

DCMME/GSCMI - Devos Award Winners (2005-2008)

2005-6 Award winners: Li & Tawarmalani

Professors Yanjun Li & Mohit Tawarmalani

Vehicle Routing Optimization

Statement of Research

Many companies face the situation where organic growth over time can lead to ineffective or inefficient logistics networks. These networks may also be robbing firms of improved customer service while keeping transportation costs unnecessarily high. The purpose of this research is to take a **case study in the furniture industry and examine opportunities for logistics routing optimization** which will lead to maintained or improved customer service while also reducing overall network costs.

2006-7 Award winners: Hummels & Kannan

Professor David Hummels

Valuing Timeliness in Global Supply Chains

Statement of Research

Over half of US exports and a third of US imports arrive in the market via air cargo, despite the fact that air shipping is many times more expensive than ocean shipping. Hummels (2007a) uses international trade data with modal detail to estimate a willingness to pay for speed equal to nearly 1 percent of a manufactured goods value for every day saved in transit. We propose to **use analytical modeling and data to investigate precisely why international trade is so time sensitive**. We examine two key hypotheses: One, rapid transportation provides firms with a real option to manage demand volatility. Two, rapid transportation allows firms to closely link stages of production in global supply chains.

Professor Karthik Kannan

Impact of Bid Revelations in Procurement Settings

Statement of Research

There is an interest in **understanding the implications of information policies in procurement contexts**. By interacting with an electronic marketplace, Freemarkets (now Ariba), I learned that procurers are required to choose an information policy, which determines the nature of information provided as feedback to the suppliers participating in that auction. The information policy chosen affects the suppliers' bidding behaviors and, in turn, the procurer's surplus. In this work, I focus on some of the key aspects of the procurer's decision problem not considered in prior works, and contribute to the growing body of knowledge that provides insights helpful to a procurer in electronic marketplace in choosing the appropriate policy.

2007-8 Award winners: Bisi & Hu

Professor Arnab Bisi

Global Supply Chain Management with Unknown Demand Distribution

Statement of Research

With increased globalization and offshore sourcing, global supply chain management is becoming an important issue for many businesses. Like traditional supply chain management, the underlying factors behind the trend are reducing operational costs and decreasing the risks related to procurement activities. The big difference is that global supply chain management involves a company's worldwide interests, suppliers and retailers rather than simply a local or national orientation. Because global supply chain management usually involves a plethora of countries, it usually comes with a plethora of difficulties that need to be dealt with appropriately. In this research we will **study the optimal procurement, distribution and pricing policies for managing global supply chains of both seasonal and non-seasonal products.**

Dr. Yu Hu

Website Features and Online Shopping: How Technology Usage Impacts Consumer Demand

Statement of Research

Today, most firms view their websites as more than just a direct ordering channel. Firms increasingly provide advanced search, browsing, and recommendation features on their websites; and consumers increasingly use these features to gather information on an expanded set of products, compare them, and make evaluations. With increased investment in website technologies comes the responsibility to provide economic justification. **Does consumers' technology usage have an impact on consumer demand? Does consumers' usage of different technologies lead to different purchasing patterns? How does the impact of technology usage on demand vary across different consumers and different products? This project studies these important questions, which have largely been neglected by previous research on electronic commerce.**