

MESSAGE FROM THE PRESIDENT

I hope everyone has been enjoying the great fall weather. I bring up the weather because the Broncos have not been doing well this fall and I will just leave it at that.

Before I get too far into the newsletter, I want to take a moment and thank everyone for their participation in the first annual CAGE Social held October 2, 2010 at the Mount Vernon Country Club. The intent of the event was to provide an atmosphere, other than business or technical, for CAGE members or those interested in becoming CAGE members to gather in a night of fun and to raise money to support the CAGE scholarship. The social event was attended by 47 participants and was a success raising approximately \$2000 for the CAGE Scholarship fund. A list of Auction / Donation items and the company/individual who donated the items follows:



John H. Hart, P.E.
CAGE President 2010

Auction / Donation Item

- Colorado Rockies Baseball Tickets
- Denver Bronco Football Tickets
- Denver Nugget Basketball Tickets
- Day at the Race Track
- Golf outing at Columbine Country Club
- All Day Fly Fishing Drift Boat Trip
- Loveland Ski Passes
- Foursome at CAGE 2011 Golf Outing
- A Night out at Dinner and a Movie
- 2-Hour Airplane Ride over Colorado
- \$350.00
- \$250.00
- \$450.00
- \$400.00
- \$250.00

Company / Individual Donating

- Michael W. West and Associates – Mike West
- CTL Thompson, Inc.
- A. G. Wassenaar, Inc. – Don Taylor
- J. A. Cesare, Inc. – Joe Cesare
- Philip Cardi
- John Mechling
- Shannon and Wilson, Inc. – Mark Vessely
- Tensor, Inc.
- Williams Form Engineering
- Dick Hepworth
- Ground Engineering, Inc.
- Wiss Janney Elstner, Inc.
- Bob and Lynda Thompson
- Hayward Baker, Inc.
- Kumar and Associates, Inc.

Again, I want to thank everyone who contributed (donators, purchasers, and organizers) to the success of the first annual CAGE Social.

The 2010 CAGE Technical seminar, “Reliability Based Geotechnical Engineering” a seminar and workshop featuring Load and Resistance Factor Design (LRFD) for Geotechnical Engineering, is quickly approaching. The date for the event is December 3 and the location will be the same as last year, the PPA Event Center in Denver. The cost of the seminar is \$250 per individual registration (which is lower than the cost last year). Instructors for the event will be Jim R. Harris, Ph.D., P.E. Principal, J.R. Harris & Company and John P. Turner, Ph.D., P.E., Professor of Civil Engineering, University of Wyoming. **Please sign up as soon as possible to ensure your reservation at the seminar.**

PRESIDENT'S MESSAGE CONTINUED

Other Items:

NOCOGEO (Northern Colorado Section of CAGE)

At their October 20, 2010 meeting, the NOCOGEO group voted to become the Northern Colorado Section of CAGE. A total of 18 people attended the meeting. Robin Dornfest (Geotechnical Services, Inc.) was elected President and Wayne Thompson (CTL Thompson, Inc.) was elected Vice President. At present, the CAGE board is working with the Northern Colorado CAGE Section on how to best orchestrate the incorporation to benefit both organizations. NOCOGEO will hold their meetings every two months throughout the year. Because the next meeting would fall so close to the holidays, NOCOGEO decided to hold their next meeting in January, 2011. That meeting is scheduled for Wednesday, January 19, 2011 at 11:30AM at CTL Thompson's Ft. Collins office.

Communication Committee Kick-off Meeting

On October 8th, five CAGE members and committee chair Paul Jordan held the first Communication Committee meeting. The purpose/mission is to improve communication between the CAGE board, membership, and the general public. The group discussed possible venues to improve communication such as email, website, newsletter, and community outreach. If interested in participating or providing suggestions, please contact Paul Jordan.

December CAGE Meeting

The CAGE December talk will take a break from the technical aspects of geotechnical engineering and instead focus on business and economic trends that influence our work. Our December speaker will be Mark Snead, who is assistant vice president, economist, and branch executive of the Federal Reserve Bank of Kansas City – Denver Branch. Mark serves as the Bank's regional economist and lead officer in the states of Colorado, Wyoming, and northern New Mexico and his research interests focus primarily on regional economic modeling and economic forecasting. He has published numerous articles and research reports on regional economic issues and will provide CAGE members and guests valuable insight into economic trends that influence our business. Mark Snead will give a broad overview of who is the Federal Reserve while answering the following questions on the Colorado regional economy and national outlook:

- Is the recession over?
 - What are the areas of overhang?
 - What is the potential for growth?

There will be time for questions, which will be a great opportunity to interact with one of the leading economic experts in our region. This will be a great topic for all types of professionals in the infrastructure and construction market so invite clients and other engineering colleagues.

CAGE Community Outreach

Have you ever wondered how to use our math and science background to help others? Well CAGE has found the way! As mentioned at the October CAGE meeting, we have decided to volunteer as tutors for the Denver Public School system. **And WE NEED YOU!** With enough participation, we can offer FREE, weekly, one-on-one tutoring to children. Ideally, we will have a rotating schedule of volunteers, so the ultimate commitment may only be 1 – 2 times per month. If you are interested in participating, please contact Kathleen Noonan at knoonan@jacesare.com or 303-210-1284 and she will send you the volunteer tutor application forms. We would like to start the program in January 2011. If you have any questions, feel free to contact Kathleen. Thanks, in advance, for your participation.

Thank you,
John H. Hart, P.E.
CAGE President 2010

NOVEMBER LUNCHEON**WEDNESDAY, November 10, 2010**

11:30 A.M. – 1:00 P.M.

**Lakewood Country Club
6800 W. 10th Avenue, Lakewood**

***CAGE now accepts prepayment of luncheon registrations online.
Click on the November 10 event on the calendar at www.cagecolorado.org.
Please note that refunds will not be given if you must cancel or are not able to attend.***

Continuous Impact Response System and Impact Compaction Technology
presented by Professor Barry Thompson, Innovative Construction Consultants

The Continuous Impact Response (CIR) System is a system capable of measuring the soil response to every impact of the roller, resulting in a direct measurement of soil stiffness, which is a function of the soil density. The CIR system employs an Impactometer to measure peak decelerations of the compaction masses with each impact. Each of these points is recorded relative to its position on the site as determined by an integrated GPS. CIR measurements can be very accurately correlated to all conventional testing methods including density measurements, penetration testing (CPT, DCP, SPT, etc.) and direct load testing (Plate Load, Zone Load, etc.). In doing so, the CIR system can be used in conjunction with conventional testing techniques to provide a quality assurance system capable of certifying the entire system at a reduced cost and increased level of certainty.

High energy impact compaction involves the transfer of compaction energy into the soil by means of the lifting and falling motion of non-circular rotating masses. The rotation of such masses to their highest point results in an effective potential energy build-up. Further rotation of these masses results in the conversion of this potential energy into a falling kinetic energy, which is transferred to the soil upon the impact of the lowest point of the masses with the surface of the soil. The amount of energy transferred, in the form of compactive effort, is closely related to the amount of potential energy generated in the lifting process.

Please FAX or email your reservations **before noon, Friday, November 8, 2010** to:

Becky Roland, CAGE

Fax: (720) 230-4846, admin@cagecolorado.org

You can RSVP online at www.cagecolorado.org. Just click on the November 10 event!

Walk-ins may not be guaranteed a meal, so please RSVP by November 8!

\$25 for CAGE members, \$30 for non-members, \$15 for students

CAGE is looking for volunteers to serve on its Communication Committee. Members of the Committee will assist with developing relevant material for this newsletter and the CAGE website. The goal is to provide technical information and professional support to the CAGE membership. If you are interested, please contact Becky Roland at admin@cagecolorado.org.

ABOUT CAGE

The Colorado Association of Geotechnical Engineers (CAGE) was established in 1995 by a small group of owners of geotechnical engineering firms in Colorado. This visionary group of founding members saw the need for a much greater exchange of technical and professional information between practicing geotechnical engineers, in an effort to advance the profession and to promote the public welfare.

Since CAGE was formed it has experienced steady and significant growth, with more than 120 current members from more than 60 different companies and organizations. Beyond the growth in the size of our membership, the organization has made great strides in promoting and improving the practice of geotechnical engineering in Colorado.

CAGE's contributions to the profession have included the hosting of regular luncheon meetings with guest speakers, sponsoring local geotechnical seminars, establishing committees to evaluate and respond to various geotechnical issues, issuing several publications, and developing Geotechnical Study Guidelines for Light Commercial and Residential Buildings in Colorado. In addition, CAGE has promoted collegial interactions between members and practitioners in related fields of geology, as well as civil and structural engineering.

CAGE

PO Box 460311
Denver, CO 80246
Phone: 303-551-3266
Fax: 720-230-4846
E-mail: admin@cagecolorado.org

CAGE

RELIABILITY BASED GEOTECHNICAL ENGINEERING

A SEMINAR AND WORKSHOP
FEATURING LOAD AND RESISTANCE
FACTOR DESIGN (LRFD) FOR
GEOTECHNICAL ENGINEERING



AS A PARTICIPANT IN THE SEMINAR, YOU WILL:

- learn more about the reliability based engineering.
- better understand LRFD.
- be able to better define the necessary geotechnical data for proper LRFD incorporation with structural engineers.
- learn how to properly utilize LRFD in geotechnical engineering to be more efficient and effective.
- receive the short course manuals and personal notes as reference for future geotechnical models and designs.
- earn up to 8 PDH credits for this course.

DECEMBER 3, 2010
PPA EVENT CENTER
2105 DECATUR ST
DENVER, CO

SEMINAR SCHEDULE

8AM	Introduction	Presenter Introductions, Outline, and "House-Keeping" Items
8:15–9:15	History and Background of Reliability Based Design (RBD)	Why?, Performance, Economy, Safety and Serviceability
9:15–9:30	COFFEE BREAK	
9:30–10:30	Fundamentals of RBD	Reliability Based Approach to Geo-Structural Engineering
10:30-10:45	COFFEE BREAK	
10:45-11:45	RBD for Deep Foundations	Drilled shafts, Driven Piles, Examples of LRFD
12:00-1:00	LUNCH	
1:00-2:00	RBD Shallow Foundations	Footings, Examples
2:00-2:15	COFFEE BREAK	
2:15-3:15	Lateral Analysis	Basement Walls, Retaining Walls, Earth Pressure, Examples
3:15-3:30	COFFEE BREAK	
3:30-4:30	Site Characterization for RBD	Acquisition of Field data, Laboratory Testing, Soil and Rock Properties
4:30-5:00	Questions	

INSTRUCTORS

Jim R. Harris, Ph.D., P.E., Principal, J.R. Harris & Company

Dr. Harris earned a bachelors from the University of Colorado in 1968 and a masters and doctorate from the University of Illinois in 1975 and 1980, respectively. He is an active member of several committees that produce national standards for structural engineering practice, including ASCE and the American Concrete Institute. Dr. Harris has written over 25 reports and journal articles.

In 1984, Dr. Harris founded J. R. Harris & Company in Denver, CO where he currently serves as principal. Dr. Harris has designed or evaluated hundreds of structures ranging from dwellings to high-rise buildings including industrial facilities, long spans, buildings in the highest seismic zones, earth retention, deep foundations, and renovations of historic buildings.

John P. Turner, Ph.D., Professor of Civil Engineering, University of Wyoming

Dr. Turner earned a bachelors in Geology from James Madison University in 1976 and a bachelors and masters in Civil Engineering from University of Wyoming in 1981 and 1982, respectively, and his doctorate in Geotechnical Engineering from Cornell University in 1986.

Dr. Turner has conducted research on drilled shaft foundations, anchored retaining walls, landslide stabilization, and rock mechanics and has authored 100+ technical papers. He is a past chairman of the ASCE Committee on Deep Foundations and has served as a member of the Editorial Board for the Journal of Geotechnical and Geoenvironmental Engineering.

REGISTRATION FORM

Registration Type	before Oct. 31	After Oct. 31
Individual Registration	\$250	\$300
CAGE Student Member	\$100	\$100
Break Sponsor	\$150 (inc. recognition at breaks)	
Lunch Sponsor (limit 4)	\$500 (inc. recognition at breaks & lunch)	

I have enclosed a payment for \$_____. (check or major credit card)

Credit Card # _____ Exp _____

Name(s) and Address: _____

Send form and payment to: CAGE, PO Box 460311, Denver, CO 80246
admin@cagecolorado.org or fax to (720) 230-4846

CAGE now accepts registrations and payments online. Go to www.cagecolorado.org and click on the calendar event for December 3 to register and pay online.