

# 2013 Kirlin Distinguished Speaker Series

## Infusing Sustainability into Civil Engineering Design: Value Proposition for Society and Engineering Practice

### Abstract:

This presentation provides an overview of the need for sustainability awareness in societal decision-making in the context of the availability of energy and natural resources in a rapidly changing world, with an emphasis on infrastructure construction. Examples are provided where recycled materials and high-volume industrial byproducts are used to promote more sustainable transportation infrastructure that has lower long-term cost, greater service life, and lower energy consumption and greenhouse gas emissions. Life-cycle analysis tools embedded in a software application for rating sustainable infrastructure are used to make practical assessments. The presentation illustrates how the engineer can infuse sustainability into design, providing value to society and the client.



**Dr. Craig H. Benson**

**Director of Sustainability  
Research & Education**

**Co-Director of the Office of  
Sustainability**

**University of Wisconsin-  
Madison**



Dr. Craig H. Benson is an international expert in environmental engineering and science, a Distinguished Professor of Engineering, and a member of the US National Academy of Engineering. Dr. Benson serves as Director of Sustainability Research and Education and Co-Director of the Office of Sustainability at the University of Wisconsin-Madison (UW-Madison). He is also Chair of the Departments of Civil and Environmental Engineering and Geological Engineering. Dr. Benson has a BS from Lehigh University and MSE and PhD degrees from the University of Texas at Austin, all in Civil Engineering with an emphasis in geoenvironmental engineering.

Dr. Benson has been conducting experimental and analytical research related to protection of the environment for nearly three decades, with a primary focus on sustainable infrastructure; beneficial use of industrial byproducts; and environmental containment of solid, hazardous, radioactive, and mining wastes. In the Office of Sustainability, Dr. Benson is responsible for facilitating the interdisciplinary sustainability research enterprise across the UW-Madison campus.

Dr. Benson has received several awards for his work, including the Ralph Peck Award, the Huber Research Prize, the Alfred Noble Prize, and the Croes (twice), Middlebrooks, Collingwood, and Casagrande Awards from the American Society of Civil Engineers and the Award of Merit and the Best Practical Paper Award from ASTM International. Dr. Benson is a former Editor-in-Chief of the Journal of Geotechnical and Geoenvironmental Engineering. He currently serves as Vice President and President Elect of the ASCE Geo-Institute (GI) Board of Governors.

**Wednesday, March 13, 2013**

**12:00 pm  
1179 Glenn Martin Hall**