



The California Geotechnical Engineering Association

E.Geo Newsletter

February 2016

Win a Trip to the 2017 Annual Conference in Hawaii!



CalGeo will hold a 2016 Membership Drive competition with a prize award valued at over \$2,000. Want to go to the beautiful Big Island of Hawaii, attend an amazing conference, stay in an incredible hotel and have CalGeo foot the bill? You can, by spending a little time convincing your friends and colleagues to become a CalGeo Active or Affiliate member firm.

This membership drive competition is open to all CalGeo members. The winner of this competition will receive free conference registration, three (3) nights hotel stay and round-trip airfare for the 2017 CalGeo Annual Conference at the Hapuna Beach Prince Hotel on the Big Island of Hawaii.

See the rules for details on how to win and get busy. See you in Hawaii!

[Rules](#)

Come Smell The Roses In Pasadena!

CalGeo's Annual Conference-April 14-16, 2016

Reunite with industry friends and family at CalGeo's Annual Conference, April 14-16, 2016 in Pasadena at The Langham Hotel. The conference will encompass a broad range of must-see business, legislative and seismic technical topics. Elevate your game at the "Pasadena Putt" CalGeo Golf Tournament on

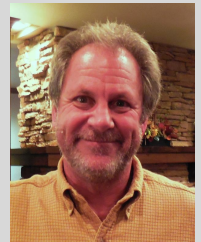
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President's Message



Larry Taylor, GE of Taylor Group and CalGeo President talks about his vision for CalGeo this year. Get his message here [President's Message](#)

[Join Our Mailing List!](#)

Thursday Morning, April 14. Get Your Game On at the "Tailgate Party" themed night of food, fun and frivolity at the closing night banquet on Saturday, April 16. [Click Here](#) for the Conference Brochure and Registration Package.

2016 CalGeo Pasadena Conference Presenters and Topics are summarized below.



Prof. J. David Rogers, Ph.D., P.E., P.G., C.E.G., C.HG, Missouri University of Science & Technology

Dr. Rogers will be speaking on two subjects this year.

The Reconnaissance of Alta California by Jedediah Smith in 1826-28; or How Geology Controls Everything in California

Famed Mountain Man Jedediah Smith led two back-to-back explorations of the Great Basin, and blazed the first overland trail into southern California, which took him to the Los Angeles and San Diego areas in the fall of 1826. Smith discovered Cajon and Tejon Passes, then reconnoitered the Kern and Tulare Basins, and the San Joaquin Valley. The journals of Smith's secretary

Harrison Rogers survived the massacre and their publication hastened future explorations of California, by American trappers, gold seekers, and railroad surveyors, who followed the same paths blazed by Smith, which were controlled by the underlying geologic structure. This presentation will demonstrate how faults control the springs, and springs controlled the routes taken by all the early explorers and surveyors, which were then followed by railroads and highways.

The Emergence of Geotechnical Engineering Practice in California (1945-present)

The need for soil mechanics and foundation engineering services came about largely as a consequence of the March 1933 Long Beach Earthquake, which triggered passage of the Riley and Field Acts, requiring that schools, hospitals, auditoriums and other public buildings be designed to resist earthquake loading. This was followed in quick succession by a series of floods in 1934, 1937, and 1938 which brought in a large number of joint-local sponsor federal agency public works projects. In 1952 the City of Los Angeles enacted the nation's first excavation and grading code, which was adopted by most other cities and counties in the major urban centers of California, often after these areas suffered damage from landslides. The California Building Code was established in 1988. It combined the Uniform Building Code (CBC) with the addition of California's more stringent seismic design parameters, as determined by California Building Standards Commission. The 1989 Loma Prieta and 1994 Northridge earthquakes triggered substantive legislation and changes in the CBC aimed at mitigating seismic site response problems in California, chiefly near-field acceleration, liquefaction potential, and seismically-induced landslides. The current economic slump, which began in October 2008, has witnessed a dramatic re-structuring of the geotechnical and geoenvironmental services sector, with less emphasis on new construction.



Dr. Edward Kavazanjian, Ph.D., P.E., G.E., D.GE, NAE

Geo-Alchemy (Turning Sand Into Sandstone) and Other Biogeotechnologies

Biogeotechnical engineering is based upon the premise that through 3.8 billion years of trial and error (i.e., evolution) nature has developed some efficient and sustainable solutions to many of the problems that vex geotechnical engineers. The biogeotechnology that has gained the most attention over the past 15 years is bio-mediated calcium carbonate precipitation, wherein microbes are used to induce precipitation of calcium carbonate (calcite) in granular soils, turning cohesionless sand into a sandstone-like material. Other biogeotechnologies currently being explored by geotechnical engineers include development of root-inspired earth reinforcement and foundation systems, in situ creation of barriers to contaminant transport, enhanced soil penetration systems, and motile subsurface investigation probes.



Dr. Patrick C Lucia, PhD, P.E., G.E., Adjunct Professor of Civil Engineering, University of California, Davis, Chairman Emeritus, Geosyntec Consultants

A History of Geotechnical Insurance Claims & Recommended Risk Management Practices for Site Characterization

In an increasingly litigious society, lawsuits against geotechnical engineers seemingly are inevitable. In a recent research project at the University of California at Davis approximately 900 claims, made against geotechnical engineers throughout the United States, over a 25 year period were studied to develop a broader understanding of the factors that can lead to a claim. This project was intended to develop a better understanding of the nature of the claims against practicing geotechnical engineers and those business and technical practices that can mitigate the risk for potential claims. These recommendations lead to suggested changes in the standard of care for

geotechnical work in the development of a scope of work in proposals that, it is believed, will make unknown conditions easier to defend in litigation against geotechnical engineers. In addition to discussing the recommendations of the recent work, Dr. Lucia will discuss how the standard of care is decided in court based on his experiences in over 50 litigation cases defending geotechnical engineers.



Ms. Susan Kirkgard, C.E.G., Geocon West, Inc.

Urban Geology

Surface fault rupture has been observed to create differential offsets of up to several meters. It is imperative to identify the locations of fault rupture surfaces to properly site structures away from faults and to evaluate the potential hazards that may be located over the fault traces. The most direct method of investigation is to excavate trenches and visually identify discontinuities in the stratigraphy that may indicate a seismogenic origin. In an urban environment, this may not be possible due to physical constraints and geologists are now using an array of different exploration techniques to evaluate the potential for surface fault rupture.



Mr. Michael Reader, P.E., G.E., CEO, Group Delta

Millennium Fault Study

The Hollywood Millennium project is proposed to be developed at, and adjacent to, parking lots the site used by iconic Capitol Records tower building. The fault rupture study performed for the Millennium Hollywood Project, and adjacent sites, is perhaps the most controversial fault rupture hazard investigation ever performed in California. The proposal for the Millennium Hollywood project itself pre-dated the publication of the Alquist-Priolo Map for the Hollywood Quad. However, due to intense public

opposition and scrutiny, the CGS moved forward with publication of the draft map and utilized the attention to raise funding for the department. The original basis for the map in the area of the Hollywood Millennium project was based on scant subsurface information and was inferred solely on groundwater data (later dropped by CGS) and presumed fault related topography (also later revised). Group Delta was contracted by 4 adjacent site owners to conduct fault rupture hazard studies using trenches, CPTs, and corings. All of the 4 investigations were approved by the City of Los Angeles, in spite of frequent negative public comments from the CGS. The main result of the investigation was that the fault identified by CGS as being active had in fact last been active more the 125,000 years ago; the 4 investigations all showed no active faulting was present. CGS has refused to change the map.



There is a speaker change for this presentation. Taking the place of Mr. Jeff Kortan is Mr. Mike Fugua PhD, Materials Engineer, Foundation Supportworks, Inc.

Polyurethane Foam Injection for Stabilizing and Lifting Concrete

Polyurethane foam is used to create a variety of products from weather stripping to automobile parts. In recent years, the technology has been optimized for use in geotechnical and structural applications, including void filling, sealing utilities, pipeline erosion prevention, subgrade improvement, slab stabilization and slab lifting. This presentation focuses on how polyurethane foam injection is used for stabilizing and lifting concrete. Learn the benefits of polyurethane foam injection, typical

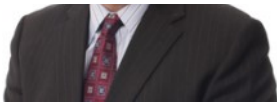
applications, design considerations, and installation steps and equipment.



Mr. Van Allyn Goodwin, Esq. - Littler Mendelson, P.C.

The 2016 Labor and Employment Law Update

Mr. Goodwin's presentation will include a summary of key labor and employment decisions and important new legislation affecting California



employers, with an emphasis on those that specifically affect geotechnical consulting firms. It will also include a lively and informative discussion of recent Prevailing Wage Law developments.



Mr. Marco A. Estrada, Director of Business Development, Pavement Recycling Systems

Sustainable Pavement Solutions

Because of the substantial economic and environmental benefits yielded through the use of Sustainable Engineered Technologies, the County of Los Angeles has been implementing these technologies as a part of their pavement reconstruction program. Due to widespread distress, base failure and yielding subgrade on these Community Roadway Improvement Projects, the County recycled the existing asphalt pavement for use as the structural base course asphalt through the Cold Central Plant Recycling (CCPR) process, as well as stabilizing the subgrade/base layer through the in-place processing of a Cement Stabilized Pulverized base (CSPB). The use of the Sustainable Engineering Technologies resulted in reducing reconstruction costs by almost 50%, for a combined savings of \$3.5M, reduced Energy

Consumption by 68%, and reduced greenhouse gas (GHG) emissions by 60%.



Dr. Esmael Adibi, PhD, Director of the A. Gary Anderson Center for Economic Research, Anderson Chair of Economic Analysis, Chapman University

The U.S. and California Economic Outlook

A rapid rise in home prices and tight inventory fueled construction spending. That, along with a pickup in consumer spending, became a key driver of this recovery. But home price appreciation is slowing down, the Federal Reserve is ending its easy monetary policy, Europe is still struggling and Chinese economic growth is slowing down. Dr. Adibi will discuss the U.S. and California economic outlook and will provide answers to the following questions; What can power the economy forward? Will the pace of job

creation accelerate? What's the outlook for the interest rates? Will higher interest rates dampen economic recovery? What is the outlook for the real estate market? What are the new knowns and unknowns?



The Colorado Bridge, Pasadena

To register for the Conference in Pasadena, [CLICK HERE](#)

Chance-Pacific Helix Seminar-Helical Piles & Helical Anchors

Date: February 25, 2016
Where: San Rafael, CA
Time: 8 am - 4 pm

In this one day seminar, participants will be given an in-depth historical, theoretical & practical review of helical anchors (tension) and helical piles (compression) in both classroom sessions and observing an actual pile installation and a full scale compression load test in the field. The knowledge and techniques developed in this course will allow participants to design, install, and specify helical anchors and piles utilizing the latest

course will allow participants to design, install, and specify helical anchors and piles utilizing the latest developments in steel foundation technology.

To view the event website and to register:

- 1.) Go to www.cvent.com
- 2.) Click "RSVP for an event" at the top right corner of the page.
- 3.) Enter the event code: V9NTX3YQJMN

If you would like to register by phone or if you have questions, please call Pacific Helix, Inc. at 1-408-640-0359

Job Board

Visit our [website](#) for the latest information on current available positions throughout the industry, including:

- * Soils Technician with Geosphere Consultants
- * Mining Operations Supervisor, East Bay Regional Parks
- * Certified Engineering Geologist with Geocon West, Inc.
- * Staff Geotechnical Engineer with WRECO
- * Staff Geologist with LGC Geotechnical, Inc.



If you're LOOKING for help throughout the year, we also have a number of resumes on our website at [CalGeo](#)

Like Us On Facebook!



CalGeo has a new Facebook page! Like us here [FACEBOOK](#) and let others know in your organization too!

Member News

Murray Engineers has opened a second office to better serve their San Francisco and North Bay projects and teams. Will Carter, P.E. has been promoted to Associate Engineer & Manager of the new Mill Valley office. Also joining the Mill Valley office are Kris Korth, P.E., Greg McCudden, Staff Geologist, and Brian Cross, Project Geologist.

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Welcome New Members!



We welcome our newest members and appreciate their support.

Affiliate Member:
GeoStabilization International (GSI)
543 31 Road
Grand Junction, CO 81504
Contact: James Chinchiolo
e/m: james@gsi.us

Safety First

Emergency Preparedness





Create a supply kit! Stock up on enough supplies to last a week. Put the items in waterproof containers and store them in a place that's easy to reach. Whether you are sheltering at home or evacuating, in a disaster situation you may need to get your supplies quickly. [Here's what you'll need.](#)



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Questions? Contact CalGeo at (530) 344-0644 or mmyers@calgeo.org