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 Executive Director
By Heidi Tremayne (M. EERI, 2004)

Can you guess how many hours that EERI members volunteered in 2018? I couldn't so I decided to make a rough calculation. I was stunned! Keep reading to see my back of the envelope calculation for the number of hours it took our enthusiastic and dedicated members to achieve our collective list of 2018 accomplishments below.

- *Earthquake Spectra* produced 4 regular issues with a total of 89 papers, 10 more than a typical year, due to the amount of technically significant papers submitted. We also welcomed new Editor David Wald and thanked retiring Editor Jonathan Stewart for his five years of exemplary stewardship.

- Learning from Earthquakes (LFE) responded to 6 earthquakes in Taiwan, Japan, Indonesia, and Alaska, producing 5 VERT reports and 2 clearinghouse websites. LFE also produced a new website to better enable members and the public to search our wealth of resources and information.

- The Public Policy and Advocacy committee was very active producing 2 new policy position statements for the Institute about confined masonry and earthquake early warning, and advocating for the passage of 3 pieces of legislation, including the NEHRP Reauthorization Bill that finally passed after many years of stagnation.

- LFE launched a remote earthquake clearinghouse on behalf of the NEHRP agencies for the M7.0 Anchorage Alaska Earthquake in November 2018 that facilitated information sharing and coordination for those conducting field reconnaissance. Ten
clearinghouse briefing calls have been conducted since the earthquake occurred with more than 100 participants.

- LFE continued our response to the 2017 Puebla-Morelos Earthquake in Mexico by hosting a technical case studies webinar and an 11NCEE Special Session to share findings and lessons. The Housner Fellows are also currently doing longitudinal studies about the resilience of the Mexico City region that will also enhance our understanding of this earthquake.

- 815 technical papers, 575+ oral presentations, 250+ poster presentations, and 135 sessions made the 11NCEE a critical meeting place for researchers and practitioners to share the latest developments in all fields related to earthquake risk reduction.

- Three new student chapters were formed, resulting in a total of 82 EERI Student Chapters around the globe who put on technical programming and outreach activities for their members.

- The 2018 Undergraduate Seismic Design competition hosted a record number of 40 teams representing 8 countries around the world, 16 U.S. States, and Puerto Rico with University of California, Berkeley ("Cal"), University of California, Los Angeles (UCLA), and Technical University of Cluj-Napoca reaching the top of the standings. All of this was organized by the dedicated graduate student members of EERI Student Leadership Council (SLC).

- To honor and preserve the recollections of pioneers in the field of earthquake engineering, Oral History: Connections Volume 26 was produced for Mete Sozen and a Spanish translation of the Vitelmo V. Bertero Oral History was also released.

- 5 new World Housing Encyclopedia (WHE) reports were produced about housing typologies from countries around the world including Armenia, Malawi, and Italy.

- Our newest regional chapter, the EERI Sacramento Regional Chapter in California, similar to many other regional chapters, has hosted regular lectures and events showcasing the latest findings from a variety of technical disciplines for their members.

- EERI has developed a new Clearinghouse Plan for the State of Idaho, at their request and with support from FEMA. This plan can be used to inform plan development in others states and several EERI regional chapters hosted reconnaissance and clearinghouse training workshops for their members in 2018.

- An active Younger Members Committee hosted 3 webinars, launched their inaugural Younger Members Award, and planned a successful Meet the Leaders event at 11NCEE, all designed to support, engage, and train our younger members.

- 17 experts were provided recognition and awards for recent and lifetime achievements.

- 4 webinars were delivered on a variety of topics - all free to our members.

As these successes indicate, EERI is active and thriving. We continue to offer robust technical information to our members through our meetings and webinars, while we continue to grow our capacity to influence policy change for earthquake risk reduction. Our 2018 work in policy confirms that technical knowledge is needed to form the basis of policy and that work is needed on both fronts.

One of the first opportunities to learn and participate in EERI activities this year will be our 2019 EERI Annual Meeting in Vancouver, Canada. A robust, diverse, and interactive program has been developed. I hope that you will attend and add your voice to enrich our conversations.
And the answer for the number of volunteer hours? I estimate at least **500 volunteers spent more than 10,000 hours to conduct these activities for EERI in 2018**! An absolutely incredible number that showcases the dedication of our amazing members. Thank you to everyone who contributed their expertise!

Thank you also for your membership which makes our work possible and for joining with us to share, learn, and influence change.

Together, we can reduce earthquake risk.

Heidi

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**EERI Honorary Members: Mary C. Comerio and Masayoshi Nakashima**

The EERI Board of Directors has selected **Mary C. Comerio** (M.EERI,1988) and **Masayoshi Nakashima** (M.EERI,1988) as Honorary Members of the Institute. Honorary Membership is awarded to recognize members who have made sustained and outstanding contributions to the field of earthquake engineering and to EERI and the pursuit of its objectives. Presentation of EERI Honorary Memberships will take place Thursday, March 7, 2019 at the EERI Honors Ceremony and Annual Business Meeting in Vancouver, British Columbia.

**Mary C. Comerio**, Professor of the Graduate School at University of California, Berkeley is an internationally recognized expert on disaster resilience and recovery. She has been on the faculty in the Department of Architecture at U.C. Berkeley for over 40 years and has served as Chair. She worked as an architect and conducted research on seismic rehabilitation, post-disaster recovery and reconstruction, loss modeling and resilience-based design. She led the FEMA sponsored Disaster Resistant University Program; and the Building Systems Research with Helmut Krawinkler at PEER. Comerio also served at co-PI on one of NSF’s Grand Challenge projects focused on the mitigation of collapse risk in nonductile concrete buildings.

She is the author of *Disaster Hits Home: New Policy for Urban Housing Recovery* (UC Press 1998) and hundreds of other research reports and scientific papers. She has received numerous awards, including the Green Star Award from the UN for post-disaster recovery work in 2011; the U. C. Berkeley Chancellor’s Award for Public Service for Research in the Public Interest; and the EERI Distinguished Lecturer Award in 2013. She was made an Honorary Member of SEAONC in 2018. She is a past-president of EERI, and serves on the Governing Board of the QuakeCoRE Center for Earthquake Resilience in New Zealand.

**Masayoshi Nakashima**, Professor Emeritus of Kyoto University and President of Kobori Research Complex Inc., earned his BS and MS from Kyoto University and Ph.D. from Lehigh University. After working for the Building Research Institute of Japan and Kobe University, he joined Disaster Prevention Research Institute, Kyoto University, in 1992.
His fields of research include seismic analysis and design of steel building structures and large-scale experimental techniques for the simulation of earthquake responses. He and his students have published about four hundred technical papers, out of which he earned various awards, including the ASCE Moisseiff Award, the Special Achievement Award of AISC, the ASCE Ernest E. Howard Award, and the EERI George W. Housner Medal, among others.

2017 Outstanding Paper Award for Earthquake Spectra

Outstanding Paper Awards for Earthquake Spectra are awarded to authors of papers judged to be outstanding contributions to earthquake hazard mitigation. Papers of recipients must be judged to have made a significant impact on the profession, to provide a significant advance in the state-of-the-art or understanding of a particular topic, to be of exceptional technical quality with concise and informative illustrations and to be well written for a broad audience. The 2017 (Vol. 33) Award will be presented to authors of two winning papers on Thursday, March 7, 2019 at the EERI Honors Ceremony and Annual Business Meeting in Vancouver, British Columbia.

“Probabilistic Tsunami Loss Estimation Methodology: Stochastic Earthquake Scenario Approach” by Katsuichiro Goda and Raffaele De Risi

Dr. Katsuichiro Goda (M.EERI,2009) is an Associate Professor and a Canada Research Chair in Multi-Hazard Risk Assessment at the University of Western Ontario, Canada. His research interests are broad and multidisciplinary and are focused on catastrophic earthquake- tsunami multi-hazard risk management from economic and societal viewpoints.

Dr. Raffaele De Risi (M.EERI,2018) is a Lecturer in Civil Engineering at the University of Bristol, United Kingdom. His research interests cover a wide range of academic fields, including structural reliability, engineering seismology, earthquake engineering, tsunami engineering, and decision-making under uncertainty.

“Non-Ergodic Site Response in Seismic Hazard Analysis” by Jonathan P. Stewart, Kioumars Afshari, and Christine Goulet

Jonathan P. Stewart (M.EERI,1994) is a Professor in the Civil & Environmental Engineering Department at UCLA. His technical expertise is in geotechnical earthquake engineering and engineering seismology, with emphases on soil-structure interaction, ground motion characterization, performance of levees and other embankments, and ground failure.
Kioumars Afshari (M.EERI, 2015) is a Senior Earthquake Engineer at Karen Clark and Company (KCC). He works on KCC's model for predicting insurance loss due to earthquakes, and statistical analysis for KCC's hurricane model. Dr. Afshari's research has been mostly focused on earthquake ground motion prediction, and probabilistic seismic hazard analysis.

Christine Goulet (M.EERI, 2004) is the Executive Science Director at the Southern California Earthquake Center (SCEC). Her work and research interests are in the field of geotechnical earthquake engineering and applied seismology. Dr. Goulet acts as the science lead for large-scale collaborative projects involving diverse disciplines related to seismic hazard and risk.

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**EERI 2019 ANNUAL MEETING**

- **New Programming Added!**

  - [EERI 2019 Annual Meeting](#)
    - March 5-8, 2019
    - Vancouver, B.C. Canada
    - JW Marriott Parq Vancouver luxury hotel, spa and casino

We're very excited about the upcoming Annual Meeting, and we encourage everyone to register if you haven't already done so. If you require a hotel room, please keep in mind that the last day to take advantage of EERI's hotel discount is February 8, 2019. [Click here to book your room.](#)
New technical sessions, speakers, interactive workshops, and program details have been recently added to the website. Listed below are a few highlights, but there is much more to see and do. [Click here to view the full program.]

- **EERI Distinguished Lecture**  
  **Speaker:** Ross Boulanger, Professor of Civil Engineering at the University of California, Davis  
  **Title:** Liquefaction: Lessons, challenges and opportunities  
  **Abstract:** Liquefaction during earthquakes has been the subject of extensive study for over half a century and is now routinely addressed in engineering practice using a wide range of technical approaches that depend on the project size and importance. These past studies have produced major advances in our scientific understanding of liquefaction phenomena and the engineering practices used to address liquefaction hazards, but there remain numerous situations where knowledge gaps and engineering practice limitations hinder the efficient mitigation of earthquake-induced liquefaction damages to our infrastructure and communities. This presentation examines a number of lessons, challenges, and opportunities regarding the evaluation and mitigation of liquefaction hazards, including aspects of site characterization, engineering analysis methods, challenging soil types, remediation methods, performance-based engineering procedures, and risk management approaches.

- **Joyner Lecture**  
  **Speaker:** Robert W. Graves, USGS  
  **Title:** Simulating Realistic Earthquake Ground Motions  
  **Abstract:** Ground motion simulations are an important resource for augmenting recorded motions, assessing impacts for scenario earthquakes, and exploring parametric sensitivity. Providing confidence that simulations are realistic requires demonstrating that they not only reproduce motions from past earthquakes, but also that they can predict motions for future events. Ideally, simulations should capture effects due to complexities in the rupture process, as well as effects due to large-scale (e.g., basins) and small-scale (e.g., scattering or site effects) variations in the seismic velocity structure. Accounting for these features is challenging due to uncertainty in the expected ranges of the required parameters. Furthermore, adding increased detail to the model space increases the computational requirements. Simulation approaches have traditionally been classified as "deterministic" or "stochastic" depending on the level of complexity used to describe earthquake rupture and wave propagation effects. Because of knowledge limitations and computational cost, the deterministic approach is typically employed for lower frequencies (< 1 Hz) and the stochastic approach at higher frequencies (>1 Hz). This distinction naturally leads to a hybrid approach, where the separate low- and high-frequency responses are combined to produce a broadband response. In my talk, I will describe the features behind the hybrid simulation approach along with examples of its application to model recorded earthquake ground motions. I will also describe refinements to the deterministic approach that extend its range of applicability to higher frequencies. Finally, I will summarize those cases where simulations are most beneficial and explore some frontiers scientists are facing in ground motion simulations.

- **Technical Session 7A**  
  **Title:** Policy, Insurance and Funding Incentives, Resilience Plans  
  **Moderator:** Micah Hilt, City of Vancouver  
  **Description:** This panel will explore the intersections between citywide resilience and seismic risk reduction policy, the key elements of designing and executing earthquake policies looking at case studies, and consider the work coming in British Columbia to build resilience and advance seismic risk reduction in buildings.
Speakers:
Katie McPherson, Chief Resilience Officer, City of Vancouver; Seismic Resilience, "Resilience Planning, and Action on Reducing Risk"
Micah Hilt, City of Vancouver; "Reducing Seismic Risk in Vancouver"
Andrew Salmon-Pape, Building and Safety Standards Branch Office of Housing and Construction Standards Ministry of Municipal Affairs and Housing; "Province of BC Existing Buildings Strategy"
Nancy Devine, City of Seattle; "Moving Action on URM Policy"
Ibrahim Almufti, Arup San Francisco; "UBC'S Risk Assessment"
Janiele Maffei, California Earthquake Authority; "Insurance and Mitigation - How to Incentivize Action"
Carlos Molina Hutt, University of British Columbia, and Danielle Hutchings Mieler, City and County of San Francisco - Office of Resilience and Capital Planning; "Seismic Risk and Tall Buildings"

Interactive Workshop 3B
Title: Improving New Building Performance - Codes vs. Cost/Benefit Data vs. Resilience Ratings
Moderators: John Shertobitoff, Ausenco, and Carlos Molina Hutt, University of British Columbia
Panelists:
John Sherstobitoff, Ausenco; "Proposed revisions to Canadian Building Code for 2020" and "Cost increment of 7 enhanced resilience designs in BC"
Ken Elwood, University of Auckland; "Direction of New Zealand building code"
Evan Reis, US Resiliency Council; "US resiliency ratings"
Tony Yang, University of British Columbia; "Resilience per ILEE"
Dave Brunsdon, Consultant, New Zealand; "Resilience Ratings - direction in NZ"
Keith Porter, University of British Columbia; "Cost/Benefit of enhanced resilience designs"
Jim Malley, Degenkolb; "Steel Buildings"
John Hooper, Magnusson Klemencic Associates; "Direction of US building code"
Perry Adebar, University of British Columbia; "Concrete Buildings"

EERI Technical Session 3C
Learning from Earthquakes: M7.0 Anchorage, Alaska Earthquake
Description: This technical session focuses on elements of seismic and community resilience that may be emerging or well developed, but are not yet mature in terms of their implementation or adoption across disciplines or with communities. This is a challenge to speakers to identify an area that could contribute to seismic resilience if it were better understood or utilized by others, to build understanding of the constellation of multi-disciplinary and societal stakeholders who could apply the knowledge, and to lay the foundations for connecting with them in such a way as to advance actionable strategies and to accelerate seismic resilience.
Earthquake Spectra’s New Associate Editor

David Wald (M.EERI, 1988), Earthquake Spectra Editor and EERI are pleased to announce Jack Baker (M.EERI, 2004) as the new Associate Editor for Earthquake Spectra. Spectra’s Associate Editor supports the Editor in routing manuscripts to Editorial Board Members (EBM), handles papers that the Editor may have conflicts of interest with, and acts as an EBM.

Prof. Baker joined the Stanford faculty in 2006 from the Swiss Federal Institute of Technology (ETH Zurich), where he was a visiting researcher in the Department of Structural Engineering. He has degrees in Structural Engineering (Stanford, M.S. 2002, Ph.D. 2005), Statistics (Stanford, M.S. 2004) and Mathematics/Physics (Whitman College, B.A. 2000). He has industry experience in seismic hazard assessment, ground motion selection, probabilistic risk assessment, and modeling of catastrophe losses for insurance and reinsurance companies. He is a co-founder and technical advisor for Haselton Baker Risk Group, LLC.

His awards include the Shah Family Innovation Prize from the Earthquake Engineering Research Institute, the CAREER Award from the National Science Foundation, the Early Achievement Research Award from the International Association for Structural Safety and Reliability the Walter L. Huber Prize from ASCE, and the Eugene L. Grant Award for excellence in teaching from Stanford. In 2015-2016 he was a Visiting Erskine Fellow at the University of Canterbury. His research has been funded by the National Science Foundation, the U.S. Geological Survey, the Pacific Earthquake Engineering Research Center, the Southern California Earthquake Center, and the Google Research Awards Program, among others.

Earthquake Spectra Call for Papers on the 2017 Puebla-Morelos, Mexico Earthquake

EERI is developing a cluster of papers in Earthquake Spectra on the September 2017 Puebla-Morelos earthquake in Mexico, to be published in 2020. In addition to original analyses of the earthquake, we are especially interested in interdisciplinary papers that examine resilience and that include data collected at multiple points in time. The Responsible Editors will be Lucy Arendt (M.EERI, 2008) and Gilberto Mosqueda (M.EERI, 2000). If you have expertise and interest, please submit a paper on the Earthquake Spectra website and select “Mexico Earthquake” as the Special Issue.

All papers submitted will be subject to the standard Earthquake Spectra review process and submission procedures (click here).
Papers selected as part of the cluster will be printed together in a single issue of *Earthquake Spectra* or clustered electronic collection depending on the total number of papers. Papers accepted but not selected for the collection can be published in a regular issue of *Earthquake Spectra*.

If you have questions about possible content please contact Lucy Arendt at lucy.arendt@snc.edu or Gilberto Mosqueda at gmosqueda@ucsd.edu. If you have questions about the submission process, please contact Earthquake Spectra Managing Editor Vida Samardžić at vida@eeri.org. Papers should be submitted by June 1, 2019.

#### PROGRAM UPDATES

- **New Report on The World Housing Encyclopedia Database: Historic Masonry block of flats**

The "Historic Masonry Block of Flats in Italy" report was written by Francesca Falchieri and Alfonso La Civita, and reviewed by Barbara Borzi. This type of construction shares common walls with adjacent buildings and the average number of floors ranges from 3 to 5. Also, it has shown good seismic performance because the adjacent blocks work together to withstand the earthquake. Strengthening interventions have been carried out after the main earthquakes.

More information about this construction system, and reports on building process, earthquake performance, and socio-economic issues in Italy can be found on the [World Housing Encyclopedia database webpage](#).

The [World Housing Encyclopedia database (WHE)](#) is a collection of resources related to housing construction practices in the seismically active areas of the world.

Photo: Figure 1. Buildings share common walls with adjacent buildings and the average number of floors ranges from 3 to 5.
Sacramento Regional Chapter: 2019 Geo Symposium and Field Expo March 29-30

REGISTER FOR THE EVENT

2019 Geo Symposium and Field Expo:
“A Geo-Resilient Sacramento: State of the Practice and State of the Art”
Date: March 29 & 30, 2019
Location: Lions Gate Hotel, 3410 Westover Street, McClellan Park, Sacramento, CA 95652

SPONSORING ORGANIZATIONS:
Association of Engineering and Environmental Geologists (AEG)
American Society of Civil Engineering (ASCE) Geo-Institute
Earthquake Engineering Research Institute (EERI)

SUMMARY DESCRIPTION:
We are excited to announce the upcoming 2019 Geo Symposium and Field Expo! The theme for this conference is “A Geo-Resilient Sacramento” with a focus on Engineering Geology, Seismology, and Geotechnical Engineering. Activities will include:

- Keynote Speakers
- Field Expo to include vendor demonstrations and discussions with the experts
- Career Fair and Networking Event
- Poster Sessions and Oral Presentations on Engineering Geology, Seismology, and Geotechnical Engineering
- And more!

For more information, please click here.
Housner Spotlight – Cale Ash

The Housner Fellows Program began in 2012 and has been used to develop future leaders in earthquake safety and provide them with in depth leadership training. In this spotlight we will take a moment to catch up with 2012 Housner Fellow Cale Ash (M.EERI, 2003) from Seattle, Washington.

Briefly give us an idea of what has happened professionally since you completed the program?
I am still with Degenkolb Engineers working on many of the same types of projects. My role in the office has evolved to take on more responsibility for project management and running our Seattle office.

How has the program altered the way you look at seismic safety?
One of the biggest takeaways for our group project (school earthquake safety in Ghana) is that seismic risk reduction needs to be taken in the context of the locality. Engineering designs and construction materials must be relevant for the region and policy changes can only happen to the extent that stakeholders will support the change.

What do you think is the biggest challenge facing earthquake professionals today?
I still think we struggle with communicating risk from an infrequent event (an earthquake or tsunami that happens every 50 or 500 years) in terms that encourages action in the near term.

What is the biggest challenge you see locally?
Communities in the Pacific Northwest still have large inventories of vulnerable buildings (URMs, nonductile concrete, etc.). Some jurisdictions are proposing mandatory retrofit ordinances and these will hopefully lead the way to increased regional resilience.

What would you recommend young engineers work on?
When it comes to earthquake risk reduction, the conversation will include multiple stakeholders with both technical and non-technical backgrounds. I encourage young engineers to work on their listening and communication skills to be comfortable and effective in these interactions.

Any other fun personal achievements?
We were just starting our family as my Housner Fellowship was wrapping up. Now we have two young boys, our oldest just started Kindergarten and our youngest is two and a half. They definitely keep us busy!
**ANNOUNCEMENTS**

- **New from Jumpstart: The Resilience Report: Disaster Displacement**

**READ THE FULL REPORT**

One of biggest casualties of a natural disaster is housing. This is a key finding of *The Resilience Report: Disaster Displacement*, recently released by Jumpstart.

Some key findings:

- Nearly half of Americans (48%) believe one of the most significant issues caused by a natural disaster is potential displacement of people from their homes.
- Millennials are more likely than any other age group to pick up and leave after a natural disaster, but they're the lifeblood of the economy.
- More than two people in five (42%) have $1,000 or less available in savings that could be put to use after a natural disaster, and of this, nearly one in five (18%) have no disaster funds at all.
- In California in particular, housing is an enormous worry: fully three-fifths (60%) reported that one of their top three financial concerns when recovering from a natural disaster was having enough money to cover a temporary residence.

**OPPORTUNITIES**

- **Job Opportunity: ImageCat Seeks Professional Engineer**

*ImageCat, Inc.* (EERI Bronze Level Subscribing Member) is a global company specializing in the assessment of risk from natural disasters. ImageCat is seeking an experienced Civil Engineer or Structural Engineer for structural evaluations, seismic risk assessment studies and seismic damage modeling. Travel required.
**Requirements:** Professional Engineer (P.E. — Civil or Structural) with:

- 5+ years of experience in seismic risk assessment, with familiarity with “PML” standards ASTM E 2026, E 2557 and ASCE 41
- 5+ years in structural design of commercial, office and/or multi-family residential buildings for earthquake and other loads
- Good English skills – both spoken and written
- Good computer skills
- Aptitude for client relations
- U.S. Citizen

**Desirable:**

- Experience in post-earthquake reconnaissances and damage evaluations
- Experience in formulation of earthquake damage models

Qualified applicants should respond by sending a resume and cover letter to jobs@imagecatinc.com
Welcome New Student Members

Abdurahman Abdulhadi, University Of Memphis, Civil
Kota Abe, University of Toronto, Civil
Bayan Fakhri Abu Safieh, Concordia University, Geotechnical
Anna Shao, Cal Poly Pomona, Civil
Malia Camille Sharp, University of Colorado Boulder, Architect
Nicholas Slavin, California Polytechnic State University, Structural
Jason Soltys, University of Connecticut, Structural
Kelsey Stithem, University of Nebraska, Structural
Zhichao Sun, University of Illinois at Urbana Champaign, Civil
Jonathan Tai, UCLA, Structural
James Preston Taylor, CSU Sacramento, Civil
Ryan David Thornton, Cal Poly San Luis Obispo, Structural
Kanav Trehan, The University of British Columbia, Civil
Emmanuel Uribe, CSU Sacramento, Civil
Jeffrey Valdespino Leal, Stanford University, Civil
Jose Carlos Velarde Gainza, North Carolina State University, Civil
Robert Vigil, University of Southern California, Structural
Autumn Grace Wagner, Cal Poly San Luis Obispo, Structural
Alexander Wallace, Sacramento State University, Civil
Cody Lee Walters, University of Texas at Austin, Education
Deanna Christy Wong, UCSD, Structural
Ella Yazbeck, University of Michigan, Civil
Jinbo Yu, University of Toronto, Civil
Muhammad Safuan Zahin Bin Zainal, Purdue University, Civil
Junlin Zhang, University of Illinois at Urbana-Champaign, Civil
Mengxiao Zhong, University of Illinois at Urbana Champaign, Civil
Shervin Zahedimazandarani, University of British Columbia, Structural
Xiaowei Wang, Hohai University, Civil

Share this article

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

1. **Earthquake in Super Slo-Mo: Ultra-slow earthquake indicates deep crustal movement near Istanbul** (Science Daily) A big earthquake occurred south of Istanbul in the summer of 2016, but it was so slow that nobody noticed. The earthquake, which took place at mid-crustal depth, lasted more than fifty days. Only a novel processing technique applied to data from special borehole strainmeter instruments allowed researchers to identify the ultra-slow quake below the Sea of Marmara. [Read more]

2. **New Method to Determine How Safe Buildings Are After An Earthquake** (Phys.Org) Deciding when it's safe for a building's residents to move back in after an earthquake is a major challenge and responsibility for civil engineers. Not only do they have to evaluate whether the building could collapse, but also whether it could withstand aftershocks of the same magnitude. The good news is, some promising research is being carried out in this field. [Read more]

3. **A Glimpse of Eugene-Springfield After the Cascadia Earthquake** (The Register-Guard) Earthquake experts say the Cascadia subduction zone, where one plate of the Earth’s crust is sliding under another plate below the Pacific Ocean, is due for a major earthquake. Saturday was the 319th anniversary of a magnitude 9-plus earthquake along the Cascadia zone. The Jan. 26, 1700, temblor was a full rupture of the zone, splitting along the seam from northern California to southern British Columbia in Canada. The huge earthquake unleashed a tsunami that slammed into Japan, where the event — and the date — was recorded. [Read more]

4. **Earthquake Preparedness: How Ready is Utah for the 'Big One'?** (ABC4/SLC) *Be Ready Utah* predicts that in a 7.0 quake along the Wasatch Front, 10,000 buildings would collapse, 2300 people would die and 30,000 more would be injured. Joe Dougherty with the Utah Division of Emergency Management says that state agencies are prepared but many Utahns are not: "We're dealing with a terrible thing in our state and that's called apathy." [Watch the Video]

5. **Photos: Anniversary of the Great Hanshin Earthquake in Japan** (Missoulian) On Jan. 17, 1995, more than 6,000 people were killed when an earthquake with a magnitude of 7.2 devastated the city of Kobe (koh-bay), Japan. Osaka and the ancient city of Kyoto were also severely damaged in the early morning quake. Kobe, a port city of 1.5 million, was the worst hit, with over 4,600 fatalities and more than 120,000 structures damaged or destroyed. It was Japan's worst earthquake since the Great Kantō earthquake in 1923, which claimed nearly 140,000 lives. [Read more]

6. **Dunleavy Wants to Spend $131 Million on Alaska Earthquake Reconstruction; Suggests Cutting $20 Million for Schools** (Anchorage Daily News) Gov. Mike Dunleavy has proposed spending $131 million, mostly from the federal government, for rebuilding after the Nov. 30 Southcentral Alaska earthquake. The figure was revealed Monday (1/28/19) in a draft supplemental budget introduced in the Alaska Senate. It's believed to represent a basement: Additional surveys and the arrival of spring are expected to reveal additional earthquake damage. [Read more]

7. **How Loud Booms Can Fool People Into Thinking There's an Earthquake When it's Very Cold** (AccuWeather) Frost quakes are often mistaken for earthquakes because the initial indicators may appear similar to those of an earthquake, including tremors, vibrations, ground cracking and related noises, such as thundering or booming sounds. For example, Chicago residents reported hearing “loud booms” Wednesday (1/30/19) night when temperatures in the area reached well below zero. [Read more]
On 25th Anniversary of Northridge Earthquake, CSUN and Elected Officials Recommit to Preparedness (CSUN Today) At 4:31 a.m. on Jan. 17, 1994 a magnitude 6.7 earthquake struck the San Fernando Valley, killing 72 people. It injured 9,000 people, destroyed 22,000 homes across the region and caused catastrophic damage throughout the CSUN campus. Among the victims were two CSUN students who perished in the collapse of Northridge Meadows apartments. It was a seminal moment for the university, which reopened for spring semester classes just two weeks after the disaster struck. Read more

CALENDAR

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
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.

ASCE/UCLA San Fernando Earthquake Conference
For more information: http://lifelines2021.ucla.edu/

EERI Annual Meeting