

Session Detail Information

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Cluster : Supply Chain Management & Operations

Session Information : Monday Nov 14, 13:30 - 15:00

Title: Inventory and Transportation in Supply Chains
Chair: Philip Kaminsky, University of California, IEOR, Berkeley CA, United States,
kaminsky@ieor.berkeley.edu

Abstract Details

Title: A Continuous-Review Inventory Model with Disruptions from Both Supplier and Retailer
Presenting Author: Zuo-Jun Max Shen, University of California, IEOR, Berkeley CA 94720, United States, shen@ieor.berkeley.edu
Co-Author: Lian Qi, University of Florida, Dept of ISE, Gainesville FL, United States, lianqi@ufl.edu

Abstract: We consider a continuous-review inventory model for a retailer who as well as its supplier may disrupt according to certain stochastic processes. We study the impacts of the disruptions on the optimal order size from the retailer to the supplier, and provide conditions on whether it is profitable to setup or maintain a supplier/retailer in a high-risk area.

Title: Integrating Order Assignment, Production, and Distribution in a Supply Chain
Presenting Author: Zhi-Long Chen, Associate Professor, Robert H. Smith School of Business, University of Maryland, College Park MD 20742, United States, zchen@rhsmith.umd.edu
Co-Author: Guruprasad Pundoor, PhD student, Robert H. Smith School of Business, University of Maryland, College Park MD 20742, United States, pundoor@umd.edu

Abstract: We consider a make-to-order supply chain consisting of a number of plants and a central DC. We consider a scheduling model that integrates order assignment, production, and distribution decisions with the objective of minimizing total production-distribution cost while maximizing customer service level. We study complexity of several problems, propose heuristics for intractable cases, and analyze performance of the heuristics.

Title: The Multi-facility Multi-retailer Newsvendor Problem
Presenting Author: Edwin Romeijn, Associate Professor, University of Florida, 303 Weil Hall, P.O. Box 116595, Gainesville FL 32611-6595, United States, romeijn@ise.ufl.edu
Co-Author: Fatma Zeynep Sargut, PhD student, University of Florida, University of Florida, Industrial and Systems Eng. Dept, Gainesville FL 32611-6595, United States, zeynep@ufl.edu

Abstract: We consider a problem in which multiple newsvendors must be supplied by a set of capacitated facilities. The objective is to minimize the total transportation costs between facilities and retailers as well as the total expected overage and underage cost at the retailers. We consider variants of the problem with and without single-sourcing constraints.

Title: Transportation Contracts in Stochastic Production/distribution Systems

Presenting Author: **Engin Alper**, University of California, Berkeley, Department of IEO, 4141 Etcheverry Hall, Berkeley CA 94720-1777, United States, engin@ieor.berkeley.edu

Co-Author: **Hyun-soo Ahn**, Ross School of Business, University of Michigan, D8203 701 Tappan Street, Ann ARbor MI 48109, United States, hsahn@umich.edu
Philip Kaminsky, University of California, IEO, Berkeley CA, United States, kaminsky@ieor.berkeley.edu

Abstract: Third-party logistics contracting has now become a widely utilized practice across many industries. Motivated by this observation, we develop models to analyze the optimal operation of stochastic production/distribution systems with transportation contracts. We characterize the optimal integrated production/distribution policy structures and provide numerical illustrations.
