

Prominent Professionals Elucidate Innovative Foundation Engineering

By ASCE-Geotechnical Group-Chicago and Chicago Geotechnical Lecture Series - Committee members

The Geotechnical Group of the ASCE Illinois Section organized the 2008 Chicago Geotechnical Lecture Series on April 10, 2008. More than 120 professionals from the Chicago area and across the country attended this outstanding forum to hear six internationally prominent foundation engineers speak on innovative foundation engineering topics and to interact with 12 industry exhibitors. This esteemed group of foundation engineers represented academia as well as private practice, included several Terzaghi award winners, and covered a wide range of topics:

- *Applications of Dynamic Methods to the Design and Installation of Driven Piles*, George G. Goble, Ph.D., P.E., Principal, George G. Goble Consulting Engineers, LLC
- *Drilled Shaft Foundations for Large Bridges*, Dan Brown, Ph.D., P.E., Gottlieb Associate Professor of Civil Engineering, Auburn University & Principal, Dan A. Brown & Associates, LLC
- *What We are Learning from Hurricanes Ivan, Katrina and Rita about Foundations*, Robert B. Gilbert, Ph.D., P.E., Hudson Matlock Professor in Civil Engineering, University of Texas-Austin
- *On the Evolution from Deterministic to Reliability-Based Foundation Design*, Fred H. Kulhawy, Ph.D., P.E., G.E., Professor of Civil/Geotechnical Engineering, Cornell University

- *Load-Settlement Behavior of Shallow Foundations up to Bearing Capacity Failure*, Gary Norris, Ph.D., P.E., Professor of Civil/Environmental Engineering, University of Nevada-Reno
- *Micropiles in Various Types of Ground*, John Wolosick, P.E., Director of Engineering, Hayward Baker

The formal presentations were followed by a panel discussion with the presenters and local engineering professionals, including Clyde Baker and Krishna Reddy, Ph.D. Some key points from the lecture series and panel discussion:

- There was unanimous agreement among the participants that there should be frequent interactions between the geotechnical and structural engineers to design the most appropriate foundations for a specific project.
- Current Chicago area building standards include variance provisions

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that allow the use of new and innovative materials and foundation systems provided they are justified based on technical data and analysis.

- Recent design-build projects based on performance criteria with bonus options for early completion have encouraged contractors to develop innovative construction and field testing methods and successfully complete projects in a timely manner.
- Reliability-based foundation design approach is shown to have merit for foundation design, however, many unique challenging geotechnical design issues relative to structural design are being debated.

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- Geotechnical challenges related to the design of foundations to withstand greater forces from natural hazards than previously understood (e.g., hurricanes) are being recognized and addressed.
- Innovative deep foundation systems are being successfully implemented in a wide range of soil conditions.
- A new simple method for assessing load versus settlement behavior up to ultimate bearing capacity failure was presented for shallow foundations.
- Good subsurface information, design for constructability, specifications and materials appropriate to the project, and implementation of good field testing and verification procedures are keys to developing suitable foundation systems.
- In all cases, local experience with subsurface conditions, foundation design and construction practices are invaluable for the design of the most suitable foundation systems.

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The advertisement features a background image of a golf club head and a golf ball on a green. The golf ball is white with the ASCE logo in blue. The text is overlaid on the image in a white, sans-serif font.

Save the Date!
ASCE Younger Member Group Golf Outing

Date: Saturday, June 7 2008
Time: 10:00 AM
Location: Village Greens of Woodridge

\$150 Hole Sponsorships are now available
For details, contact James Wonneberg (james.wonneberg@jacobs.com)