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

EERI Leadership Communiqué

A message from the president, Laurie A. Johnson (M.EERI,1990)

While at the University of Washington a few weeks ago, I had the opportunity to visit with a few members of the local student chapter of EERI. Their enthusiasm for EERI and the Learning from Earthquakes (LFE) program is so exciting. Two of the graduate students participated in the LFE travel study program to New Zealand in May 2019 and we had a lively discussion about the recovery and resilience efforts following the 2010-2011 Canterbury and 2016 Kaikoura earthquakes. Reflecting on this during my flight home, I was filled with gratitude and hope.

As 2019 and the first year of the LFE Endowment campaign come to a close, over 90 members have pledged more than $1.8 million to securing the future of LFE for these and other future leaders in earthquake engineering and risk reduction. This breaks down to $970,000 in cash pledges and $845,000 in testamentary/estate pledges and is nearly halfway toward the $4 million goal we set for the campaign. This is a remarkable milestone for the Institute since, for the past decade, EERI has been funding the LFE program and individual event reconnaissance efforts from annual membership revenue, the Institute's general endowment fund, Institute reserves, and event-specific grants. The funding uncertainty year-on-year has been a strain on the program and a concern for the health of the Institute as a whole. Our $4 million target can provide an estimated annual income of $200,000 dedicated to LFE post-earthquake reconnaissance, the travel study program, and other core program activities as well as future innovations and initiatives.

As I write this, an LFE team is in Indonesia studying population displacement and relocation aspects of the September 28, 2018 Palu, Indonesia earthquake and tsunami. Their work will build upon EERI's ground-breaking research and development of the LFE Seismic Resilience Observatory framework to better understand earthquake impacts over time, space, and societal systems. EERI also deployed
quickly following the July 4 and 5 earthquakes near Ridgecrest, California. EERI (as part of the California Earthquake Clearinghouse) established physical and virtual clearinghouses to facilitate the timely exchange of reconnaissance observations. The physical clearinghouse brought together more than 50 investigators including EERI members. Following the physical clearinghouse, EERI organized a webinar where reconnaissance team members from multiple agencies and organizations presented observations. A recording of the webinar is now available at LearningFromEarthquakes.org.

In September, EERI, in partnership with the Alaska Earthquake Center, hosted the successful “One Year Later: Symposium on the 2018 M7.1 Anchorage Earthquake” in Anchorage, Alaska. More than 130 diverse stakeholders attended the three-day symposium that highlighted findings from ground motion recordings, structural and nonstructural performance, port and lifeline performance, and response and recovery efforts, including a field tour of impacted sites. The webinar recording and poster sessions are available at LearningFromEarthquakes.org. Highlights of the symposium are also available in Heidi Tremayne’s Leadership Communique in October as well as the October 1 issue of The Pulse. EERI appreciates the support provided by NSF, USGS, NIST, and FEMA for the symposium.

As the year comes to a close, EERI’s membership renewal campaign is now underway. The Board of Directors appreciates the 200+ respondents to the 2019 membership survey. We heard very clearly that members want relevant and timely information to help them in their careers and professions. We are working with staff and have launched a new Professional Development Committee to help enhance the Institute’s programming in this area, including a growing portfolio of webinars.

Surveyed members also rated LFE and Earthquake Spectra as the top offerings of the Institute. Your membership in EERI comes with a full-access subscription to both the regular and special edition issues of Earthquake Spectra. We are really looking forward to the January 2020 start of EERI’s publishing partnership with SAGE that will enhance members’ experiences with the journal both as a reader and an author. SAGE will publish the first issue of Earthquake Spectra in February 2020 (Issue 1, Volume 36).

So, I hope you feel like me that it is an exciting time for the Institute and that your investment as an individual or subscribing member is delivering both the value and opportunities to connect, learn, and lead with EERI. I also encourage you to reach out to at least one other person or organization and ask them to consider joining EERI. Details on membership benefits and levels are available at EERI-members.org/become-a-member, and our Membership and Communications Manager, Van Nguyen, is available if you need information materials or any other help.

As you think about your year-end giving, I ask that you please consider making a pledge to the LFE Endowment Campaign so that LFE and its unique suite of post-earthquake, multi-disciplinary learning and sharing opportunities will be strengthened and sustained for years to come. “Why I give” testimonials from some of our early donors highlight the importance of the program and the transformative impacts it has had on individual careers and seismic safety both nationally and abroad. I also invite you to read our full case statement online or contact me (laurie@eeri.org), Past-President David Friedman (davidf@eeri.org), Executive Director Heidi Tremayne (heidi@eeri.org), or call 415-491-0905 for more information.

On behalf of the Board of Directors, I want to express our sincere appreciation to Heidi Tremayne and staff at EERI for all of your hard work delivering an incredible array of programs, meetings, seminars, and member services this past year. I look forward to all that is in store for 2020, including the National Earthquake Conference and 72nd EERI Annual Meeting, March 2-6, 2020 in San Diego.

And, I wish everyone a very joyful holiday time and thank you for your membership and service to EERI.
2020 Annual Meeting and NEC to host largest Seismic Design Competition

Don't miss the largest EERI Undergraduate Seismic Design Competition to date, happening at the 72nd EERI Annual Meeting and the National Earthquake Conference (NEC2020), March 2-6, 2020 in San Diego, California! We have proposals from 50 teams coming from eight countries, from as far as Egypt, Romania, and Malaysia. Each team will design and construct a scaled wood mixed-use building based on a scenario in downtown San Diego, which will then be tested in several rounds of simulated earthquake shaking.

Aside from the action-packed SDC, the dynamic program agenda also features an exclusive first-look of results from a new earthquake scenario and risk study for the San Diego region. Developed by experts over the last five years, the scenario will showcase the impacts and consequences of a potential M6.9 earthquake on the Rose Canyon. Other program highlights include findings from the M7.1 Anchorage earthquake, the Ridgecrest earthquake sequence. Join hundreds of your colleagues — multidisciplinary professionals, leaders, and experts — at one of the premier earthquake risk reduction conferences. REGISTER TODAY for the 72nd EERI Annual Meeting and the National Earthquake Conference (NEC2020)!

If you are in need of financial support to attend the meeting, consider applying for one of our registration grants. Generously funded by the Federal Emergency Management Agency (FEMA), these awards are limited to graduate students, early-career academics and professionals who reside in the U.S., attend a U.S. university, or teach at a U.S. university as of November 22, 2019. Click here to apply by November 22.

Renew your membership for 2020
As we start to get busy with the holidays and other year-end festivities, please don't forget to renew your EERI membership for 2020. We've made it simple for you to renew — just click here! For the past several years, dues have remained the same, delivering all the benefits and value you've come to rely on from EERI, like the latest issue of Earthquake Spectra. We hope you have found value in your EERI membership and will choose to remain a part of our passionate and dedicated community. Click here to renew EERI your membership today!

EERI AWARDS

Carlos Molina Hutt awarded the Shah Prize

With 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.

**Dr. Carlos Molina Hutt** (M. EERI, 2011) has been awarded the 2019 EERI Shah Family Innovation Prize. Carlos is an Assistant Professor of Structural and Earthquake Engineering in the Civil Engineering Department at the University of British Columbia (UBC) in Canada. Prior to UBC, Carlos was a Lecturer at University College London (UCL) in the United Kingdom from 2013 to 2017. His strong academic background is mixed with significant high-level industry experience, which he gained as a structural engineer at Arup from 2009 to 2013, as well as through a number of consulting projects for city governments, the (re)insurance sector, and the humanitarian sector.

The work of his research group at UBC focuses on the development of methodological approaches to assess seismic risk in buildings and its implications on urban resilience, and on the translation of this knowledge into tools and information for use by practicing engineers, seismic planners, and policymakers. His goal is to enable seismic policy decision-making with explicit consideration...
of the societal and economic impacts of the performance of the built environment during major earthquakes. Among other activities, Carlos is leading an interdisciplinary research project aimed at reducing the catastrophic risk of a Cascadia megathrust earthquake in southwest British Columbia. To keep his research work relevant to practice, and to maximize its impact, he actively participates in technology transfer projects, such as the recently completed Applied Technology Council's San Francisco Tall Buildings Study and the United States Geological Survey's HayWired Earthquake Scenario.

Carlos has participated in the design and delivery of seismic risk mitigation programs such as Save the Children's Safer School Construction Program in Haiti following the 2010 earthquake. In 2016, he was nominated as a Structural Engineering Expert by the UK Cabinet office. As part of this role, he served on numerous post-earthquake disaster response missions as a member of the European Union Civil Protection and the United Nations Disaster Assessment and Coordination teams, including recent earthquakes in Ecuador (2016) and Mexico (2017). Since his relocation to Canada, Carlos became a board committee member of EERI's British Columbia Chapter and is an active member of the City of Vancouver's Seismic Policy Advisory Committee.

Considering the breadth and excellence of Carlos's leadership, research and engineering practice, it was clear to the prize committee that he is on a trajectory to be an outstanding leader in the field of earthquake risk mitigation in the coming decades. He will be awarded the 2019 Shah Family Prize at the 2020 EERI Annual Meeting Awards Ceremony on Thursday, March 5 during the National Earthquake Conference in San Diego.

Regional Chapter News

Northern CA: Special talk on Earthquake Early Warning with David Wald

Earthquake Early Warning (EEW) is coming to the U.S. West Coast. Can it deliver on what’s been promised? Hear what David Wald (M.EERI,1988) of U.S. Geological Survey has to say on the potential benefits and practical limitations of EEW, and suggest some potential ways to better communicate these realities. David is also the editor of Earthquake Spectra. The EERI Northern California chapter is hosting this FREE event in San Francisco on Thursday, November 21 at Arup in San Francisco. Learn more and register here.

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The EERI student chapter at California State University, Chico just launched this semester! The club has already grown to more than 20 members and is busy preparing for the Seismic Design Competition. Be sure to check out this video to see what the students are up to, featuring chapter president Jordan Beach (M.EERI,2018), and EERI members Curt Haselton (M.EERI,2014) and Ed Almeter (M.EERI,2017). View the video here.

If you missed the YMC-hosted webinar, “Engineering for Earthquake Resilience,” featuring David Bonowitz, S.E. (M.EERI,1994), you can catch it online here! The webinar explores earthquake resilience and how the idea is influencing earthquake engineering. In brief, resilience-based design shifts the emphasis from the safety of buildings and infrastructure to the recovery of communities. This webinar also considers the
implications of this shift and covers differences between resilience and performance-based design, retrofit programs, and other worthwhile efforts.

A few days left to apply to the EERI Younger Member Award

The EERI Younger Member Award recognizes early-career EERI members who have made outstanding contributions to EERI and its mission, especially those that have improved opportunities for and increased the impact of younger members. The recipient of this prestigious award will be recognized during the 2020 EERI Annual Meeting and National Earthquake Conference. The application deadline is November 17 at 11:59 pm PT. Click here to apply online!

Photo: Last year's YMA recipient Xin Ma (M.EERI,2016) with EERI Executive Director Heidi Tremayne (M.EERI,2004) and EERI President Laurie Johnson (M.EERI,1990).

Are you our next Housner Fellow?
We’re seeking exemplary early to mid-career professionals who are committed to earthquake risk mitigation for the Housner Fellows Program, Class of 2020! As a fellow, you will participate in a week-long Leadership Institute at Asilomar in California’s beautiful Monterey Peninsula. The interactive program consists of classroom training, homework, group work, and other leadership exercises. You will also get the opportunity to develop a group project that makes a real impact in the field. Please share this opportunity widely. Submit your application by Friday, December 6!

Photo: the 2017 Housner Fellows cohort, along with EERI Board Member, Dr. Lucy Arendt, on a week-long trip to Mexico engaging in visits, tours, and observations.
A sequence of three major earthquakes struck the Philippines in late October 2019. As part of the Learning from Earthquakes (LFE) Program, the Virtual Earthquake Response Team (VERT) has conducted an initial review of news articles and social media to develop summaries of earthquake impacts from the October 16 M6.4 Tulunan earthquake, October 29 M6.6 Bual earthquake, and the October 31 M6.5 Tulunan in the Philippines. The team summarized the earthquake characteristics and detailed initial reports on damages to structures. Additional research focused on the implementation of building codes in the region and impacts to schools.

The VERT summary is now available in the EERI LFE Earthquake Archive:

**Virtual Earthquake Reconnaissance Team (VERT): Phase 1 Response to earthquake sequence in Philippines: M6.4 Tulunan (10/16/2019), M6.6 Bual (10/29/2019), M6.5 Tulunan (10/31/2019)**

Contributors: **Wilfrid Djima** (M.EERI, 2019), Maggie Exton, **Erica Fischer** (M.EERI, 2010), **Mikael Gartner** (M.EERI, 2019), **Manny Hakhamaneshi** (M.EERI, 2009), **Amory Martin** (M.EERI, 2017), and b (M.EERI, 2015).

The Virtual Earthquake Reconnaissance Team is led by Co-Chairs **Erica Fischer** and **Manny Hakhamaneshi**.

EERI is currently monitoring the disaster to determine whether to conduct subsequent response phases to better inform onsite reconnaissance efforts for other response organizations. To share other information or reports about these earthquakes, please contact EERI Program Manager Maggie Ortiz-Millan at Maggie@eeri.org.

Photo: A damaged hotel after an earthquake in Kidapawan, a town in the southern Philippines, on Thursday (Ferdinandh Cabrera/Agence France-Presse — Getty Images/New York Times)
November 22: COSMOS Technical Session in Oakland

The 2019 COSMOS Technical Session — happening on Friday, November 22 in Downtown Oakland — provides a forum for seismologists and seismic engineers to come together and discuss issues related to the use of earth science data (including earthquake recordings) by the engineering community. Learn more about the session and register here

USGS seeks applications to the Mendenhall Postdoctoral Fellowship

The USGS Earthquake Science Center invites applications to Mendenhall Postdoctoral Fellowships on a variety of research topics. Positions are based out of one or more of USGS offices in Seattle, Pasadena, and Moffett Field. The deadline to apply is January 6. Learn more

Job alert: University of Auckland seeks Structural Engineering faculty

The University of Auckland in New Zealand seeks candidates for a full-time permanent position in Structural Engineering at the Lecturer / Senior Lecturer / Associate Professor Levels. Applicants must hold a Ph.D. degree in Civil Engineering or a related discipline by the date of appointment. Learn more

ICYMI: Earthquake Spectra November 2019 (Vol. 35 Issue 4)

In case you missed it, the November 2019 issue of Earthquake Spectra (Vol. 35 Issue 4) is now available online! We've just mailed out print copies of the new issue. You may order additional copies, as well as past issues from the EERI Knowledge Center & Online Store, until December 31, 2019. And remember, as an EERI member, you have FULL electronic access to Spectra.
Highlights of the November issue include:

- "The Behavior of the Salesforce Tower the Tallest Building in San Francisco California Inferred from Earthquake and Ambient Shaking" by Mehmet Çelebi (M.EERI,1980), Hamid Haddadi (M.EERI,2002), Moh Huang (M.EERI,1984), Michael Valley (M.EERI,1995), John Hooper (M.EERI,1987), and Ron Klemencic

- "Simulation Framework for Infilled RC Frames Subjected to Seismic Loads" by Supratik Bose (M.EERI,2014), Jimena Martin (M.EERI,2019), and Andreas Stavridis (M.EERI,2005)

- "Assessment Supporting the Use of Outcropping Rock Evolutionary Intensity Measures for Prediction of Liquefaction Consequences" by Zach Bullock (M.EERI,2018), Shideh Dashti (M.EERI,2009), Abbie B. Liel (M.EERI,2009), Keith A. Porter (M.EERI,1998), and Zana Karimi

**NEWS OF THE PROFESSION**

- Links to recent news and views

  - After major earthquake, Indonesia lifts tsunami alert (New York Times)
  - 7.1 magnitude earthquake hits off Indonesia coast (Associated Press)
  - Earthquake conspiracy theorists are wreaking havoc during emergencies (VICE)
  - Biggest California earthquake in decades ruptured on at least 24 faults (Los Angeles Times) Tim Dawson (M.EERI,2008) interviewed.
  - Drones reveal earthquake hazards hidden in the abyss (Science Magazine)
  - Opinion: Earthquakes and the built environment (The Manila Times)
  - Magnitude-5.4 quake hits south France, 1 reported injured (Associated Press)
  - Fracking may indeed be causing earthquakes in Texas, according to UT study (The Dallas Morning News)
  - West Texas has been hit by over 7,000 earthquakes in the last 10 years (Newsweek)
  - 5 killed, 300 injured as earthquake hits northwestern Iran (CNN)
  - Earthquakes in Southern California put stress on a major fault line that's been dormant since records begin (Newsweek)
Could seismic networks reveal hard-to-detect nuclear tests? (AGU Earth and Space Science News)

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."

Monday, April 27, 2020 - April 30
SSI 2020 Annual Meeting
SSI 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 StructuralDesign 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/