Industrial and Systems Engineering Seminar

Bargaining for an Assortment

Wednesday, October 22

3:15 PM – Refreshments before the Seminar

3:30 PM – Graduate Seminar

Mechanical Engineering Room 4125 A & B

Professor Goker Aydin

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A retailer's assortment decision results from a process of give-and-take, during which the retailer may bid manufacturers against one another, and the terms of trade offer plenty of flexibility for allocating the profit among the retailer and manufacturers. We adopt a bargaining framework to capture such an assortment selection process. We investigate the properties of the profit allocations that could emerge in a decentralized supply chain. In our model, the retailer engages in simultaneous, bilateral negotiations with all manufacturers. Our model and analysis produce managerial insights that could not be obtained in the absence of a bargaining perspective on assortment planning. For example, we find that when a manufacturer improves its product, such improvements do not only benefit the retailer, but they might even benefit competing manufacturers. In fact, even improvements to out-of-assortment products can increase the profits of the retailer and certain in-assortment manufacturers. Hence, our results suggest that a manufacturer can benefit from collaborating with judiciously chosen competitors.

Bio: Goker Aydin joined the Kelley School of Business at Indiana University in August 2009 as Associate Professor of Operations and Decision Technologies. His research is driven by the demand and supply uncertainty facing both retailers and their suppliers. To manage such uncertainty, firms can use inventory as a buffer, or they can leverage their prices to match supply with demand. Goker's research uses mathematical models to gain insights into such inventory and pricing decisions. He teaches supply chain and revenue management courses at the MBA level, and an inventory theory course at the doctoral level. Prior to joining Indiana University, Goker was on the faculty of Industrial and Operations Engineering at the University of Michigan. He received a Ph.D. in Industrial Engineering from Stanford University, and a B.S. in Industrial Engineering from Bogazici University in Turkey.