

Nan Yang

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Education

Columbia University, Graduate School of Business, New York, USA

PhD in Decision, Risk and Operations, May 2007
Dissertation: Supply Risks in Supply Chain Management
Advisors: Awi Federgruen and Alp Muharremoglu

Columbia University, Graduate School of Business

Master of Philosophy in Decision, Risk and Operations, February 2003

Tsinghua University, School of Economics and Management, Beijing, China

Master of Management in Management Sciences, July 2000

Dalian University of Technology, Dept. of Foreign Languages, Dalian, China

Bachelor of Engineering in English (Honors), July 1997

Academic Appointments

- Professor of Management, *Miami Herbert Business School, University of Miami*, July 2016 – present
- Assistant Professor of Operations and Manufacturing Management, *Olin Business School, Washington University*, July 2010 – June 2016
- Assistant Professor of Operations Management, *Johnson Graduate School of Management, Cornell University*, July 2007 – June 2010
- Acting Assistant Professor of Operations Management, *Johnson Graduate School of Management, Cornell University*, July 2006 – June 2007

Research Interests

- **Application Areas:** Supply Risk Management, Dynamic Pricing and Inventory Management, Healthcare Operations, Pharmaceutical Supply Chain, Competition in Supply Chain
- **Methodological Areas:** Stochastic Models, Optimization, Game Theory

Journal Papers

- P1. Selecting A Portfolio of Suppliers under Demand and Supply Risks, (with Awi Federgruen), *Operations Research*, 56(4): 916-936, 2008.
- P2. Optimal Supply Diversification under General Supply Risks, (with Awi Federgruen), *Operations Research*, 57(6): 1451-1468, 2009.

- P3. Competition Under Generalized Attraction Models: Applications to Quality Competition Under Yield Uncertainty, (with Awi Federgruen), *Management Science*, 55(12): 2028-2043, 2009.
- P4. Inventory Management with an Exogenous Supply Process, (with Alp Muharremoglu), *Operations Research*, 58(1): 111-129, 2010.
- P5. Procurement Strategies with Unreliable Suppliers, (with Awi Federgruen), *Operations Research*, 59(4): 1033-1039, 2011.
- P6. Infinite Horizon Strategies for Replenishment Systems with a General Pool of Suppliers, (with Awi Federgruen), *Operations Research*, 62(1): 141-159, 2014.
- P7. Improving Reliability of a Shared Supplier with Competition and Spillovers, (with Yimin Wang and Yixuan Xiao), *European Journal of Operational Research*, 236(2): 499-510, 2014.
- P8. Dynamic Pricing and Inventory Management under Inventory-dependent Demand, (with Renyu Zhang), *Operations Research*, 62(5): 1077-1094, 2014.
- P9. Dynamic Pricing and Inventory Management under Fluctuating Procurement Costs, (with Guang Xiao and Renyu Zhang), *Manufacturing & Service Operations Management*, 17(3): 321-334, 2015.
- P10. PBM Competition in Pharmaceutical Supply Chain: Formulary Design and Drug Pricing, (with Panos Kouvelis and Yixuan Xiao), *Manufacturing & Service Operations Management*, 17(4): 511-526, 2015.
- P11. Dynamic Supply Risk Management with Signal-based Forecast, Multi-sourcing, and Discretionary Selling, (with Long Gao, Renyu Zhang, and Ting Luo), *Production and Operations Management*, 26(7): 1399-1415, 2017.
- P12. On the Properties of Yield Distributions in Random Yield Problems: Conditions, Class of Distributions and Relevant Applications, (with Panos Kouvelis and Guang Xiao), *Production and Operations Management*, 27(7): 1291-1302, 2018.
- P13. Drug Pricing for Competing Pharmaceutical Manufacturers Distributing through a Common PBM, (with Panos Kouvelis and Yixuan Xiao), *Production and Operations Management*, 27(8): 1399-1419, 2018.
- P14. Procurement Strategies with Unreliable Suppliers Under Correlated Random Yields, (with Lingxiu Dong, Xin Geng, and Guang Xiao), *Manufacturing & Service Operations Management*, forthcoming.
- P15. Role of Risk Aversion in Price Postponement Under Supply Random Yield, (with Panos Kouvelis and Guang Xiao), *Management Science*, forthcoming.

Book Chapter

- P16. Supply Chain Management under Simultaneous Supply and Demand Risks, (with Awi Federgruen), Chapter 4 in *Supply Chain Disruptions: Theory and Practice of Managing Risk*, Gurnani H., Mehrotra A., and Ray S. (Eds), Springer-Verlag London Ltd., pages 73-113, 2011.

Papers under Review/Revision

- W1. Assemble-To-Order Systems with Exogenous Lead Times, (with Alp Muharremoglu).

- W2. Supplier Diversification under Random Yield: The Impact of Price Postponement, (with Lingxiu Dong and Guang Xiao).
- W3. Dynamic Pricing and Inventory Management in the Presence of Online Reviews, (with Renyu Zhang).
- W4. Dynamic Competition under Market Size Dynamics: Balancing the Exploitation-Induction Trade-off, (with Renyu Zhang).
- W5. Comparative Statics Analysis of an Inventory Management Model with Dynamic Pricing and Delayed Differentiation, (with Renyu Zhang).
- W6. Supply Risk Mitigation in a Decentralized Supply Chain: Price Postponement or Payment Postponement? (with Xin Geng, Xiaomeng Guo, and Guang Xiao).

Presentations

Conference presentations:

1. *Drug Pricing for Competing Pharmaceutical Manufacturers Distributing through a Common PBM*, (with Panos Kouvelis and Yixuan Xiao), INFORMS Conference, Nashville, TN, November 2016.
2. *Drug Pricing for Pharmaceutical Manufacturers Distributing through a Common PBM*, (with Panos Kouvelis and Yixuan Xiao), INFORMS Conference, Philadelphia, PA, November 2015.
3. *Dynamic Competition under Market Size Dynamics: Balancing the Exploitation-Induction Trade-off*, (with Renyu Zhang), INFORMS Conference, Philadelphia, PA, November 2015.
4. *Dynamic Pricing and Inventory Management under Network Externalities*, (with Renyu Zhang), EURO Conference, Glasgow, United Kingdom, July 2015.
5. *Supplier Diversification under Price Dependent Demand and Random Yield*, (with Lingxiu Dong and Guang Xiao), POMS Conference, Washington, D.C., May 2015.
6. *Supplier Diversification under Price Dependent Demand and Random Yield*, (with Lingxiu Dong and Guang Xiao), INFORMS Conference, San Francisco, CA, November 2014.
7. *Dynamic Pricing and Inventory Management under Inventory-dependent Demand*, (with Renyu Zhang), MSOM Conference, Seattle, WA, June 2014.
8. *Effects of Competition on PBM Profitability in Drug Distribution: Rebates and Price Spreads*, (with Panos Kouvelis and Yixuan Xiao), MSOM Conference, Paris, France, July 2013.
9. *Optimal Supply Diversification under General Supply Risks*, (with Awi Federgruen), Best of WORMS session, INFORMS conference, Phoenix, AZ, October 2012.
10. *Improving Supplier Reliability under Competition and Knowledge Spillover*, (with Yimin Wang and Yixuan Xiao), International INFORMS Conference, Beijing, China, June 2012.
11. *Supplier Improvement under Competition and Knowledge Spillover*, (with Yimin Wang), INFORMS Conference, Austin, TX, November 2010.
12. *Competition Under Generalized Attraction Models: Applications to Quality Competition under Yield Uncertainty*, (with Awi Federgruen), INFORMS Conference, San Diego, CA, October 2009.
13. *Infinite Horizon Strategies for Replenishment Systems with a General Pool of Suppliers*, (with Awi Federgruen), INFORMS Conference, San Diego, CA, October 2009.

14. *Competition Under Generalized Attraction Models: Applications to Quality Competition under Yield Uncertainty*, (with Awi Federgruen), MSOM Conference, Boston, MA, June 2009.
15. *Competition Under Generalized Attraction Models: Applications to Quality Competition under Yield Uncertainty*, (with Awi Federgruen), POMS Conference, Orlando, FL, May 2009.
16. *Infinite Horizon Strategies for Replenishment Systems with a General Pool of Suppliers*, (with Awi Federgruen), INFORMS Conference, Washington, D.C., October 2008.
17. *Quality Competition under Yield Uncertainty*, (with Awi Federgruen), MSOM Supply Chain Management SIG Conference, College Park, MD, June 2008.
18. *Optimal Supply Diversification Under General Supply Risks*, (with Awi Federgruen), INFORMS Conference, Pittsburgh, PA, November 2006.
19. *Safeguarding Strategic Supplies: Planning for Disaster*, (with Awi Federgruen), MSOM Multi-Echelon Conference, Atlanta, GA, June 2006.
20. *Optimal Supply Diversification Under General Supply Risks*, (with Awi Federgruen), MSOM Conference, Atlanta, GA, June 2006.
21. *Safeguarding Strategic Supplies: Planning for Disaster*, (with Awi Federgruen), INFORMS Conference, San Francisco, CA, November 2005.

Campus Presentations:

1. Carey Business School, Johns Hopkins University, November 2019.
2. Krannert School of Management, Purdue University, November 2018.
3. Kelley School of Business, Indiana University, January 2016.
4. Leeds School of Business, University of Colorado–Boulder, January 2016.
5. Naveen Jindal School of Management, University of Texas–Dallas, January 2016.
6. Katz Graduate School of Business, University of Pittsburgh, January 2016.
7. College of Business Administration, University of Missouri–St. Louis, December 2015.
8. Rutgers Business School, Rutgers University, December 2015.
9. School of Business Administration, University of Miami, December 2015.
10. College of Business Administration, University of Illinois–Chicago, November 2015.
11. Sloan School of Management, Massachusetts Institute of Technology, November 2015.
12. Distinguished IEOR-DRO Seminar Series, Columbia Business School and Department of Industrial Engineering and Operations Research, Columbia University, October 2015
13. Ross School of Business, University of Michigan, October 2015.
14. Kellogg School of Management, Northwestern University, October 2015.
15. Department of Industrial Engineering and Operations Research, University of California–Berkeley, September 2015.
16. Tepper School of Business, Carnegie Mellon University, September 2015.
17. Kelley School of Business, Indiana University, November 2014.
18. Fuqua School of Business, Duke University, October 2012.
19. John Cook School of Business, St. Louis University, October 2011.
20. Anderson Graduate School of Business, University of California–Riverside, October 2010.

21. Olin Business School, Washington University in St. Louis, April 2010.
22. Johnson Graduate School of Management, Cornell University, March 2008, March 2006.
23. Department of Mechanical and Industrial Engineering, University of Illinois–Urbana Champaign, March 2006.
24. Anderson School of Management, University of California–Los Angeles, March 2006.
25. Sauder School of Business, University of British Columbia, February 2006.
26. Simon Graduate School of Business, University of Rochester, February 2006.
27. McCombs School of Business, University of Texas–Austin, January 2006.
28. Krannert School of Management, Purdue University, January 2006.
29. Wisconsin School of Business, University of Wisconsin–Madison, January 2006.
30. NUS Business School, National University of Singapore, January 2006.
31. Department of Industrial Engineering and Logistics Management, Hong Kong University of Science and Technology, January 2006.
32. Department of System Engineering and Engineering Management, Chinese University of Hong Kong, January 2006.

Teaching Experience

Instructor, Miami Herbert Business School, University of Miami

1. Principles of Operations Management (Core Two-year MBA, Core Master of Management), Fall 2018, Spring 2019, Fall 2019, Spring 2020.
2. Global Operations Management (Core OneMBA), Fall 2019.
3. Operations Management (Core Professional MBA), Fall 2016, Spring 2017, Fall 2017, Spring 2018.
4. Enhancing Global Operations (Core Executive MBA, taught the module “Recognizing the Value of Information in a Supply Chain”), Fall 2017, Fall 2018.
5. Decision Making in a Global Environment (Core Executive MBA, taught the module “Strategic Sourcing in a Competitive Supply Chain”), Fall 2019.
6. Principles of Supply Chain Management (One-year MBA Core, Two-year MBA Elective), Fall 2017
7. Strategic Sourcing (Undergraduate Elective), Spring 2017

Instructor, Olin Business School, Washington University in St. Louis

1. Operations Planning and Control (MSSCM Core, MBA and Undergraduate Elective), Spring 2012-2016.
2. Operations Management (Core Undergraduate), Spring 2011-2016.

Instructor, Johnson Graduate School of Management, Cornell University

1. Managing Operations (Core Accelerated MBA), Fall 2008, Fall 2009.
2. Managing Operations (Core two-year MBA), Spring 2009.
3. Managing Operations (Non-Johnson Elective), Spring 2009, Spring 2008, Fall 2006.
4. Statistics for Management (Non-Johnson Elective), Spring 2008.

PhD Students

- **Co-advisor of:**
 - **Yixuan Xiao** (2014), *Olin Business School, Washington University in St. Louis*, “A Study of Drug Distribution in Pharmaceutical Supply Chain”, (Placement: City University of Hong Kong).
 - **Renyu Zhang** (2016), *Olin Business School, Washington University in St. Louis*, “Dynamic Pricing and Inventory Management: Theory and Applications”, (Placement: New York University–Shanghai).
- **Doctoral Dissertation Committee Member of:**
 - **Jin Kyung Kwak** (2012), *Johnson Graduate School of Management, Cornell University*, “Retailer Behavior in Information-enabled Supply Chains: Models, Analysis and Impact”, (Placement: Ewha Woman’s University, Korea).
 - **Yueshan Yu** (2014), *Olin Business School, Washington University in St. Louis*, “A Study of Upgrading in Capacity Management”, (Placement: Amazon.com, Inc.).
 - **Fan Zhang** (2015), *Olin Business School, Washington University in St. Louis*, “Two Essays on Management of Multiple Delivery Channels in the Digital Era”, (Placement: Amazon.com, Inc.).
 - **Guang Xiao** (2016), *Olin Business School, Washington University in St. Louis*, “Issues on Managing Commodity Price and Supply Yield Risks in Global Supply Chains”, (Placement: Hong Kong Polytechnic University).
 - **Irene Gerlovin** (2017), *Rutgers Business School, Rutgers University*, “Managing Supply Chain Risks in Government Acquisitions Programs: Success Factors and Lessons Learned from Fifth Generation Fighters”.
 - **Huiqi Guan** (2018), *Miami Business School, University of Miami*, “Essays on Supplier’s Market Encroachment Strategy: Asymmetric Information, Strategic Inventory, and Sharing Economy”, (Placement: Fudan University, China).
 - **Yutian Li** (2018), *Miami Business School, University of Miami*, “Essays on the Value of Information in Supply Chain Management and Healthcare Management”, (Placement: University of Science and Technology of China).
 - **Hewen Liu** (2019), *Department of Economics, Miami Business School, University of Miami*, “Applications of Matching and Sorting Theory to Topics in Operations Management”.

Graduate Student Projects

- **Faculty advisor of MBA student Jing Xu**, *Johnson Graduate School of Management, Cornell University*, “Directed Reading and Research: Independent Study Project in the Application of Optimization in Investment Management”, Fall 2009. The results of this study were implemented in Arcadian Asset Management, LLC, in Boston.
- **Faculty co-advisor of a team of MBA, MSSCM and PhD students**, *Boeing Center for Technology, Information and Manufacturing, Olin Business School, Washington University in St. Louis*, “Picking and Distribution Processes: Analysis of Hand/Automated Picking

Processes”, Fall 2013. The results of this study were implemented in the warehouses of Anheuser-Busch InBev.

Consulting Experience

- **Consultant for Express Scripts:** inventory analysis for specialty drugs, 2015-2016.
- **Consultant for Dunkin’ Donuts:** design and control of its drive-through system; project based on queueing theory, 2002-2003.

Honors

- Presented in the “Best of WORMS” session at INFORMS: “Three women in OR/MS present their highly influential work published in INFORMS journals,” 2012.
- Excellence in Teaching, the “4.5 club”, *Johnson Graduate School of Management, Cornell University*, 2006, 2008.
- Teaching Honor Roll, *Johnson Graduate School of Management, Cornell University*, 2006, 2008.
- John M. Chapman Fellowship, *Columbia Business School*, 2002-2003.
- US Mathematical Contest in Modeling, *honorable mention*, 1995, 1996.
- China Mathematical Contest in Modeling, *first prize in Liaoning Province*, 1994, 1995.
- China Mathematical Contest in Modeling, *second prize in China*, 1994.

Service in Research Community

- Member, *INFORMS, MSOM, POMS*.
- Associate Editor, *Manufacturing & Service Operations Management*, 2020-present.
- Associate Editor, *Naval Research Logistics*, 2019-present.
- Senior Editor, *Production and Operations Management*, 2017-present.
- Associate Editor, *Journal of Management Science and Engineering*, 2017-present.
- Track Co-Chair, *2020 DSI Annual Conference, Business Analytics Track*, 2019-2020.
- Program Co-Chair, *2019 POMS Annual Conference*, 2018-2019.
- Member, *Nominating Committee of POMS 2019 Elections*, 2018-2019.
- Session Chair, *INFORMS Annual Meeting*, 2005, 2009, 2018.
- Session Chair, *POMS Annual Conference*, 2018.
- Referee, *Management Science, Operations Research, Manufacturing & Service Operations Management, Production and Operations Management, Mathematics of Operations Research, Naval Research Logistics, IIE Transactions, Decision Sciences, European Journal of Operational Research, Annals of Operations Research*.
- Judge, *MSOM Student Paper Competition*, 2010-2017, 2019.
- External Reviewer, *Research Grants Council of Hong Kong*, 2014.
- Referee, *Supply Chain Management Special Interest Group, MSOM conference*, 2015, 2016.
- Referee, *MSOM conference*, 2011, 2012.

University Service

- Member, *Promotion and Tenure Committee*, Miami Herbert Business School, University of Miami, 2019-present.
- Co-Director, *Global Operations Research Cluster*, Miami Herbert Business School, University of Miami, 2018-present.
- Faculty Senator, University of Miami, 2017-present.
- Coordinator, *Operations Management PhD Program*, Miami Herbert Business School, University of Miami, 2017-present.
- Member, University of Miami Fellowship Selection Committee, 2017-present.
- Member, Organizing Committee, *Miami Conference on Operations*, 2017.
- Coordinator, *Operations Management Research Workshop Series*, Johnson Graduate School of Management, Cornell University, 2009-2010.
- Participant, *Inaugural Faculty Diversity Institute*, Cornell University, 2008-2009.
- Organizer, *PhD Weekly Seminar Series*, Decision, Risk and Operations Division, Columbia Business School, 2002-2003.