

# AEG Inland Empire Chapter Newsletter

of the Southern California Section

April 2013 Vol.9 No. 7

[www.aegse.org/chapters/inlandempire](http://www.aegse.org/chapters/inlandempire)

## April Joint Meeting Announcement

- Department of Geological Sciences, CSU-San Bernardino
  - SME (Society for Mining, Metallurgy, and Exploration)
  - IGS (Inland Geological Society)
- AEG\_IE (Association of Environmental & Engineering Geologists, Inland Empire Chapter)

Southern California Earth Resource Awareness Meeting

## ***“Hydrology and Engineering Geology Required To Manage Pit Stability At The Rio Tinto Boron Mine”***

### **Brandon Griffiths,**

Senior Geologist, Mine Technical Services, Rio Tinto Minerals – Boron Operations



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**UPDATED**  
With Fault Mitigation  
Workshop – See Announcements

Thursday, April 25, 2013

CSU San Bernardino, San Bernardino, CA

6:00 PM Social Hour

7:00 PM Dinner

7:30 PM Program

RSVP to **Dr. Eric Melchiorre, CSU-SB using attached card, by Friday April 12, 2013**

See pages 3 - 6 for more meeting details

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**Membership Chairman**

**Richard Orr**, Leighton Group,  
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**Past Chairs:**

Debbie Kunath, 2012;  
Frank Jordan, 2005, 2011;  
Douglass Johnston, 2010;  
Kerry Cato, 2009;  
Mike Cook, 2008;  
Rick Gundry, 2007;  
Gary Wallace, 2006

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more information visit the  
Chapter website:  
[http://www.aegsc.org/chapters/  
inlandempire](http://www.aegsc.org/chapters/inlandempire).

Submittals: Deadline, 28<sup>th</sup> 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](mailto:aeginland@gmail.com)

## Chair's Message

I hope the Easter holiday was good to you and your families and the kids and teenagers are now enjoying their spring break. We just enjoyed another successful meeting at our favorite venue in the Rancho Cucamonga area, the Old Spaghetti Factory about two weeks ago. Thanks again to all who made the trip, we always seem to do very well at this venue. All present filled up with high calorie Italian food and turned our attention to Dr. David Lynch who gave a wonderful presentation on the growth of mud volcanoes and mud pots on the southeast side of the Salton Sea. The steady decline in the Salton Sea level and the recent evolution of this phenomenon would make for a great one-day field trip for any local geologists including their children.

For our upcoming April event we are excited to be part of the 2nd Annual joint meeting held with IGS, SME and the Department of Geological Sciences at Cal State University San Bernardino on the 25th. We will be meeting on the campus of CSUSB and the guest speaker will be Brandon Griffith with US Borax. The talk should be of interest to both the environmental and engineering geology disciplines as he will discuss slope stability issues and environmental issues at their open mine pit in Boron, CA. Even though we will be on a university campus the answer to your most pressing question is yes, beer will be served! Last years event was a great success with a strong turnout from the professional community and we are expecting another strong turnout this year.

Other upcoming chapter events will include our annual Saturday field trip sometime during May (date TBD) and our next monthly diner meeting will be held in June in the Temecula area. We are currently reaching out to potential speakers for that June meeting so I don't have a "big name" to announce yet. As for those folks waiting for an announcement on our annual springtime short course, fear not, we have decided to postpone the event until early 2014. We are leaning towards presenting a 2013 code update course that may be more fitting as the new code goes into effect in January.

Another item that should be on everyone's radar is the possibility of serving as an officer of the board for our IE chapter. Overall meeting attendance has been quite strong this year and I suspect many people would like to get more involved and get connected by means of serving. We would like to have all potential nominations for board positions by the June meeting so we can officially vote on a new board of officers in July. The new board of officers would become official at the October 2013 meeting. Please contact me personally to discuss your interest level and position availability.

The rapidly approaching April meeting is expected to be a packed event with members from several association's as well as many local geology students, so make your reservations early this month!

Best regards,



Douglass Johnston,  
Chair, AEG Inland Empire Chapter

*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 Earth Resource Awareness Meeting*

*Thursday, the 25<sup>th</sup> of April, 2013*

*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, choice of Italian: Antipasto platters, Caesar salad, Sauteed vegetables, Cheese tortellini or  
Penne pasta, Chicken cacciatore or Home-style meatballs, Tiramisu*

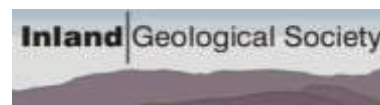
*Or*

*Asian: 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 Brandon Griffiths, Senior Geologist for Rio Tinto  
Minerals at their Boron Operations. Mr. Griffiths will present an update on operations at the Boron  
Mine, California and a lecture about the hydrology and engineering geology required to manage pit  
slope stability at this challenging location.*

*Please R.S.V.P. using the enclosed card by Friday, April 12<sup>th</sup>*



**Program Speaker:** Brandon Griffiths- Senior Geologist, Mine Technical Services, Rio Tinto Minerals - Boron Operations

*Southern California Earth Resource Awareness Meeting*

*6:00 p.m. April 25th, 2013 - CSUSB Campus*

*\$25 per attendee - \$5 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 on the back of this card, meal choice (Italian or Asian) and provide contact information.*

☐ *Enclosed is my check*

*(please make check payable to CSUSB Geological Sciences Department)*

☐ *RSVP, but will pay at the door*

*Southern California Earth Resource Awareness Meeting*

*6:00 p.m. April 25th, 2013 - CSUSB Campus*

*\$25 per attendee - \$5 Students - children free (under 12)*

\_\_\_\_ *Number of guests*

*Name(s)*

*affiliation(s)*

*S I A CSUSB,  
M G E Alumni,  
E S G Other*

_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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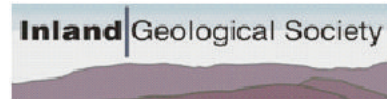
*Contact Phone or e-mail* \_\_\_\_\_

*To RSVP, please return this card/payment to:*

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

*Southern California Earth Resource Awareness Meeting  
6:00 PM to 9:00 PM April 25th, 2013 - 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 lots B, C, and D.**

# CALIFORNIA STATE UNIVERSITY SAN BERNARDINO

5500 University Parkway, San Bernardino, CA 92407-2393  
(909) 537-5000 • <http://www.csusb.edu>

## Campus Map 2012

January 9, 2012

\*Parking permits are required to park on campus at all times – 24 hours a day/7 days a week. <http://admin?n.csusb.edu/parking>

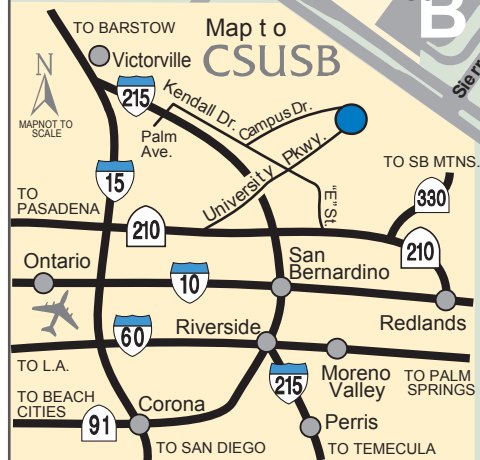
### Legend

- Disability/Medical Parking Areas
- Emergency Phones
- Bicycle Racks
- Information Center (IC)
- Parking Permit Dispensers\*

- AD Administration
- AF Auto Fleet Services
- AH Animal House/ Vivarium
- AR Academic Research
- AS Administrative Services
- AV Arrowhead Village Housing
- BI Biological Sciences
- BK Coyote Bookstore
- CC Children's Center
- CE College of Education
- CH Chaparral Hall
- CO Commons
- CS Chemical Sciences
- DD Univ. Center for Developmental Disabilities
- ES Environ. Health & Safety



- FB Foundation Building
- FM Facilities Management
- FO Faculty Office Building
- HA HVAC Central Plant
- HC Health Center
- HP Health & PE Complex/ Coussoulis Arena
- IC Information Centers
- JB Jack H. Brown Hall
- OB Murillo Family Observatory
- PA Performing Arts/ Theatre/ Recital Hall
- PE Physical Education
- PK1 Parking Structure West
- PK2 Parking Structure East
- PL John M. Pfau Library
- PS Physical Sciences
- PW Plant/Central Warehouse
- RF Student Rec. & Fitness Ctr.
- SB Social & Behavioral Sciences
- SH Sierra Hall
- SU Santos Manuel Student Union
- SV Serrano Village
- TC Temp. Classrooms
- TK Temp. Kinesiology Annex
- TO Temp. Offices
- UH University Hall
- UP University Police
- UV University Village
- VA Visual Arts Center/Robert & Frances Fullerton Museum of Art
- YC Yasuda Ctr. for Ext. Learning



## OTHER MEETINGS

## AEG-Southern California Section:

April 10, 2013 (Wednesday). Topic: *"Translational Sheet Landsliding in the Pacific Palisades and its Relevance to Safety Factor Calculation with Additional Notes on Oil-Shale Development."* Speaker: **E.D. Michael**, CEG, Consulting Geologist. Location: Cisco's Restaurant, Westlake Village, CA. For more information visit: <http://www.aegsc.org/>.

AEG – ASCE – EERI: May 10, 2013 (Friday)

***Surface Fault Rupture Workshop,  
New Mitigation Concepts and Political Challenges***

Location: Orange County Water District, Fountain Valley, CA

Cost: \$85 - 1-day workshop  
- lunch provided

**SEE BROCHURE ON PAGES 9 & 10 OF THIS NEWSLETTER**

ASCE (San Bernardino-Riverside Counties – Geotechnical Committee): April 17, 2013 (Wednesday – Mid-Day), Topic: *"HOT Lanes Are Heating Up."* Speaker: TBD. For more info visit: <http://www.asce-sbriv.org/index.html>.

EERI: Date, Topic & Speaker: TBD. For more information visit <http://www.eeri.org/about-eeri/regional-chapters/>

**GRA:** April 24, 2013 (Wednesday). **ANNUAL LEGISLATIVE SYMPOSIUM AND LOBBY DAY, "Striking the Balance: Can We Develop the Water, Gas and Energy Supplies We Need and Still Protect California's Groundwater and Natural Resources? Or is the answer "No Fracking Way!"** Citizen Hotel, Sacramento, CA. For more info visit: <http://www.grac.org/>.

**LA Basin:** Due to a conflict with the PSAAPG Convention there will be no April meeting. Meetings are generally held the 4th Thursday of the month at 11:30AM at the Grand at Willow. For more info visit: <http://www.labgs.org/>

**IGS & SME:** April 25, 2013 (Thursday). Joint Meeting IGS, SME, & AEG and CSU-San Bernardino Dept of Geology (SEE PAGE 1 – THIS NEWSLETTER)

**SCGS:** April 1, 2013 (Monday). Topic: *"Earthquakes, Tsunamis, Tornadoes, and Other Earth-Shattering Disasters."* Speaker: **Don Prothero**, Ph.D., Location: DoubleTree Club Hotel 7 Hutton Centre Drive Santa Ana, CA. For more info about SCGS visit: <http://www.southcoastgeo.org/>.

**SDAG:** April 24, 2013 (Wednesday). SDAG Scholarship Recipients. For more info visit: <http://www.sandiegogeologists.org/>

## ANNOUNCEMENTS

### AEG Advocacy Committee Wants To Know - What outreach have you done?

The AEG Advocacy Committee, Chaired by Rick Kolb (Carolina Section), along with committee member Charles Nestle (SoCal Section), the Committee Chair, are contacting local Section Chairs in an effort to accumulate a list of advocacy efforts by Section members. Their request is listed below:

*Our committee is searching for examples of advocacy for both our profession and AEG by our members. While our committee is working on AEG-wide efforts of advocacy (e.g., the SET and Geoscience Congressional Visit Days, for which our committee "recruits" and provides financial support for members to attend), we know there are lots of advocacy efforts being undertaken by members in our sections. We would like to publicize those efforts, both to bring attention to those individuals and to give other members ideas of how they can advocate.*

*As chairs of your sections, can you provide examples of these efforts by your members, or the names and contact information for those doing advocacy so I can ask them what they are doing? Ultimately, we hope to compile a list of these efforts for publication in a future article in AEG News. We're sure that members are advocating for the profession (whether they're aware of it or not) and we'd like to ramp up the attention to those doing advocacy. We hope that publicizing these efforts will help raise AEG's image and exposure, and encourage other members to take part in advocacy.*

*Please let me know ASAP if you are aware of any efforts that may be useful.*

Thanks,

Charles Nestle, County of Los Angeles, Department of Public Works, Geotechnical and Materials Engineering Division, 900 So. Fremont Ave., 4th Floor, Alhambra, CA 91803-1331, (626) 458-4923, [cnestle@dpw.lacounty.gov](mailto:cnestle@dpw.lacounty.gov)

### ASCE-Los Angeles Geo-Institute Short Course

ASCE Los Angeles Geo-Institute invites you to the 36th Annual Queen Mary Seminar on Wednesday, April 17, 2013. This year's Ken Lee Lecture will be presented by Dr. John T. Christian, Ph.D., PE, Consulting Engineer, who will speak on **"Failure and Reliability of Large Projects"**.

The first afternoon lecture will be presented by Mr. Jerry A. DiMaggio, Jerry A. DiMaggio Consulting, LLC, on **"Application of the Load Resistance Factor Design Platform to Geotechnical Features (Fact and Fiction)"**.

The second afternoon lecture will be presented by Professor James R. Martin, Virginia Tech, on **"Recent Earthquake Ground Improvement Case Histories"**.

See the attached flier for more information. Please RSVP online at [www.lageoinstitute.com](http://www.lageoinstitute.com) or complete and return the [Registration tab on the attached document](#). All registrations must be received by Wednesday, April 3, 2013 for the Early Registration discount.

## Workshop Location



Orange County Water District  
18700 Ward Street  
Fountain Valley, CA 92708  
[www.ocwd.com](http://www.ocwd.com)

**Friday May 10, 2013**  
8:00 – 9:00 Reg. & Social  
9:00 – 12:30 Presentations  
1:00 – 2:30 Presentations  
2:45 – 4:30 Discussions

This Workshop focuses on the latest geotechnical and structural engineering concepts to mitigate surface fault rupture. The interdisciplinary forum allows the participants to go beyond the current regulatory restriction of total fault avoidance regardless of site-specific procedures now available to mitigate risk to life and property.

## Registration Information

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Name

---

Affiliation

---

Address

---

City, State, Zip

---

Email

- Mail check for \$85, payable to AEG, to: Eldon Gath, c/o Earth Consultants Int., 1642 E. 4<sup>th</sup> St., Santa Ana, CA 92701
- Space-available registrations at the door will be \$100. These cannot be assured and lunch may not be provided.
- The event is limited to 100 people.
- A sandwich lunch and drinks will be provided.

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Contact Eldon Gath for further information: 714-412-2653 or [gath@earthconsultants.com](mailto:gath@earthconsultants.com)

## Surface Fault Rupture



**New Mitigation  
Concepts and  
Political Challenges**

AEG • ASCE • EERI

A Knowledge and  
Technology Transfer  
Workshop

**May 10, 2013**



## Speakers (partial list)

**Moderators:** Dr. Roy Shlemon and Eldon Gath

**Keynote Speaker:** Dr. Jonathan Bray – UC Berkeley, 2012  
SSA/EERI Joyner Lecturer

**Craig Comartin** – CDComartin, Inc.

**Alan Kropp** – Alan Kropp & Assoc.

**Dr. Roy Shlemon** – Roy J. Shlemon & Assoc.

**Dr. Thomas Rockwell** – SDSU & Earth Consultants International

**Charles Nestle** – County of Los Angeles, Dept. of Public Works

**Other invitees.**

**Panel Discussion and Attendee participation encouraged**

**Who Should Attend:** Geologists, Engineers, Architects, City Planners, Attorneys, Agency Regulators and others concerned with California seismic hazards and with improving the public's health, safety and welfare.

## Fault rupture is only ground deformation along discrete or dispersed surfaces – does the structure care why the ground moved?

Surface fault rupture is defined as a hazard in California under the 1972 Alquist-Priolo Act that was passed in response to the 1971 San Fernando earthquake to regulate future development within active fault zones. Although the Act has been amended 11 times, and had its name changed from “Special Studies Zones Act” to “Earthquake Fault Zoning Act” in 1994, the technical intent of the Act has never been challenged: i.e. *“prohibit the location of developments and structures for human occupancy across the trace of active faults”* (CA 2621.5). As such, the A-P Act's only permitted mitigation is the total avoidance of the hazard.

In the past 40 years since the passage of the A-P Act, the geologic understanding of fault rupture has greatly improved by use of paleoseismic trenching, by earthquake field investigations, and by new generations of geologists completing thousands of fault studies. Today it is possible to

quantitatively and temporally determine fault hazards at a resolution that was totally unknown in 1971.

Geotechnical and structural engineering practice has also matured significantly since 1971, and today provide a technical basis for mitigation of surface fault displacements unavailable when the A-P Act was written. Indeed, the CA Seismic Hazards Mapping Act requires the mitigation of slope and liquefaction-induced displacements that often exceed fault rupture displacements!

This conference will bring together developers, planners, engineers, geologists, and regulators to examine the fault rupture mitigation issue from all angles, and perhaps develop consensus for a 12<sup>th</sup> amendment to the Act.

Please participate, contribute, and benefit.