

## THE ASCE PITTSBURGH SECTION GEO-INSTITUTE CHAPTER PRESENTS

### ENERGY GEOTECHNOLOGY: ENABLING NEW INSIGHTS INTO SOIL BEHAVIOR

#### *The 2014 Karl Terzaghi Lecture*



Presented By: *J. Carlos Santamarina, Ph.D., Ing., A.M.ASCE, Goizueta Foundation Faculty Chair and Professor, Civil and Environmental Engineering at the Georgia Institute of Technology, Atlanta, Georgia*

Energy is critical to life, and the coming decades will see worldwide population growth and associated economic development that will result in a pronounced increase in energy demand. Historically, geotechnical engineering has been crucial to projects that have sustained societal transformations. Once again, geotechnical engineering has a central role to play in the evolving energy challenge, from resource recovery and infrastructure development, to energy storage and waste management. Examples during this lecture and details in the accompanying manuscript show that the emerging field of energy geotechnology drives us to reconsider the basic tenets of geotechnical engineering (such as soil formation, index properties, and classification), to extend our understanding of geomaterials (at high pressure and temperature, long time scales, and large number of repetitions), to recognize new phenomena (most often couplings between hydraulic, thermal, chemical, biological and mechanical processes, and various forms of localization), and to advance technological innovations for characterization (in situ, sampling, and laboratory) and monitoring.

*Attendance at this technical presentation qualifies participants for 1.0 PDH*

***DINNER RESERVATIONS ARE REQUIRED***  
***PLEASE RSVP ON OR BEFORE Friday, October 17, 2014***

*Reservations made and not honored will be invoiced.*

*Cancellations must be received by the RSVP deadline in order to qualify for a refund.*

Date: **Thursday, October 23, 2014**

Time: 6:00 PM Social Hour (Cash Bar)  
7:00 PM Dinner  
8:00 PM Presentation

Place: Pittsburgh Athletic Association  
4215 Fifth Avenue  
Pittsburgh, PA 15213  
(412) 621-2400

Cost: \$40 ASCE Pittsburgh Section Members  
\$50 Non-members  
\$10 Students

Entrée Choices:

Herb Grilled Chicken Breast  
Peppers, Leeks, Roasted Garlic Jus

English Style Virginia Spots  
Lightly Breaded and Baked

Pork Medallions  
Sautéed with Apples and Pears. Balsamic Sauce

Roasted Vegetable Ravioli  
Vodka Tomato Cream Sauce

For Reservations, contact Mr. Kent Lindamood @  
(724) 746.0730 or [kent.lindamood@gmail.com](mailto:kent.lindamood@gmail.com);  
or register online at: <http://www.asce-pgh.org/>