SEMINAR SERIES
Department of Quantitative Analysis and Operations Management
College of Business Administration
University of Cincinnati

"Role of Capacity in the Optimal Production and Inventory Policies under Various Ownership Structures"

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12:30 p.m.
214 Lindner Hall

We consider a two-stage serial supply chain with limited production and stochastic demand. For centralized control, we show that the structure is tractable and can be interpreted as a generalization of multi-echelon results of Clark and Scarf. Extensions include Markov-modulated demand and various lead-time configurations. For decentralized control, even though unique equilibrium is not guaranteed, dominating conditions allow us to describe the game between the two stages of the supply chain. We also consider the effect of capacity when the supply chain includes two competing retailers, but one of them has flexible capacity.

Roman Kapuscinski (Ph. D., Carnegie Mellon, 1996) is the Sanford R. Robertson Assistant Professor in Business Administration and Assistant Professor of Operations Management at The University of Michigan Business School. His research focuses on manufacturing and its operational aspects, as well as its connections with other areas. Examples include: the value of information in coordinating elements of supply chains, optimal design of production-inventory systems with capacity constraints, efficiency as a function of ownership within value chain analysis, and lead-time quotation.