

SCEC *Southern California*
AN NSF+USGS CENTER *Earthquake Center*

Communication, Education, and Outreach:
Resources and Activities for the SCEC Community



Southern California Earthquake Center

SCEC CEO Staff & Consultants



**Mark
Benthien**
Associate Director
for CEO



**Sharon
Sandow**
Asst. Director
Strategic Partnerships



**John
Marquis**
Webmaster / Digital
Products Manager



**Jason
Ballmann**
Communications
Manager



**Gabriela
Noriega**
Experiential Learning & Career
Advancement Manager



**Michele
Wood**
SCEC/ECA Evaluation

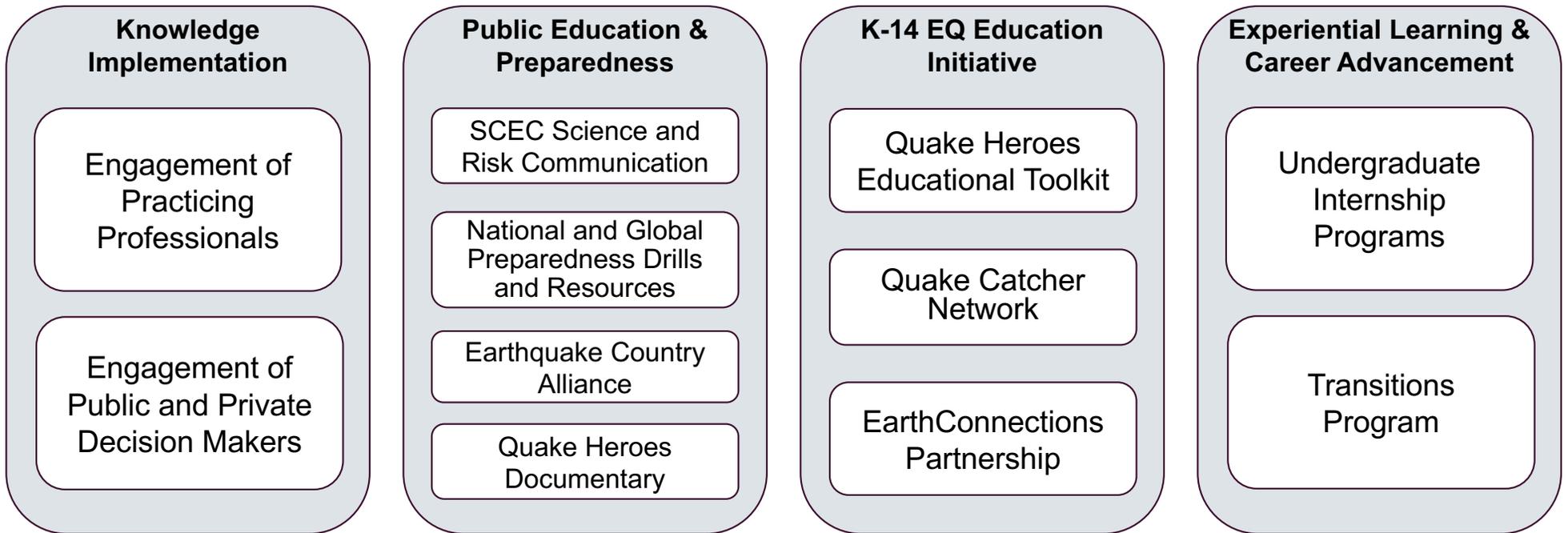


**Jozi
Pearson**
UseIT Supervisor

SCEC5 CEO Strategy

- **Theme:** *Partner Globally, Prepare Locally*
- **Long Term Outcomes**
 - Improved application of earthquake science in policy and practice
 - Reduced loss of life, property, and recovery time
 - Increased science literacy
 - Increased diversity, retention, and career success in the scientific workforce
- **Comprehensive Evaluation Framework**
 - Logic Model, Metrics, Milestones, etc.

CEO Focus Areas



SCEC CEO Planning Committee



Tim Sellnow
Chair & Advisory Council Rep.
Focus Area: Public Education and Preparedness
University of Central Florida



Kate Long
Vice Chair
Focus Area: Public Education and Preparedness
Dr. Lucy Jones Center



Ricardo Taborda
SCEC Planning Committee Rep.
Focus Area: Knowledge Implementation
University of Memphis



Tim Dawson
SCEC Board Rep.
Focus Area: Knowledge Implementation
California Geological Survey



Danielle Sumy
Focus Area: K-14 Earthquake Education Initiative
IRIS



Sally McGill
Focus Area: Experiential Learning and Career Advancement
CSU San Bernardino

CEO Focus Areas

Knowledge Implementation

Engagement of
Practicing
Professionals

Engagement of
Public and Private
Decision Makers

Public Education & Preparedness

SCEC Science and
Risk Communication

National and Global
Preparedness Drills
and Resources

Earthquake Country
Alliance

Quake Heroes
Documentary

K-14 EQ Education Initiative

Quake Heroes
Educational Toolkit

Quake Catcher
Network

EarthConnections
Partnership

Experiential Learning & Career Advancement

Undergraduate
Internship
Programs

Transitions
Program

Knowledge Implementation

Goals

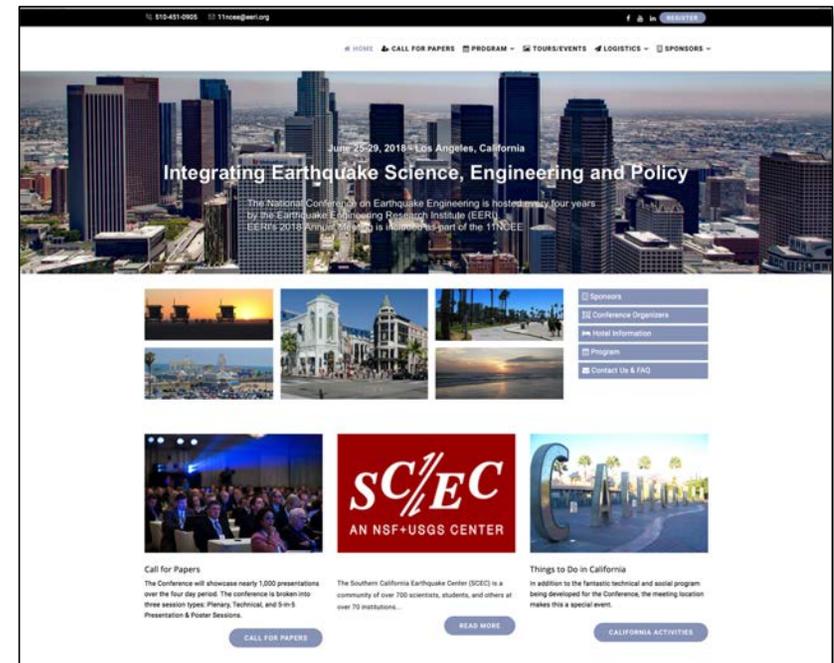
- **Increased participation of SCEC** at engineering conferences, professional society meetings, policy activities, etc.
- **Engaged engineers** within SCEC working groups/projects/CEO activities
- **Adoption of SCEC science** for better building codes, insurance rates, emergency response, etc.
- **Improved articulation** of science process/results of the SCEC Community

Strategy

- Knowledge Implementation committee/group being formed to develop priorities, connect partners, identify opportunities

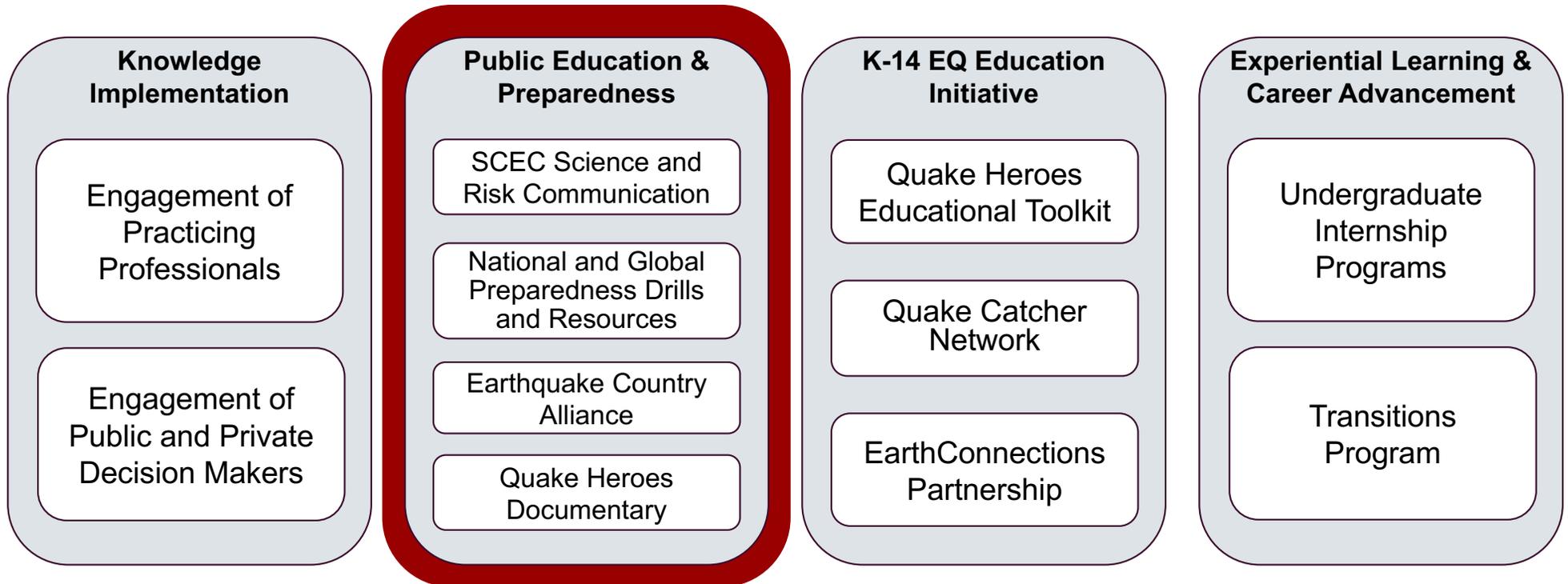
11th National Conference on Earthquake Engineering

- June 25-29, 2018
- Downtown Los Angeles
- *Integrating Earthquake Science, Engineering and Policy*
- SCEC was a technical co-sponsor with EERI
- Goulet was Program Co-Chair
- Benthien and Ballmann supported publicity & media relations



11NCEE.org

CEO Focus Areas



SCEC Science & Risk Communications

- SCEC Media Relations
- SCEC Social Media
 - [@scec](https://twitter.com/scec) #SCECmeet
 - [Facebook.com/scec](https://facebook.com/scec)
 - [Youtube.com/scecmovies](https://youtube.com/scecmovies)
 - [Instagram.com/SCECinsta](https://instagram.com/SCECinsta)
- SCEC.org website articles
- Crisis Communications Development
- SCEC Community Media Trainings
- Geohazards Messaging Collaboratory (SCEC, IRIS, UNAVCO, USGS, NOAA)

SCEC Twitter Profile

UCERF3: Significant Advancements Made in Earthquake Forecasting

SCEC CEO Earthquake Immediate Response Plan

Location:	Urban			Suburban/Rural		
	Severe Event	Moderate Event	Weak Event	Severe Event	Moderate Event	Weak Event
Scenario	Moderate to Severe	Moderate	Low	Moderate to Severe	Moderate	Low
Intensity	Red/Orange	Yellow	Green	Red/Orange	Yellow/Green	Green
PAGER	>= M6.0	>= M4.5 - 6.0	M3.0 - 4.5	>= M6.0	M4.5 - 6.0	M3.0 - 4.5
Typical Magnitudes						
Actions:						
Internal Summary	Yes	Yes	Yes	Yes	Yes	No
Social Media Outreach	Yes	Yes	Yes	Yes	Maybe	Maybe
Email Campaign Note	Yes	Yes	No	Yes	No	No
Media Involvement	Yes	Maybe	Maybe	Yes	Maybe	No
Website Article	Yes	Maybe	No	Maybe	No	No
CRISIS ACTIONS						
	Action Descriptions:	Internal Summary CEO Team Sends Overview to SCEC Staff at USC / Coordinates with SCEC Directors	Social Media Outreach CEO Team Posts Across Appropriate Social Media Channels (Earthquake Event Details w/ USGS Link and ShakeMap, Step 6 Safety GIFs and Actions, Other Relevant Content)	Media Involvement CEO Team Coordinate Interviews, or Hold Press Conference at USC or Relevant Site, with University Communications and IRIS	Email Campaign Note CEO Team Sends Email Summary to Relevant Public List	Website Note CEO Team Publish Internal/External Article, USGS Event Page Link

Great ShakeOut Earthquake Drills

- Schools, organizations, and families worldwide practice earthquake safety and other aspects of their emergency plans
- Coordinated globally by SCEC
- 2017: **58+ million** people worldwide
- 2018 International ShakeOut Day:
October 18
- Learn more and register:
ShakeOut.org

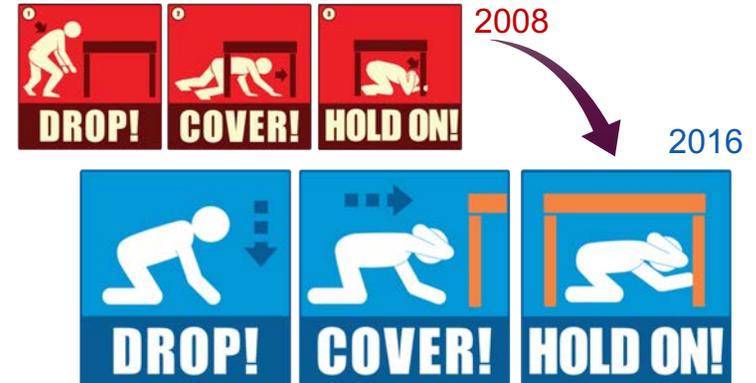
Protect Yourself During Earthquakes!



EarthquakeCountry.org/step5

ShakeOut.org/messaging

- Social media messaging #ShakeOut
- News release templates
- Common talking points
- Downloadable earthquake safety videos
- Animated GIFs and more!



PREPARE!

1. Secure Your Space
2. Make a Plan
3. Organize Disaster Supplies
4. Minimize Financial Hardship

SURVIVE!

5. Drop, Cover, and Hold On
6. Improve Safety

RECOVER!

7. Reconnect and Restore

Do: take a step each week or month.
Don't: rush through or cut corners.



CONTACT: **Your Name, Agency
Media/Doc. Phone?
Your email** FOR IMMEDIATE RELEASE

**FIFTH ANNUAL "GREAT YOUR REGION SHAKEOUT"
SET FOR OCTOBER 19, 2017**
All citizens, businesses, and communities in SEVERAL STATES encouraged participate

CITY, IN ... Following FEMA's "National Preparedness Month" in September, individuals and organizations throughout **SEVERAL STATES** will participate in the **5th** annual Great **SEVERAL STATES** ShakeOut earthquake drill.

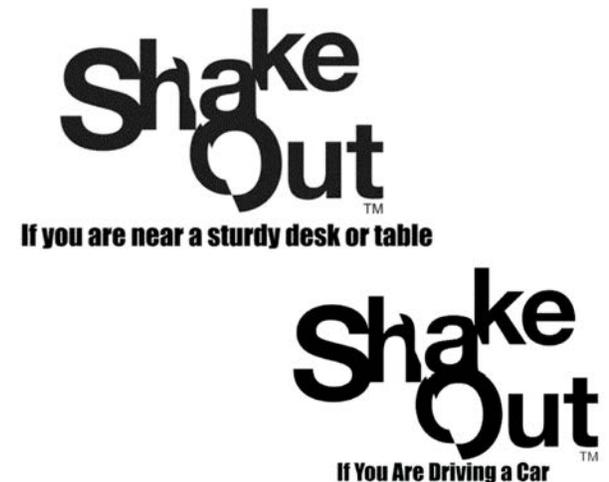
Held annually on the third Thursday of October, the ShakeOut International Day of Action is set for Thursday, October 19, 2017 at 10:00 a.m. During the self-led drill, participants practice how to "Drop, Cover, and Hold On". Endorsed by emergency officials and first responders, the safe response to an earthquake is to:

- DROP** when you are on your hands and knees. This position protects you from being knocked down and also allows you to stay low and covered to shelter if nearby.
- COVER** your head and neck with one arm and hand
 - If a sturdy table or desk is nearby, crouch underneath it for shelter.
 - If no shelter is nearby, crouch next to an interior wall (away from windows).
 - Stay on your knees, head over to protect vital organs.
- HOLD ON** until shaking stops
 - Under shelter, hold on to it with one hand, be ready to move with your shelter if it shifts.
 - No shelter, hold on to your head and neck with both arms and hands.

ShakeOut any events or non-traditional earthquake events here! The April 2015 M7.8 Nepal earthquake and 2011 September 26, 2011 earthquake near Japan, Chile, were so powerful that large earthquakes one hour with 7.0+ is a warning. Citizens in the central U.S. are not immune to earthquakes. All regions in home to several active seismic zones capable of producing damaging earthquakes, including the West Coast and Midwest Valley Seismic Zones.

According to Seismologist ROBERTSON (2016), "While damaging earthquakes have only been recorded in shelter schools compared to other areas, they can occur at any time wherever we work, live, or travel within the region and beyond. Everyone, everywhere should learn to protect themselves from an earthquake."

The ShakeOut is free and open-to-the-public, and participants include individuals, schools, businesses, local and state government agencies, and many other groups. To take part in the ShakeOut, individuals and organizations are asked to join the drill by registering to participate www.shakeout.org. Our registered participants receive regular information on how to plan their drill and become better prepared for earthquakes and other disasters.



ShakeOut.org/colleges

Messaging templates, instructor's guide, and PowerPoint slides (with link to Drill Broadcast)

Letter to Deans, Department Chairs, and Directors

Dear _____,

You may have already seen [President Smith's / my] letter about this year's Great California ShakeOut (www.shakeout.org/california). I encourage you to mobilize your faculty and staff to participate in the largest earthquake drill ever, along with the rest of the university.

This year's ShakeOut drill will be at **10:18 a.m. on October 18, 2012**. Millions of Californians will practice **Drop, Cover, and Hold On**, along with millions of others in many other states and countries:

- **DROP** to the ground (before the earthquake knocks you down)
- Take **COVER** by getting under a sturdy desk or table, and
- **HOLD ON** to your shelter and be prepared to move with it until the shaking stops.

If there is no table or desk near you, drop to the ground and then if possible move to an inside corner of the room. Be in a crawling position to protect your vital organs and be ready to move if necessary, and cover your head and neck with your hands and arms. Do not move to another location or run outside. Earthquakes occur without any warning and may be so violent that you cannot run or crawl. These are guidelines for most situations. Visit www.dropcoverholdon.org to learn what to do in specific settings.

Last year more than 8.6 million people participated in California alone. All colleges and universities are encouraged to participate in the drill along with K-12 schools, businesses, government agencies, other organizations, and families.

Please request all your students, staff, and faculty to participate in this year's Shakeout drill. This includes directing students and others you may supervise to participate wherever they may be at drill time.

Visit www.ShakeOut.org/california/colleges for an instructional guide and 4-slide PowerPoint presentation for use by instructors in their classes. The presentation links to a 60-second "Drill Broadcast" narration with earthquake sound effects that can be played during your drill.

Other preparedness recommendations:

- Everyone should sign up for our school's emergency notification system [\[include link\]](#)
- Everyone should also have an emergency kit in your car and home and an out-of-state contact you and your family can call to check-in after a major earthquake.
- For preparedness information and resources specific to [XYZ University](#), visit www.xyz.edu/preparedness.

Best regards,

Campus Emergency Manager / President

Great ShakeOut Earthquake Drill Classroom Instruction Guide

Thank you for playing your important role in teaching or reminding our students how to be safe during major earthquakes. This may be the first time some of our out-of-state students have ever participated in an earthquake drill, and it may be their only opportunity to practice what to do to protect themselves ("Drop, Cover, and Hold On") before our next major earthquake.

The 2012 ShakeOut will be held statewide on **October 18th at 10:18 a.m.** This is when most people will participate, but you are welcome to shift the time to the start or end of your class. As many students may not be in class at this time, you are welcome to hold similar drills in other classes this day as well.

Instructions:

1. Prior to the start of your drill, start the 4-slide PowerPoint and display the first slide, or read the following:
 - California is earthquake country... an earthquake can happen at any time and cause intense shaking at USC! To protect your life, you need to know what to do in an event of an earthquake.
 - The Great California ShakeOut is an annual statewide earthquake drill for practicing what to do to protect ourselves during earthquakes
2. Advance to the second slide and read the content about protective actions during earthquakes:
 - a. Classroom or auditorium:
 - **Drop** to the floor
 - Take **Cover** under your desk or table as best as possible. If in an auditorium with no tables, take cover between the rows of chairs. Cover the back of your head and neck with your other hand.
 - **Hold on** to the leg of the desk/table with one hand.
 - b. Laboratory or other room with no tables/shelter:
 - Step back from the lab table.
 - **Drop** to the floor on your knees next to a wall, away from glass and other hazards if possible.
 - **Cover** your head and neck with your arms.
 - **Hold On** to something sturdy during the shaking, if possible
 - Once the shaking has stopped carefully exit the building.
3. Advance to the third slide and play the 60-second Drill Broadcast narration, or read this:
 - This is an earthquake drill. Drop, Cover, and Hold on.
 - **Drop** to the ground now, before the ground jerks strongly and throws you down
 - Take **Cover** under something sturdy to protect yourself from objects being hurled across the room. Or stay low and protect yourself from flying objects with your hands and arms.
 - **Hold On** to your shelter or hold your position until the shaking stops.
4. Once the narration is over and the students return to their seats, you can hold an optional brief discussion. Possible topics:
 - a) Do you always keep your cell phone and computer charged? If you have a car, do you always keep at least half a tank of gas in it?
 - b) How would you contact your family in case of an emergency? Do your parents/family members know how to respond to emails/texts/etc.?
 - c) If the ATMs are down after a major earthquake, will you have enough money to sustain yourself?
 - d) Do you know what "check in" services and hotlines are available for your use through USC?
 - e) Learn more: <http://www.earthquakecountry.org>

Thank you for participating in the ShakeOut Drill and putting safety first!

What Are We About To Do?

People get injured by falling objects and when they try to run, which is why we will practice **Drop, Cover, and Hold On**:

In a CLASSROOM OR AUDITORIUM:

- **Drop** to the floor. Do not try to exit during shaking.
- **Cover** your head and neck with one hand and seek shelter under your desk or table as best as possible. If in an auditorium with no tables, take cover between the rows of chairs.
- **Hold on** to the leg of the desk/table with your other hand.



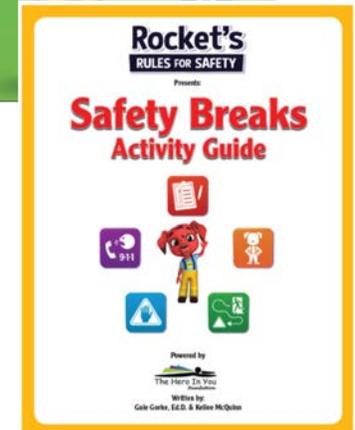
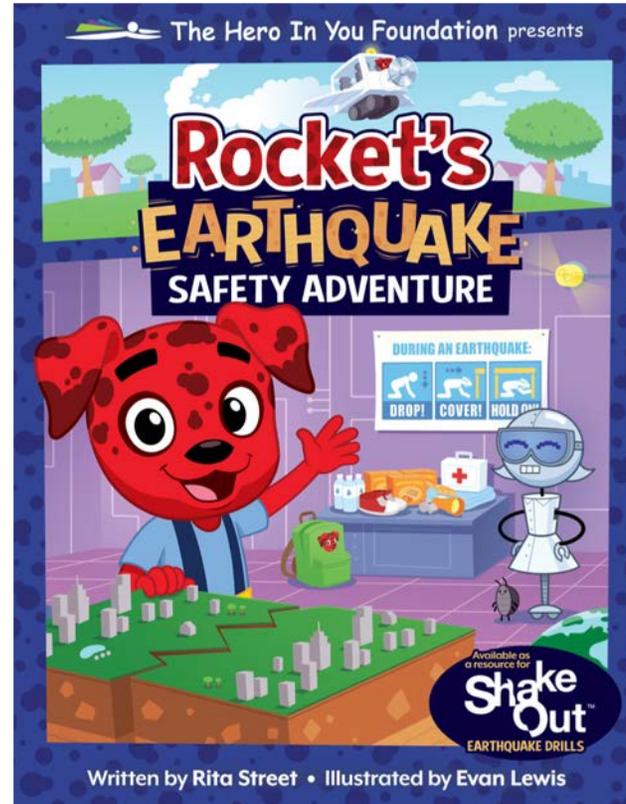
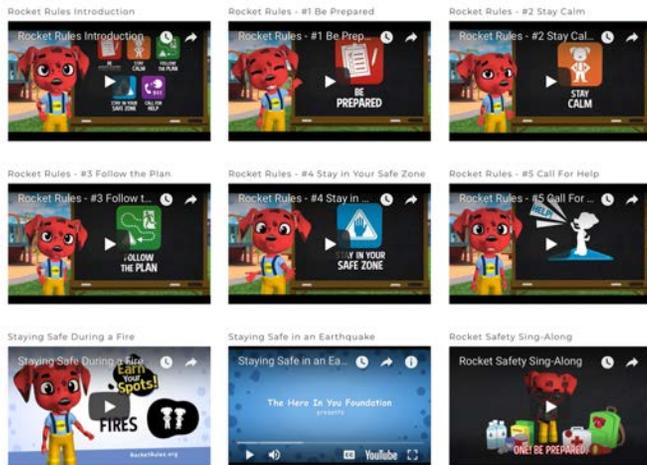
In a LABORATORY:

- Step back from the lab table.
- **Drop** to the floor on your knees next to a wall, away from glass and other hazards if possible.
- **Cover** your head and neck with your hands and arms.
- **Hold On** to something sturdy during the shaking



"Wait a Minute" after shaking stops. Then look around for hazards, including behind you, before getting up. Carefully exit the building if instructed.

New Materials for Grades K-3



ShakeOut.org/schools

RocketRules.org

TsunamiZone.org

- **Know Your Zone:** Maps for all coastal areas to know if you are in a tsunami inundation zone
- **Tsunami Preparedness Week:** Register your activities to be counted
- **Event Calendar:** Learn about drills, presentations, and other events near you
- **Resources:** Movies, manuals, posters, etc.
- **2018:** California (181K); Caribbean (389K)
- **Funding:** CalOES/NOAA

Earthquake Country Alliance

- Public-Private-Grassroots leaders
- Regional alliances coordinate local activities
- Statewide Sector-based committees: develop resources and programs
- SCEC coordinates ECA with grants from California's Office of Emergency Services and FEMA
- Learn more and join today:
EarthquakeCountry.org



ECA Sector-Based Committees

- Businesses
 - K-12 Schools
 - Seniors and People with Disabilities
 - Museums, parks, libraries, etc.
 - Healthcare
 - Public Sector
 - Higher Education
 - Non-Profit & Faith-Based Organizations
 - Fire Agencies
 - Multi-Cultural
- 

ECA SoCal Coordinating Committee

- **Chairs:** Connie Lackey (Providence Health) Heidi Rosofsky (Global Vision), Margaret Vinci (Caltech)
- **Membership Coordinator:** Anna Burton (Los Angeles World Airports)
- **Regional Workshops Coordinator:** Amy Estey (American Red Cross)
- **Media Bureau Coordinator:** Chris Ipsen (City of LA Emergency Management)
- **Participation Bureau Coordinators:** Ken Kondo (County of LA Emergency Management) & Jenny Novak (CalOES Southern Region)
- **Events Bureau Coordinators:** Lance Webster (Toastmasters) and John Hammett (Zenith Insurance, retired)
- **SCEC staff liaison:** Gabriela Noriega

Nov. 1: ShakeOut 10th Anniversary Celebration @ LA County Fire Museum



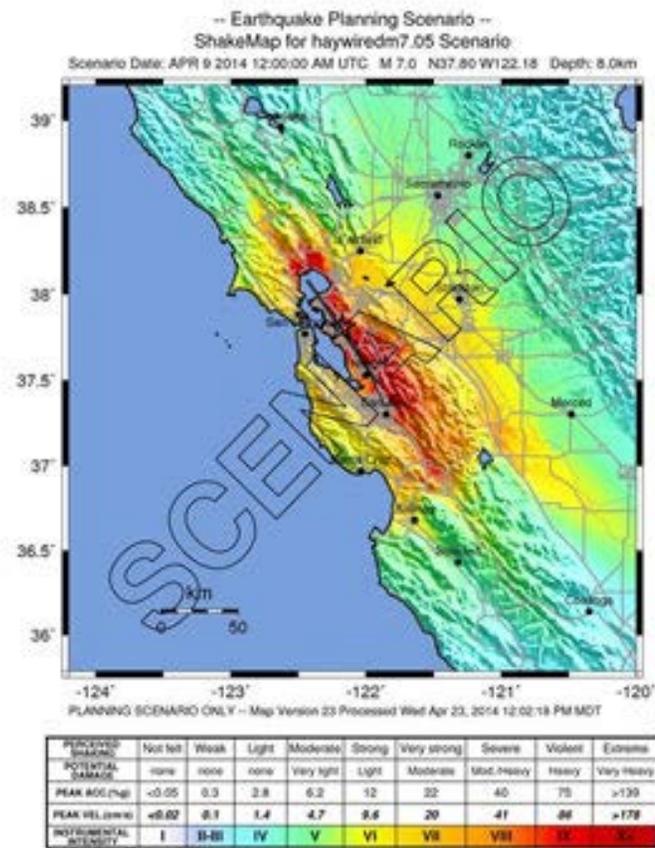
ECA Bay Area Coordinating Committee

- ***Chairs:*** Daniel Homsey (City of SF, NEN), Jennifer Lazo (City of Berkeley), Bob Beecher (Cisco, San Jose)
 - ***Membership Coordinator:*** Frank Doyle (Allied Universal Security))
 - ***Regional Workshops Coordinator:*** Dena Gunning (City of Oakland)
 - ***Media Bureau Coordinator:*** Janet Ruiz (Insurance Information Institute)
 - ***Participation Bureau Coordinator:*** Kathy Gerk (City of Richmond)
 - ***Sector-Based Committees Coordinator:*** Larissa Paschyn (Amgen)
 - ***Events Bureau Coordinator:*** Jill Dutchover (Alameda County Fire Dept.)
 - ***EPIcenter Network Coordinator:*** Lia Turk
 - ***SCEC staff liaison:*** Sharon Sandow de Groot
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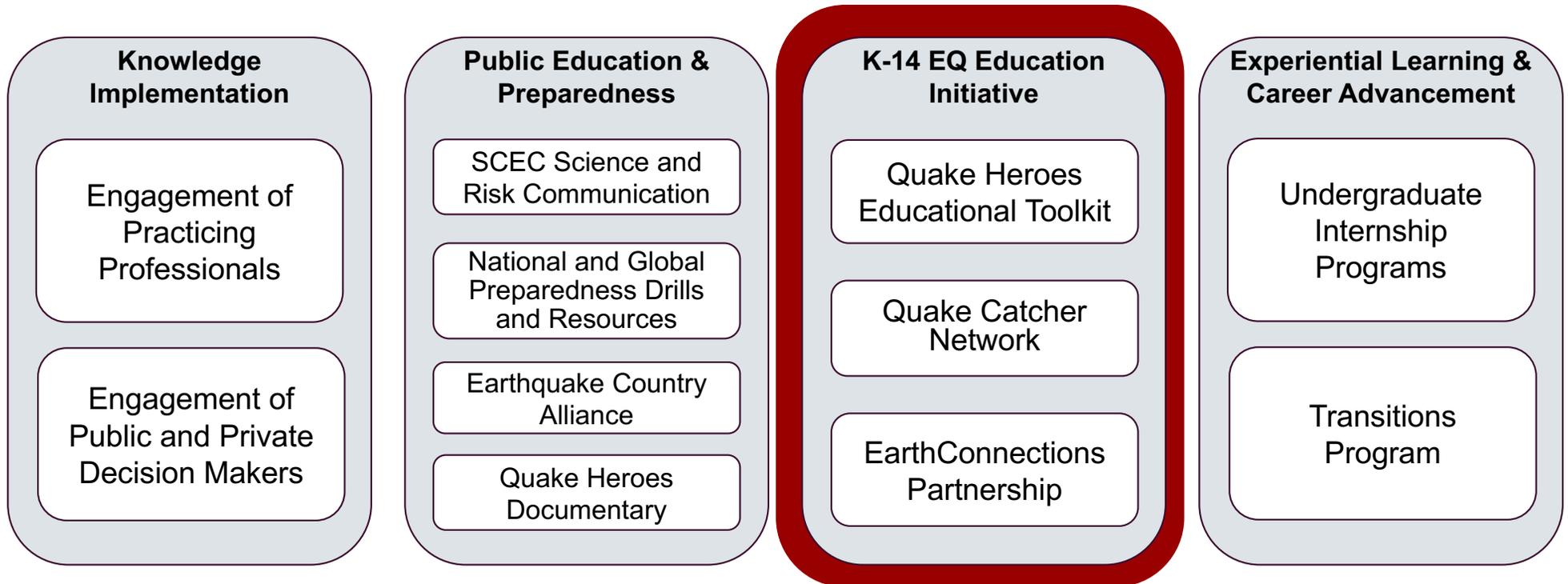
USGS HayWired Scenario

- 2017-2019: Release of scenario chapters & outreach to government/business
- SCEC & ECA Bay Area participating in and supporting HayWired Coalition (biweekly meetings)
- Basis for 2018 Bay Area ShakeOut drills and new statewide business resilience campaign
- Learn more & promote resiliency:

OutsmartDisaster.com



CEO Focus Areas



K-14 Education Initiative

- Resources:
 - *Quake Heroes* Film & Educational Toolkit
 - Quake Catcher Network (with IRIS and USGS): School and Museum stations
 - SCEC Plate Tectonics Puzzlemap (www.shakeoutshop.com)
- “EarthConnections” San Bernardino Regional Alliance
 - Educator & community workshops
 - Field trips (fault tours, college/university visits, career opps)
 - Geology club activities (HS, 2yr, 4yr)
 - National partners (UNAVCO, IRIS, etc.)

Quake Heroes Components

- **Broadcast-quality documentary**
Interviews, live action re-enactments, archival news footage, and 3D motion graphics
- **Classroom toolkit**
Earthquake science lesson plans, take-home preparedness guides, and Teen CERT materials
- **Outreach campaign**
Social media, website, and additional video content
- **Funding**
FEMA, State Farm, Simpson Strong Tie, SEAOSC, Safe-T-Proof, Hero In You Foundation, and other sponsors
- **Release**
ShakeOut 2018 and Northridge 25th Anniversary (Jan. 2019)



CEO Focus Areas

Knowledge Implementation

- Engagement of Practicing Professionals
- Engagement of Public and Private Decision Makers

Public Education & Preparedness

- SCEC Science and Risk Communication
- National and Global Preparedness Drills and Resources
- Earthquake Country Alliance
- Quake Heroes Documentary

K-14 EQ Education Initiative

- Quake Heroes Educational Toolkit
- Quake Catcher Network
- EarthConnections Partnership

Experiential Learning & Career Advancement

- Undergraduate Internship Programs
- Transitions Program

Undergraduate Studies in Earthquake Information Technology

- 8-week, 24 intern REU Site
 - www.scec.org/internships/useit
- New initiative for 2018
 - Pre-summer workshop for community college interns
 - Engaging students year-round
 - AGU Virtual Symposium
 - SoCal CISE REU Workshop
 - USC Undergrad Symposium
 - School-year research at USC
- Encourage your undergraduates to apply
- Be a guest presenter (in person or remote)



Summer Undergraduate Research Experience

- Summer research with SCEC scientist mentors
- Recruitment
 - Requests for Interns no longer tied to SCEC RFP process
 - Instructions will be emailed; submit potential projects and qualifications
 - Candidates rate project description
 - Mentors rank interns interested in their research
 - www.scec.org/internships/sure
- 2018 Cohort:
 - Interns from Utah State, Cal Poly Pomona, CSU Bakersfield, Occidental, and UC Irvine
 - Mentors from UC Riverside, UC San Diego, Occidental, and UC Irvine

Transitions Program @ SCEC 2018

The Breakfast Club—Pathways in Earthquake Science Careers

www.scec.org/workshops/2018/transitions

Career building strategies:

How to promote yourself professionally

Monday (07:00-08:30)

Career options in earthquake science:

Where to start?

Tuesday (07:00-08:30)



Transitions Program: Other Upcoming Activities

- Mentors Workshop
- Careers in Earthquake Science & STEM (Webinars)
- Potential travel support for students to present at conferences
- Summer “Bridge” funding (between UG & Grad)



CEO Resource Tables

- New SCEC Tri-fold Brochure
 - Booklets and handouts for various audiences
 - SCEC Internships flyer
 - ShakeOut flyers, posters, buttons, pens, etc.
 - FEMA Materials
 - SCEC Cups (made for 11NCEE conference tote bags)
- 

SC/EC ***Southern California***
Earthquake Center
AN NSF+USGS CENTER

Communication, Education, and Outreach



Southern California Earthquake Center