

Curriculum Vitae
Yao Zhao

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RESEARCH INTERESTS

Supply Chain Management, Analytics, Healthcare

EDUCATION

Northwestern University, Evanston, IL.

Ph. D., Industrial Engineering & Management Science, the McCormick School of Engineering 2002.

Thesis: *The Impact of Information Sharing on Supply Chain Performance*

Supervisor: David Simchi-Levi (MIT)

EXPERIENCE

Professor, Dept. of Supply Chain Management, Rutgers – the State University of New Jersey, July 2015 to present.

Associate Professor, Dept. of Supply Chain Management and Marketing Sciences, Rutgers, July 2008 to June 2015.

Assistant Professor, Dept. of Management Science and Information Systems, Rutgers, July 2002 to June 2008.

Visiting Professor, Fuqua School of Business, Duke University, 2005

Visiting Scholar, Operations Research Center, Massachusetts Institute of Technology, 2000-2001

Member, Rutgers Center for Operations Research (RUTCOR), 2004 to present

Fellow, Rutgers Center for Supply Chain Management, 2002 to present

Fellow, Rutgers Blanche & Irwin Lerner Center for Pharmaceutical Management Studies, 2007 to present

SELECTED PUBLICATIONS IN PEER-REVIEWED JOURNALS

1. Song, J.M., Y. Zhao, X. Xu. 2019. Incentives and Gaming in Collaborative Projects under the Risk Sharing Partnership. Forthcoming at *Manufacturing & Service Operations Management*.
2. Mun, K.G., Y. Zhao, R. Rafique. 2019. Designing Hydro Supply Chains for Energy, Food and Flood. Forthcoming at *Manufacturing & Service Operations Management*. Best theoretical research paper, 22nd Asian Pacific Decision Science Institute (APDSI) Conference, Seoul, Republic of Korea. July 21-25, 2017. ENRE Early-Career Best Paper Award, INFORMS Conference, Seattle, WA, October 20-23, 2019.

3. Shi, J., Y. Zhao, R.K. Kiwanuka, A. Chang. 2019. Optimal Selling Policies for Farmer Cooperatives. Forthcoming at *Production and Operations Management*.
4. Rafique, R., K.G. Mun, Y. Zhao. 2017. Designing Energy Supply Chains: Dynamic Models for Energy Security and Economic Prosperity. *Production and Operations Management* **26** (6): 1120–1141.
5. Khan, A.J., R. Rafique, W. Zafar, C. Shah, B.G. Haffty, A. Jamshed, Y. Zhao. 2017. Nation-Scale Adoption of Shorter Breast Radiotherapy Schedules Can Increase Survival By Improving Access in Resource Constrained Economies: Results from a Markov Chain Analysis. *International Journal of Radiation Oncology, Biology, Physics* **97** (2): 287-295.
6. Johnson, A., X. Xu, Y. Zhao. 2016. Transportation Planning and Scheduling for the 2014 Special Olympics Games. *Interfaces* **46** (3): 218 – 230.
7. Zhao, Y., N. Liu, Y. Wang, K. T. Hickey. 2015. A Rolling-horizon Pharmacokinetic Pharmacodynamic model for warfarin inpatients in transient clinical states. *Personalized Medicine* **13**: 21-32.
8. Fleischhacker, A., A. Ninh, Y. Zhao. 2014. Inventory Positioning in Clinical Trial Supply Chains. *Production and Operations Management* **24**: 991-1011.
9. Shi, J., Y. Zhao. 2014. Component Commonality under No-Holdback Allocation Rules. *Operations Research Letters* **42**:409-413.
10. Shi, J., Yue, X., Y. Zhao. 2014. Operations Sequencing for a Multi-stage Production Inventory System. *Naval Research Logistics* **61**: 144-154.
11. Fleischhacker, A., Y. Zhao. 2013. Balancing Learning and Economies of Scale for Adaptive Clinical Trials. *Operations Research for Health Care* **2**: 42-51.
12. Choi, S., A. Ruszczyński, Y. Zhao. 2011. A Multi-Product Risk Averse Newsvendor with Law-invariant Coherent Measures of Risk. *Operations Research* **59**: 346-364
13. Shi, J., Y. Zhao. 2010. Technical Note: Some Structural Results of Acyclic Supply Chains. *Naval Research Logistics* **57**: 605–613
14. Lu, Y., J.S. Song, Y. Zhao. 2010. Non-holdback Allocation Rules in Assemble-to-Order Systems. *Operations Research* **58**: 691-705
15. Zhang, X. L., Y. Zhao. 2010. The Impact of External Demand Information on Parallel Supply Chains with Interacting Demand. *Production and Operations Management* **19**: 463-479
16. Melamed, B., Y. Fan, Y. Zhao, Y. Wardi. 2010. IPA Derivatives for a Discrete Model of Make-to-Stock Production-Inventory Systems with Backorders. *Annals of Operations Research* **181**: 1-19
17. Xu, X., Y. Zhao. 2010. Price-only Contract and Backup Supply. *Operations Research Letters*, **38**: 201-206
18. Song, J.S., Y. Zhao. 2009. The Value of Component Commonality in a Dynamic Inventory System with Lead Times. *Manufacturing & Service Operations Management* **11**: 493-508
19. Zhao, Y. 2008. Evaluation and Optimization of Installation Base-Stock Policies in Supply Chains with Compound Poisson Demand. *Operations Research* **56**: 437-452
20. Boros, A., L., Lei, Y. Zhao, H. Zhong. 2008. Scheduling Container Vessels with Conflicting Objectives. *Annals of Operations Research* **161**: 149-170
21. Zhao, Y., B. Melamed. 2007. IPA Gradients for Make-to-Stock Production-Inventory Systems with Lost Sales. *IEEE Transactions on Automatic Control* **52**: 1491-1495
22. Zhao, Y., D. Simchi-Levi. 2006. Performance Analysis and Evaluation of Assemble-to-Order Systems with Stochastic Sequential Lead-times. *Operations Research* **54**: 706-724
23. Zhao, Y., B. Melamed. 2006. IPA Gradients for Make-to-Stock Production-Inventory Systems with Backorders. *Methodology and Computing in Applied Probability* **8**: 191-222

24. Zhao, Y., M.N. Katehakis. 2006. On the Structure of Optimal Ordering Policy for Stochastic Inventory Systems with Minimum Order Quantity. *Probability in the Engineering and Informational Sciences* **20**: 257-270
25. Simchi-Levi, D., Y. Zhao. 2005. Safety Stock Positioning in Supply Chains with Stochastic Lead-times. *Manufacturing & Service Operations Management* **7**: 295-318
26. Simchi-Levi, D., Y. Zhao. 2004. The Value of Information Sharing in a Two-Stage Supply Chain with Production Capacity Constraint: The Infinite Horizon Case. *Probability in the Engineering and Informational Sciences* **18**: 247-274
27. Simchi-Levi, D., Y. Zhao. 2003. The Value of Information Sharing in a Two-Stage Supply Chain with Production Capacity Constraint. *Naval Research Logistics* **50**: 888-916

MEDIA

1. Zhao, Y. 2016. Risk Sharing in Joint Product Development – Lessons From 787 Dreamliner. *The European Business Review*, November – December Issue, pg. 78-84.
2. Iacocca K., Y. Zhao. 2015. Resell vs. Direct Models: US Branded Drug Distribution in the Future. *Pharmaceutical Executive*, July 12, 2015.
3. Zhao, Y. 2013. Model Management: Project-Driven Supply Chains – Integrating Supply Chain Planning with Project Management. *International Innovation*, May 2013, pg. 56-58.
4. Zhao, Y., A. Shenhar. 2011. Why 787 Slips Were Inevitable. *Aviation Week & Space Technology*, ViewPoint article, February 28, pg. 58.

UNDER REVIEW & WORK-IN-PROGRESS

1. Ninh, A., B. Melamed, Y. Zhao. 2017. Analysis and Optimization of Recruitment Stocking Problems.
2. Song, J.M., Y. Zhao. 2018. Shipping Peak Demand for Online Sellers: Penalty vs. Flat Rate.

AWARDS & GRANTS

- 2019-2022 Dean’s Research Professor, Rutgers Business School
- 2016 Dean’s Meritorious Teaching Award, Rutgers Business School
- 1st Place Award – INFORMS Case Competition 2014
- 2011 Dean’s Meritorious Research Award, Rutgers Business School
- 2010 *M&SOM* Meritorious Service Award
- *Honorable Mention*, Manufacturing & Service Operations Management (*M&SOM*) Student Paper Competition 2001
- *Walter P. Murphy fellowship*, Northwestern University 1997

GRANTS

- *NSF EAGER* (2015-2016): Collaborative: IC Supply Chain Security and Quality Control in Business and Social Context
- *NSF CAREER AWARD* (2008-2013): Project-Driven Supply Chains (PDSCs) – Integrating Supply Chain Planning with Project Management (0747779)

INVITED TALKS

- Baruch College Department of Management, CUNY, NY (11/2018)
- IBM Watson Research Center, NY (10/2016)
- Anderson School of Management, University of California Riverside, CA (4/2016)
- Olin School of Business, Washington University in St. Louis, IL (4/2016)
- Fuqua School of Business, Duke University, NC (3/2016)
- Rutgers Energy Institute, Rutgers University, NJ (2/2015)
- Robert H. Smith School of Business, University of Maryland, MD (10/14)
- Alfred Lerner School of Business and Economics, University of Delaware, DE (9/14)
- Ross School of Business, University of Michigan, MI (2/14)
- MIT System Design Management, MA (12/13)
- IBM Watson Research Center, NY (11/13)
- Booth School of Business, University of Chicago, IL (10/13)
- MIT Operations Research Center, MA (9/13)
- IEMS, Northwestern University, IL (4/13)
- IEOR-DRO Distinguished seminar series, Columbia University, NY (3/13)
- Stern School of Business, New York University, NY (2/13)
- New York Presbyterian Hospital/Columbia University Medical Center, NY (1/13)
- W. P. Carey School of Business, Arizona State University, AZ (12/12)
- Management & Global Business, Rutgers Business School, NJ (10/12)
- International Society of Pharmaceutical Engineering, MD (6/12)
- Mailman School of Public Health, Columbia University, NY (5/10)
- Expeditors International, NJ (11/09)
- Chinese University of Hong Kong, SEEM, Hong Kong (7/09)
- Peking University, College of Engineering, Beijing, China (7/08)
- Chinese Academy of Science, Division of Mathematics and System Science, Beijing, China (7/08)
- Hong Kong City University, Dept. of Management Science, Hong Kong (6/08)
- Hong Kong University of Science and Technology, Logistics Dept., Hong Kong (6/08)
- Chinese University of Hong Kong, SEEM, Hong Kong (6/08)
- IBM Watson Research Center, NY (3/08)
- Drexel University, School of Business, PA (5/06)
- Stern School of Business, New York University, NY (4/06)
- Department of Industrial Engineering and Operations Research, North Carolina State University, NC (11/05)
- SAS Corporation, NC (11/05)
- Dept. of Operations Research, University of North Carolina at Chapel Hill, NC (10/05)
- Department of Civil and Environmental Engineering, MIT, MA (10/05)
- Fuqua School of Business, Duke University, NC (9/05)
- Management Science and Engineering, Stanford University, CA (1/02)
- Department of Industrial Engineering, University of Miami, FL (1/02)
- Management Science and Information Systems, Rutgers University, NJ (12/01)
- Sloan School of Management, MIT, MA (11/01)
- Kellogg School of Management, Northwestern University, IL (10/01)

- Industrial and Operations Engineering, University of Michigan, MI (3/01)
- Industrial, Welding and System Engineering, Ohio State University, OH (2/01)
- United Technology Research Center, CT (1/01)

CONFERENCE PRESENTATIONS

- INFORMS Conferences 2000 - 2015
- M&SOM Conferences 2005, 2007, 2009, 2012
- International Workshop on Applied Probability 2006
- The Winter Simulation Conference 2004

CONSULTING

- Robert Wood Johnson hospitals (2018): Forecasting ICU admissions and behavior center readmissions
- XiaoDingDang Tmall Store (2017): Pricing and promotion planning
- ZheJiang DAHUA Electronics Limited (2017): Inventory Management
- AdvanceScale (2016): Managing Demand and Service Vehicles
- Fannie Mae (2015): Proactive supply risk analytics
- Pakistan Ministry of Water and Power (2012 – present): Energy supply chain design
- Defense Logistics Agency and Navy (2013-2015): Diagnostics of spare part logistics and fulfillment analytics
- Johnson and Johnson (2012): Inventory rationing and product allocation
- Special Olympics 2014 USA Games (2012-2013): Transportation services planning and scheduling
- Verizon (2012): Supply chain inventory control
- MTA New York City Transit (2011-2012): Forecasting and inventory management
- Estee Lauder Companies (2001): Production and inventory control for new product launch
- General Motors (2000): Forecasting and inventory management of service parts

CASE STUDIES

2009

- “ImportHome LLC – A B2C Small Business Model” with Lei Wang
- “Yaka Pharmaceuticals: Drug Distribution Contracts” with Kathleen Iacocca
- “Panda Express: Material Management” with Lily Yin and Suparna Bhaumik
- “Coach Logistics.”
- “ICM Inc. – Construction Resource Management” with Mihirkumar Shah

2010

- “From Farm to Cup: The Coffee Supply Chain in Kenya” with Rose Karimi.
- “CTR Clinical Research: Clinical Trial Supply Management.”
- “Build-to-Performance – Boeing 787 Dreamliner” with Xin Xu.
- “Influenza Pandemic – Just-In-Time vs. Just-In-Case Strategies.”
- “American Royal Financial – The Launch of Amrolife Return Of Premium Term.”

- “Supply Chain Efficiency vs. Sustainability – Army Ammunition Industry Base.”

2011

- “The Chocolate Factory – EOQ vs. EPC Models” with Vijay Hanagandi & Stephen Johanson
- “VASTA Wireless – Multi-Echelon Inventory Management.”
- “TLJ Pharmacy – Ordering Strategies.”
- “Pakistan Energy Crisis – Breaking the Vicious Cycle” with Raza Rafique

2012

- “Valentine’s Roses – Supply Strategies.”
- “OXO International – Forecasting & Inventory Management.”

2014

- “Special Olympics – Transportation Planning and Scheduling” with Andrew Johnson
- “Apple vs. Samsung – Competitive Supply Chain Collaboration” with Raza Rafique and Kwon Gi Mum
- “Sony vs. Samsung: The Fall of Electronics Legends” with Kwon Gi Mun and Raza Rafique
- “F-35 Joint Strike Fighter: Supply Chain Project Management Comes to Rescue” with Irene Gerlovin.

2016

- “Yunji vs. Taobao: The Tale of Two Ecommerce Platforms” with Chan Hyung Park and Boxiang Lu.
- “Heilan Home: Business Model Innovation” with Chan Hyung Park and Boxiang Lu.
- “Dabeinong – Nongxin Mobile Internet” with Chan Hyung Park and Boxiang Lu.

COURSES

Rutgers

- PhD 26:799:685, “Inventory Models” (Average Quality: 4.67/5. Effectiveness: 4.67/5).
- MBA 22:799:580, “Operations Analysis” Offline (Average Quality: 4.43/5. Effectiveness: 4.39/5).
- MBA 22:799:580, “Operations Analysis” Online (Average Quality: 4.21/5. Effectiveness: 4.25/5).
- MBA 22:799:607, “Supply Chain Management Strategies” (Average Quality: 4.18/5. Effectiveness: 4.29/5)
- MBA 22:799:696, “Healthcare Services Management” (Average Quality: 4.29/5. Effectiveness: 4.43/5)
- Undergraduate. 22:623:340, “Business Research Method” (Average Quality: 4.62/5. Effectiveness: 4.49/5)

Northwestern

- MEM. C201, “Introduction to Statistics”.

EXECUTIVE EDUCATION

- China Business Executive Academy Dalian (Summer 2014). “Innovation and Global Operations”
- International Executive MBA (Beijing, China. Fall 2011). 22:960:523, “Business Statistics” (Quality: 4.25/5. Effectiveness: 4.19/5).
- Executive Certificate program (2004-2012). “Supply Chain Case Studies”
- Beijing Economy Commission (2004). “Supply Chain Management”
- Training for Port Newark Staff (2004). “Inventory Management”

PhD Graduates

1. Arim Park, Ph.D. 2019. “Designing Efficient Marketplaces for the Freight Services Industry.” Co-advised with Dr. Soohyun Cho. Tenure-track assistant professor, North Carolina A&T State University, NC.
2. Bonnie He Zhang, Ph.D. 2018. “Essays on Supply Chain Analytics.” Associate on Quantitative Financial Analysis, J. P. Morgan, New York City.
3. Irene Gerlovin, Ph.D. 2017. “Managing Supply Chain Risks in Government Acquisitions Programs – Success Factors and Lessons Learned from Fifth Generation Fighters.” Founder and Principal, New Line Services, Inc., NJ
4. Ju Myung Song, Ph.D. 2017. “Essays on Supply Chain Coordination and Optimization.” Tenure-track assistant professor, School of Global Innovation and Leadership, Lucas College and Graduate School of Business, San Jose State University, CA.
5. Kwon Gi Mun, Ph.D. 2016. “Designing Energy and Water Supply Chains for Prosperity.” Tenure-track assistant professor in Information Systems and Decision Sciences Department, Silberman College of Business, Fairleigh Dickinson University, NJ. ENRE Early-Career Best Paper Award, INFORMS Conference, Seattle, WA, October 20-23, 2019. Winner of the ENRE Early-Career Best Paper Award, INFORMS Conference, Seattle, WA, October 20-23, 2019.
6. Anh Ninh, Ph.D. 2015. “Selected Topics in Stochastic Optimization.” Tenure-track assistant professor in Operations Research at the College of William and Mary, VA.
7. Andrew Johnson, Ph.D. 2015. “Mission Critical Logistics – Transportation Planning and Service Parts Operations.” Tenure-track assistant professor in Marketing & Business Information Systems Department, Rohrer College of Business, Rowan University, NJ.
8. Raza Rafique, Ph.D. 2015. “Resolving the Energy Crisis in Pakistan – Location Models for Economic Growth and Finance.” Tenure-track assistant professor, Suleman Dawood School of Business, Lahore University of Management Sciences, Lahore, Pakistan.
9. Xin Xu, Ph.D. 2014. “Essays on the Interface between Supply Chain and Project Management.” Senior Adviser in Quantitative Financial Services, Goldman Sachs, New York City.
10. Rose Karimi Kiwanuka, Ph.D. 2013. “Global Coffee Supply Chains: Improve Small Scale Farmers’ Income.” Africa Nazarene University, Nairobi, Kenya
11. Kathleen Iacocca, Ph.D. 2011. “Essays on Drug Distribution and Pricing Models”, Tenure-track assistant professor at the Kania School of Management, University of Scranton. Scranton, PA.

12. Adam Fleischhacker, Ph.D. 2009. "Supply Chain Management for Clinical Trials", Tenured associate professor at the Alfred Lerner College of Business & Economics, University of Delaware. Newark, DE.
13. Ching-Yu Chen, Ph.D. 2008. "Essays on Supply Chain Inventory Management", tenure-track assistant professor at the College of Management, Tunghai University, Taiwan

UNIVERSITY SERVICE

- *Co-director*. Supply Chain Analytics Laboratory. 2015-present
- *Co-director*. Masters of Science in Supply Chain Analytics. 2015-2016
- *Academic coordinator*. Ph.D. programs in supply chain management. 2010-present
- *Academic advisor*. Masters of Science in Healthcare Services Management. 2014-2016
- *Founding member*. The Joint Rutgers-Shanghai Jiao Tong University DBA program. 2013
- *Faculty Mentor*. The School of Arts and Sciences Honors Program. 2011-13
- *Committee member*. MBA curriculum, course of study committee. 2009
- *Core Courses Review committee*. Undergraduate programs. 2009-2011
- *Standing committee*. Undergraduate and MBA programs. 2008-2009
- *Standing committee*. Teaching Methods and Innovations. 2004-2005
- *Junior Faculty Research Award committee*. 2010-2011
- *Faculty recruiting committee*. 2008-present.
- *PhD admission committee*. 2007-present.

PROFESSIONAL ACTIVITIES

- *Associate Editor*. Operations Research 2012-2018
- *Associate Editor*. Manufacturing & Service Operations Management 2011-2014
- *Reviewer*. Multi-Echelon Conference 2006, M&SOM conference 2009, 2011, 2012
- *Judge*. M&SOM Student Paper Competition 2008-2015
- *Committee*. IIE Pritsker Doctoral Dissertation Award 2014-15
- *Panelist*. NSF CMMI 2009, 2010, 2013
- *President*. INFORMS New Jersey Chapter 2006-2007