

The Power of Pooling

Date and Time: Friday, December 9, 2011, 2:30-3:30, Kittridge Auditorium, HBC

by

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Abstract:

In product distribution systems, one of the most powerful principles for leveraging the tradeoff between customer service and inventory investment is the 'power of pooling': the reduction in safety stock requirements that occurs whenever product demands can be pooled and served from a common stocking point. Exploiting this phenomenon often involves changes in network configuration, improvements in information systems, and optimization of operating policies. In this talk, we demonstrate the principle in a variety of ways and provide examples of its use in military, industrial supply and maintenance, manufacturing, and retail environments. We will also review some of the techniques we have used to approximate and solve the large scale optimization problems that arise from these applications. Research reported is joint with Prof. Jack Muckstadt and Juan Li.



Bio:

Peter Jackson is a Professor in the School of Operations Research and Information Engineering. He joined the Cornell faculty in 1980 after receiving his Ph.D. in Operations Research (Stanford University). Currently, he is Director of Graduate Studies for, and a former Director of, the Systems Engineering Program within the Cornell University College of Engineering.

Prof. Jackson's research focus is in supply chain management with publications in journals such as *IIE Transactions* and *Operations Research*. He is the recipient of a Most Valuable Colleague Award, 2010, from General Motors Research and Development for his work on a "Business Process for Optimizing Retail Inventory."

Prof. Jackson is the recipient of several awards for curriculum innovation in addition to numerous student-voted awards for teaching excellence. He is the author of an introductory textbook in systems engineering, *Getting Design Right: A Systems Approach*.

[1] Presented by the Department of Mechanical & Aerospace Engineering and the STAR Center for Environmental Quality Systems.