

# Curriculum Vitae

## Cong SHI

### Contact Information

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### Education

<b>Massachusetts Institute of Technology (MIT)</b> , Cambridge, MA, USA Ph.D. in Operations Research (Thesis Advisor: Professor Retsef Levi)	9/2007 - 8/2012
<b>National University of Singapore (NUS)</b> , Singapore B.S. in Mathematics (First Class Honors)	9/2003 - 6/2007

### Academic Employment

<b>University of Michigan</b> , Ann Arbor, MI, USA Associate Professor (with tenure), Department of Industrial & Operations Engineering	9/2019 - Present
<b>University of Michigan</b> , Ann Arbor, MI, USA Assistant Professor, Department of Industrial & Operations Engineering	9/2012 - 8/2019

### Professional Experiences

<b>IBM Research Zurich</b> , Rüschlikon, Switzerland Research Fellow (Summer Intern)	6/2010 - 9/2010
<b>Motorola Solutions Venture Capital</b> , Sunnyvale, CA, USA Quantitative Analyst (Summer Intern)	6/2006 - 9/2006
<b>Citigroup Global Markets</b> , Singapore Quantitative Analyst (Summer Intern)	6/2005 - 9/2005

### Selected Awards

Amazon Research Award, 2021  
Finalist, INFORMS MSOM Data Driven Research Challenge, 2018  
Third Place, INFORMS Junior Faculty Forum Paper Competition (JFIG), 2017  
First Place, INFORMS George E. Nicholson Student Paper Competition, 2009  
UM IOE Graduate Course Professor of the Year, University of Michigan, 2019  
UM CoE Vulcans Education Excellence Award, University of Michigan, 2019  
INFORMS Management Science Meritorious Service Award, 2018, 2019, 2021

### Selected Awards (won by Ph.D. advisees)

Hao Yuan:

Finalist, INFORMS Applied Probability Society (APS) Best Student Paper, 2019.

Esmaeil Keyvanshokoh:

Finalist, POMS College of Healthcare Operations Management (CHOM) Best Paper, 2022.

Finalist, INFORMS Manufacturing & Service Operations Management (MSOM) Best Student Paper, 2021.

Finalist, INFORMS Health Applications Society (HAS) Best Student Paper, 2021.

Second Place, INFORMS Decision Analysis Society (DAS) Best Student Paper, 2020.

## Research Interests

**Theory:** Online Learning, Offline Learning, Data-Driven Optimization, Approximation Algorithms

**Applications:** Supply Chain Management, Revenue Management, Healthcare Operations, Human-Robot Interaction

## Books and Book Chapters

1. Xi Chen, J. Stefanus Jasin, Cong Shi, “The Elements of Joint Learning and Optimization in Operations Management”, Springer, New York, NY. Available @ <https://link.springer.com/book/9783031019258>
2. C. Shi, “Approximation Algorithms for Stochastic Inventory Systems”, *Research Handbook on Inventory Management*, edited by J.-S. Song, Edward Elgar, Cheltenham, UK.
3. C. Shi, “Approximation Algorithms for Stochastic Optimization Problems in Operations Management”, *Wiley Encyclopedia of Operations Research and Management Sciences*, edited by J. J. Cochran, Wiley, Hoboken, NJ.

## Conference Proceedings

(Authors underlined are Ph.D. advisees; authors underlined and asterisked are undergraduate students\*.)

1. J. Dong, W. Mo, Z. Qi, C. Shi, X. Fang, V. Tarokh,  
“PASTA: Pessimistic Assortment Optimization”,  
**International Conference on Machine Learning (ICML 2023)**, Honolulu, HI.
2. Y. Guo, X. J. Yang, C. Shi,  
“Enabling Team of Teams: A Trust Inference and Propagation (TIP) Model in Multi-Human Multi-Robot Teams”,  
**Robotics: Science and Systems (RSS 2023)**, Daegu, South Korea.
3. H. Jia, C. Shi, S. Shen,  
“Online Learning and Pricing for Network Revenue Management with Reusable Resources”,  
**Advances in Neural Information Processing Systems (NeurIPS 2022)**, New Orleans, LA.
4. H. Jia, C. Shi, S. Shen,  
“Online Learning and Pricing with Reusable Resources: Linear Bandits with Sub-Exponential Rewards”,  
**International Conference on Machine Learning (ICML 2022)**, Baltimore, MD.
5. S. Bhat, J. B. Lyons, C. Shi, X. J. Yang,  
“Clustering Trust Dynamics in a Human-Robot Sequential Decision-Making Task”,  
**International Conference on Intelligent Robots and Systems (IROS 2022)**, Kyoto, Japan.
6. Y. Guo, C. Shi, X. J. Yang,  
“Reverse Psychology in Trust-Aware Human-Robot Interaction”,  
**International Conference on Robotics and Automation (ICRA 2021)**, Xi'an, China.
7. Y. Chen, C. Shi,  
“Joint Pricing and Inventory Management with Strategic Customers”,  
**ACM Conference on Economics and Computation (EC 2017)** MIT, Cambridge, MA.

## Journal Publications

(Authors underlined are Ph.D. advisees; authors underlined and asterisked are undergraduate students\*.)

### Operations Research

1. H. Jia, C. Shi, S. Shen,  
“Online Learning and Pricing for Service Systems with Reusable Resources”,  
**Operations Research**, to appear.
2. M. Zhalechian, E. Keyvanshokoo, C. Shi, M. P. Van Oyen,  
“Data-Driven Hospital Admission Control: A Contextual Learning Approach”,  
**Operations Research**, to appear.
3. M. Zhalechian, E. Keyvanshokoo, C. Shi, M. P. Van Oyen,  
“Online Resource Allocation with Personalized Learning”,  
**Operations Research**, Vol. 70(4), 2138–2161, 2022.

4. Y. Chen, C. Shi,  
“Network Revenue Management with Online Inverse Batch Gradient Descent Method”,  
**Production and Operations Management**, to appear.
5. H. Jia, C. Shi, S. Shen,  
“Multi-Armed Bandit with Sub-Exponential Rewards”,  
**Operations Research Letters**, Vol. 49(5), 728-733, 2021.
6. H. Yuan, Q. Luo, C. Shi,  
“Marrying Stochastic Gradient Descent with Bandits: Learning Algorithms for Inventory Systems with Fixed Costs”,  
**Management Science**, Vol. 67(10), 6089–6115, 2021.  
(Finalist, INFORMS Applied Probability Society (APS) Best Student Paper, 2019.)
7. B. Chen, X. Chao, C. Shi,  
“Nonparametric Learning Algorithms for Joint Pricing and Inventory Control with Lost-Sales and Censored Demand”,  
**Mathematics of Operations Research**, Vol. 46(2), 405-833, 2021.
8. E. Keyvanshokoh, C. Shi, M. P. Van Oyen,  
“Online Advance Scheduling with Overtime: A Primal-Dual Approach”,  
**Manufacturing & Service Operations Management**, Vol. 23(1), 246-266, 2021.
9. W. Chen, C. Shi, I. Duenyas,  
“Optimal Learning Algorithms for Stochastic Inventory Systems with Random Capacities”,  
**Production and Operations Management**, Vol. 29(7), 1624-1649, 2020.
10. H. Zhang, X. Chao, C. Shi,  
“Closing the Gap: A Learning Algorithm for the Lost-sales Inventory System with Lead Times”,  
**Management Science**, Vol. 66(5), 1962–1980, 2020.
11. R. Levi, G. Perakis, C. Shi, W. Sun,  
“Strategic Capacity Planning Problems in Revenue Sharing Joint Ventures”,  
**Production and Operations Management**, Vol. 29(3), 664-687, 2020.
12. Y. Chen, C. Shi,  
“Joint Pricing and Inventory Management with Strategic Customers”,  
**Operations Research**, Vol. 67(6), 1610-1627, 2019.  
(Third Place, INFORMS Junior Faculty Forum Paper Competition (JFIG), 2017.)
13. C. Shi, Y. Wei, Y. Zhong,  
“Process Flexibility for Multi-Period Production Systems”,  
**Operations Research**, Vol. 67(5), 1300-1320, 2019.
14. Y. Jiang, C. Shi, S. Shen,  
“Service Level Constrained Inventory Systems”,  
**Production and Operations Management**, Vol. 28(9), 2365-2389, 2019.
15. H. Zhang, X. Chao, C. Shi,  
“Perishable Inventory Systems: Convexity Results for Base-Stock Policies and Learning Algorithms under Censored Demand”,  
**Operations Research**, Vol. 66(5), 1276-1286, 2018.
16. X. Chao, X. Gong, C. Shi, C. Yang, H. Zhang, S. X. Zhou,  
“Approximation Algorithms for Capacitated Perishable Inventory Systems with Positive Lead Time”,  
**Management Science**, Vol. 64(11), 5038-5061, 2018.
17. Y. Chen, R. Levi, C. Shi,  
“Revenue Management of Reusable Resources with Advanced Reservations”,  
**Production and Operations Management**, Vol. 26(5), 836-859, 2017.
18. Y. Xu, C. Shi, I. Duenyas,  
“Priority Rules for Multi-Task Due-Date Scheduling under Varying Processing Costs”,  
**Production and Operations Management**, Vol. 25(12), 2086-2102, 2016.
19. H. Zhang, C. Shi, C. Qin\*, C. Hua\*,  
“Stochastic Regret Minimization for Revenue Management Problems with Nonstationary Demands”,  
**Naval Research Logistics**, Vol. 63(6), 433-448, 2016.
20. V. Nagarajan, C. Shi,  
“Approximation Algorithms for Inventory Problems with Submodular or Routing Costs”,  
**Mathematical Programming Series A**, Vol. 160(1), 225-244, 2016.

21. H. Zhang, C. Shi, X. Chao,  
“Approximation Algorithms for Perishable Inventory Systems with Setup Costs”,  
**Operations Research**, Vol. 64(2), 432-440, 2016.
22. C. Shi, W. Chen, I. Duenyas,  
“Nonparametric Data-Driven Algorithms for Multiproduct Inventory Systems with Censored Demand”,  
**Operations Research**, Vol. 64(2), 362-370, 2016.
23. X. Chao, X. Gong, C. Shi, H. Zhang,  
“Approximation Algorithms for Perishable Inventory Systems”,  
**Operations Research**, Vol. 63(3), 585-601, 2015.
24. C. Shi, H. Zhang, C. Qin\*,  
“A Faster Algorithm for the Resource Allocation Problem with Convex Cost Functions”,  
**Journal of Discrete Algorithms**, Vol. 34, 137-146, 2015.
25. C. Shi, H. Zhang, X. Chao, R. Levi,  
“Approximation Algorithms for Capacitated Stochastic Inventory Systems with Setup Cost”,  
**Naval Research Logistics**, Vol. 61(4), 304-319, 2014.
26. R. Levi, C. Shi,  
“Approximation Algorithms for the Stochastic Lot-Sizing Problem with Order Lead Times”,  
**Operations Research**, Vol. 61(3), 593-602, 2013.  
(First Place, INFORMS George E. Nicholson Student Paper Competition, 2009.)

## Human-Robot Interaction, Transportation, Service Science

27. S. Bhat, J. B. Lyons, C. Shi, X. J. Yang,  
“Clustering Trust Dynamics in a Human-Robot Sequential Decision-Making Task”,  
**IEEE Robotics and Automation Letters**, Vol. 7(4), 8815-8822, 2022.
28. Y. Guo, C. Shi, X. J. Yang,  
“Reverse Psychology in Trust-Aware Human-Robot Interaction”,  
**IEEE Robotics and Automation Letters**, Vol. 6(3), 4851-4858, 2021.
29. X. Chen, L. Jiang, S. Miao, C. Shi,  
“Road to Micro-Celebration: The Role of Mutation Strategy of Micro-Celebrity in Digital Media”,  
**New Media and Society**, to appear.
30. H. Jia, S. Shen, J. Garcia, C. Shi,  
“Partner with a Third-Party Delivery Service or Not?  
A Prediction-and-Decision Tool for Restaurants Facing Takeout Demand Surges During a Pandemic”,  
**Service Science**, Vol. 14(2), 139-155, 2022.
31. Y. Jiang, J. Xu\*, S. Shen, C. Shi,  
“Production Planning Problem with Joint Service-Level Guarantee: A Computational Study”,  
**International Journal of Production Research**, Vol. 55(1), 38-58, 2017.
32. M. Yu\*, Y. Ding, R. Lindsey, C. Shi,  
“A Data-Driven Approach to Manpower Planning at U.S.-Canada Border Crossings”,  
**Transportation Research Part A: Policy and Practice**, Vol. 91, 34-47, 2016.

## Working Papers

- E. Keyvanshokoo, M. Zhalechian, C. Shi, M. P. Van Oyen, P. Kazemian,  
“Contextual Learning with Online Convex Optimization: Theory and Application to Chronic Diseases”,  
Minor Revision, **Management Science**.  
(Finalist, POMS College of Healthcare Operations Management (CHOM) Best Paper, 2022.)  
(Finalist, INFORMS Manufacturing & Service Operations Management (MSOM) Best Student Paper, 2021.)  
(Second Place, INFORMS Decision Analysis Society (DAS) Best Student Paper, 2021.)  
(Finalist, INFORMS Health Applications Society (HAS) Best Student Paper, 2021.)
- Z. Qi, J. Tang, X. Fang, C. Shi,  
“Offline Personalized Pricing with Censored Demand”,  
Major Revision, **Management Science**.

- J. Tang, B. Chen, C. Shi,  
“Online Learning for Dual Index Policies in Dual Sourcing Systems”,  
Major Revision, **Manufacturing & Service Operations Management**.
- S. Li, L. Qi, Z. Huang, C. Shi,  
“Online Learning for Constrained Assortment Optimization under Markov Chain Choice Model”,  
Major Revision, **Operations Research**.
- M. Li, X. Liu, Y. Huang, C. Shi, C. Hua,  
“Integrating Empirical Estimation and Assortment Personalization for E-Commerce: A Consider-then-Choose Model”.  
(**Finalist, INFORMS MSOM Data Driven Research Challenge, 2018.**)
- X. Chen, L. Liang, S. Miao, C. Shi,  
“Time to Leave Your Comfort Zone? Optimal Variation-Seeking Strategies for Social Media Influencers on Streaming Media Platforms”.
- X. Chen, L. Ji, L. Jiang, S. Miao, C. Shi,  
“More Bang for Your Buck: Effective KOL Marketing Campaign in Emerging Short-Video Markets”.
- Y. Chen, C. Shi,  
“Near-Optimal Pricing Policy for Service Systems with Reusable Resources and Forward-Looking Customers”.
- B. Chen, C. Shi,  
“Tailored Base-Surge Policies in Dual-Sourcing Inventory Systems with Demand Learning”.
- J. Tang, C. Shi, I. Duenyas,  
“Online Learning and Matching for Multiproduct Systems with General Upgrading”.
- Y. Guo, X. J. Yang, C. Shi,  
“Modeling Trust Propagation in Multi-Human Multi-Robot Teams”.
- H. Jia, C. Shi, S. Shen,  
“Online Learning and Pricing for Network Revenue Management with Reusable Resources”.
- S. Ji, Y. Yang, C. Shi,  
“Online Learning and Pricing for Multiple Products with Reference Price Effects”.
- R. Miao, Z. Qi, C. Shi, L. Lin,  
“Personalized Pricing with Invalid Instrumental Variables: Identification, Estimation, and Policy Learning”.

## Research Grants

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|--|-------------------|
| 1. <b>Amazon Research Award, PI</b><br>Machine Learning for Personalized Assortment Optimization, \$68K  | 5.2021 - 5.2024   |
| 2. <b>Boeing Research Award, Co-PI (with X. J. Yang)</b><br>Predicting and Optimizing Trust Towards Autonomous Delivery Vehicles, \$50K  | 10.2022 – 10.2023 |
| 3. <b>DOD-AFOSR, AWD-023413, Co-PI (with X. J. Yang)</b><br>Enabling Re-configurable Multi-Operator Multi-Agent (MOMA) Teams:<br>A Trust Inference and Propagation (TIP) Approach, \$800K (my share: \$400K) | 5.2023 - 5.2026   |
| 4. <b>DOD-AFOSR, AWD-016363, Co-PI (with X. J. Yang)</b><br>Trust Building in Human-Autonomy Teaming:<br>A Reinforcement Learning Approach, \$578K (my share: \$289K)  | 9.2020 - 9.2023   |
| 5. <b>DOD-ARL, AWD-014929, Co-PI (with X. J. Yang)</b><br>Trust-Driven Human-Agent Teaming:<br>Modeling and Predicting Trust Dynamics, \$100K (my share: \$50K)  | 5.2020 - 4.2021   |
| 6. <b>National Science Foundation (NSF), CMMI-1634505, PI</b><br>Nonparametric Sampling-Based Algorithms for Supply Chain Systems, \$290K  | 9.2016 - 8.2019   |
| 7. <b>National Science Foundation (NSF), CMMI-1451078, PI</b><br>Sustainability in Supply Chain: An Innovative and Systemic Approach, \$273K   | 9.2014 - 8.2016   |
| 8. <b>National Science Foundation (NSF), CMMI-1362619, Co-PI (with X. Chao)</b><br>Managing Perishable Inventory Systems:<br>New Algorithms and Approximations, \$375K (my share: \$160K)                    | 6.2014 - 5.2017   |

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| 9.  | <b>Seeding to Accelerate Research Themes (START), University of Michigan, Co-PI</b><br>Trusted AI Decision-Makers for Complex and Rapid Response in Dynamic Situations,<br>with S. Shen (PI), X. Yang, R. Jiang, \$60K | 5.2022 - 5.2023 |
| 10. | <b>Mcubed, University of Michigan, PI</b><br>Optimal Learning in Dynamic Matching, with I. Duenyas and S. Shen, \$60K  | 5.2020 - 5.2021 |
| 11. | <b>Mcubed, University of Michigan, PI</b><br>Integrating Review Information with Pricing, with R. Kapuscinski and R. Jiang, \$60K  | 9.2016 - 9.2017 |
| 12. | <b>Mcubed, University of Michigan, PI</b><br>Distribution Free Inventory Control for Supply Chains, with I. Duenyas and Y. A. Bozer, \$60K   | 9.2013 - 9.2014 |

## Professional Activities

### Editorial Services

- **Guest Co-Editor** (with Professor George Shanthikumar), *Naval Research Logistics*, 2021–2023  
Special Issue on Online and Offline Learning in Operations Management
- **Associate Editor**, *Management Science*, 2021 – Present
- **Senior Editor**, *Production and Operations Management*, 2019 – Present
- **Associate Editor**, *Naval Research Logistics*, 2022 – Present
- **Associate Editor**, *IIE Transactions*, 2017 – Present
- **Associate Editor**, *Operations Research Letters*, 2015 – Present
- Journal Reviewer for *Operations Research*, *Management Science*, *Mathematics of Operations Research*, *Mathematical Programming*, *Manufacturing & Service Operations Management*, *Production and Operations Management*, *INFORMS Journal on Computing*, *Stochastic Systems*, *Naval Research Logistics*, *IIE Transactions*, *Operations Research Letters*, *International Journal of Production Research*, *Computers & Operations Research*, *A Quarterly Journal of Operations Research*, *European Journal of Operations Research*, *Flexible Services and Manufacturing*, *International Transactions in Operational Research*, *Journal of the Operations Research Society of China*
- Conference Reviewer for *Conference on Neural Information Processing Systems (NeurIPS)*, *International Conference on Machine Learning (ICML)*, *ACM Conference on Economics and Computation (EC)*, *ACM-SIAM Symposium on Discrete Algorithms (SODA)*, *European Symposia on Algorithms (ESA)*, *MSOM Conference Proceedings*.
- Book Reviewer for *Advances and Trends in Optimization with Engineering Applications by Society for Industrial and Applied Mathematics (SIAM)*.

### Extramural Services

- Cluster Chair for MSOM Supply Chain for INFORMS Annual Meeting, 2020
- Conference Session Chairs: INFORMS Annual (2012–2022), INFORMS International (2016), POMS (2015)
- Judge, INFORMS George Nicholson Prize Committee, 2023, 2024
- Judge, INFORMS Junior Faculty Forum (JFIG) Paper Competition, 2019, 2020
- Judge, POMS Supply Chain College Student Paper Competition, 2016, 2017, 2018, 2019, 2020, 2021, 2022
- Judge, POMS College of Healthcare Operations Management Paper Competition, 2018, 2019, 2020, 2021, 2022, 2023
- Judge, CSAMSE Best Paper Competition, 2021, 2022
- Judge, MSOM Supply Chain Management Special Interest Group (SCM SIG), 2023
- External Reviewer, Research Grants Council (RGC) of Hong Kong, 2019, 2020, 2021, 2022, 2023
- National Science Foundation Panelist: December 2013 (CMMI), September 2016 (DRMS), March 2020 (CMMI)
- External Examiner, Ph.D. Thesis, The University of British Columbia, 2023

## Internal Services at University of Michigan

- IOE Master of Engineering Program Task Force (Chair), 2021-2023
- IOE Murty Prize Committee, 2023
- Co-organizer (with Xiuli Chao and Stefanus Jasin), MIDAS/IOE Colloquium on Decision Making with Data Analytics on Dec 9, 2022.
- IOE Master of Engineering Program Task Force (Chair), 2022
- COE Representative for ECE Faculty Candidate, 2022
- IOE Master's Program Task Force (Chair), 2021
- Graduate Recruiting & Admissions Committee (GRA), 2021
- IOE Graduate Program Committee, 2021
- IOE First-Year Ph.D. Advisor, 2021
- IOE Faculty Mentor for IOE 316 (Daniel Felipe Otero-Leon, Luke DeRoos), 2021
- IOE Curriculum Committee, 2020
- IOE Graduate Program Committee, 2020
- IOE First-Year Ph.D. Advisor, 2020
- IOE Murty Prize Committee, 2020
- IOE Undergraduate Program Computing and Data Science Task Force, 2020
- COE Representative for CSE Faculty Candidate, 2020
- IOE Graduate Admissions and Financial Aid (GAFA) Committee, 2019–2020
- IOE Faculty Search Committee, 2019
- IOE Review Committee for Reza Kamaly (Lecturer), 2019
- IOE Curriculum Committee, 2019
- IOE Graduate Program Committee, 2019
- IOE First-Year Ph.D. Advisor, 2019
- IOE Wilson Prize Committee, 2019
- IOE Undergraduate Program Computing and Data Science Task Force, 2019
- IOE Review Committee for Luis Guzman (Lecturer), 2018
- IOE Departmental Committee, 2018-2019
- IOE Murty Prize Committee and IOE Wilson Prize Committee, 2018
- IOE Internal Review Committee (formed by the College of Engineering), 2018
- IOE Graduate Admissions and Financial Aid (GAFA) Committee, 2017–2018
- IOE Murty Prize Committee, 2017
- IOE Review Committee for Dan Reaume (Lecturer), 2017
- IOE Graduate Admissions and Financial Aid (GAFA) Committee, 2016–2017
- IOE Ph.D. Preliminary Exam Coordinator (Operations Research), 2016
- IOE Graduate Admissions and Financial Aid (GAFA) Committee, 2015–2016
- IOE Ph.D. Preliminary Exam Coordinator (Operations Research), 2015
- IOE Ph.D. Qualifying Exam Coordinator (Stochastic Models), 2015
- IOE Graduate Admissions and Financial Aid (GAFA) Committee, 2014–2015
- IOE Departmental Committee, 2014-2015
- IOE Graduate Admissions and Financial Aid (GAFA) Committee, 2013–2014
- IOE Graduate Admissions and Financial Aid (GAFA) Committee, 2012–2013
- IOE Seminar Series Coordinator (11 External Speakers), Fall 2013
- Ph.D. Prelim Committee Member for IOE Ph.D. students (Jeffrey Choy, Arlen Dean, Kati Moug, Xinyu Fei, Jingwen Tang, Yaohui Guo, Haoming Shen, Rohan Ghuge, Xian Yu, Luke DeRoos, Huiwen Jia, Mohammad Zhalechian, Hideaki Nakao, Elnaz Kabir, Esmaeil Keyvanshokoo, Alejandro Vigo, Fatemeh Navidi, Qi Luo, Sentao Miao, Francisco Aldarondo, Nima Salehi, Armando Bernal, Yuchen Jiang, Huanan Zhang, Weidong Chen, Hao Yuan, Amirhossein Meisami, Abdullah Al-Shelahi, Zhihao Chen, Yuanyuan Guo, Elliot Lee, Xiang Liu, Jingxing Wang, Emily Speakman, Patrick Nestor)



## Invited Seminars at Peer Institutions

1. University of Chicago, Institute for Mathematical and Statistical Innovation, Spring 2023.
2. University of North Carolina at Chapel Hill, OM Seminar Series, Spring 2023.
3. Hong Kong University of Science and Technology, ISOM Seminar Series, Fall 2022.
4. Northwestern University, IEMS Seminar Series, Fall 2022.
5. University of Miami, Management Science Seminar Series, Fall 2022.
6. University of Colorado Boulder, OM Seminar Series, Fall 2022.
7. University of Rochester, Simon School of Business Seminar Series, Fall 2022.
8. University of Toronto, Rotman School of Management Seminar Series, Fall 2021.
9. Arizona State University, IE Seminar Series, Fall 2021.
10. Massachusetts Institute of Technology, Data Science Lab (DSL) Seminar Series, Summer 2021.
11. University of Chicago, Booth School of Business Seminar Series, Fall 2020.
12. University of Michigan, IOE Seminar Series, Spring 2020.
13. Zhejiang University, International Symposium on Revenue Management, Summer 2019.
14. Chinese University of Hong Kong, Shenzhen, MOSTLY OM Workshop, Summer 2019.
15. Institute for Mathematics and its Applications, University of Minnesota, Fall 2018.
16. Tsinghua University, MOSTLY OM Workshop, Summer 2018.
17. Cornell University, ORIE Seminar Series, Fall 2017.
18. Northwestern University, IEMS Seminar Series, Spring 2017.
19. University of Illinois at Urbana-Champaign (UIUC), ISE Seminar Series, Spring 2017.
20. Columbia University, IEOR-DRO Seminar Series, Spring 2017.
21. Georgia Institute of Technology, ISyE Seminar Series, Spring 2016.
22. Columbia University, IEOR Seminar Series, Spring 2012.
23. University of Michigan, IOE Seminar Series, Spring 2012.
24. University of British Columbia, Sauder School of Business Seminar Series, Spring 2012.
25. Rutgers University, Rutgers Business School Seminar Series, Spring 2012.
26. University of Rochester, Simon School of Business Seminar Series, Spring 2012.
27. National University of Singapore, Decision Sciences Seminar Series, Spring 2012.
28. Singapore Management University, LKC Business School Seminar Series, Spring 2012.
29. Chinese University of Hong Kong, Business School Seminar Series, Spring 2012.
30. Massachusetts Institute of Technology, Operations Management Seminar Series, Spring 2008.

## Invited Conferences

Omitted due to a long list of conference talks (more than 100).

## Ph.D. Students Supervised

1. **Dr. Huanan Zhang** (co-advised with Professor X. Chao), UM-IOE, 2012 – 2017  
Dissertation: Data-Driven Algorithms for Stochastic Supply Chain Systems  
Defense Date: April 20, 2017  
First Position: Assistant Professor, Industrial and Manufacturing Engineering, Penn State University  
Current Position: Assistant Professor, Leeds School of Business, University of Colorado Boulder
2. **Dr. Yuchen Jiang** (co-advised with Professor S. Shen), UM-IOE, 2013 – 2018  
Dissertation: Supply Chain and Revenue Management for Online Retailing  
Defense Date: February 16, 2018  
First Position: Data Scientist, Uber, San Francisco, CA  
Current Position: Sr. Machine Learning Engineer, Robinhood, San Francisco, CA



3. **Dr. Weidong Chen** (co-advised with Professor I. Duenyas), UM-IOE, 2014 – 2019  
 Dissertation: Online Learning Algorithms for Stochastic Inventory and Queueing Systems  
 Defense Date: March 14, 2019  
 First Position: Data Scientist, Gap, San Francisco, CA  
 Current Position: Data Scientist, Amazon, Seattle, WA
4. **Dr. Hao Yuan**, UM-IOE, 2015 – 2019  
 Dissertation: Data Driven Optimization: Theory and Applications in Supply Chain Systems  
 Defense Date: March 28, 2019  
 First Position: Applied Scientist, Amazon, Seattle, WA  
 Current Position: Machine Learning Engineer, Facebook, San Francisco, CA
5. **Dr. Armando Bernal**, UM-IOE, 2016 – 2020  
 Dissertation: Pricing in Network Revenue Management Systems with Reusable Resources  
 Defense Date: March 19, 2020  
 First Position: Data Scientist, Amobee, Baltimore, MD
6. **Dr. Esmail Keyvanshokoo** (co-advised with Professor M. P. Van Oyen), UM-IOE, 2015 – 2020  
 Dissertation: Personalized Data-Driven Learning and Optimization  
 Defense Date: December 16, 2020  
 First Position: Assistant Professor, Mays Business School, Texas A&M University
7. **Dr. Huiwen Jia** (co-advised with Professor S. Shen), UM-IOE, 2018 – 2022  
 Dissertation: Adaptive Optimization and Learning for Service Systems  
 Defense Date: March 9, 2022  
 First Position: Applied Scientist, Amazon, Seattle, WA
8. **Yaohui Guo** (co-advised with Professor X. Yang), UM-IOE, 2019 –
9. **Jingwen Tang**, UM-IOE, 2019 –
10. **Shreyas Bhat** (co-advised with Professor X. Yang), UM-IOE, 2021 –

## Ph.D. Dissertation Committee

1. **Shukai Li**, IEMS, Northwestern University, 2019 –
2. **Dr. Moyan Li**, IOE, University of Michigan, 2019 – 2023  
 Dissertation: Statistical Inference on Large-Scale and Complex Data via Gaussian Process  
 Defense Date: May 10, 2023  
 First Position: Applied Scientist, Amazon, Seattle, WA
3. **Dr. Haoming Shen**, IOE, University of Michigan, 2016 – 2023  
 Dissertation: Theory and Algorithms of Robust Chance Constraints  
 Defense Date: May 8, 2023  
 First Position: Assistant Professor, Industrial Engineering, University of Arkansas
4. **Dr. Rohan Ghuge**, IOE, University of Michigan, 2018 – 2023  
 Dissertation: The Power of Adaptivity for Decision-Making under Uncertainty  
 Defense Date: March 20, 2023  
 First Position: Postdoc, ISyE, Georgia Institute of Technology
5. **Dr. Kati Moug**, IOE, University of Michigan, 2019 – 2023  
 Dissertation: Sequential Decision Making in Crisis: Mitigating Risk in Marginalized Communities with Stochastic Optimization  
 Defense Date: February 21, 2023  
 First Position: Clinical Assistant Professor, ISyE, Georgia Institute of Technology
6. **Dr. Luke DeRoos**, IOE, University of Michigan, 2016 – 2023  
 Dissertation: Managing Chronic Health Conditions with Limited Resources  
 Defense Date: February 13, 2023  
 First Position: Applied Scientist, Optilogic, Ann Arbor, MI

7. **Dr. Mohammad Zhalechian**, IOE, University of Michigan, 2016 – 2023  
Dissertation: Data-Driven Learning and Resource Allocation in Healthcare Operations Management  
Defense Date: July 7, 2022  
First Position: Assistant Professor, Kelley School of Business, Indiana University
8. **Dr. Mengzhenyu Zhang**, Technology & Operations, University of Michigan, 2015 –  
Dissertation: Revenue Management in the New Age: Analysis and Learning with Dependency and Non-Stationarity  
Defense Date: June 4, 2021  
First Position: Assistant Professor, UCL School of Management, University College London
9. **Dr. Pornpawee Bumpensanti**, ISYE, Georgia Institute of Technology, 2016 – 2021  
Dissertation: Pricing and Revenue Management in Supply Chain Networks and Service Systems  
Defense Date: April 29, 2021  
First Position: Applied Scientist, Amazon, Seattle, WA
10. **Dr. Feng Tian**, Technology & Operations, University of Michigan, 2015 – 2021  
Dissertation: Continuous-time Optimal Dynamic Contracts  
Defense Date: Jul 16, 2021  
First Position: Assistant Professor, HKU Business School, University of Hong Kong
11. **Dr. Hideaki Nakao**, IOE, University of Michigan, 2016 – 2021  
Dissertation: Distributionally Robust Optimization in Sequential Decision Making  
Defense Date: March 8, 2021  
First Position: Researcher, Argonne National Laboratory
12. **Dr. Manqi (Maggie) Li**, Technology & Operations, University of Michigan, 2014 – 2021  
Dissertation: Data-Driven Operations Management  
Defense Date: March 4, 2021  
First Position: Assistant Professor of Business, Renmin University
13. **Dr. Seok Joo Kwak**, IOE, University of Michigan, 2015 – 2020  
Dissertation: Examining Interventions and Cognitive Load Factors in Online Learning Experiences  
Defense Date: June 16, 2020  
First Position: Researcher, AI/OR Lab, Korean Army
14. **Dr. Zhaohui (Zoey) Jiang**, Technology & Operations, University of Michigan, 2014 – 2020  
Dissertation: Towards a Better Design of Online Marketplaces  
Defense Date: April 30, 2020  
First Position: Assistant Professor, Tepper School of Business, Carnegie Mellon University
15. **Dr. Fatemah Navidi**, IOE, University of Michigan, 2015 – 2020  
Dissertation: Adaptive Approximation Algorithms for Ranking, Routing and Classification  
Defense Date: March 24, 2020  
First Position: Postdoc, Booth Business School, University of Chicago
16. **Dr. Qi Luo**, IOE, University of Michigan, 2015 – 2020  
Dissertation: Dynamic Pricing, Incentives and Learning in Sharing Mobility: A Continuous Approach  
Defense Date: March 23, 2020  
First Position: Assistant Professor, Industrial Engineering, Clemson University
17. **Dr. Sentao Miao**, IOE, University of Michigan, 2015 – 2020  
Dissertation: Data-Driven Optimization in Revenue Management: Pricing, Assortment Planning, and Demand Learning  
Defense Date: March 18, 2020  
First Position: Assistant Professor, Desautels Faculty of Management, McGill University
18. **Dr. Frank Cheng**, Computer Science and Engineering, University of Michigan, 2015 – 2020  
Dissertation: Agent-Based Models for Analyzing Strategic Adaptations to Government Regulation  
Defense Date: January 22, 2020  
First Position: Researcher, Microsoft Research, San Francisco, CA
19. **Dr. Aravind Govindarajan**, Technology & Operations, University of Michigan, 2014 – 2019  
Dissertation: Essays on Omnichannel and E-commerce Retail Operations  
Defense Date: September 4, 2019  
First Position: Data Scientist, Target, Minneapolis, MN
20. **Dr. Francisco Aldarondo**, IOE, University of Michigan, 2014 – 2019  
Dissertation: Design and Operational Analysis of Automated Guided Vehicle-Based Goods-to-Person Order Picking and Sortation Systems  
Defense Date: August 27, 2019  
First Position: Researcher, Applied Physics Laboratory, Johns Hopkins University

21. **Dr. Yuanyuan Guo**, IOE, University of Michigan, 2014 – 2019  
 Dissertation: Data-Driven Distributionally Robust Optimization on Power System Operations  
 Defense Date: July 19, 2019  
 First Position: Data Scientist, ExxonMobil, Irving, TX
22. **Dr. Qiyun Pan**, IOE, University of Michigan, 2015 – 2019  
 Dissertation: Computationally Efficient Methods and Uncertainty Quantification for Extreme Quantile Estimation with Stochastic Simulation Models  
 Defense Date: May 2, 2019  
 First Position: Senior Data Scientist, Nielsen, Chicago, IL
23. **Dr. Ece Sanci**, IOE, University of Michigan, 2015 – 2019  
 Dissertation: Strategies for Disaster Preparedness and Disruption Risk Mitigation  
 Defense Date: April 30, 2019  
 First Position: Assistant Professor, School of Management, University of Bath
24. **Dr. Abdullah Alshelahi**, IOE, University of Michigan, 2014 – 2019  
 Dissertation: Macroscopic Look at Equity Markets  
 Defense Date: February 20, 2019  
 First Position: Researcher, General Motors Research & Development, Warren, MI
25. **Dr. Xiang Liu**, IOE, University of Michigan, 2014 – 2018  
 Dissertation: Operations Research Models for Reducing Hospital Readmissions  
 Defense Date: December 18, 2018  
 First Position: Assistant Professor, Department of Industrial Engineering, Tsinghua University
26. **Dr. Nima Salehi Sadghiani**, IOE, University of Michigan, 2014 – 2018  
 Dissertation: Models for Flexible Supply Chain Network Design  
 Defense Date: April 23, 2018  
 First Position: Data Scientist, Gap, San Francisco, CA
27. **Dr. Amirhossein Meisami**, IOE, University of Michigan, 2014 – 2018  
 Dissertation: Integrated Learning and Optimization Frameworks with Applications in Operations Management  
 Defense Date: April 5, 2018  
 First Position: Data Scientist, Adobe Research, San Jose, CA
28. **Dr. Qi (George) Chen**, Technology & Operations, University of Michigan, 2010 – 2017  
 Dissertation: Dynamic Pricing under Operational Frictions  
 Defense Date: April 11, 2017  
 First Position: Assistant Professor, Naveen Jindal School of Management, University of Texas at Dallas
29. **Dr. Do Yong (Elliot) Lee**, IOE, University of Michigan, 2011 – 2016  
 Dissertation: Management of a Chronically Ill Population: An Operations Approach to Liver Cancer Screening  
 Defense Date: May 4, 2016  
 First Position: Research Analyst, Center for Naval Analyses (CNA) Corporation
30. **Dr. Zhihao Chen**, IOE, University of Michigan, 2011 – 2016  
 Dissertation: Strategic Network Planning under Uncertainty with Two-Stage Stochastic Integer Programming  
 Defense Date: February 12, 2016  
 First Position: Research Scientist II, Amazon, Seattle, WA
31. **Dr. Boxiao (Beryl) Chen**, IOE, University of Michigan, 2010 – 2016  
 Dissertation: Learning Algorithms for Stochastic Dynamic Inventory Systems  
 Defense Date: March 23, 2016  
 First Position: Assistant Professor, College of Business Administration, University of Illinois at Chicago
32. **Dr. Yao Cui**, Technology & Operations, University of Michigan, 2009 – 2015  
 Dissertation: Strategic Pricing in Service Industries  
 Defense Date: April 9, 2015  
 First Position: Assistant Professor, Johnson Graduate School of Business, Cornell University

## Masters Students Supervised

1. **Jing Yang**, IOE, University of Michigan, 2018 – 2019  
 Project Title: Inventory Routing Problems  
 First Position: Ph.D. Student at School of Industrial Engineering, Purdue University.

2. **Charles Su**, Ross MBA, University of Michigan, 2018 – 2019  
 Project Title: Applying a Facility Location Model to Amazon's US Fulfillment Center Network  
 First Position: Data Scientist, Amazon, Seattle, WA
3. **Baiyang (Sarah) Liu**, IOE, University of Michigan, 2012 – 2013  
 Project Title: Revenue Management of Reusable Resources with Advanced Reservations  
 First Position: Senior Researcher, General Motors Research & Development, Warren, MI
4. **Xing (Shane) Li**, IOE, University of Michigan, 2012 – 2013  
 Project Title: Cyclical Production Scheduling  
 First Position: Senior Operations Research Consultant, Sabre Corporation, Dallas/Fort Worth Area

## Undergraduate Students Supervised

1. **Chao Qin**, IOE, University of Michigan, 2012 – 2015  
 Project Title: A Faster Algorithm for the Resource Allocation Problem with Convex Cost Functions  
 First Position: Ph.D. Student at IEMS, Northwestern University  
 Current Position: Ph.D. Student at DRO, Columbia Business School, Columbia University  
**Joint papers have been Finalists, INFORMS Undergraduate Research Prize, 2014, 2015**
2. **Cheng Hua**, IOE, University of Michigan, 2012 – 2015  
 Project Title: Stochastic Regret Minimization for Revenue Management Problems with Nonstationary Demands  
 First Position: Ph.D. Student at Yale School of Management, Yale University  
 Current Position: Assistant Professor, Antai School of Business, Shanghai Jiaotong University  
**Joint paper has been Finalist, INFORMS Undergraduate Research Prize, 2014**
3. **Yiren Zhou**, IOE, University of Michigan, 2015 – 2017  
 Project Title: Priority Rules for Multi-Task Due-Date Scheduling under Varying Processing Costs  
 First Position: Masters Student at ORIE, Cornell University  
 Current Position: High Frequency Trading, DRW, Chicago, IL

## Teaching Activities

### Courses at the University of Michigan – Ann Arbor

1. IOE 202 Operations Engineering & Analytics (Undergraduate Core Class)
2. IOE 265 Probability and Statistics for Engineers (Undergraduate Core Class)
3. IOE 516 Stochastic Processes II (Ph.D. Core Class)
4. IOE 541 (IOE 591) Optimization Methods in Supply Chain (Ph.D./Masters Class)
5. IOE 490 Undergraduate Directed Study, Research, and Special Problems
6. IOE 590 Masters Directed Study, Research, and Special Problems
7. IOE 899 IOE Seminar Series (Invited 11 External Speakers)

### Teaching Evaluations (based on a 5.0 scale)

**Q1:** Overall, this was an excellent course;

**Q2:** Overall, the instructor was an excellent teacher;

**Q4:** The student had a strong desire to take this course (*independent of any instructors*).

<i>Semester</i>	<i>Course</i>	<i>Level</i>	<i>Title</i>	<i>Enroll/Resp.</i>	<b>Q1</b>	<b>Q2</b>	<i>Q4</i>
Fall 22	IOE 541	PHD/G	Supply Chain Mgt	47/44	<b>4.81</b>	<b>4.83</b>	<i>4.73</i>
Winter 22	IOE 516	PHD/G	Stochastic Proc II	33/29	<b>4.76</b>	<b>4.81</b>	<i>4.83</i>
Winter 22	IOE 202	UG	Ops Eng & Analytics	73/64	<b>4.58</b>	<b>4.67</b>	<i>4.30</i>
Fall 21	IOE 541	PHD/G	Supply Chain Mgt	40/38	<b>4.81</b>	<b>4.81</b>	<i>4.74</i>
Winter 21	IOE 516	PHD/G	Stochastic Proc II	19/18	<b>4.81</b>	<b>4.90</b>	<i>4.60</i>
Winter 21	IOE 202	UG	Ops Eng & Analytics	66/55	<b>4.08</b>	<b>4.21</b>	<i>3.76</i>
Winter 20	IOE 516	PHD/G	Stochastic Proc II	34/23	<b>4.54</b>	<b>4.68</b>	<i>4.25</i>
Fall 19	IOE 541	PHD/G	Supply Chain Mgt	38/34	<b>4.61</b>	<b>4.68</b>	<i>4.69</i>
Fall 19	IOE 265	UG	Prob&Stat Engr	137/128	<b>4.11</b>	<b>4.38</b>	<i>3.76</i>
Winter 19	IOE 516	PHD/G	Stochastic Proc II	27/26	<b>4.88</b>	<b>4.93</b>	<i>4.78</i>
Fall 18	IOE 541	PHD/G	Supply Chain Mgt	40/38	<b>4.73</b>	<b>4.79</b>	<i>4.53</i>
Fall 18	IOE 265	UG	Prob&Stat Engr	131/118	<b>4.28</b>	<b>4.54</b>	<i>3.70</i>
Winter 18	IOE 516	PHD/G	Stochastic Proc II	23/23	<b>4.78</b>	<b>4.86</b>	<i>4.68</i>
Fall 17	IOE 591	PHD/G	Supply Chain Mgt	38/35	<b>4.85</b>	<b>4.85</b>	<i>4.36</i>
Fall 17	IOE 265	UG	Prob&Stat Engr	140/121	<b>4.53</b>	<b>4.67</b>	<i>4.03</i>
Winter 17	IOE 516	PHD/G	Stochastic Proc II	23/21	<b>4.88</b>	<b>4.92</b>	<i>4.55</i>
Fall 16	IOE 591	PHD/G	Supply Chain Mgt	31/20	<b>4.68</b>	<b>4.82</b>	<i>4.85</i>
Fall 16	IOE 265	UG	Prob&Stat Engr	108/93	<b>4.69</b>	<b>4.69</b>	<i>3.96</i>
Winter 16	IOE 516	PHD/G	Stochastic Proc II	21/19	<b>4.77</b>	<b>4.82</b>	<i>4.77</i>
Fall 15	IOE 265	UG	Prob&Stat Engr	141/114	<b>4.15</b>	<b>4.34</b>	<i>3.87</i>
Winter 15	IOE 516	PHD/G	Stochastic Proc II	18/17	<b>4.85</b>	<b>4.89</b>	<i>4.25</i>
Fall 14	IOE 265	UG	Prob&Stat Engr	121/89	<b>4.03</b>	<b>4.28</b>	<i>3.81</i>
Winter 14	IOE 516	PHD/G	Stochastic Proc II	17/16	<b>4.70</b>	<b>4.77</b>	<i>4.25</i>
Fall 13	IOE 265	UG	Prob&Stat Engr	133/69	<b>4.12</b>	<b>4.31</b>	<i>3.62</i>
Winter 13	IOE 516	PHD/G	Stochastic Proc II	17/14	<b>4.86</b>	<b>4.96</b>	<i>4.63</i>