Northeastern University
College *of* Engineering

CEE 7400: Graduate Seminar Series

Department Civil and Environmental Engineering

Four Examples of Green Engineering Design

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Friday, September 17, 2010
1:45-2:45 PM*
10 Behrakis

Abstract

A variety of changes in social goals and culture have increased the importance of environmentally conscious, 'green' design in engineering. This seminar will present four examples of green design drawn from ongoing work at Carnegie Mellon's Green Design Institute in the areas of Sustainable Infrastructure, Energy and Environment, Life Cycle Assessment and Carbon Footprinting. Specific examples to be discussed include design of power tools for remanufacturing, solid state lighting, ethanol distribution and carbon emissions inventory at a university.

Professor Chris Hendrickson is the Duquesne Light Company Professor of Engineering and Co-Director of the Green Design Institute at Carnegie Mellon University. His research, teaching and consulting are in the general area of engineering planning and management, including design for the environment, project management, transportation systems, finance and computer applications. Current research projects include life cycle assessment methods (especially based on economic input/output tables such as eiolca.net), assessment of alternative construction materials, economic and environmental implications of Ecommerce, product takeback planning, and infrastructure for alternative fuels. He has co-authored three textbooks, Environmental Life Cycle Assessment of Goods and Services: An Input-Output Approach (Resources for the Future, 2005), Project Management for Construction (Prentice-Hall, 1989, now available on the web) and Transportation Investment and Pricing Principles (John Wiley & Sons, 1984) and two monographs, Knowledge Based Process Planning for Construction and Manufacturing (Academic Press, 1989) and Concurrent Computer Integrated Building Design (Prentice-Hall, 1994). In addition, he has published numerous articles in the professional literature. Prof. Hendrickson is a Distinguished Member of the American Society of Civil Engineering, an Emeritus Member of the Transportation Research Board and a Fellow of the American Association for the Advancement of Science. He has been the recipient of the 2002 ASCE Turner Lecture Award, the 2002 Fenves Systems Research Award, the 1994 Frank M. Masters Transportation Engineering Award, Outstanding Professor of the Year Award of the ASCE Pittsburgh Section (1990), the ASCE Walter L. Huber Civil Engineering Research Award (1989), the Benjamin Richard Teare Teaching Award from the Carnegie Institute of Technology (1987) and a Rhodes Scholarship (1973).

** 30 minutes reception to follow*