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

2019 Annual Meeting: Presentations & Photos

EERI's 71st EERI Annual Meeting took place March 3-5 in Vancouver, Canada. The Institute welcomed more than 600 attendees - professionals and students - representing a wide range of disciplines while sharing a common goal, reducing earthquake risk.

We extend our deepest appreciation to the local organizing committee led by John Sherstobitoff and Kate Thibert. The committee built the technical program around the meeting theme, "Reaching Resilience Faster by Working Together," with many interesting sessions focused on community resilience initiatives, LFE for recent events and recovery efforts, seismic safety of schools, public policy that will improve earthquake safety, and a host of other engaging topics. The lively and informative trainings, workshops, and local tours were also smoothly arranged by the local organizing committee. We could not have held this meeting if not for the many volunteer hours donated by members of the local organizing committee, and the many volunteers who stepped up to help throughout the week.
Thank you Sponsors!
EERI extends gratitude and appreciation to the generous sponsors of our 2019 Annual Meeting and 16th Annual Seismic Design Competition: FEMA, Engineers & Geoscientists of British Columbia, The Canadian Association of Earthquake Engineering, RJC Engineers, Computers & Structures, Inc., Trimble, Degenkolb Engineers, California Earthquake Authority, Kinemetrics, Structural Engineers Association of British Columbia, UC Davis Center for Geotechnical Modeling, and Oregon State University.

Presentations
Presentations from the Annual Meeting are now posted on the website. To view or download slides, go to the Full Program page and scroll through the presentations. Not all presentations are available, but those that are will have a blue "download" link in their description. Click here.

Photos
To view photos of the annual meeting please visit the 2019 Annual Meeting photo album.
To view photos of the 16th Annual Seismic Design Competition and Live Auction provided by Computers & Structures, Inc., please click the links below:
16th Annual Seismic Design Competition
SDC Auction
EERI thanks Sevil Baghban Karimi, Computers & Structures, Inc., and the EERI members who contributed photos to the album.

Save the Date: EERI 2020 Annual Meeting
You can start making plans now for EERI's 72nd Annual Meeting which will take place during the 2020 National Earthquake Conference, March 4-6, 2020, in San Diego, California.

Learning From Earthquakes

LEARNING FROM EARTHQUAKES

EERI Learning From Earthquakes Endowment Fund

In the March 15 Pulse newsletter, EERI announced a fundraising campaign for the Learning From Earthquakes (LFE) program with a goal of raising $4 million dollars to ensure the continuation of robust and dynamic LFE program for generations to come. The campaign seeks $2 million in cash pledges paid over a 5 year period, and another $2 million in testamentary gifts. All early donors who make a cash pledge prior to July 2019 will be given the distinction of "LFE Endowment Founding Benefactor."

Please help us add to this momentum by considering your own gift today. If you would like to learn more about why this campaign was launched, LFE impacts over the last 70 years, and how EERI plays a unique role on the earthquake reconnaissance landscape, please read our full case statement on the website or contact President Laurie Johnson, Past-President David Friedman or Executive Director Heidi Tremayne for more information.

Can we count on your pledge today?
For additional information about the campaign including a list of donors and donation levels, visit the EERI LFE website. To make your pledge or donation today, please click here.
OPPORTUNITIES

2019 Summer/Fall Post-Graduate Internship Opportunity At EERI

APPLICATIONS ARE NOW OPEN!
Application deadline: April 21, 2019
Apply Now

The Earthquake Engineering Research Institute (EERI) has 1-2 internship positions available for recent graduates who are interested in gaining valuable professional experience while supporting the Institute's mission to reduce earthquake risk. Summer/Fall 2019 interns are expected to start as early as May 2019.

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, and the World Housing Encyclopedia. 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.

EERI Post-Graduate internships are a great way to gain valuable professional experience, to be involved in meaningful projects related to seismic safety and risk reduction, and to make connections with EERI's multi-disciplinary professional community.

EERI's internships provide a monthly stipend of $2,500/month for recent college grads.

To learn more about the EERI Internship Program including requirements, desired qualifications, location, and more, please click here.

Photo: 2018 & 2019 EERI Post-Graduate Interns (L to R): Jorge Moreno, Julio Rios, Omar Plata, and Ana Orozco
Seismic Safety Assessment of Base Isolated Buildings using Lead-Rubber Bearings by T.Y. Yang (M.EERI,2005), and Hongzhou Zhang

Does the 1D assumption hold for site response analysis? A study of seismic site responses and implication for ground motion assessment using KiK-net strong-motion data by Marco Pilz and Fabrice Cotton

Analytical Modelling of Moderately Ductile RC Frame Structures for Seismic Performance Evaluation Using PERFORM-3D by Abdullah Al Mamun and Murat Saatcioglu

Development and validation of fragility functions for buried pipelines based on Canterbury earthquake sequence data by Xavier Bellagamba (M.EERI,2017), Brendon A Bradley (M.EERI,2012), Liam M Wotherspoon (M.EERI,2014) and Matthew W Hughes

Seismic Evaluation of Ultra-High Voltage Wall Bushing by Qiang Xie, Chang He and Yong Zhou

A Probabilistic Model to Evaluate Options for Mitigating Induced Seismic Risk by Jan van Elk, Stephen J Bourne, Steve J Oates, Julian J Bommer (M.EERI,1992), Rui Pinho (M.EERI,2008), and Helen Crowley (M.EERI,2008)


Uniaxial Cyclic Tests on Reinforced Concrete Members with Lap Splices by Danilo Tarquini, João P. Almeida and Katrin Beyer

Discussion of “Joint maximum likelihood estimators for Gutenberg-Richter parameters λ0 and β using sub-catalogs” by Mario Ordaz and Sebastián Giraldo


Seismic Response of Embankment Dams based on Recorded Strong Motion Data in Japan by DongSoon Park and Tadahiro Kishida (M.EERI,2005)

A Candidate Proxy to be Used in Intensity-Based Triggering Mechanism for Parametric CAT-Bond Insurance: Istanbul Case Study by Mehdi Mousavi, Sinan Akkar and Mustafa Erdik (M.EERI,1980)


Predicting Fatality Rates Due to Earthquakes Accounting for Community Vulnerability by Yi (Victor) Wang (M.EERI,2018), Paolo Gardoni, Colleen Murphy and Stéphane Guerrier

A Framework to Evaluate the Benefit of Seismic Upgrading by Clotaire Michel, Blaise Duvernay (M.EERI,2007), Ehrfried Közl, Navid Jamali and Pierino Lestuzzi

Joint Maximum Likelihood Estimators for Gutenberg-Richter Parameters λ0 and β using Sub-Catalogs by Petrus J. Vermeulen and Andrzej Kijko

Influence of epistemic uncertainty in shear wave velocity on seismic ground response analyses by Federico Passeri (M.EERI,2007), Sebastiano Foti, Brady R. Cox and Adrian Rodriguez-Marek

To read all current preprint manuscripts posted, visit Earthquake Spectra preprints.
ANNOUNCEMENTS

Liu Huixian Earthquake Engineering Scholarship Awards in 2019

The Huixian Earthquake Engineering Foundation (China) and the US-China Earthquake Engineering Foundation (USA) are pleased to announce that about ten (10) Liu Huixian Earthquake Engineering Scholarship Awards are available in 2019. Applicants must currently be enrolled as a full-time master's degree or doctoral degree student in earthquake engineering or a closely related field. Applicants must be at a university or research institute in China, USA, Singapore, or a member center of the Asian-Pacific Network of Centers for Earthquake Engineering Research (ANCER).

Application materials should be submitted electronically to the Secretariat of the Huixian Earthquake Engineering Foundation by June 30, 2019.

For more information including how to apply for a scholarship, please read the full announcement.

NEWS OF THE PROFESSION

Links to Recent News & Views

Eight (8) recent news articles, stories, opinions and reports from around the web.

1. How AI Can And Will Predict Disasters (Forbes) Earthquakes: Researchers are collecting enormous amounts of seismic data for analysis using deep learning systems. Artificial intelligence can use the seismic data to analyze the magnitude and patterns of earthquakes. For example, Google and Harvard are developing an AI system that can predict the aftershocks of an earthquake. Scientists have studied more than 131,000 earthquakes and aftershocks to build a neural network. Read more

2. Examining Alaska’s Earthquakes on Land and Sea (EOS) The Alaska Amphibious Community Seismic Experiment is taking a close look at seismic activity along the Alaska Peninsula to understand earthquakes in this little-studied region. Read more

3. Indonesia: Earthquakes and Tsunami - Sulawesi - Emergency Plan of Action MDRID013 Operation Update n°11 (ReliefWeb) The operations in Lombok, Sulawesi, and Sunda Strait's overall objectives and strategy have shifted from immediate relief assistance to recovery of the affected people and increase their resilience to future disasters by providing appropriate medium-term and longer-term assistance in a timely, effective, and efficient manner. Read more
California's Shake Alert Earthquake Warning System Tested in Oakland (ABC7News) Last Wednesday, if you were in downtown Oakland, you may have received an earthquake alert. It was only a test, but a very important one which will now expand to other parts of the state. In following more tests, the warning system could be in place along the West Coast in the early 2020s. Read more

Scientific Fraud Announced in Two Studies of the 2016 M=7.0 Kumamoto, Japan, Earthquake (Temblor) On Tuesday, March 26, Kyoto University held a press conference to announce that a panel of outside experts had concluded that Prof. Aiming Lin of Kyoto University had fabricated, mislocated, distorted, and misrepresented data in a paper published in the journal, Science, in October/November 2016. Endorsing the conclusion of the panel, the University called for the paper to be retracted by Science. Read more

M5.5 quake: A Bump in the Night Toward More Typical Seismic Background (Hawaii Tribune Herald) Geophysicists from the U.S.G.S.'s Hawaiian Volcano Observatory (HVO) quickly verified that the March 13th M5.5 earthquake did not originate from beneath Kilauea Volcano's summit region. Rather, the earthquake was centered 12 km (roughly 7 miles) south-southeast of Volcano Village, at a depth of 7 km (~4 miles) below sea-level. Read more

Researchers Use Shake-Table Testing To Improve Disaster Recovery (Texas A&M Today) A team of researchers led by Dr. Maria Koliou (M.EERI,2009), an assistant professor in the Zachry Department of Civil Engineering at Texas A&M University, is conducting research into how residential wood-framed buildings are damaged from strong earthquakes, providing new insight into how to best build and repair infrastructure so that residents can move back into them as soon as possible. Read more

After 5 Earthquakes in One Month, Seismic Stations Will be Installed in Jay, Florida (Pensacola News Journal) After 5 minor quakes struck near the Florida-Alabama state line in the span of less than a month, the Florida Geological Survey and the U.S. Geological Survey are installing seismic stations in Jay to gather even more data on a region that previously hadn’t seen an earthquake in more than 20 years. Read more

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
**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 State Conference Center
State College, PA.

**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.

**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/