

“What we know is a drop; what we don’t know is an ocean.”

—Dennis Zhang, Associate Professor of Supply Chain, Operations & Technology

Olin faculty members in Supply Chain, Operations & Technology (SCOT) are distinguished by strong analytical backgrounds in operations research, management science, industrial engineering and economics. The program emphasizes the use of modeling techniques and empirical methodologies to understand manufacturing and service environments in areas of research ranging from supply chain management, operations strategy and revenue management to supply contracts and effective uses of information technology for process reengineering. Research frequently focuses on areas with strategic and tactical implications, and involves mathematical models and data analytics that help analyze problems and provide insight into complex scenarios. Emerging research areas of interest are digitalization of supply chains, machine learning applications and sustainable supply chains.

The Boeing Center for Supply Chain Innovation (BCSCI) creates value through collaborative research in technology, information and supply chain management. The focus is on the proprietary challenges member companies face. BCSCI undertakes a number of custom projects annually for members. Teams of PhD and other Olin students tackle these projects, working closely with Olin faculty to find solutions that build a competitive advantage through strategic supply chain management and technology-based process reengineering.

## Collaborative Research—SCOT Faculty and PhD Students

### Working Papers:

- Bai, B.\*, Chan, T.Y., Zhang, D.J. and Zhang, F. The Value of Logistic Flexibility in E-commerce. Job Market Paper.
- Bai, B.\*, Clyde, N.\* and Zhang, D.J. Learning in Crowdfunding: Evidence from Field Experiments on Kickstarter.
- Hu, C.\*, Long, X., Sun, J. and Zhang, D.J. Green E-commerce: Environmental Impact of Fast Delivery.
- Jiang, P., Xu, S.\* and Dong, L. Upgrading Random Lead Time on Asset Selling Platforms.
- Kouvelis, P. Liu, Y.\* and Turic, D. Optimal Hog Farm Finishing Stage Management via Deep Reinforcement Learning.
- Liu, Y.\*, Kouvelis, P. and Turic, D. Deep Hedging Strategies for a Hog Farm.
- Xu, S.\* and Kouvelis, P. Financing Newsvendors with Platform and Trade Credit.

### Published Papers:

- Bai, B.\*, Dai, H., Zhang, D.J., Zhang, F. and Hu, H. (2022). The Impacts of Algorithmic Work Assignment on Fairness Perceptions and Productivity: Evidence from Field Experiments.” *Manufacturing & Service Operations Management* 24 (6):3060-3078.
- Bing, B.\*, Dai, H., Zhang, D.J. and Zhang, F. The Impacts of Algorithmic Work Assignment on Fairness Perceptions and Productivity: Evidence from Field Experiments. *Manufacturing & Service Operations Management* (Vol. 24:6).
- Chen, X.\*, Feldman, J., Jung, S.H. and Kouvelis, P. (2022). Approximation Schemes for the Joint Inventory Selection and Online Resource Allocation Problem. *Production and Operations Management* 31 (8) 3143-3159.
- Dong, L., Jiang, P.\* and Xu, F. (2023). Impact of Traceability Technology Adoption in Food Supply Chain Networks. *Management Science* 69 (3) 1518-1535.
- Dong, L., Shi, D.\* and Rashkova, I. (2022). Food Safety Audits in Developing Economies: Decentralization vs. Centralization, *Manufacturing & Service Operations Management*.
- Dong, L., Shi, D.\* and Zhang, F. (2021). 3D Printing and Product Assortment Strategy. *Management Science*.
- Guo, X.\*, Kouvelis, P. and Turic, D. (2022). “Pricing, quality, and stocking decisions in a manufacturer-centric dual channel.” *Manufacturing & Service Operations Management* 24 (4) 2116-2133.
- Guo, X.\*, Kouvelis, P. Turic, D. (2022). Pricing Quality and Stocking Decisions in a Manufacturer-Centric Dual Channel, *Manufacturing & Service Operations Management*: 24 (4), 2116-2133.
- Liu, Y.\*, Kouvelis, P., Qiu, Y.\* and Turic, D. (2023). Managing Operations of a Hog Farm Facing Volatile Markets: Inventory and Selling Strategies, *Manufacturing & Service Operations Management*. (Vol. 25:5).
- Liu, Z.\*, Zhang, D.J. and Zhang, F. (2021). Information Sharing on Retail Platforms. *Manufacturing & Service Operations Management* 23 (3) 606-619.
- Wi, X.\*, Zhang, F. and Zhou, Y. (2022). Brand Spillover as a Marketing Strategy. *Management Science* 68 (7) 5348-5363.

\*Indicates current or former student

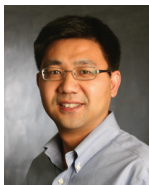


**CO-CHAIR: Lingxiu Dong**

**Professor of Supply Chain, Operations & Technology (SCOT); Frahm Family Chair of Supply Chain, Operations & Technology**

PhD, Stanford University

Research interests: operations management, production and distribution systems, supply chain management, information in supply chains



**CO-CHAIR: Fuqiang Zhang**

**Professor of Supply Chain, Operations & Technology (SCOT); Dan Broida Professor of Supply Chain, Operations & Technology**

PhD, University of Pennsylvania

Research interests: supply chain management, consumer behavior in operations management, inventory and production planning, game theory, incentives and mechanism design, energy and environment

**Deniz Akturk**

**Assistant Professor of Supply Chain, Operations & Technology**

PhD, University of Chicago

Research interests: sharing economy, intervention strategies, policy

**Naveed Chehrazi**

**Assistant Professor of Supply Chain, Operations & Technology**

PhD 2013, Stanford University

Research interests: data-driven modeling and optimization, applied probability and optimal control, consumer lending and retail banking, inventory management and retail operations, drug resistance and healthcare operations

**Kaitlin Daniels**

**Assistant Professor of Supply Chain, Operations & Technology**

PhD, University of Pennsylvania

Research interests: gig/sharing economy, self-scheduling capacity, platform operations, contract design, service operations

**Jake Feldman**

**Associate Professor of Supply Chain, Operations & Technology**

PhD, Cornell University

Research interests: assortment optimization, customer choice models, revenue management, approximation algorithms, machine learning

**Panos Kouvelis**

**Emerson Distinguished Professor of Supply Chain, Operations & Technology, and Director of the Boeing Center for Supply Chain Innovation**

PhD, Stanford University

Research interests: global supply chain management, operations and finance interfaces, risk management in supply chains, commodity risk management, operations strategy, managing the innovation process, marketing/manufacturing interfaces, product line design, lean manufacturing, inventory control, operations planning, project management, cyclic scheduling, manufacturing system design, management science and optimization

**Iva Rashkova**

**Assistant Professor of Supply Chain, Operations & Technology**

PhD, London Business School

Research interests: financial considerations for inventory management, medical shortages, developing countries

**Dennis Zhang**

**Associate Professor of Supply Chain, Operations & Technology**

PhD, Northwestern University

Research interests: service operations, healthcare operations, social interaction and operations, interface of econometrics, machine learning

