

Inland Geological Society

April 2018

Newsletter of the Inland Geological Society

Volume 34 No. 4

Next Meeting:
Wednesday
April 4th

Time:
Social: 6:00pm
Dinner: 7:00pm
Lecture: 7:45pm

Location:
Jurupa Mountains
Discovery Center
7621 Granite Hill Dr.
Jurupa Valley, CA
92509
(Map on Pg. 7)

Coming to
Dinner?
Please RSVP
to Jessie Bagby
by Monday 4/2
rsvp.igs@gmail.com

In this issue:

- April Speaker: Dr. Hillary S. Jenkins, Ph.D. 1-2
- Announcements 2-5
- Upcoming Events/IGS Meeting Schedule 6
- Current IGS Officers and Meeting Location 7

April Speaker:

Dr. Hillary S. Jenkins, Ph.D.
Associate Professor of Environmental Studies
University of Redlands

The Next Big One? Seismic Risk in the Inland Empire

Abstract:

More than 1500 earthquakes have occurred in Southern California in 2018 alone. Although most of these ruptures are magnitude 4.5 or lower, this region is rife with seismic activity. The dense population (23.8 million people living in southern California) makes even minor changes in fault stress relevant for this region. Here I present my recent findings on the seismic hazard and compressive strength of the lithologic units along the Mill Creek Strand and the San Bernardino Branch of the San Andreas Fault. I then use this information to model ground shaking across a suite of hypothetical earthquake epicenters in the Inland Empire and predict the total ground shaking that would result for the towns of Highland, Redlands, Yucaipa, Riverside, and San Bernardino.

Biography:

Hillary Jenkins holds a Ph.D. in Earth & Ocean Sciences from Duke University with expertise in paleoclimatology, dendroclimatology, isotope geochemistry, and hydrology. She is an Associate Professor of Environmental Studies at the University of Redlands where she teaches courses in Geology, Hydrology, and Climate Science. Her current

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Biography (cont.):

research interests include seismic hazard and risk analysis in Southern California, tree rings and extreme drought in Amazonia and the southwestern United States, spatio-temporal patterns of water distribution, quality, and scarcity in southern California, the hydrologic health of meadow ecosystems, deforestation over the Amazon rainforest using remote sensing geospatial analysis techniques, and the relationship between faulting and forest carbon loss.

Congratulations!

Congratulations to **Joel Lara** and **Edgar Rivas**, junior high school students from San Jacinto, for their Riverside County Science and Engineering Fair poster presentation on why the San Jacinto fault is actually a branch of the San Andreas fault. Joel and Edgar were awarded a \$100 prize for their presentation. Good work, gentlemen! Joel and Edgar have been invited to attend our April Meeting to show their poster and answer questions.

Major Revision to California Guide for Assessing Fault Rupture Hazards

CGS released a major revision to its Special Publication 42 (SP 42): *Earthquake Fault Zones - A Guide for Government Agencies, Property Owners / Developers, and Geoscience Practitioners for Assessing Fault Rupture Hazards in California*. SP 42 has been the primary guidance document since 1975 for providing background regarding the Alquist-Priolo Earthquake Fault Zoning Act (AP Act) and the assessment of surface fault rupture hazard. The 2018 edition is the latest update to this document, with a focus on providing more detailed guidance to government agencies, property owners, and geoscientists who are affected by the AP Act. This edition is freely available on the CGS website as a pdf download at:

http://www.conservation.ca.gov/cgs/Documents/CGS_SP42_2018.pdf

Earthquake Hazards Search just got easier

California Geological Survey unveils web application to help public locate Earthquake Hazard Zones

The California Earthquake Hazards Zone Application is an online map that allows anyone with a computer, tablet or smartphone to conveniently check whether a property is in an earthquake hazard zone. With this tool, you can type in an address or use the location capability of your computer or mobile device to determine whether a property lies within any of CGS's mapped earthquake hazard zones. It will also tell you if CGS has not yet evaluated the hazards in that area. For more information, visit the website at:

http://www.conservation.ca.gov/cgs/Pages/SH_EQZ_App.aspx

Note our New Meeting Place!

The Inland Geological Society monthly meeting will be held at the
Jurupa Mountains Discovery Center
 7621 Granite Hill Drive, Jurupa Valley, California 92509
 951.685.5818



The Jurupa Mountains Discovery Center hosts the Ruth and Sam Kirkby Earth Science Museum, which houses a unique collection of exhibits including the Crestmore Quarry, fluorescent minerals, Indian artifacts, mining exhibits, petrified wood, sea shells, dinosaur exhibits, fossils, rocks and minerals, and many more.

The onsite Granite Hill Nursery stocks a large variety of cacti and succulents, and the gardens showcase mature and unique species over several acres. A collection of butterfly gardens is under construction as part of ongoing Eagle Scout Service Projects.

The Center also provides hands-on educational kits for educators, houses a critter corner in the gift shop, and hosts themed toddler times on Friday afternoons.

Visit their website at <https://jmdc.org> to learn more about the Jurupa Mountains Discovery Center, and meet us there on Tuesday, March 6th for our next meeting!



Final Reminder

The 32nd Annual Desert Symposium and Field Trip will be held from April 20-21st at Zzyzx, CA, with field trips to follow on April 22-23rd. This year, registration will not be available at the door. The final registration deadline is April 10th. For additional information, visit the website at DesertSymposium.org.

AGI Announces 2018 Harriet Evelyn Wallace Scholarship Recipients

ALEXANDRIA, VA – The American Geosciences Institute (AGI) congratulates Master's student Anna Stanczyk and doctoral student Nicole Shibley as the 2018 recipients of the Harriet Evelyn Wallace Scholarship. This highly competitive scholarship, which is awarded to women pursuing graduate degrees in geoscience, provides a \$5,000 award for one academic year. Wallace Scholars who are continuing their graduate studies are eligible to apply for the award a second time.

Anna Stanczyk (*University of Utah*) is a Master's student at the University of Utah studying rock avalanches. Her current research is a multidisciplinary investigation of an ancient valley-blocking rock avalanche deposit in the natural laboratory of Hop Valley, Zion National Park. Her study fuses geological engineering, geochronology, geomorphology, and stratigraphy to clarify the occurrence and impacts of rock avalanches in areas of restricted topography. It also takes a unique step beyond the geosciences by investigating archaeological implications of a flat-bottomed valley in otherwise steep terrain.

Nicole Shibley (*Yale University*) is a Ph.D. candidate at Yale University studying the dynamics of the Arctic Ocean. Her current research combines theory and observations to investigate ocean mixing processes that are responsible for vertical heat fluxes towards the overlying sea ice cover. She hopes that this research will contribute to a better understanding of the Arctic Ocean's influence on sea ice and Arctic climate. Her research is supported by the Department of Defense through the National Defense Science and Engineering Graduate Fellowship Program.

The Wallace Scholarship is celebrating its sixth year supporting women geoscientists in graduate school. The original bequest was given by Harriet Evelyn Wallace, who was one of the founding members of the Geoscience Information Society (GSIS), a national organization and AGI Member Society that facilitates the exchange of information in the geosciences. The scholarship is awarded to the top applicants who most demonstrate a strong likelihood of successfully transitioning from graduate school into the geoscience workforce. To learn more, go to <https://www.americangeosciences.org/workforce/harriet-evelyn-wallace-scholarship>.

To make a tax-deductible donation to support rising women geoscientists through the Wallace Scholarship Fund, go to <https://bit.ly/GeoWomen>.

AGI is a not-for-profit 501(c)(3) organization dedicated to serving the geoscience community and addressing the needs of society. AGI headquarters are in Alexandria, Virginia.

The American Geosciences Institute represents and serves the geoscience community by providing collaborative leadership and information to connect Earth, science, and people.

Registration is now open for the
Joint Meeting of the GSA Rocky Mountain and Cordilleran Sections
 May 15-17, 2018
 at the Double Tree by Hilton Hotel and Conference Center, Flagstaff, AZ

For additional information regarding registration and accommodations, visit the website at
https://www.geosociety.org/GSA/Events/Section_Meetings/GSA/Sections/rm/2018mtg/home.aspx

Webinar Featuring
Vincent P. Drnevich, P.E., Ph.D.,
 Emeritus Professor of Civil Engineering, Purdue University



Ethics, Integrity and the Law for Geoprofessionals

May 9, 2018

Part 1: Ethical Decision Making with Integrity

May 16, 2018

Part 2: Statutes and Rules of Professional Conduct

Take a gigantic step toward solid leadership by recognizing ethical crossroads.



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Abstract submission is now open for the **7th International Conference on Debris Flow Hazards Mitigation**. This conference will be held in Golden, Colorado, from June 10-13, 2019. With the beautiful Rocky Mountains covering half the state, Colorado shares the problem of debris-flow hazards with other mountainous areas of the world. Against this backdrop, scientists, engineers and policy makers from around the world will be able to share new research and ideas in the field of debris flows.

In addition to technical and poster sessions, field trips will be run both before and after the meeting. Proceedings will be published as an AEG special publication; proceedings from previous conferences are highly respected and widely cited.

Abstract submission details are available at <https://dfhm7.csmospace.com/papers.html> and more details about the event are available at <https://dfhm7.csmospace.com/>.

Upcoming Meetings/Events

Inland Geological Society

The Inland Geological Society typically meets the first Wednesday or Thursday of each month. The May meeting has not been announced yet. For more information, visit our website at www.inlandgeo.org.

South Coast Geological Society



Monthly dinner meetings are typically the 1st Monday of the month. This month's meeting will be held on Monday, April 2, 6:00 pm, at Dave & Buster's in Orange. Philip Shaller, Ph.D., PG, CEG, will speak on "The Wildfire-Flood Sequence in California: Past, Present and Future". For more information, visit the association website at www.southcoastgeo.org.

AEG—Southern California Section



The next meeting of the AEG—Southern California Section has not been announced yet. For more information, visit the association website at www.aegsc.org.

AEG—Inland Empire Chapter



Monthly dinner meetings are typically the third Wednesday of the month at Pinnacle Peak Steakhouse, 2533 S. La Cadena Drive, Colton. The April meeting has not been announced yet. For more information, visit the association website at www.aegsc.org/chapters/inlandempire.

Rock & Gem Shows—various locations

Various rock and mineral shows will be held throughout southern California. To find one near you, visit www.rockngem.com, then select the Show Dates tab.

San Diego Association of Geologists



Meetings are usually held the third Wednesday evening each month. The next SDAG meeting will be held on Wed., Apr. 18th, and will involve student presentations. For more information, visit the association website at www.sandiegogeologists.org.

Los Angeles Basin Geological Society



Monthly lunch meetings are typically the 4th Thursday of the month from 11:30 am to 1:00 pm at the Willow Street Conference Center, 4101 E. Willow Street, Long Beach. The next meeting of the Los Angeles Basin Geology Society has not been announced yet. For more information, visit the association website at www.labgs.org.

Get Your IGS Coffee Mug!

IGS will now be selling IGS coffee mugs at the monthly meetings. They will be on sale for \$10.



IGS MEETING LOCATION:**Jurupa Mountains Discovery Center**

7621 Granite Hill Drive
Jurupa Valley, California 92509

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