

**DANIEL J. EPSTEIN DEPARTMENT OF
INDUSTRIAL AND SYSTEMS ENGINEERING**

EPSTEIN INSTITUTE SEMINAR • ISE 651 SEMINAR

***Current and Future Research Directions
in Industrial and Systems Engineering***

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ABSTRACT

As the problems societies face become increasingly complex and intertwined, the importance of engineering increases. However, engineering will only be able to address these problems if it develops a better contextual understanding of the problems and interactions. Industrial and Systems Engineering with its traditional focus on socio-economic and technical problems is well positioned to help address the problems. This presentation will review some current and emerging areas of research as well as address the impact and need for understanding policy. As part of the presentation it is hoped that a robust discussion of the role of engineering in dealing with society's most complex problems and policies will ensue.

**TUESDAY, MARCH 20, 2012
ANDRUS GERONTOLOGY BLDG (GER) ROOM 309
3:30 – 4:50 PM**



Bio – Cerry Klein

Cerry Klein is in the Provost's Office at the University of Missouri, leading an initiative on Sustainable Energy in the Mizzou Advantage Program. He is also a Lapierre Professor of Engineering, past chair of the Department of Industrial and Manufacturing Systems Engineering at the University of Missouri, and past Program Director for the Service Enterprise Systems program and the Manufacturing Enterprise Systems program at the National Science Foundation. Dr. Klein's research areas include energy systems and logistics, health care, entrepreneurship, nonlinear and linear integer programming, dynamic programming, network optimization, multi-criteria and multi-attribute decision making, and scheduling. Dr. Klein has also been involved in educational research involving freshman retention and the vertical integration of material, the development of K-12 teacher's expertise in science and mathematics, and the development of introducing entrepreneurship across the engineering curriculum. He has received as a PI or Co-PI funding from several industrial and government institutions including the National Science Foundation, the Office of Naval Research, The Kauffman Foundation, Department of Education, Society of Manufacturing Engineers, Boeing, Union Electric, Missouri Department of Transportation, and Unilever. He has also worked as a consultant for several companies.

EDUCATION

Ph.D. in Industrial Engineering, School of Industrial Engineering, Purdue University, Dec. 1983.

M.S. in Mathematics, Department of Mathematics, Purdue University, 1980.

B.S. Ed. in Mathematics, Northwest Missouri State University (highest honors), 1977.

EXPERIENCE

Provost's Office, Mizzou Advantage – Sustainable Energy – September 2010 – present

Program Director, Service Enterprise Systems program and the Manufacturing Enterprise Systems program at the National Science Foundation, November 2007 to 2010

Lapierre Professor, Department of Industrial and Manufacturing Systems Engineering, University of Missouri, September 2007 - present.

Chair, Department of Industrial and Manufacturing Systems Engineering, University of Missouri, September 2000 to October 2007.

Director of Graduate Studies, Department of Industrial and Manufacturing Systems Engineering, University of Missouri, September 1992 to 2000 and 2001- October 2007

Director of Undergraduate Studies, Department of Industrial and Manufacturing Systems Engineering, University of Missouri, September 1989-1992, and 2000- October 2007

AWARD Highlights

Named Fellow of the Institute of Industrial Engineers– June 2010

Senior Faculty Research Award for Excellence in Research, College of Engineering, University of Missouri, 1999

Office of Naval Research Young Investigator, 1988-1991

UMC Outstanding Industrial Engineering Professor, voted by graduating seniors (26 times)

Outstanding Engineering Faculty Teaching Award, College of Engineering (twice)

Ralph R. Teetor Educational Award, Society of Automotive Engineers, 1989

William T. Kemper Fellowship for Teaching Excellence, University of Missouri – (Highest Teaching award given by the University)