



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 Communique](#)

A Message from the Executive Director

By Heidi Tremayne (M. EERI, 2004)

In 2018, EERI celebrates the 70th anniversary of our formation as a professional institute. Since our founding in 1948, EERI and its members have been dedicated to reducing the impacts of earthquakes on society.

I have been a passionate supporter of EERI since I first joined the Institute as a student member in 2004. My dedication to EERI is founded in pride for EERI's long legacy of accomplishments (some of which are outlined below), but my true passion for the Institute comes from the promise of our mission to reduce earthquake risk. Our mission inspires me, and hints at future impacts we can achieve together. I am truly honored to be the new EERI Executive Director and am excited for the role I can play in accomplishing our collective vision.



Many of our activities and products can trace their roots to our long history. One of EERI's founding members, George Housner helped to organize the first U.S. National and World conference on earthquake engineering in Los Angeles in 1952. In June 2018, EERI is proudly organizing and hosting the [11th National Conference on Earthquake Engineering](#), once again, in Los Angeles. Thank you to the hardworking EERI members that are making this conference the go-to destination for learning about cutting-edge research in earthquake engineering!

Earthquake Spectra, our quarterly journal, was inaugurated in 1984. The journal remains relevant today, continuing to serve its role as a multidisciplinary publication that encourages and promotes knowledge sharing amongst the diverse set of its researchers and stakeholders. The journal's impact factor in 2017 was 2.9, the highest among earthquake engineering journals globally. Twenty-seven special issues have also been produced by the journal during its history, including a new online issue just released for the [2015 Gorkha, Nepal Earthquakes](#). The success of the journal can be attributed to the researchers who've submitted their work to *Earthquake Spectra* and to the amazing editorial staff and reviewers.

EERI proudly celebrates members who have influenced positive change in society and in professions focused on earthquake risk reduction. Twenty five volumes of our [Oral History Series](#) have been produced since the start of the series in 1994. Each volume's purpose is to celebrate and share the recollections of those who pioneered earthquake engineering and seismic design. In 2017, a volume was released for [John F. \(Jack\) Meehan](#) highlighting his role in advancing safety by overseeing the Field Act implementation of public school construction. We also

annually recognize many of our impactful members through [awards and honors](#) that pay tribute to some of our founders like George Housner, Alfred E. Alquist, Bruce Bolt, and William Joyner.

Our Learning From Earthquakes Program has been sending multidisciplinary teams of members to conduct reconnaissance following major earthquakes since 1973. The goal of these activities is to accelerate and increase learning from earthquake-induced disasters that affect the natural, built, social, and political environments worldwide. In 2017, EERI responded to earthquakes in Mexico ([Puebla](#) and [Chiapas](#)) and [Iran](#) by supporting field reconnaissance, data collection and archiving, and dissemination of lessons from these events. Three LFE reports were released in 2017 for earthquakes in late 2016 including, [Pidie Jaya](#), Indonesia; [Cushing, Oklahoma](#); and [Kaikoura, New Zealand](#). We also hosted webinar briefings for the 2017 M7.1 Puebla-Morelos Earthquake and 2016 Central Italy Earthquake Sequence that are freely available at any time from on our [YouTube Channel](#) along with many other resources including our past technical seminars. We continue to grow LFE and EERI's role by expanding our thinking about reconnaissance to measure and document community resilience over time, creating new and exciting ways for young members to participate in activities like our [LFE Travel Study Program](#) and Virtual Earthquake Response Teams, and serving the entire risk reduction community by facilitating reconnaissance team coordination calls that foster increased collaboration amongst the growing number of teams and organizations entering the sphere of earthquake reconnaissance.

Ongoing activities, like our [World Housing Encyclopedia](#) (WHE) project, [Confined Masonry Network](#), and our [School Earthquake Safety Initiative](#) (SESI) continue to gather dedicated, like-minded colleagues together to advocate for improved earthquake practices for vulnerable populations. Our Concrete Coalition seemingly draws from an endless pool of goodwill from structural engineer members who again in 2017, like in years past, came together to conduct a concrete building inventory survey to inform and support a local jurisdiction wanting to craft new policies and incentives to make their residents safer from nonductile concrete buildings.

The long past and continued stability of our Institute over many decades is something for which we should all be very proud. As you renew your membership this year, you can and should be proud of what we have accomplished together in 2017 and for the last 70 years. For those who would like to read more about the great legacy of our institute, an outstanding paper outlining EERI's history was written by [Tubbesing and Anagnos](#) in 2008 for the 14th World Conference on Earthquake Engineering.

Today, our membership's passion for understanding and reducing earthquake losses remains as strong as ever. I expect 2018 to be an exciting and active time for the Institute.

- We will host the 11NCEE with over 1,200 attendees, 800 technical paper in the proceedings, 220 posters on display, and 135 technical presentation sessions.
- Forty-two teams from EERI Student Chapters at universities from around the world will participate in the 15th Annual Seismic Design Competition.
- Reconnaissance Training Workshops are being planned with several of our regional chapters that will ignite discussion around how our members can be best prepared to learn and respond to major earthquakes in the United States.
- LFE will launch a new website that will better showcase our many decades of products and utilize new tools to support data gathering and visualization to enhance learning.
- Our Public Policy and Advocacy Committee will continue its efforts to encourage the passage of legislation that reauthorizes the U.S. National Earthquake Hazards Reduction Program.
- Members from our Regional Chapter in British Columbia will be developing an intriguing and engaging program for the 2019 EERI Annual Meeting in Vancouver, Canada.
- The third class of [Housner Fellows](#) will launch its group project that aims to inform and support resilience planning in Mexico City.
- The Confined Masonry Network will continue work with Nepalese partners at NSET to develop draft code provisions for confined masonry construction, and plans to complete and publish its online engineered design guide for confined masonry.

- The WHE will host several webinars in 2018 and launch a new email discussion group to encourage more collaboration and sharing amongst members of this network.
- SESI plans to launch messaging materials that can be used by EERI members to advocate for enhanced school earthquake safety to stakeholders in their own region.

One unifying element of these 2018 activities is that they will all involve many of our members, and by doing so, allow them to use their expertise and technical understanding for the benefit of our profession and society.

As your new Executive Director, I dedicate my efforts to achieving the promise of our mission. I hope you will continue to support EERI's legacy and make our future even brighter by volunteering your time and passion to the many things we are doing. Together, we can reduce earthquake risk.

Happy New Year!

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► Farewell to Juliane Lane

EERI is sad to announce that **Juliane Lane**, EERI Membership Coordinator and Publications Manager, has left EERI due to health and personal reasons. We are very appreciative and grateful for Juliane's dedication and support during her 17 years of service to the Institute.

During her time at EERI she was often the first contact person for members, and her role evolved over her tenure from support for Executive Director **Susan Tubbesing** (M.EERI, 1988) to her more recent responsibilities for publication sales and distribution, membership correspondence and renewals, Chapter coordination and website updating, Board assistance, and Friedman Family Visiting Professional coordination. Staff and members have enjoyed Juliane's vast knowledge of the Institute, quick wit and sense of humor, and of course her dog, Puff, who regularly accompanied her to the office and to many EERI Annual Meetings.

Juliane asked us to share that she loved taking care of the membership and really enjoyed all the members she had the pleasure of meeting over the years. We will all miss Juliane and Puff and wish them the best on their new ventures. If you would like to write a personal note of thanks to Juliane, you can reach her at lane727@gmail.com

Photo right: Juliane's dog, Puff, basking in the sun at the EERI offices, a common sight that will be missed by our staff members.



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PUBLICATIONS

► Special Issue Released on the 2015 Gorkha, Nepal Earthquake

We're pleased to announce that *Earthquake Spectra's* [special issue on the 2015 Gorkha, Nepal, earthquake](#) is now available. This online-only issue of the journal provides a compendium of research papers on the Gorkha earthquake, organized into five topics: (1) seismology, ground

motion, and geotechnical issues; (2) lifelines; (3) buildings; (4) cultural heritage structures; and (5) social science and public policy related topics. The papers in this special issue provide assessments and lessons on these topics, which can help aid in understanding the short- and long-term effects of this event, and provide transferable lessons for seismic mitigation efforts in the United States and around the world. Please see the Table of Contents for the list of articles, as well as a [downloadable PDF](#) of the full special issue.

We thank the authors of these papers and reviewers for their contributions and insights, and we thank the guest editorial team—Bret Luzundia, Rachel A. Davidson, Youssef M. A. Hashash, and Robert B. Olshansky—for their efforts in developing and shaping this issue and in coordinating the peer review of all of the papers.

This special issue was underwritten by contributions from the Federal Emergency Management Agency, FM Global, the U.S. Geological Survey, the World Bank's Global Facility for Disaster Reduction and Recovery, and the Earthquake Engineering Field Investigation Team; we gratefully acknowledge their generous support. We also thank EERI's Board of Directors for their personal financial contributions in support of this special issue.

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▶ November 2017 Issue Now Available

The November 2017 issue of *Earthquake Spectra* (Volume 33 Issue 4), which had been delayed, has been available online as of December 23, 2017. Please see the [Table of Contents](#) for the list of articles.

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▶ Earthquake Spectra: Preprint Manuscripts

Two (2) preprint manuscripts have been posted to the *Earthquake Spectra* website prior to formal publication. The papers to be published are:

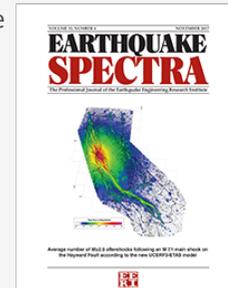
- **Random Response Spectrum Analysis of Gravity Dam Classes: Simplified, Practical and Fast Approach** by **Mohammad Amin Hariri-Ardebili** (M.EERI,2017) and Victor E. Saouma
- **Development of Deep Shear Wave Velocity Profiles with Estimates of Uncertainty in the Complex Inter-Bedded Geology of Christchurch, New Zealand** by **David Teague** (M.EERI,2012), **Brady Cox** (M.EERI,2004), **Brendon Bradley** (M.EERI,2012), and **Liam Wotherspoon** (M.EERI,2014)

To read all current preprint manuscripts posted, visit [Earthquake Spectra preprints](#).

If you have questions about *Spectra*, contact Managing Editor Liz Stalnaker at liz@eeri.org

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EERI HONORS AND AWARDS

▶ The EERI Graduate Paper Competition is changing!

In past years, the rules of the EERI Graduate Paper Competition required the paper to be an original contribution in a discipline directly earthquake engineering or earthquake hazard reduction, that represented the original work of the student and be authored by the student alone. This process failed to recognize the contributions of the full research team, and also constrained the ability of the student and the author team from submitting this content to a technical journal.

The following changes were made to (1) encourage graduate student researchers to publish their high-quality work in *Earthquake Spectra*, (2) ensure that other research team members are properly credited for their contribution to the work, and (3) align more with current interdisciplinary earthquake engineering research trends.

The changes will be in effect for the 2017 EERI Graduate Student Paper Competition and moving forward. The competition will work as follows:

1. Papers will be submitted to *Earthquake Spectra* for possible publication. The submitted papers may have any number of authors, but the first author must be a graduate student researcher at the time of first submission. The submitted paper will undergo the normal peer-review process.
2. Each year (i.e., each volume of *Earthquake Spectra*), the preceding published papers will be collected by the managing editor, and then reviewed by the Student Activities Committee to determine which paper(s) will win the graduate student paper award for that year. The 2017 winning paper will be chosen from those papers published in Volume 33 of *Earthquake Spectra*, for which the first author was a graduate student researcher at the time of first submission.
3. Do not submit a paper for the 2017 competition. If your paper qualifies, it will be reviewed by the Student Activities Committee for the award.
4. The authorship team wins the award, and at least one co-author should be designated to accept the award and present on behalf of the research team at the EERI annual meeting.
5. A registration grant for the annual meeting will be made available to the first author, in addition to a small travel stipend, as long as funds are available.

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ANNOUNCEMENTS

▶ OSU Seminar February 1: Lessons Learned from the 2017 Mexico City Earthquake

A seminar: *Lessons Learned from the 2017 Mexico City Earthquake* will be hosted by Oregon State University College of Engineering, School of Civil and Construction Engineering, on Thursday, February 1, 2018 from 3:00 - 5:30 pm PST on campus in the **Memorial Union Horizon Room**.

Speakers include Menzer Pehlivan (CH2M), Kenny O'Neill (Reid Middleton), Kyle Steuck (Degenkolb), Andre Barbosa (Oregon State University), Haizhong Wang (Oregon State University), Brian Knight (WRK Engineers), and Allison Pyrch (Hart Crowser).

Topics discussed will include geotechnical issues, performance of retrofitted structures, performance of modern structures, critical facilities, performance of lifelines, and resilience aspects.

Following the seminar will be a reception to network with the speakers. Jonna Papaefthimiou (Portland EMD) will wrap up the evening with a discussion of Portland's latest initiatives for pre-disaster mitigation to improve the resilience of the city after a potential earthquake.

The seminar is free and open to the public. Accommodations for disabilities may be made by calling 541-737-4934 or emailing Lauren.Farmer@oregonstate.edu

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OPPORTUNITIES FOR STUDENTS - JANUARY 15, 2018

▶ NHERI Summer Research Program in Natural Hazards Engineering

Deadline February 1, 2018

The 2018 NHERI REU program (Research Experiences for Undergraduates) for college students in STEM majors provides research opportunities at 10 [hazard-engineering](#), [simulation](#) and [cyberinfrastructure facilities](#) around the country. Over the course of the summer, students work side-by-side with earthquake, wind, tsunami and coastal engineers, geoscientists, and data scientists – all dedicated to mitigating the effects of natural hazards.

Students who are interested in solving engineering challenges presented by earthquakes, tsunamis, windstorms and coastal inundation are encouraged to apply. The NHERI REU accepts applications from many majors and may be of special interest to students majoring in engineering, architecture, meteorology, geoscience and computer science.

Don't delay - the application deadline is February 1, 2018.

[Download and post the flyer](#). Find details and application forms at the [NHERI-DesignSafe-CI website](#).

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WELCOME NEW EERI STUDENT CHAPTER

▶ Concordia University EERI Student Chapter

EERI is pleased to introduce the new student chapter established at Concordia University, Montreal, QC, Canada. The chapter's faculty advisor is Prof. (Dr.) **Ashutosh Bagchi** (M.EERI,2017), Chair, Building, Civil and Environmental Engineering Department. The local contact is Mr. **Richard Frazao** (M.EERI,2017), President, Quaketek Inc. Recently elected founding officers include **Timir Baran Roy**, President (M.EERI,2017); **Hasan Ayouby**, Vice President (M.EERI,2017); **Amit Chandra**



(M.EERI,2017), General Secretary and External Affairs Director; **Ardalan Sabamehr** (M.EERI,2017), Treasurer and Financial Director; **Alireza Torkaman Rashid** (M.EERI,2017), Social Media and Campaign Director; and **Mojtaba Valinejadshoubi** (M.EERI,2017), Internal Affairs and Workshop Director.

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RESOURCES FROM THE VAULT

▶ January 17, 1994: M6.7 Northridge, California



The M6.7 Northridge Earthquake occurred 24 years ago on January 17, 1994, at 4:31 AM PST. The hypocenter was about 32 km west-northwest of Los Angeles, California, in the San Fernando Valley, at a relatively deep focal depth of 19 km. The earthquake occurred in the south-southwest dipping thrust ramp beneath the San Fernando Valley and, thus, reemphasized the seismic hazard of concealed faults in the greater Los Angeles region.

Sixty people were killed, more than 7,000 injured, 20,000 homeless and more than 40,000 buildings damaged in Los Angeles, Ventura, Orange and San Bernardino Counties. Severe damage occurred in the San Fernando Valley: maximum intensities of (IX) were observed in and near Northridge and in Sherman Oaks. (source - [USGS](#)).

Photo: Broken gas and water mains on Balboa Boulevard in Granada Hills, California, created this scene of post-earthquake flood and fire (EERI archives).

EERI Member Resources: More resources about the Northridge Earthquake can be found in the [LFE Reconnaissance Archive](#) where EERI members can read reconnaissance team reports and Earthquake Spectra articles, view photos, and peruse other findings. Members can also access EERI's Earthquake Photo Galleries through the [Member Resources](#) site. Non-members can preview photo galleries [here](#).

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WELCOME NEW EERI MEMBERS

► Welcome New Members

EERI welcomes new members who have joined the Institute in 2018

E-Affiliate

Janssen Brian Esguerra, Fluor Daniel Inc.(Philippines), *Structural*

Regular

Lorena Arce, American Institute of Steel Construction

Mike Gannon, American Institute of Steel Construction

Christina Harber, American Institute of Steel Construction

Jong-Su Jeon, Andong National University, *Structural*

Jan Van Elk, NAM BV, *Risk Analysis*

Youwei Zhou, Kleinfelder



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► Welcome New Student Members

EERI welcomes new student members (Dec 27, 2017 - Jan. 11, 2018)

Saeed Nozhati, Colorado State University

Dominga Sanchez, Oregon State University, *Structural*

Yifeng Xu, San Francisco State University, *Civil*

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DONATIONS

► Thank You EERI Donors!

EERI would like to thank donors to the Endowment Fund and special programs, and gratefully acknowledges these recent contributions.

The list below reflects recent donations to the Institute.

\$3,000

\$200 - \$499

Other Amounts

Faultline Foundation

\$1,000

Thomas O'Rourke

Josephson Werdowatz & Associates

Bruce Maison

\$500 - \$999

G. Rodolfo Saragoni

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Anshel Schiff

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Richard Henige

Craig Davis

Ricardo Dobry

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Robert & Kaye Hanson

Donald Wells

Richard Quittmeyer

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Joe Maffei

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Jelena Pantelic

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Timothy McCrink

Tim Hart

Robert Chew

Peter Somers

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Claudio Chesi

Craig Davis

Luis Romero

Bozidar Stojadinovic

Mohammad Joolazadeh

John Egan

Arturo Schultz

John Egan

Carlos Ventura

Arturo Schultz

Chang Seok Lee

Thank you for your generous support!

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NEWS OF THE PROFESSION

▶ [Links to Recent News and Views](#)

Nine (9) recent articles, stories, opinions, or reports from around the web.

1 Tests of Concrete Walls With High-Strength Rebar Lay Foundation for Code Change (Engineering News-Record) If structural engineers have their way, building codes will take a historic leap forward in the next few years. A team of researchers at the University of Kansas led by co-investigators, **Remy D. Lequesne** (M.EERI,2007) and **Andres Lepage** (M.EERI,1993)... [Read more](#)

2 Christchurch Shifts from Concrete to Steel in Post-Earthquake Rebuild (UB News) **Michel Bruneau** (M.EERI,1984) co-authored a 170-page report with potential significant impacts on how modern cities may be reconstructed following earthquakes. [Read more](#)

3 Bay Area Earthquake Rattled 9.8 Million People — and Offers a Preview of Something Much Worse (Los Angeles Times) A January 4th magnitude 4.4 earthquake's epicenter was in the area of the Hayward fault. "We live in earthquake country so we should all expect earthquakes," said **Keith Knudsen** (M.EERI,2001), deputy director of the USGS Earthquake Science Center. [Read more](#)

4 Response by the Director of the Iranian Seismological Center (Temblor) The multiple earthquakes in Iran in recent weeks, including the November 2017 Ezgeleh-Sar Pole Zahab Earthquake, and the earthquakes in the Kerman, Alborz and Tehran provinces in December 2017, were followed by widespread rumors on social media. [Read more](#)

5 Resiliency at Center of \$1.5B Seaport San Diego Design (Construction Dive) Although the \$1.5 billion Seaport San Diego project is still in the conceptual design phase, developers are ensuring that the new waterfront attraction will be able to adapt to future sea-level rise and the possibility of seismic activity. [Read more](#)

6 Mount St. Helens Rattled by 2nd Largest Earthquake in Area Since 1981, Then 15 Aftershocks (The News Tribune) January 3, 2018 at 12:36 a.m. the first, and largest, temblor struck. It registered as a magnitude 3.9 at a depth of six miles, according to the Pacific Northwest Seismic Network. In the last month, PNSN said there have been 82 earthquakes within 10 kilometers of Mount St. Helens. [Read more](#)

7 As California Awaits The 'Big One,' Anxieties Loom Over Funding The Earthquake Warning System (Huffington Post) The U.S. is still more than a decade behind Japan in rolling out earthquake alerts, experts say. "Funding for the seismic networks in the United States has been meager and in steady decline for years," said **Tom Heaton** (M.EERI,1995). [Read more](#)

8 M=7.6 Honduras Earthquake— A Near Miss (Temblor) On January 9, at 2:51 a.m. local time, a M=7.6 earthquake struck in the Caribbean off the coast of Honduras. Based on the location and focal mechanism (left-lateral strike-slip), it occurred on the Swan Islands transform fault... one could say that Honduras and the greater Caribbean dodged a bullet. [Read more](#)

9 Seattle's Second Tallest Tower Rises on Steel Plates, Without Rebar (The Architect's Newspaper) Studies are underway for the eventual construction of the Rainier Square Tower in Seattle, which will eschew a traditional concrete-and-rebar core in favor of a new steel plate system. [Read more](#)

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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."

Tuesday, October 29, 2019 - October 30

APGCE

The Asia Petroleum Geoscience Conference & Exhibition (APGCE)

29 – 30 October 2019

KUALA LUMPUR CONVENTION CENTRE, MALAYSIA

[REGISTER](#)

Monday, December 09, 2019 - December 13

AGU 2019 Fall Meeting

9-13 December 2019 San Francisco, California

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 (RBDCC)

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.](#)

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.



Earthquake Engineering Research Institute

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