



“Influential research and fresh knowledge creation are the trademarks of any top doctoral program and business school, and Olin’s doctoral program is both pioneering and extremely successful at it.”

—Panos Kouvelis, Emerson Distinguished Professor of Operations and Manufacturing Management and Director of the Boeing Center for Supply Chain Innovation



Olin faculty members in Operations and Manufacturing Management (OMM) are distinguished by strong analytical backgrounds in operations research, management science, industrial engineering, and economics. The program emphasizes the use of modeling techniques 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 that help analyze problems and provide insight into complex scenarios.

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. BCSCI also sponsors seminars, conferences, and other programs to address critical issues and bring to light the latest thinking in the information, technology, and supply chain fields.

Collaborative Research—OMM Faculty and PhD Students

Working Papers:

- Duo, S., Kouvelis, P., Who Compensates the Sales Agent?
- Jung, S.H.*, Kouvelis, P., Co-opetitive Supply Partnerships with End-Product Rivals under Information Asymmetry. Under review at Manufacturing and Service Operations Management.
- Turcic, D., Guo, X.*, Kouvelis, P., Omni-Channel Retailing with Operational Frictions.
- Turcic, D., Xiao, G.*, Kouvelis, P., Make-to-Order versus Make-to-Stock When Firms Compete under Fluctuating Input Cost.
- Zhang, F., Guo X.*, Xiao, G.*, Effect of Consumer Awareness on Corporate Social Responsibility under Asymmetric Information. Under revision at Management Science.
- Zhang, F., Dong, L., Shi, D.*, 3D Printing versus Traditional Flexible Technology: Implication on Manufacturing Strategies. Under revision at Manufacturing & Service Operations Management.
- Zhang, F., Bolandifar, E.*, Zhu, K. Managing Competitive Levers in a Collaborative Distribution Channel. Under review at Manufacturing & Service Operations Management.
- Zhang, F., Guo, X.*, Yu, Y.*, Zheng, S., Optimal Bundling Strategy for a Retail Platform under Agency Selling. Under review at Management Science.
- Zhang, F., Lei, J., Yu, Y.*, Zhang, R.*, Competition on Product Availability.
- Zhang, F., Xiao, G.*, Yu, Y.*, The Impact of Capacity Constraint and Consumer Heterogeneity on Service Differentiation.
- Kouvelis, P., Xiao, G.*, Study of Hybrid (Push-Pull) Wholesale Price Contracts for Random Yield Supply Chains. Under review at Manufacturing and Service Operations Management.

Published Papers:

- Tian, Z., Tang, S.Y., Kouvelis, P., (2018). Soft Order Commitment in Supply Chains: Role of Penalties and Rationing Rules. *Decision Sciences*.
- Kouvelis, P., Xiao, Y.*, Yang, N., (2018). Drug Pricing for Competing Pharmaceutical Manufacturers Distributing through a Common PBM. *Production and Operations Management*.
- Kouvelis, P., Xiao, G., Yang, N., (2018). On the Properties of Yield Distributions in Random Yield Problems: Conditions, Class of Distributions, and Relevant Applications. *Production and Operations Management*.
- Kouvelis, P., Milner, J., Tian, Z., (2017). Clinical Trials for New Drug Development: Optimal Investment and Application. *Manufacturing & Service Operations Management*, 19(3): 437–452.
- Kouvelis, P., Wu, X.*, Xiao, Y.*, Cash Hedging in a Supply Chain. *Management Science*, forthcoming.
- Zhang, F., Aviv, Y., Wei, M.*, (2018). Responsive Pricing of Fashion Products: The Effects of Demand Learning and Strategic Consumer Behavior (with Y. Aviv and M. Wei). *Management Science*, forthcoming.
- Zhang, F., Wei, M.*, (2018). Advance Selling to Strategic Consumers: Preorder Contingent Production Strategy with Advance Selling Target. *Production and Operations Management*, forthcoming.
- Dong, L., Guo, X.*, Turcic, D., (2018). Selling a Product Line through a Retailer When Demand Is Stochastic: Analysis of Price-Only Contracts. *Manufacturing and Service Operations Management*, forthcoming.
- Dong, L., Bolandifar, E., Feng, T., Zhang, F., (2017). Simple Contracts to Assure Supply Under Noncontractible Capacity and Asymmetric Cost Information. *Manufacturing & Service Operations Management*.

Published Papers Continued:

- Dong, L., Kouvelis, P., Tian, Z.*. (2017). Responsive Pricing Newsvendor Networks with Discretionary Commonality, *Journal of Production and Operations Management*, 26(8): 1534–1552.
- Kouvelis, P., Tian, Z.*, Munson, C., (2015). Understanding and Managing Product Line Complexity: Applying Sensitivity Analysis to a Large-Scale MILP Model to Price and Schedule New Customer Orders. *IIE Trans*, 47: 1–22.
- Bolandifar, E.*, Kouvelis, P., Zhang, F., (2016). Delegation versus Control in Supply Chain Procurement and Competition. *Journal of Production and Operations Management*, 25(9): 1528–1541.
- Kouvelis, P., Xiao, Y.*, Yang, N., (2015). Competition in Pharmaceutical Supply Chain: Formulary Design and Drug Pricing. *Manufacturing and Service Operations Management*, 17(4): 511–526.
- Turcic, D., Kouvelis, P., Bolandifar, E.*, (2015). Hedging Commodity Procurement in a Bilateral Supply Chain. *Manufacturing and Service Operations Management*, 17(2): 221–235.
- Dong, L., Kouvelis, P., Wu, X.*. (2014). The Value of Operational Flexibility in the Presence of Input and Output Uncertainties with Oil Refining Applications. *Management Science*, 60(12): 2908–2926.
- Wu, X.*, Zhang, F., (2014). Home or Overseas? An Analysis of Sourcing Strategies under Competition. *Management Science*, 60(5): 1223–1240. 1–22.
- Bolandifar, E.*, Kouvelis, P., Zhang, F., (2016). Delegation versus Control in Supply Chain Procurement and Competition. *Journal of Production and Operations Management*, 25(9): 1528–1541.
- Kouvelis, P., Xiao, Y.*, Yang, N., (2015). Competition in Pharmaceutical Supply Chain: Formulary Design and Drug Pricing. *Manufacturing and Service Operations Management*, 17(4): 511–526.
- Turcic, D., Kouvelis, P., Bolandifar, E.*, (2015). Hedging Commodity Procurement in a Bilateral Supply Chain. *Manufacturing and Service Operations Management*, 17(2): 221–235.
- Dong, L., Kouvelis, P., Wu, X.*. (2014). The Value of Operational Flexibility in the Presence of Input and Output Uncertainties with Oil Refining Applications. *Management Science*, 60(12): 2908–2926.
- Wu, X.*, Zhang, F., (2014). Home or Overseas? An Analysis of Sourcing Strategies under Competition. *Management Science*, 60(5): 1223–1240.

Operations and Manufacturing Management Faculty



CO-CHAIR: Lingxiu Dong
Professor of Operations and Manufacturing Management
PhD, Stanford University
Research interests: operations management, production and distribution systems, supply chain management, information in supply chains



CO-CHAIR: Fuqiang Zhang
Professor of Operations and Manufacturing Management
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

Kaitlin Daniels, Assistant Professor of Operations and Manufacturing Management
PhD, University of Pennsylvania
Research interests: gig economy, contract theory, service operations

Jake Feldman, Assistant Professor of Operations and Manufacturing Management
PhD, Cornell University
Research interests: assortment optimization, customer choice models, revenue management, approximation algorithms, machine learning

Aber Elsaleiby, Visiting Assistant Professor of Operations and Manufacturing Management
PhD, Manufacturing and Technology Management, University of Toledo
Research Interests: Manufacturing and service operations management, healthcare operations management/analytics, supply chain network design, supply chain-information system interface, supply chain collaboration, optimization, simulation, operations research practice

Panos Kouvelis, Emerson Distinguished Professor of Operations and Manufacturing Management 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 Operations & Manufacturing Management

PhD 2015, London Business School
Research interests: financial considerations for inventory management, medical shortages, developing countries

Danko Turcic, Associate Professor of Operations and Manufacturing Management

PhD, Case Western Reserve University
Research interests: supply chain management, supply chain risk management

Dennis Zhang, Assistant Professor of Operations and Manufacturing Management

PhD, Northwestern University
Research interests: data science, service operations, healthcare operations, social networks, behavioral operations and economics

