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

▷ Save the Date: October 10 for the NGA-East Seminar
Please join EERI and partners for a one-day seminar on the Next Generation Attenuation Relationships for Central & Eastern North-America (NGA-East).

**When:** Thursday, October 10, 9 am - 5 pm ET

**Where:** National Institute of Standards and Technology (NIST) in Gaithersburg, MD, just outside of Washington, D.C.

**What:** NGA-East: Ground Motion Hazard for Very Hard Rock

At this seminar, you’ll gain a deeper understanding of the database, methodology, and models developed by the NGA-East project. You’ll learn about the technical basis and model development of the ground motion models (GMM) for median and standard deviations for Central and Eastern North America.

The seminar will also summarize the key differences with previously released GMMs for use in probabilistic seismic hazard analyses. The seminar is focused on the hazard implementation for very hard rock, as for nuclear applications and for site-specific studies. We will also touch on the implementation of the NGA-East models in the USGS National Seismic Hazard Models, and the recommended site amplification models.

NGA-East is a multi-disciplinary research project coordinated by the Pacific Earthquake Engineering Research Center at the University of California, Berkeley. The project is jointly sponsored by the U.S. Nuclear Regulatory Commission, the U.S. Department of Energy, the Electric Power Research Institute, and the U.S. Geological Survey.

**Guest speakers:**
Who Should Attend? Nuclear Power Engineers, Geotechnical, Lifeline, and Structural Engineers; Seismologists; Engineering Geologists; Urban Planners; Insurance Professionals; Students; and Risk Modelers.

Stay tuned for registration, and for more information please click here.

Meet the 2019-2020 EERI/FEMA NEHRP Graduate Fellows in Earthquake Hazard Reduction

We're excited to announce Andrew J. Makdisi (M.EERI,2017) and Sarah Wichman (M.EERI,2018) as the 2019-2020 EERI/FEMA NEHRP Graduate Fellows! The one-year fellowship seeks to foster the participation of those working toward goals and activities of the National Earthquake Hazards Reduction Program. We look forward to highlighting the fellows' research at the EERI 2020 Annual Meeting. To learn more about the fellowship, click here.

Andrew J. Makdisi
Ph.D. Student, University of Washington

Andrew's research focuses on soil liquefaction during earthquakes and the ensuing ground failure that often results. The project, which is funded through the NIST Disaster Resilience Research Grants Program, seeks to develop a predictive framework that separates the lateral spreading problem into components that occur before and after the onset of liquefaction, and utilizes different, optimal ground motion intensity measures to describe the mechanics of each component. The goal is to account for the timing of liquefaction in the development of a more efficient semi-empirical method for performance-based prediction of lateral spreading displacements.

Andrew currently serves as vice president of the EERI student chapter at UW and on the Board of Directors for the Washington professional chapter. He participated in the Learning from Earthquakes Travel Study Program in New Zealand earlier this year.
Andrew received a B.S. in Civil Engineering from the University of California, Davis in 2012 and an M.S. in Civil Engineering from the University of Washington in 2016.

Sarah Wichman  
Ph.D. Student, University of Washington

Sarah is currently working to develop a resilient-based seismic design methodology for tall timber buildings with the NHERI TallWood Project. Her research focuses on the performance of using cross-laminated timber panels in post-tensioned rocking wall systems to create a reliable, cost-effective, and rapidly constructible, ductile seismic load resisting system. She works to develop and validate numerical models from large scale dynamic tests and sub-assembly tests to contribute to the development of seismic design recommendations for tall timber buildings.

Sarah currently serves as president of the EERI UW student chapter and seeks to increase the involvement of a multidisciplinary group of students. She also participated in the Learning from Earthquakes Travel Study Program in New Zealand earlier this year. Sarah received a B.S. in Civil Engineering from the University of Wisconsin-Madison in 2016.

Honorable Mention - Dustin Cook

EERI's Student Awards Committee, consisting of eleven members led by the University of Texas at Austin Assistant Professor Patricia Clayton (M. EERI, 2012), reviewed the application packages and made the final selections. The committee awarded an honorable mention to candidate Dustin Cook (M.EERI, 2017) from the University of Colorado, Boulder.

Last chance: Let us know what you think by September 5
We'd love to hear from more of you. We've extended the deadline, so if you haven't done so, please take a few moments out of your day to share your feedback and ideas with us by Thursday, September 5.

Your feedback will help us make sure we're doing our best. Click here to take the survey.

Incentives: For those who complete the survey, there will be a special drawing at the conclusion for 4 individual $50 Amazon gift cards.

LEARNING FROM EARTQUAKES

Field trip added for M7.1 Anchorage Earthquake Symposium
In partnership with the Alaska Earthquake Center, join us September 24-26 in Anchorage for a special symposium on the 2018 M7.1 Anchorage Earthquake! The symposium will include a one-day field trip via motorcoach to explore sites around Anchorage and to the north that experienced damage.

The planning committee will finalize the itinerary soon; sites that may be included are:

- Sunset Park, Anchorage – site of old Government Hill elementary school, comparison of 1964 and 2019 earthquakes
- Delaney Park Array, Anchorage – downhole strong-motion array
- UAA, ANTHC, Port of Alaska, Anchorage
- Sand Lake and Campbell Areas, Anchorage – residential damage
- Eagle River locations – Gruening Middle School and other locations
- Matanuska-Susitna Valley

Be sure to visit the symposium website to get the most updated information on the agenda, breakout session topics, and logistics.
About the Symposium

The Nov. 30, 2018, M7.1 Anchorage earthquake in Southcentral Alaska was the most impactful earthquake in the U.S. in many years, presenting a major learning opportunity for the U.S. earthquake risk reduction community. At this symposium, you'll get to connect with others in the field, hear the latest research, and access learning opportunities to stimulate new investigations and collaborations.

Drawing on local and national experts in a wide range of disciplines related to earthquake research and practice, the symposium will cover a wide range of topics, including but not limited to: seismology, geology, ground motion, structural and geotechnical engineering, lifelines, public health, emergency management and response, tsunami monitoring and modeling, school safety, and public policy.

MITIGATION CENTER

New resources added to the Mitigation Center

We're pleased to share new resources on the Mitigation Center. The site provides earthquake hazard mitigation resources in the following categories: Policy and Regulations, Structures, Lifelines, Educational Materials, Developing Countries, and Case Studies. We're always working to add new resources to the website. If you would like to submit a resource to the Mitigation Center, please send them to mitigation@eeri.org.

Below are some of the new articles:

The Resilient City: Defining What San Francisco Needs from its Seismic Mitigation Policies
February 2009, San Francisco Planning and Urban Research Association

This paper addresses the policy problem which relates to making San Francisco a more resilient city in the face of a natural disaster. More specifically, the standards we use to define the safety of a structure. Policymakers focus on different aspects of safety than engineers do. This paper provides four goals for improving the city's resilience through seismic mitigation policies. Access the report: The Resilient City: Defining What San Francisco Needs from its Seismic Mitigation Policies
Time-dependent seismic risk of bridges is assessed while accounting for the effect of aftershocks and the uncertainty in the damage state after a mainshock event. To achieve this, a Markov risk-assessment framework was adopted to account for the probabilistic transition of the bridge structure through different damage states and time-dependent aftershock hazard. Access the report: *Aftershock Seismic Vulnerability and Time-Dependent Risk Assessment of Bridges*

This paper emphasizes the importance of lifelines. Reducing the risk to lifelines should be of equal importance to infrastructures. SPUR has developed this policy paper to raise awareness of the City's vulnerability and to encourage steps necessary to increase the City's resilience to a major earthquake, with respect to lifelines. This paper is a component of SPUR's seismic hazard mitigation initiative. Access the report: *Lifelines: Upgrading Infrastructure to Enhance San Francisco's Earthquake Resilience*

Register today! Special webinar presented by the YMC

Register today for a special webinar, “Engineering for Earthquake Resilience,” featuring David Bonowitz, S.E. (M.EERI,1994), presented to you by the Younger Members Committee!

**Thursday, September 12 at 11 am PT / 2 pm ET | Click here to register**

What is earthquake resilience, and how is this idea 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 will consider the implications of this shift and cover differences between resilience and performance-based design, retrofit programs, and other worthwhile efforts.
SPEAKER BIO: David Bonowitz (M.EERI, 1994) is a structural engineer practicing in San Francisco. He is a Fellow Member of SEAONC and SEAOC, and past chair of the NCSEA Existing Buildings and Resilience committees. David is an appointed member of the new FEMA-NIST working group on Functional Recovery of the Built Environment and Critical Infrastructure. He is a co-author of “Functional Recovery: A Conceptual Framework,” an EERI white paper, and lead author of “Resilience-based Design and the NEHRP Provisions,” now in review by the NEHRP Provisions Update Committee.

STUDENT CHAPTERS

Call for Papers: EERI Annual Undergraduate Student Paper Competition

We're pleased to announce a Call for Papers for its Annual Undergraduate Student Paper Competition! The purpose of the competition is to promote the active involvement of students in earthquake engineering and the earthquake hazards research community. A registration grant for the EERI Annual Meeting will be made available to the winning author, in addition to a small travel stipend, as long as funds are available. Click here to apply.

Guidelines:

- The paper must be directly related to earthquake engineering or earthquake hazard reduction.
- The paper or extended abstract must not exceed four (4) pages in length inclusive of all figures, tables, photographs, appendices, and list of references. Final papers from other programs, such as REU's, will be accepted if shortened to 4 pages.
- The paper must be authored by the student alone. In addition, a faculty member or other advisor can provide feedback before submission of the paper but may not co-author the paper. The advisor’s name should be included in the “acknowledgments” section of the paper.
- Applicants must be U.S. residents enrolled at an accredited U.S. college or university.
MEMBER SPOTLIGHT

Dan M. Frangopol publishes book on life-cycle of fatigue-sensitive civil and marine structures

Congratulations to Dan M. Frangopol (M.EERI,1987), Fazlur R. Khan Endowed Chair of Structural Engineering and Architecture at Lehigh University, on the recent publication of his book, *Life-Cycle of Structures Under Uncertainty: Emphasis on Fatigue-Sensitive Civil and Marine Structures*. Frangopol co-authored the book with Sunyong Kim, Lehigh alumnus and Assistant Professor of Civil and Environmental Engineering at Wonkwang University, South Korea. Read more

PUBLICATIONS

Exciting new changes ahead with Earthquake Spectra

As you might have already heard, we are excited to partner with SAGE Publishing beginning in January 2020. SAGE will publish the first issue of Earthquake Spectra in February 2020 (Issue 1, Volume 36). For a full FAQ covering the transition, please click here.

After an extensive 3-year process involving EERI's board, editors, and staff, we've chosen to partner with SAGE. SAGE are experts in working with previously self-published titles and we believe our journal is in the best hands. You will get more value from your membership: an enhanced reading experience, greater ease of access, as well as improved author services. EERI and SAGE are making every effort to ensure that the transition runs as smoothly as possible.

Please note that after the transition, you can access journal content via the SAGE Journals platform. Until the new website and author submission interfaces are ready later this fall, you can continue to access content
Job alert: Opportunity at the USGS Earthquake Science Center
The USGS Earthquake Science Center has an open position for a Geophysicist, Engineer or Computer Scientist to lead the National Strong Motion Data Center. Learn more and apply here.

Job alert: Dynamic Isolation Systems seeks Project Engineer
Dynamic Isolation Systems, a leader in earthquake protection for buildings, bridges and equipment throughout the world, seeks a Project Engineer based in Reno, Nevada. This position entails working in a small technical group to prepare designs, proposals, bids, and test reports. Explore this opportunity here.

Job alert: GEM seeks an Earthquake Risk Modeler
Global Earthquake Model (GEM) is seeking an Earthquake Risk Modeler to work on the development of exposure, vulnerability, and risk models on a national and regional scale. If you have expertise in one or more of the following disciplines: structural engineering, earthquake engineering and/or earthquake loss modelling, click here to learn more about the position and how to apply.

Deadline extended: Call for papers and sessions from the 17th World Conference on Earthquake Engineering
The 17th World Conference on Earthquake Engineering — happening September 13-18, 2020 in Sendai, Japan — seeks proposals for papers and sessions. Proposals are now due September 15, 2019. Read more

NEWS OF THE PROFESSION

Links to recent news and views

- Earthquake fault long thought dormant could devastate Los Angeles, researchers say (Los Angeles Times)
- Hidden earthquake risk found lurking beneath Los Angeles (National Geographic)
- Magnitude 6.3 earthquake rumbles 150 miles off Oregon coast (Associated Press)
- Washington releases tsunami simulation videos (Associated Press)
- Seismic recording facility Weston Observatory threatened by lack of money (MetroWest Daily News)
- Asia-Pacific Disaster Report 2019 (United Nations Economic and Social Commission for Asia and the Pacific)
- New urban resilience program for Central Asia (United Nations Office for Disaster Risk Reduction)
- Peru announces earthquake alert and proposes resilient cities (Prensa Latina)
- 2 quakes in 2 days, no warning from ShakeAlertLA. Now the app is getting reworked (Los Angeles Times)
- Yellowstone was rocked by a magnitude 7.3 earthquake 60 years ago – and the scars are still visible today
- Wind-triggered ground shaking masks microseismicity (Earth & Space Science News)
- Sinking wastewater triggers deeper, stronger earthquakes (Earth & 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."

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 (RBDC)
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.iaee.or.jp/](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/](http://lifelines2021.ucla.edu/)