesday, March 04, 2020 - March 06
**2020 RBDCC**  
5th Residential Building Design & Construction Conference (RBDCC)  
Hosted by The Pennsylvania Housing Research Center  
March 4-6, 2020  
Penn Stater Conference Center  
State College, PA.  
[website](#)

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](http://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.iiaee.or.jp/](http://www.iiaee.or.jp/) for more information.
ASCE/UCLA San Fernando Earthquake Conference
For more information: http://lifelines2021.ucla.edu/