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

Reginald DesRoches to Deliver 2018 EERI Distinguished Lecture

Reginald DesRoches (M.EERI,1995), the William and Stephanie Sick Dean of Engineering at the George R. Brown School of Engineering at Rice University, will deliver the 2018 EERI Distinguished Lecture at the Eleventh U.S. National Conference on Earthquake Engineering (11NCEE) to be held June 25–29 in Los Angeles, California. The EERI Distinguished Lecture Award is presented annually to recognize and encourage communication of outstanding professional contributions of major importance for earthquake hazard mitigation.

Biography

Reginald DesRoches is the William and Stephanie Sick Dean of Engineering at the George R. Brown School of Engineering at Rice University. In this position, he provides leadership to a top ranked engineering school with 9 departments, over 125 faculty, and 2500 students. His primary research interests are in design of resilient infrastructure systems under extreme loads and the application of smart and auto-adaptive materials. His research is highly interdisciplinary and spans micro- to macro-scale. He has published approximately 300 articles and served as thesis advisor to 30 doctoral students.

Dr. DesRoches served as the key technical leader in the United States’ response to the 2010 Haiti earthquake, taking a team of 28 engineers, architects, city planners, and social scientists to study the impact of the earthquake. Dr. DesRoches serves on the NIST National Construction Safety Team Advisory Committee (NCST), National Academies Resilient America Roundtable (RAR), the Board on Army Science and Technology (BAST), the National Science Foundation’s Engineering Advisory Committee, and the Global Earthquake Modeling Scientific Board. He has chaired the American Society of Civil Engineers’ Seismic Effects Committee as well as the executive committee of the Technical Council on Lifeline Earthquake Engineering. In recent years, Dr. DesRoches has testified before U.S. House and Senate subcommittees on...
earthquake resilience and the state of the science, and he has participated in Washington, D.C. roundtables for media and congressional staffers on topics ranging from disaster preparedness to the critical role that university research must play in addressing the country's failing infrastructure.

Dr. DesRoches received the Presidential Early Career Award for Scientists and Engineers (PECASE) in 2002 — the highest honor bestowed upon scientists and engineers in the early stages of their careers. Most recently, he was elected Fellow of the Structural Engineering Institute (2016), Fellow of the American Society of Civil Engineering (2015), and was a recipient of the 2015 ASCE Charles Martin Duke Lifeline Earthquake Engineering Award, the Georgia Tech Outstanding Doctoral Thesis Advisor Award (2010), the 2007 ASCE Walter L. Huber Civil Engineering Research Prize, and the Georgia Tech ANAK Award (2008). The ANAK award is the highest honor the undergraduate student body can bestow on a Georgia Tech faculty member.

DesRoches was born in Port-au-Prince, Haiti, and grew up in Queens, New York. He earned his Bachelor of Science in Mechanical Engineering, Master of Science in Civil Engineering, and Ph.D. in Structural Engineering at the University of California, Berkeley, where he was recently elected to the civil engineering department's Academy of Distinguished Alumni (2015).

Requests
EERI Student and Regional chapters are encouraged to request a presentation of the 2018 Distinguished Lecture by sending an email request to Dr. DesRoches at deng@rice.edu. Groups should request a presentation early, as opportunities fill fast.
Mexico City (CDMX) is no stranger to damaging earthquakes. On September 19th, 2017, a magnitude 7.1 earthquake struck Central Mexico (Puebla), killing and injuring hundreds. This earthquake occurred on the anniversary of the magnitude 8.0 earthquake that killed tens of thousands in 1985. In the aftermath of that 1985 tragedy, building codes were updated, an early warning system for CDMX was installed, and building evacuation drills were implemented. The people of Mexico City had participated in just such a drill on the morning of September 19, 2017, a mere two hours before the recent earthquake occurred.

In March of 2018, 100 Resilient Cities (pioneered by the Rockefeller Foundation) collaborated with the CDMX Resilience Office on a 3-day Network Exchange entitled “Building Seismic Resilience: Preparedness, Response, Recovery.” Chief Resilience Officers (CROs), municipal leaders, private sector partners, academics, and subject matter experts from around the globe were invited to participate and share their experiences and strategies for building resilient communities in seismically active regions around the world.

We are proud to report that a six-member team from EERI was invited to participate in the Exchange. Dr. Lucy Arendt (M.EERI,2008), Lead Trainer of EERI’s Housner Fellows Program, and five of the six 2017 Housner Fellows* – Dana Brechwald (M.EERI,2013), Erik Bishop (M.EERI,2015), Veronica Cedillos (M.EERI,2008), Rebecca Laberenne (M.EERI,2007), and Karl Telleen (M.EERI,2017) – were able to participate in the exchange and produce a report from their experience there.

Read the full report.

Photo top (left to right): Rebecca Laberenne, Dana Brechwald, Lucy Arendt, Karl Telleen, Veronica Cedillos, Erik Bishop
*The sixth 2017 Housner Fellow, Debra Murphy (M.EERI, 2007), was unable to join the team in CDMX as she was on maternity leave at the time.

11NCEE - Have you registered yet? Hotel rooms and special events are filling up!
LEARNING FROM EARTHQUAKES

- LFE webinar, "Technical Case Studies from the September 19, 2017 Mexico Earthquake," is now available for viewing:

On April 05, 2018, EERI hosted a technical case studies webinar for the September 19, 2017 Mexico Earthquake as a part of the Learning from Earthquakes (LFE) program. A recording of this webinar is now available on the Puebla, Mexico Earthquake Virtual Clearinghouse website.

View the webinar

This webinar included the following presentations:

- Introduction by EERI Reconnaissance Co-Lead Gilberto Mosqueda (M.EERI,2001), University of California San Diego
- Foundation Failure of Structure on Piles by Marty Hudson (M.EERI,1994), SEAOSC/Wood PLC
- Two 8-story building in Mexico City near collapse by Ezra Jampole (M.EERI,2012), Exponent
Three (3) LFE reports from recent earthquakes are now available:

1. Virtual Earthquake Reconnaissance Team (VERT): Immediate Response to Hualien, Taiwan Earthquake on February 6, 2018


   View Summary

   The Virtual Earthquake Response Team conducted an initial review of news articles and social media to summarize earthquake impacts from the February 6, 2018 Hualien, Taiwan earthquake. The team summarized immediate impacts to schools, buildings, hospitals, emergency response, lifelines, geotechnical structures, roads and bridges and also provides information on social media response and aftershocks.

   Photo right: Four severely damaged mid-rise buildings in Hualien (Summary p.9).

2. EERI Preliminary Notes on Tsunami Information and Response: Tsunami Generated by Mw7.9 Gulf of Alaska Earthquake on January 23, 2018


   Read the full report

   The M7.9 Alaska earthquake at 12:31 am AST January 23, 2018 occurred on a strike-slip fault, in the Gulf of Alaska, about 250 km SE of Kodiak Island and 100 km south of the Alaska-Aleutians trench. The National Tsunami Warning Center placed the coastlines of southern Alaska and British Columbia in an immediate Warning-level alert status, the U.S. west coast in a Watch and the Pacific Tsunami Warning Center placed Hawaii in a Watch. Most areas within the tsunami Warning area were notified using multiple methods (social media, sirens, door-to-door).
and evacuated. The earthquake generated a small tsunami that was recorded on a DART deep ocean sensor less than ten minutes after the earthquake, and registered less than one-foot amplitudes on tide gauges in nearby Alaska. Due to complications in source modeling and other factors, delays in resolving the forecasts for the Watch area caused several issues for U.S. west coast state and local emergency managers.

3. GEER Report: Geotechnical Engineering Reconnaissance of the 19 September 2017 Mw 7.1 Puebla-Mexico City Earthquake

Editors: Juan M. Mayoral, Tara C. Hutchinson (M.EERI,1995), and Kevin W. Franke (M.EERI,2008)

Read the full report

This report offers an introduction to the event and an overview of societal and infrastructure impacts. Importantly, the engineering seismology and recorded ground motions from the event, including comparison of micro-tremor data from the current and past events are also documented. Similar to previous events affecting Mexico City, site effects served an important role in the response of structures. Therefore, in the present report a comparison with past motion recordings (dating back to the 1985 event) is conducted. An important observation from analysis of the ground motions from this event is that soft rock motions contained a much higher frequency content than recorded previously during the 1985 Michoacan earthquake that ravaged Mexico City. As a result, rock ground motions appeared to resonate in transition zone soils (Zone II) and lake zone soils (Zone IIib) in the western half of Mexico City, causing large horizontal spectral accelerations at periods between 0.8 seconds and 1.5 seconds and resulting in significant damage to many structures between five to eight stories in height. Damage maps across Mexico City and in various heavily impacted regions of the state of Morelos and Puebla reveal patterns of structural damage; which in some cases correlate with foundation damage and ground movement.

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OPPORTUNITIES

- RFP for Unreinforced Masonry Building Inventory in Washington State
The Washington State Department of Commerce has initiated a Request for Proposals (RFP) to solicit proposals from firms interested in participating on a project for a study/inventory regarding suspected unreinforced masonry buildings in Washington State.

Due Date: May 11, 2018

Click here for more information.

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Job Opening: The Center for Infrastructure, Energy and Space Testing (CIEST), University of Colorado, Boulder - Professional Research Assistant

The Center for Infrastructure, Energy and Space Testing (CIEST) in the Department of Civil, Environmental and Architectural Engineering at the University of Colorado, Boulder, provides a managed experimental facility offering geotechnical centrifuge, structural dynamics and material testing. The facility boasts unique full-scale, fast loading rate, gravitational and environmental control capabilities. The Center offers accessibility of facilities and expertise for large-, reduced-, and element-scale testing to students, faculty and visitors.

The CIEST is seeking candidates for a Technical Specialist (Professional Research Assistant, job ID 13249) position, to join a multidisciplinary research team of engineers tackling the lab’s broad testing capabilities.

Click here for more information about the position and application process.

Questions may be directed to Brad Wham (M.EERI, 2011), Manager of Center for Infrastructure, Energy, and Space Testing, brad.wham@colorado.edu

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Job Opening: Newcastle University - Research Assistant/Associate (Earthquake Reconnaissance)

Newcastle University School of Engineering, located in Newcastle Upon Tyne, UK, has posted job ID D115435R, Research Assistant/Associate, Earthquake Reconnaissance to become part of an international and interdisciplinary team developing tools to collect and interpret information regarding damage to buildings and infrastructure and disruptions to communities resulting from earthquakes. You will have the opportunity to work with the internationally leading earthquake reconnaissance group (EEFIT) and visit regions that have recently experienced earthquakes. You will help...
to develop and test tools, which can be used by experts and novices alike and that can tap into a variety of data sources to obtain
information. You will also be required to test how good the information that these tools can gather is when used by experts and novices.
The person will need to be able to show initiative and drive the project while still being able to fit into a team consisting of academics and
industry partners.

Application deadline May 11, 2018

Click here for more information about the position and application process.

Informal enquiries can be directed to Sean Wilkinson sean.wilkinson@ncl.ac.uk or +44 191 208 8876.

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WELCOME NEW STUDENT MEMBERS

- EERI welcomes new Student Members to the Institute (March 15 - April 14, 2018)

- Hassan Alokaily, McMaster University, Civil
- Mauricio Alvarez, Structural
- Angelica Angeles, California State University Los Angeles, Mechanical
- Raul Anguiano, Iowa State University, Contractor
- Ali Arid, San Francisco State University, Civil
- Ma'moon Ayesh, McMaster University, Civil
- Hazel Baez, San Francisco State University, Civil
- Saikat Bagchi, Concordia University, Civil
- Juan Barajas Vargas, Portland State University, Civil
- Jeffrey Brietling, Lehigh University, Civil
- Kirsten Briggs, University of Southern California, Civil
- Jakob Bruxvoort, Iowa State University, Civil
- Gabriela Carnicero, California State Los Angeles, Structural
- Rebecca Castro, San Francisco State University, Civil
Johan Cheah, The University of Texas at Austin, Architect
Kevin Chen, University of Illinois at Urbana Champaign, Civil
Jonnalagadda Chintaiah Sunil, McMaster University, Structural
Bennett Christenson, University of Minnesota - Twin Cities, Structural
Christian Chung, University of California Berkeley, Civil
Nick Coburn, Structural
Kaitrin Colby, University of Minnesota, Structural
Miguel Crisostomo, Structural
Heather Daigle, McMaster University, Civil
Julia De Hart, Cal Poly San Luis Obispo, Structural
Allie Decker, California Polytechnic State University, San Luis Obispo, Structural
Kevin Di, University of Illinois Urbana-Champaign, Civil
Reion Richard Domingo, University of California Los Angeles, Civil
Dipesh Pravinbhai Donda, Concordia University, Civil
Daniel Duffy, University of Texas at Austin, Civil
Nicholas Dunn, University at Buffalo, Civil
Emily Duong, Purdue University, Civil
Matthew East, McMaster University, Structural
Kevin Escobedo, Civil
Honor Fisher, University of California Los Angeles, Civil
Boris Galindo, Manhattan College, Structural
Jaden Anthony-Amaro Gallegos, Rice University, Civil
David Uwinganjir Gatete, University of Nebraska Omaha, Civil
Harpreet Gill, California State University Sacramento, Structural
Jacob Glasek, Civil
Kevin Glasek, McMaster University, Civil
Michael Goldenberg, California Polytechnic State University San Luis Obispo, Structural
Christopher Guilcapi, Lehigh University, Civil
Civil Sean Gulbranson, University of Minnesota, Structural
Soham Gupta, University of California Los Angeles, Civil
Ricardo Gustavson, California Polytechnic State University San Luis Obispo, Structural
Gabriel Halladay, University of California, San Diego, Civil
Calvin Hamblet, North Carolina State University, Civil
Brandon Hein, University of California Berkeley
Jiwoo Heo, McMaster University, Civil
Md Hossain, The University of Tokyo, Emergency Response Management
Wenbo Hu, Dalian University of Technology, Civil
Nathan Jenni, University of Illinois at Urbana-Champaign, Civil
Lauren Kercheval, University of Colorado Boulder, Civil
Kara Kieffer, Iowa State University, Civil
Lenn Kushigemachi, University of California, Los Angeles, Structural
Daniel Lee Kim, Civil
Amie Leung, University of Toronto, Social Sciences
Andrea Lin, University of California San Diego, Structural
Julia Lind, University of Southern California, Civil
Jerry Luong, Structural
Hongyu Ma, University of Toronto, Civil
Troy Marasigan, The University of Texas at Austin, Structural
Sam Massinople, North Carolina State University, Structural
Emma Mogus, McMaster University
Hossein Mohammadi, McMaster University, Structural
Fernando Muñoz, University of Chile, Structural
John Murphy, Civil
Michael Neal, University of Illinois Urbana-Champaign, Structural
Junco Nelson, University of Southern California, Civil
Christina Ngo, University of California San Diego, Structural
Huan Ngo, Intermodal Freight Transportation Institute, Civil
Gabriela Palavecino, Stanford University, Civil
Ryan Park, McMaster University, Civil
Jacob Parnell, McMaster University
Nicholas Pasquini, State University of New York at Buffalo, Civil
Adolfo Perez, San Francisco State University, Civil
Francisco Perez, San Francisco State University, Civil
Fray Pozo, Utah State University, Structural
Inna Radova, California State University Sacramento, Civil
Elisa Reyes, Architect
Luis Rios, Iowa State University
Marco Rosas Rodriguez, Brigham Young University, Civil
Maja Sagaser, California Polytechnic State University, Structural
Aws Salahaldin, University of California Irvine, Civil
Giovani Santamaria, Civil
Yoshi Sawai, University of Colorado, Boulder, Education
Darryl Sexton, Purdue University, Civil
Haziq Shafie, Iowa State University, Mechanical
Patricia Sierra, Lehigh University, Civil
Maxwell Snook, California Polytechnic State University San Luis Obispo, Structural
Brenden Suh, McMaster University, Architect
Shiyao Sun, University of Illinois at Urbana Champaign, Civil
Annika Tan, University of California San Diego, Structural
Katie Terou, Structural
Maimouna Amatou Rahmane Thiam, Dalian University of Technology, Civil
Ana Tijerina, Portland State University, Civil
Edgar Daniel Varela Torres, University of Colorado Boulder, Civil
Michelle Tran, University of California Los Angeles, Civil
Vongsri Vang, California State University, Sacramento, Civil
Austin Wang, University of California Irvine, Civil
Eric Wang, University of Toronto, Civil
Yuanqi Wang, University of California, San Diego, Civil
Joel White, Stanford University, Architect
Nathaniel Wilson, California State University Sacramento, Structural
Tanya Wohlfarth, California Polytechnic State University, Structural
Alvin Wong, University of California San Diego, Structural
Mark Wright, California Polytechnic State University, San Luis Obispo, Structural
Jason Xu, The University of Texas at Austin, Mechanical
Xulai Xu, University of Illinois at Urbana-Champaign, Civil
Kristianne Yabut, San Francisco State University, Civil
Sige Yang, Dalian University of Technology, Civil
Mario Yescas II, Portland State University, Structural
Charles Ying, University of California San Diego, Structural
Sami Zaki, McMaster University, Structural
Juan Zermeno, Civil
Tianyi Zhang, University of California San Diego, Civil
Earthquake Advisories Can Save Lives (Japan Times) Letter to the Editor by James D. Goltz (M.EERI, 1994). I have long been intrigued with the effort to predict a large, potentially devastating earthquake in the Tokai region of Japan and the legislation that established how scientists and public officials were to respond, should precursory seismic activity reach the point of a warning issued by the prime minister. Read more

USGS Rolls Out Groundbreaking Earthquake Study: The HayWired Earthquake Scenario (press release) the USGS, along with approximately 60 partners, released a new fact sheet that summarizes a report from a larger study of what could happen during a major earthquake in the San Francisco Bay area along the Hayward Fault — arguably one of the most urbanized and interconnected areas in the nation. Read more

On Anniversary of Great 1906 Quake, California Still Struggles to Prepare for the Next 'Big One' (Los Angeles Times) Some California cities are now in the midst of new efforts to retrofit buildings to better protect them during a major quake. These efforts are far from uniform across the State — and experts say they still leave many people and buildings vulnerable. Here is a breakdown of what is being done — and what isn't. Read more

San Francisco's Big Seismic Gamble (New York Times) The City lives with the certainty that the Big One will come. But the city is also putting up taller and taller buildings clustered closer and closer together because of the state's severe housing shortage. Now those competing pressures have prompted an anxious rethinking of building regulations. Read more

Rail Subways and Bridges at Risk From Quake Damage (Wellington.Scoop) Thousands of Wellington (New Zealand) train commuters are using subways and pedestrian bridges that are high earthquake risks. The council plans to spend $5.6 million over the next two years to get the bridges up to 67 percent of the standard, which means they will be low risk. But it will take seven years to fix the subways at a cost of $4.2m. Read more

East Bay Fault is 'Tectonic Time Bomb,' More Dangerous Than San Andreas, New Study Finds (Los Angeles Times) The so-called HayWired scenario envisions a scale of disaster not seen in modern California history — 2,500 people needing rescue from collapsed...
buildings and 22,000 being trapped in elevators, Hudnut said. More than 400,000 people could be displaced from their homes, and some East Bay residents may lose access to clean running water for as long as six months. Read more

UNR Earthquake Engineering Lab Holds Bridge Seismic Stress Test (CBS2 News video) "What we're getting out of this study is that it is going to allow engineers in high-seismic states to embrace this concept and expedite construction of bridges," says Saiid Saiidi (M.EERI,1981), UNR Professor of Civil and Environmental Engineering. Read more

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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 StructuralDesign Council conference will cover a variety of topics related to recent advances in structural design of tall and special buildings. Learn more: www.latallbuildings.org
Monday, September 14, 2020 - September 18

**17th WCEE**

The 17th WCEE will be hosted in Sendai, Japan, from September 14th to 18th 2020. Check [http://www.iaee.or.jp/](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/)

Wednesday, March 17, 2021 - March 19

**EERI Annual Meeting**