Special Issue – Call for Papers

Special Issue on **Stochastic Simulation and Optimization in Supply Chain Management**

Overview

Supply chain management (SCM) is viewed as a business philosophy, which extends the concept of partnerships into a multi-firm effort to manage the total flow of goods from the supplier to the ultimate customer. It includes the movement and storage of raw materials, work-in-process inventory, and finished goods from point of origin to point of consumption.

SCM is facing a variety of uncertainties, covering supplier inventory uncertainty caused by gradually exaggerated demand information deviation and delivery date uncertainty caused by cumulative effect of time delay in logistics supply. However, the uncertainties and complexities are constantly rising and more complex model and more sophisticated novel methodologies are required to tackle them. This has driven the development of computation-intensive SCM methods based on stochastic simulation and optimization. The stochastic simulation and optimization can handle complex model with nonlinear and stochastic elements to get accurate and insightful results. It offers promising opportunities for the optimization of SCM, stochastic optimization algorithms and efficient simulation techniques.

This special volume collects papers describing cutting edge research on advanced stochastic simulation and optimization methodologies, and their application to SCM problems. The scope of this volume is wide ranging and includes all aspects of the delivery process (procurement, manufacturing, logistics, inventory management, account management, marketing and new product development) and theoretical contributions from the social sciences (operations management, corporate strategy, organizational behavior, new institutional economics, and public policy).

Topics

The special volume will cover a broad range of topics in the field of SCM, which use stochastic simulation and optimization. Potential topics include, but are not limited to, the following areas of SCM:

- Optimization model for single and multi-echelon inventory/capacity management
- Application of stochastic programming approach to inventory management, logistics distribution management, and customer demand with risk considerations
- Sustainable supply chain: recycling and reverse logistics
- Stochastic method and algorithm in logistics, traffic and transportation
- Time-dependent routing problem in SCM
- Procurement management

- Analytical performance model
- Simulation and information model
- Bayesian global optimization
- Discrete-event simulation
- Monte Carlo methods in SCM

Procedures

Submissions should be original work with scientific contributions, and can neither have been published nor be under concurrent review of another journal or conference. All submitted papers should be written in English and follow the format standards of the Journal. Each paper will be subjected to the Journal's usual peer review process. Once a manuscript has been accepted for publication, it will undergo language copyediting, typesetting, and reference validation in order to provide the highest publication quality possible.

Important dates

Submission deadline: January 1st, 2017

First author notification: **May** 1st, 2017

Revised version: **July** 1st, 2017

Final notification: **October** 1st, 2017

The expected publication time of the special issue will be at the end of 2017.

Manuscripts should be prepared and submitted online at

http://mc.manuscriptcentral.com/simulation. The authors should state that the paper is submitted for the special issue "Stochastic Simulation and Optimization in Supply Chain Management." Submissions should be original work with scientific contributions, and can neither have been published nor be under concurrent review of another journal or conference. All submitted papers should be written in English and follow the format standards of the Journal. Each paper will be subjected to the Journal's usual peer review process. Once a manuscript has been accepted for publication, it will undergo language copyediting, typesetting, and reference validation in order to provide the highest publication quality possible.

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Baozhen YAO received her PhD degree from Beijing Jiaotong University, Beijing, China in 2011. Currently she is a professor in school of Automotive Engineering, Dalian University of Technology, Dalian, China. She is also the Dean of Institute for Automotive Service Engineering. Her current research interests include public transportation, transportation planning and management and logistics system. She is the author and co-author of 34 in SCI/SSCI indexed journals.

Gang CHEN is an Assistant Professor in Shipping and Logistics at the Department of Mechanical and Manufacturing Engineering in Aalborg University (AAU), since August 2012. He took his Ph.D. study at University of Southern Denmark, on the topic of Marine Terminal Operation modeling with a focus on vehicle congestion and emission issue. His other research areas include Liner Shipping Market Analysis, and Revenue Management application in Liner Shipping.

Gang Chen has published more than 10 academic articles in international journals. He obtained two outstanding awards from International Association of Maritime Economists (IAME) 2009 Annual Conference and 2010 International Conference on Logistics and Maritime Systems. He has participated one EU funded project and two externally funded research projects in Denmark.

Currently Gang Chen is coordinating a master program – Global System Design at AAU