

AEG Inland Empire Chapter Newsletter

of the Southern California Section

February 2014 Vol.10 No. 4

www.aegse.org/chapters/inlandempire

February 2014 Meeting Announcement Southern California Joint Societies Meeting



"SAMPLING THE SOURCE OF THE 2011 JAPAN EARTHQUAKE AND TSUNAMI"

2014 AEG/GSA Jahns Lecturer In SoCal
Feb 25-28, 2014

Dr. Frederick Chester

Texas A&M University
2013-2014 Distinguished Lecturer

Info on Page 9

Thursday, February 6, 2014, California State University – San Bernardino

Note: This is two weeks earlier than our normally scheduled meeting

6:00 – Social 7:00 – Dinner 7:30 – Program

Location

CSU-San Bernardino, Obershaw Dining Room, CO-205

(Meeting Cost \$25; Students \$8);

See meeting details on pages 3 - 7

RSVP to Dr. Erik Melchiorre Friday January 31, 2014

INSIDE

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8+ Other Meetings & Announcements

Fellow AEG-IE Chapter members;

Here we are at the start of a new year. I hope all our members enjoyed a wonderful holiday season. Our December meeting was very well attended (especially since it was so close to Christmas) and our speaker, Tony Morgan, presented a highly descriptive talk regarding the work that he and his people have done to begin to characterize the aquifers underlying the Oxnard plain area. Not only was the hydrology discussed but also the structural geology that the work has revealed that control the various basins and individual aquifers themselves. This work was performed to support the United Water District's on-going recharge program which utilizes water flow from the Santa Clara River. Details of the recharge basins and their associated design parameters including the geological constraints on the location of those basins relative to the natural recharge pathways were discussed. The geophysics performed in conjunction with those studies suggested that buried faulting, possibly related to previously mapped nearby faults, provides considerable structural control on the basin boundaries. Possible facies variations that appear to control the seawater intrusion into portions of the aquifers were also delineated from these studies. All of the data developed from the geophysical studies were correlated with driller's logs (a major undertaking and very time consuming) to build a composite model of the area groundwater system. All in all, a talk that appealed to most of us, as either engineering geologists or groundwater specialists. Now we are looking forward to the February joint meeting sponsored jointly by AEG_IE, IGS and SME at Cal State San Bernardino. If this meeting follows the previous year's events, it will be well attended and provide an opportunity for our members to mix and mingle with geologists, engineers and faculty members from throughout our area. I look forward to seeing all of you there.

Best regards,

David Gaddie, Chair
AEG Inland Empire Chapter

AEG-IE Chapter Officers

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Douglass Johnston, 2010;
Kerry Cato, 2009;
Mike Cook, 2008;
Rick Gundry, 2007;
Gary Wallace, 2006

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The AEG Inland Empire Chapter Newsletter is a monthly publication of the Inland Empire Chapter of the Southern California Section, Association of Environmental and Engineering Geologists. For more information visit the Chapter website:

<http://www.aegsc.org/chapters/inlandempire>

Submittals: Deadline, 28th of the month. Employment notices, job position announcements, and advertisements can be posted for a minimal fee. Newsletter circulation about 170 in greater inland areas of Southern California, and elsewhere.

E-Mail Address changes:
aeginland@gmail.com

NEW NEWSLETTER EDITOR

Beginning with the next AEG_IE Newsletter:

Desmond Chung, Geobruigg North America, LLC
will take over at the next Newsletter Editor.

Congratulations Desmond!

Note from the Editor

It has been my pleasure to serve as AEG_IE Newsletter editor for the past 5 ¾ years. I am the second newsletter editor having taken over from the original Newsletter editor and a founding member of the Chapter, Richard Gundry. The Chapter is one of the energy dynamos in the practice of applied geology in Southern California. The Newsletter is an important element in maintaining this energy level.

Desmond Chung will begin Newsletter Editor duties with the March Newsletter and I sincerely wish him the best success.

Kerry Cato
AEG_IE Newsletter Editor 2009-2014

**The Department of Geological Sciences
at California State University, San Bernardino;
Society for Mining, Metallurgy, and Exploration;
Inland Geological Society; and Association of Environmental &
Engineering Geologists
request the honor of your company at the**

Southern California Joint Societies Meeting

Thursday, the 6th of February, 2014

Reception and Social Hour at 6:00 PM, Dinner at 7:00 PM, Program at 7:30 PM
Obershaw Dining Room, CO-205, CSUSB Campus (see attached map)

The social hour will feature informational booths from mining operations and environmental firms in Southern California, and a CSUSB Geology Alumni reception.

Dinner

Asian Salad, Garlic Lemon Ginger Broccoli, Sticky Rice, Vegetable Lo Mein,
Cilantro Breast of Chicken, Fortune Cookies

(Special dietary needs accommodated by request)

The evening program will feature a presentation by Dr. Frederick Chester, Professor, Department of Geology and Geophysics, Texas A&M University. Dr. Chester is the 2013-14 Distinguished Lecturer for the Integrated Ocean Drilling Program, Consortium for Ocean Leadership. Dr. Chester will speak about recent advances in deep drilling, which permitted a rapid response team to drill into the Japan Trench at the site of the 2011 magnitude 9.0 earthquake to make observations and deploy instruments. Dr. Chester will address the technical challenges, and scientific results of this work

Please R.S.V.P. using the enclosed card by Friday, January 31st



Program Speaker: Dr. Frederick Chester- Professor, Department of Geology and Geophysics, Texas A&M University.

Frederick Chester
Texas A&M University
2013-2014 Distinguished Lecturer

“SAMPLING THE SOURCE OF THE 2011 JAPAN EARTHQUAKE AND TSUNAMI”

The fault slip during the 2011 Tohoku-oki earthquake, which reached over 50 meters near the Japan Trench, is the largest observed, and it is responsible for the tsunami that devastated the coast of northeast Honshu, Japan. Although the cause of significant seismic slip at shallow depths is not entirely understood, a number of possible contributing factors have been identified. Key questions include how displacement was accommodated near the trench, and whether coseismic weakening of the shallow megathrust had a role in the mechanics of such large displacement. These and other questions were addressed by the Japan Trench Fast Drilling Project, Expedition 343/343T, undertaken by the Integrated Ocean Drilling Program (IODP). Drilling the plate boundary interface was technically challenging because of the 6.9 km water depth and the need to penetrate > 800 m through the prism to reach the subducting plate. Nonetheless, three successful holes were drilled to the target depth for geophysical logging, coring, and placing instruments across the fault to measure the frictional heat produced during the earthquake. I will summarize the scientific motivation for the rapid response expedition, the challenges that were overcome, and the truly unique findings that shed light on the Tohoku-oki event and other tsunamigenic subduction zones worldwide.



Dr. Chester studies the mechanics of earthquake faulting. He served as a structural geologist on IODP Expedition 316 of the Nankai Trough Seismogenic Zone Experiment and as co-chief scientist on the Japan Trench Fast Drilling Project, IODP Expedition 343/343T.

**Southern California Earth Resource Awareness Meeting
6:00 p.m. Feb 6th, 2014 - CSUSB Campus**

\$25 per attendee - \$8 Students - children free (under 12)

☐ I (we) will attend ☐ I (we) will be unable to attend

— Number of guests

**Please print the name(s) of attendee(s) you are
paying for at the bottom of this card and
provide contact information.**

☐ **Enclosed is my check**
(please make check payable to CSUSB Geological Sciences Dept.)

☐ **RSVP, but will pay at the door**

**Southern California Earth Resource Awareness Meeting
6:00 p.m. Feb 6th, 2014 - CSUSB Campus**

\$25 per attendee - \$8 Students - children free (under 12)

— Number of guests

Name(s)

affiliation(s)			
S M E	I G S	A E G	CSUSB Alumni, Other
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<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Contact Phone or e-mail _____

To RSVP, please return this card/payment to:

**Dr. Erik Melchiorre
Geological Sciences, CSUSB
5500 University Parkway
San Bernardino, CA 92407**

909-537-7754 emelch@csusb.edu



**Southern California Earth Resource Awareness Meeting
6:00 PM to 9:00 PM February 6th, 2014 - CSUSB Campus
Obershaw Dining Room, CO-205**

PARKING PERMIT



Please make sure this permit is clearly visible through the front windshield on the dashboard of your car. Valid for any parking lot.

OTHER MEETINGS

AEG-Southern California Section: January 22, 2014. (Wednesday). Topic: *“Seismic Enhancements for Delivering Water to the City of Los Angeles across the San Andreas Fault in the Elizabeth Tunnel.”* Speaker: **Dr. Jeffrey R. Keaton**, AMEC, Los Angeles, California. Location: Victorio’s Ristorante, 10901 Victory Blvd., North Hollywood. For more information visit: <http://www.aegsc.org/>

ASCE (San Bernardino-Riverside County Branch). February 5, 2014 (Wednesday). Topic: *“Debris Flow Mitigation.”* Speaker: **Dr. William Kane**, KANE GeoTech, Inc.. For more info visit: <http://www.asce-sbriv.org/index.html>.

ASCE (San Diego Section). February 25, 2014, Lunch Meeting Tuesday. **Joint Luncheon with EERI.** Topic & Speaker: **TBD**. For more info visit: <http://www.asce-sd.org/>

Desert Symposium 2014

Information/Call for Papers/Registration

April 18–21, 2014. The 28th Annual Desert Symposium will be held at the Desert Studies Center, Zzyzx, CA. Theme: *“Environmental Monitoring and Reconstruction: Linking Causes and Biological Consequences.”* Field Trip: *“Ice Age Hydrology: Not a Drop Left to Drink”*. see attached registration form. Abstract and paper form information can be found at <http://biology.fullerton.edu/dsc/pdf/papersubmission.pdf>.

EERI (San Diego). February meeting TBD. For more info, visit: <http://sandiego.eeri.org/>

GRA: January 22, 2014 (Wednesday – Luncheon). GRACast Web Seminar

Topic: *“Salt and Nutrient Management Plans, Part 4 – CV-Salts - An Overview of the Central Valley Salinity Alternatives for Long- Term Sustainability.”*

March 4-5, 2014. “GRA Conference on Groundwater Issues and Water Management.” Location: Sacramento, CA. For more info, visit www.grac.org/

IGS: February 6, 2014 (Thursday). **Joint Societies Meeting** – see page 1, this Newsletter. For more info visit: <http://www.inlandgeo.org/>

LA Basin: January 23, 2014 (Thursday) (Joint meeting with LAAPL). Topic: *“Oil history from the perspective of a landman”* Speaker: **Edward Renwick**.

February 27, 2014 (Thursday). Topic: “Ranger Formation in Wilmington.” Speaker: **Mike Clark**. For more info visit: <http://www.labgs.org/>

SCGS: February meeting TBD. For more info visit: <http://www.scgs.org/>.

SME: : February 6, 2014 (Thursday). **Joint Societies Meeting** – see page 1, this Newsletter. For more info visit: <http://www.smenet.org/SouthernCalifornia/>

SDAG: : February meeting TBD. For more info about SDAG visit: <http://www.sandiegogeologists.org/index.html>

ANNOUNCEMENTS

2014 AEG – GSA Jahns Distinguished Lecturer. Feb 25-28, 2014 [Schedule available Feb 7.](#) **Dr. Greg Hempen**, URS, St. Louis, MO. Dr. Hempen will visit the Southern California area and speak at the following locations: **UCLA, Cal Poly Pomona, CSU San Bernardino, UC Riverside, Southern California Section Meeting, AEG-IE Chapter Meeting** (2nd Feb Meeting of the Chapter).

Topics are:

- **“HELLO??? ARE YOU READY FOR THE BIG ONE?** [AKA: *Important Considerations for Central US Seismicity*]”
- **“KABOOM! (or whoosh?)** [AKA: *Mitigating Blasting Impacts without Diminishing Effectiveness*]”
- **“WHAT’S MY LINE? SITE ASSESSMENT!** [AKA: *Applying Geophysics in Site Assessment*]”
- **“YOU’RE GOING TO DRINK THAT WATER?!** [AKA: *The Challenges of Reducing Groundwater Impacts from Radioactive Waste Sites*]”

AEG_Inland Empire Annual Field Trip --- Call for Field Trip Stops

The Inland Empire Chapter of the Association of Environmental and Engineering Geologists is in the planning stages of the Spring 2014 Field Trip. Saturday May 3, is the tentative date for the field trip. The area of interest for the Spring 2014 Field Trip is the Cajon Pass. This will include the pass itself and portions of the areas immediately bordering the pass (Mojave Desert, West San Bernardino Mountains, East San Gabriel Mountains, and the Devore area of the San Bernardino Valley).

We are currently seeking individuals or groups interested in selecting stop locations, hosting at the stop locations, as well as providing written documentation and perhaps plates that will be incorporated into a road log. The date selected will be determined from the responses that we receive. If you are interested in selecting and hosting at a stop location, please contact us no later than February 28, 2014. Should you have any questions please contact Jeff Fitzsimmons at geojeff08@att.net.

IGS/AEG High School Science Fair winners

Teenage Paleontologists Present Barstow Rock Formation Research at the AEG National Science Fair (News.bytes Extra)

Hannah and Zachary Larsen, 11th graders from Riverside, California, were invited to participate in the first annual American Association of Environmental and Engineering Geologists science fair at the AEG Annual Meeting in Seattle, WA. The twins presented habitat and climatic data from Miocene-era flora and fauna from the Barstow Formation, earning them second prize and a \$100 gift certificate.

http://www.blm.gov/ca/st/en/info/newsbytes/2013/599_extra_-teenage.html

For many years IGS has promoted Earth Science at middle school and high school levels by participating in local science fairs and inviting participants to exhibit and present at IGS meetings. Inviting science fair winners to participate at a national conference is something new that AEG began this year (2013 Seattle Annual Meeting).

Follow-up from the AEG_IE Nov meeting. Rock Slope Info from Stan Miller

Those that wish to obtain a copy of Stan Miller’s power point presentation may contact Dr. Miller at smiller@stratageotech.com. The Chapter wishes to thank Dr. Miller again for an informative talk and for providing this information to the attendees.



ANNOUNCEMENTS



Two volume update being prepared for "Applied Geology in California"

Editor's Note: We are sending out this announcement for the organizers of these volumes. Similar information has been placed on our website:

<http://www.aegsc.org/chapters/inlandempire/> and the Southern California Sections webpages: <http://www.aegsc.org/>

A link has been placed on the Home pages that directs you to the Announcements section

There is a new update being prepared for Applied Geology in California that will consist of a 2 volume set. One volume is on Engineering Geology and the second volume is on Hydrogeology and Environmental Issues. This will be the 3d volume in the series which is published about every 10 years. Our publication deadline the 3d quarter 2015. This will be a combined publication effort supported by AEG and CGS.

The purpose of the series is to provide an update on the state of the practice in California. However, we will entertain significant papers that deal with any site anywhere in the world.

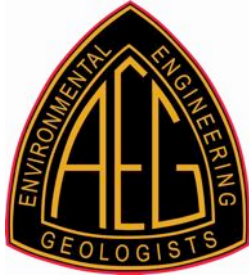
Attached are the call for papers for both volumes, and the preliminary table of contents of both volumes. The TOC will likely evolve over time depending on who responds with papers. We are open on the topics addressed but we would like to focus on the following major areas:

Levees	Groundwater Banking
Seismic Risk Assessment	Cleanup of heavy metals in mining districts
Tunneling	Schools and Hospitals
Drought conditions	Sample collection (drilling, etc.)
Subsidence	Remote Sensing (ROV, LiDAR, multi-scan SONAR, etc.)

We are actively recruiting potential authors and chapter editors, along with peer reviewers. All we are looking for right now is the name of the lead author and a short abstract (3-4 sentences about what you would like to write about). **Deadline 15 January 2013.**

Also, very important, we are going to include a special section in both volumes on "Shop Talk". These would be short (1 page or less) explanations of lessons learned, or new techniques, in field methods (drilling, sampling, well installation, lab testing, field logging). These would be designed so that they would contain no site or project specific information so that they would not need to get client approval for publication.

Send inquiries or questions to: Garry Maurath, Principal Hydrogeologist, URS Corporation
2870 Gateway Oaks Drive, Suite 150, Sacramento, CA. 95833. 916.679.2002 (direct), 916.752.3016 (mobile), 916.679.2900 (fax), garry.maurath@urs.com



AEG MEMBER BENEFITS

- You find value in our **conferences** - both [Annual Meetings and Specialty Conferences](#) - and in the **technical knowledge and continuing education** you receive at these meetings.
- You appreciate **networking opportunities** in local settings, at [Section meetings, and at national conferences](#). With over **3,000 members**, AEG provides you with access to a wide network of Environmental and Engineering geology professionals.
- You love our **publications** - the [AEG NEWS, the Environmental & Engineering Geoscience Journal, and the AEG Insider](#) - with their relevant geoscience information, updates on AEG activities, and engaging scientific interest stories.

With benefits like these, of course you want to be part of AEG! And we encourage you to spread the word - talk to your co-workers, classmates, and friends about AEG and all it has to offer.

Remember:

- Student Membership is FREE
 - Graduating students receive their first year of full membership for FREE as our Graduation Gift to you (Contact aeg@aegweb.org to receive your gift)
 - New Membership is just \$95 (First Year of Membership only)
 - If you have - thank you! Full members receive discounted registration for [Annual Meetings and Specialty Conferences](#)
- If you have any questions regarding your membership status or would like to [Join or Renew today](#), please call AEG Headquarters at 303-757-2926 or email AEG@aegweb.org.