

## 2011 M&SOM Best Paper Award

Jing-Sheng (Jeannette) Song

Fuqua School of Business, Duke University, Durham, North Carolina 27708, jssong@duke.edu

It is a great pleasure to announce that the 2011 *Manufacturing & Service Operations Management* Best Paper Award goes to Jean-Philippe Gayon, Saif Benjaafar, and Francis de Véricourt for "Using Imperfect Advance Demand Information in Production-Inventory Systems with Multiple Customer Classes" (2009). This annual award is given to one paper, published in one of the prior three volumes of *M&SOM*. Nominees were first appraised by *M&SOM* associate editors to select a limited set of finalists. The finalists were further reviewed by an ad hoc committee comprised of Baris Ata, Seyed Iravani, Jing-Sheng (Jeannette) Song, and Paul Zipkin. Jing-Sheng (Jeannette) Song, the immediate past president of the MSOM Society, served as chair. This paper was chosen as most deserving for its contribution to the theory and practice of operations management. For their accomplishment, Professors Gayon, Benjaafar, and de Véricourt will share \$2,000, generously contributed by the MSOM Society of INFORMS.

This paper addresses how a supplier can best utilize advance demand information (ADI) when this information is imperfect. The supplier is a make-to-stock manufacturer with limited capacity. There are several customer classes, each with stochastic demand. In the effort toward supply chain collaboration and information sharing, many customers provide ADI to the supplier by announcing orders with future due dates. However, this information is often imperfect: customers may decide to change due dates or cancel orders, and not all customers provide ADI. The paper presents an elegant analysis of the structure of the optimal inventory replenishment and allocation policy and develops numerous important properties and insights.

According to one reviewer, "This paper...does a fine job at modeling the decision that actual manufacturers face and provides key insights as to who benefits from advanced demand information. It is extremely well written and clearly motivated. Moreover, the authors rightfully acknowledge the limitations of this work as well as opportunities for future research. I appreciate that the authors recognize that firms could benefit from a simpler heuristic that is easy to implement yet still preserves elements of their solution." In the nomination letter, the nominator also comments, "the paper makes an important technical contribution to the analysis of Markov decision processes with unbounded transition rates, with an approach that has broad applicability to other optimal control problems."

The ad hoc committee in general liked the richness of the model features and insights, the novelty of modeling of imperfect ADI, the rigorous and elegant execution of the analysis, the cleanness of the structural results, and the excellent exposition. Finally, in the words of one reviewer, "This paper studies a fundamental and timely operations problem. The advance demand information is going to be more and more prevalent with the advancement of technology, and the supply chain managers need to know how to use it and when it is most valuable." Thus, we are very pleased to present the 2011 *M&SOM* Best Paper Award to Professors Gayon, Benjaafar, and de Véricourt.

### Reference

Gayon, J.-P., S. Benjaafar, F. de Véricourt. 2009. Using imperfect advance demand information in production-inventory systems with multiple customer classes. *Manufacturing Service Operations Management* 11(1) 128-143.