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 Honorary Members: William J. Hall and Anne S. Kiremidjian**

EERI is pleased to announce that William J. Hall (M.EERI, 1973) and Anne S. Kiremidjian (M.EERI, 1976) have been selected as Honorary Members of EERI! One of the highest honors from the Institute, Honorary Membership is awarded to members who have made sustained and outstanding contributions to the field of earthquake engineering and to EERI.

**William J. Hall** is Professor Emeritus of Civil Engineering at the University of Illinois at Urbana-Champaign, and a consulting engineer. Dr. Hall served on the EERI Board of Directors from 1979 to 1981 and was a recipient of the prestigious Housner Medal. He joined the UIUC faculty of the Department of Civil Engineering in 1954 and served as Head of the Department from 1984-91. There he specialized in structures, materials and structural dynamics and engaged in research and instruction. His research centered on earthquake engineering and military structures. Professor Hall was also involved with many large engineering projects, including being part of the design team for the Trans-Alaska petroleum pipeline, many nuclear power plants, and major projects of agencies of the U.S. government. Dr. Hall received a B.S. degree in civil engineering from the University of Kansas and his M.S. and Ph.D. degrees from the University of Illinois at Urbana-Champaign.

**Anne S. Kiremidjian** is a Professor in the Department of Civil and Environmental Engineering at Stanford University. From 1987 to 2002 she served as the Co-Director and Director of the John A. Blume Earthquake Engineering Center at Stanford University. At Stanford, she teaches courses in structural analysis, earthquake hazard and risk analysis, structural reliability and decision theory. Her research over the years has focused on all aspects of earthquake hazard and loss estimation, regional risk assessment, risk analysis of transportation systems, wireless sensor and sensing system development for structural performance evaluation, and the development of damage detection algorithms.
using sensor measurements. Dr. Kiremidjian received her B.S. degree from Columbia University in Civil Engineering and her M.S. and Ph. D. degrees from Stanford University in Structural Engineering.

**FINAL NOTICE: Renew your EERI membership before the grace period ends**

If you have not yet renewed your membership for 2020, your 2019 membership will no longer be active and your member benefits will end on February 1. **Click here to renew your membership!**

Renew your EERI membership now for 2020 to remain a part of our vibrant community and continue to enjoy these valuable benefits:

- Get the Pulse e-newsletter delivered to your inbox every two weeks and have full access to the Pulse archives dating back to 2000. Stay up-to-date with what's happening in the field, filled with timely information on recent earthquakes, new publications, conferences, news of the profession, job opportunities, and more. **Non-members do not have Pulse delivered to their inbox or access to the Pulse archives.**

- Retain full access to the premier journal of earthquake engineering, Earthquake Spectra — now with a better and more user-friendly interface — to keep you informed of the latest in earthquake engineering practice, codes and regulations, public policy, and investigation reports. **Non-members will not have full access to Spectra following the promotional period next month.**

- Pay the discounted EERI member-only rate to the **2020 National Earthquake Conference** in San Diego, March 4-6 — $100 off the full conference rate!

- Free access to professional development webinars throughout the year. We have one coming up next month on teaching methods for science and engineering fields and another one in April on USGS web tools. **Non-members must pay for these webinars.**

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**NATIONAL EARTHQUAKE CONFERENCE**

- **Register for the NEC — happening in less than five weeks!**
The National Earthquake Conference (NEC) and EERI Annual Meeting is less than FIVE weeks away! As an EERI member, you get to save $100 off the full-conference rate! **Register today** and select “EERI Member Rate” to unlock your member benefit. We have an incredible program designed for you, including the following sessions on lessons for practice and future research directions from recent earthquakes in Anchorage and Ridgecrest. Stay tuned for more information on the Puerto Rico earthquake sequence sessions.

**Findings from the 2018 M7.1 Anchorage Alaska Earthquake:** This session will summarize major outcomes in earth science, geotechnical engineering, and structural engineering from the 2019 Symposium on the 2018 M7.1 Anchorage Earthquake. Speakers include:

- **Sterling Strait**, Structural Engineer, Alyeska Pipeline Service Company (M.EERI,2019)
- **Jessica Feenstra**, Geologist and Geophysicist, Golder (M.EERI,2017)
- **Eric Thompson**, Research Geophysicist, USGS (M.EERI,2005)
- Wael Hassan, Associate Professor, University of Alaska, Anchorage
- Rich Koehler, Assistant Professor, University of Nevada
- Natalia Ruppert, Seismologist, Alaska Earthquake Center

**Ridgecrest Earthquake Sequence: Science Findings and Lessons:** This session will focus on science findings and lessons from the Ridgecrest earthquake sequence in July 2019. Speakers include:

- **Tim Dawson**, Senior Engineering Geologist, CGS (M.EERI,2008)
- **Silvia Mazzoni**, Lecturer and Project Scientist, UCLA (M.EERI,2010)
- Eric Fielding, Principal Scientist, NASA Jet Propulsion Laboratory
- Annemarie Baltay, Research Geophysicist, USGS
- Kevin Milner, Computer Scientist, Southern California Earthquake Center

**Ridgecrest Earthquake Sequence: Engineering Findings and Lessons:** This session will focus on engineering findings and lessons from the Ridgecrest earthquake sequence in July 2019. Speakers include:

- **Wayne Chang**, Principal, Structural Focus (M.EERI,2020)
- **Kelly Cobeen**, Associate Principal, Wiss, Janney, Elstner Associates, Inc. (M.EERI,2000)
- **Craig Davis**, Civil and Geotechnical Engineer, retired from the Los Angeles Department of Water and Power (M.EERI,1995)
- **Jonathan P. Stewart**, Professor of Civil and Environmental Engineering, UCLA (M.EERI,1994)
- **Dave Swanson**, Executive Vice President, Reid Middleton (M.EERI,1991)
Seismic Design Competition seeks judges

Held at the National Earthquake Conference in San Diego this year, the 17th Annual EERI Undergraduate Seismic Design Competition will showcase more than 50 teams from 8 different countries! These teams have spent many months and countless hours designing and constructing their models.

The Student Leadership Council is now seeking judges to evaluate team presentations, posters, and design architecture. Judging will take place throughout the day on Tuesday, March 3 and requires a 1-1.5 hour time commitment. If you would like to volunteer your time to better the next generation of earthquake engineers, please complete this interest form by Tuesday, February 11.

EERI extends a warm welcome to the following teams invited to compete this March:

Ain Shams University; Brigham Young University; Cal Poly San Luis Obispo; Cal Poly Pomona; CSU Chico; CSU, Fullerton; CSU, Long Beach; CSU, Los Angeles; CSU, Northridge; CSU, Sacramento; Cornell University; Helwan University; Lehigh University; McMaster University; New York University Tandon School of Engineering; North Carolina State University; Oregon State University; Ozyegin University; Pontificia Universidad Catolica Madre Y Maestra; Portland State University; Purdue University; San Francisco State University; Stanford University; Technical University of Civil Engineering Bucharest; Technical University of Cluj-Napoca; Universidad de las Fuerzas Armadas; Universidad Iberoamericana; Universidad Politécnica Salesiana; University at Buffalo; University of British Columbia; UC Berkeley; UC Davis; UC Irvine; UCLA; UC San Diego; University of Colorado Boulder; University of Connecticut; University of Illinois Urbana-Champaign; University of Massachusetts Amherst; University of Memphis; University of Michigan; University of Nebraska- Lincoln; University of Nevada Reno; University of Notre Dame; University of Puerto Rico at Mayagüez; University of Southern California; University of Texas Austin; University of Toronto; University of Victoria; University Teknologi Malaysia; and Virginia Tech.

WEBINARS

USGS Web Tools for Site-Specific Ground Motion Hazard Analysis

USGS Web Tools for Site-Specific Ground Motion Hazard Analysis

Wednesday, April 8 at 11 am PT / 2 pm ET | REGISTER HERE
FREE for EERI members | $50 for non-members (PDH hours included upon request)

This webinar will introduce and demonstrate how USGS web tools can be used to conduct some types of site-specific seismic hazard analysis. The new 2019 California Building Code adopts the ASCE/SEI 7-16 Standard ("Minimum Design Loads and Associated Criteria for Buildings and Other Structures") which requires site-specific ground motion analysis for many more structures than prior editions. For
example, now site-specific analysis shall be performed for structures on Site Class D and E sites with S1 greater than or equal to 0.2g, with some exceptions. The new 2019 California Building Code is effective as of January 1, 2020.

Participants will leave the webinar with a greater understanding of how USGS web tools can be used to perform site-specific ground motion hazard analysis. Participants involved in conducting site-specific hazard analysis will benefit from the webinar. The webinar will also provide an opportunity for feedback on the USGS web tools from earthquake engineering users.

The webinar will include an introduction from Jorge Meneses (M.EERI,2006), RMA Group, Inc., Nicolas Luco, USGS, will demonstrate the USGS web tools. Following the demonstration, Nicolas Luco and Peter Powers (M.EERI,2018), also of USGS, will be available to answer questions from participants.

Explore Innovative Teaching Methods in Science & Engineering

Join us for a special webinar presented to you by the Younger Members Committee!

Explore Engaging Teaching Methods for the Science and Engineering Fields
Thursday, February 13 at 12 pm PT / 3 pm ET | REGISTER HERE
FREE for EERI members | $25 for non-members (PDH hours included upon request)

Learn how you can incorporate experiments and demonstrations to enhance your teaching methods and improve your students' learning outcomes. This webinar is designed for graduate students, academics, and other practitioners in the science and engineering fields with any and all levels of teaching experience. You'll hear two dynamic presentations touching on different aspects of this topic.

Incorporating Demonstrations into Engineering Classrooms and Outreach
Diane Moug, Ph.D. (M.EERI,2014)
Assistant Professor, Civil and Environmental Engineering
Portland State University

You will gain new strategies on using demonstrations in different settings, including in classroom teaching and engineering outreach events. In the classroom setting, demonstrations have several benefits including, breaking up the pace of lecture, communicating technical concepts, offering different teaching styles, and reinforcing learning outcomes. For engineering outreach events, demonstrations should be able to communicate engineering concepts to the public and provide opportunities to spark excitement in outreach attendees. The presentation will provide examples, including “the iron glove” and “water flows uphill” demonstrations.

Learn by Doing: Engaging Students in Experimentation
Anahid Behrouzi, Ph.D.
Assistant Professor, Architectural Engineering
California Polytechnic State University, San Luis Obispo
Hands-on experimentation helps students develop a clearer understanding of complex course concepts, exhibit greater satisfaction with the overall learning experience, and have more confidence in future research opportunities. You will explore how to incorporate such experiments into structural engineering courses on dynamics, earthquake engineering, and seismic design in steel. The presentation will highlight examples such as small-scale dynamic tests, forced-vibration testing, and large-scale laboratory tests for steel frame and bracing systems. The presentation will also cover data collection and analysis techniques including smartphone accelerometer applications and data analysis through EMAPS and MATLAB.

MEMBER SPOTLIGHT

Sudhir Jain awarded the Padma Shri, among India's highest civilian honors

We're pleased to share that Sudhir Jain (M.EERI,1987), Professor of Civil Engineering and Director at the Indian Institute of Technology Gandhinagar, has been awarded the Padma Shri for his significant contribution to the science and engineering field. The Padma Awards are among the highest civilian honors in India. Dr. Jain is an internationally-recognized expert in earthquake engineering and served as the President of the International Association for Earthquake Engineering from 2014 to 2018. He has also provided comprehensive earthquake engineering consultancy for major bridge projects, buried pipelines for petrochemicals, concrete dams, and the like to numerous organizations. Dr. Jain has contributed significantly to the development of Indian seismic codes, conducted numerous short courses and seminars on seismic design for practicing engineers and college instructors.

Feng Li selected Engineering News-Record Northwest 2020 top young professional

Feng Li (M.EERI,2014) of Golder has been selected as one of the Engineering News-Record Northwest 2020 top young professionals! The class comprises 10 young industry leaders under 40 years of age and from the Northwest region (Alaska, Oregon, and Washington)

A senior project engineer at Golder, Feng's expertise centers on geotechnical earthquake engineering and site-specific seismic hazard assessment. She joined Golder seven years ago as a junior engineer and works as part of the firm's global seismic team. Li's projects include seismic hazard analysis for a New Zealand major port damaged by a large earthquake; a risk
category V (the highest category) project for the U.S. Army Corps of Engineers; and U.S. sites on an 800-mile-long pipeline that extends from seismically quiet terrain to very active regions. Read more

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**PUBLIC POLICY AND ADVOCACY**

- Important information on Prop. 13 for California voters

At the recommendation of EERI's Public Policy and Advocacy (PPA) California Legislative Subcommittee, the EERI Board of Directors has taken a neutral position on Proposition 13 — the only statewide measure on California's March 3 primary. While EERI holds a neutral position, we highly encourage you to learn more about this important measure, which has the potential for providing funding for seismic risk reduction in school, college, and university buildings.

Prop 13 would authorize $15 billion to build and repair public schools, including $9 billion for preschool and K-12 schools, $4 billion for universities, and $2 billion for community colleges. For K-12 schools, Prop 13 would give projects meant to improve “health or life safety” the highest funding priority and amends Education Code § 17075.10 to govern projects mitigating unacceptable seismic risks, putting them under the health and safety umbrella.

The subcommittee acknowledged the benefit to school safety if educational facilities pursued seismic retrofit projects or if new school construction replaces deficient facilities. But the lack of definitive commitment of funds to seismic risk reduction versus other health hazards, and the broad bond scope encouraged the Subcommittee to offer a “Neutral” position for Prop 13. If Prop 13 passes, PPA can then advocate for school districts to take advantage of the available funds for seismic risk reduction projects.

For more information on Prop 13, review the following resources:

- Information from the California Secretary of State
- Full text of AB 48, which put Prop 13 to voters
- Ballotpedia
- Analysis from CalMatters

**Influence seismic safety with a powerful voice — join PPA!** Join EERI's Public Policy and Advocacy Committee and stay engaged with the broader seismic safety and public policy community. The committee reviews significant state and federal policy initiatives regarding seismic safety and works with the EERI Board of Directors to craft official policy positions. Through this work, the committee seeks to forge
EERI is pleased to release an updated white paper titled, "Functional Recovery: A Conceptual Framework with Policy Options," leading the earthquake risk reduction field in a new way of thinking about resilience and formulating responsive policy solutions. This version supersedes our white paper dated July 24, 2019, and includes two parts and a new executive summary. The first part contains the full language of the conceptual framework that was previously released, with a few slight revisions and updates.

The new second part explores how legislatures and government agencies at the federal, state, and local level can develop or implement policies for functional recovery. The policy options vary in scale and focus, however, the white paper considers ideas for buildings and infrastructure, both new and existing. EERI recognizes that the normal processes for developing design standards can and should be used and that there are also interim options available to policymakers.

In this updated paper, EERI explores a diverse suite of policy possibilities organized into the following four categories:

1. Legislation and regulations that require designing and planning for functional recovery, in addition to safety.
2. Interim programs that encourage designing and planning for functional recovery.
3. The development of technical consensus, specifically in the form of standards that set objective design criteria and planning strategies for achieving specified functional recovery times.
4. The development of policy consensus, specifically in the form of building code provisions and infrastructure regulations that assign, with local customization, acceptable functional recovery times to buildings and lifeline infrastructure systems based on their role in supporting various community functions.

The paper will inform a new NIST-FEMA working group mandated by recent national legislation and others considering new functional recovery standards and practices. You can expect to hear more about this at the EERI Annual Meeting and National Earthquake Conference in March 2020.
Liu Huixian Earthquake Engineering Scholarship Awards for graduate students

The Huixian Earthquake Engineering Foundation and the US-China Earthquake Engineering Foundation are pleased to announce that about ten (10) Liu Huixian Earthquake Engineering Scholarship Awards are available in 2020. 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). Applications are due June 30, 2020. Learn more about this opportunity.

Call for Abstracts: San Fernando Earthquake Conference (Lifelines2021)

The UCLA/ASCE Lifelines Conference 2021, February 7-10, 2021 — commemorating the 50th anniversary of the San Fernando Earthquake — is seeking session, paper, and presentation abstracts. The deadline is March 24. Learn more and submit here.

NEWS OF THE PROFESSION

Links to recent news and views

- Powerful earthquake strikes Caribbean, but no reports of injuries or damage (NPR)
- Powerful earthquake strikes between Jamaica and Cuba (ABC News)
- Caribbean 7.7 quake: two terrible myths and one great piece of advice (Forbes)
- A month after Puerto Rico’s earthquakes began, more than 4,000 still sleep outside (Miami Herald)
- Puerto Rico opens only 20% of schools amid ongoing quakes (Associated Press)
- 4.9 magnitude quake shakes Albania, people in the streets (Associated Press)
- Magnitude 5.2 quake strikes off Greek island of Karpathos (Associated Press)
- Turkish rescuers find last quake victims; death toll hits 41 (Associated Press)
- Earthquake-damaged buildings cripple Puerto Rico (CNN)
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
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/