

Department of Industrial Engineering  
Announces  
**The Scott T. Poage Distinguished Lecture Series**

**Title: Equipment Replacement under Uncertainties**



Distinguished Speaker

Joseph C. Hartman, Ph.D.

Affiliation

Department of Industrial Engineering  
and Systems Engineering  
University of Florida

**When:** 10-11:00am, Friday, September 26, 2008

**Where:** 102 D, Engineering Building 1

Abstract

Replacing equipment is often motivated by economics, including deterioration of the asset itself or technological improvements in available replacements over time. We examine a number of problem variants, including uncertainties in utilization levels, the horizon, and the arrival of new technologies over time with the use of stochastic dynamic programming. We illustrate how each of these complications leads to different solutions from their deterministic counterparts. Analytical results are presented along with numerical examples. Furthermore, we present alternative formulations to allow for finding robust solutions.

Short Bio

Joseph C. Hartman is Professor and Chair of Industrial and Systems Engineering at the University of Florida. He received his M.S. (1994) and Ph.D. (1996) in Industrial and Systems Engineering from the Georgia Institute of Technology. Previously, he served on the Lehigh University faculty for 11 years where he most recently served as Department Chair of Industrial and Systems Engineering while holding the Kledaras Endowed Chair. His research and teaching focuses on discrete optimization with applications in engineering economics, finance, and transportation systems.