Call for Papers

Special Volume of ***Annals of Operations Research***

Innovative Supply Chain Optimization

Models with Multiple Uncertainty Factors

Uncertainty is an inherent factor throughout the whole supply chain (SC) channel within production, distribution, transportation, and market sales. In traditional manufacturing processes, stochastic capacity, random yield, and uncertain transportation delay are regarded as the main causes of supply uncertainty. Market fluctuations, brought on by ever-changing customer preferences and competitive marketing environments, also expose the demand side to a high level of uncertainty. Another type of uncertainty comes from unexpected disruptions, such as earthquakes, economic crises, strikes, terrorist attacks, etc., which have damaged several SC operations severely. Well-known examples include Ericsson losing 400 million euros after their supplier's semiconductor plant caught fire in 2000, and Apple losing many customer orders during a supply shortage of DRAM chips after an earthquake hit Taiwan in 1999. The recent March, 2011, earthquake in Japan, which triggered a massive 23-foot tsunami and a nuclear crisis, even led to a global supply disruption. As a result, focusing on specific sources of uncertainty, many researchers have developed optimization models with a goal of mitigating the respective SC uncertainty and the associated risk.

However, in today's business environment, the initiatives to deal with a specific type of uncertainty might not be effective in the complex environment filled with various types of random factors and disruptions. As a result, this special volume aims at investigating new research issues and developing innovative optimization methods for supply chains facing multiple uncertainty factors. Suitable topics include, but are not limited to

- SC coordination and contracting mechanisms with multiple sources of uncertainties
- Stochastic location/production/transportation planning models
- Closed-loop SC models with supply and demand uncertainties
- Stochastic supply chain models with financial instruments
- Stochastic/robust/fuzzy programming for innovative stochastic SC models
- SC management with multiple sources of disruptions

- Emergency logistics management with accidents
- SC management for perishable products with supply and demand uncertainties
- Information sharing, information management, and forecasting for complex stochastic SC systems
- Innovative models for reliability and risk management in SCs with multiple sources of uncertainty
- Behavior operations management in stochastic SCs with multiple uncertainty factors

All papers submitted to the special volume will be peer-reviewed in accordance with the standard procedures of the **Annals of Operations Research (AOR)**. We expect that this edited volume will collect groundbreaking novel research on this important and challenging research topic.

Manuscript Preparation and Submission

To prepare their manuscripts, authors are asked to closely follow the AOR "Guide for Authors" at http://www.springer.com/business/operations+research/journal/10479. Authors should submit their papers via the journal's online submission site http://www.editorialmanager.com/anor/ and should select the article type "SI: innovative supply chain optimization". Submitted papers should not have been previously published or be currently under consideration for publication elsewhere.

Submission Deadline: December 31, 2014

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