

Dennis J. Zhang

CONTACT INFORMATION

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ACADEMIC POSITION

Olin Business School, Washington University in St. Louis

<i>Professor of SCOT</i>	2025 - Present
<i>Professor of Marketing</i>	2025 - Present
<i>Associate Professor of Marketing</i>	2022 - 2025
<i>Associate Professor of SCOT</i>	2020 - 2025
<i>Assistant Professor of Supply Chain, Operations, and Technology</i>	2016 - 2020

EDUCATION

Kellogg School of Management, Northwestern University	2012-2016
Ph.D., Managerial Economics and Operations Management	
M.S., Managerial Economics and Operations Management	
University of California, at Los Angeles (UCLA)	2008-2012
B.S., Electrical Engineering and Computer Science (Summa cum laude)	
B.S., Mathematics (Summa cum laude)	

RESEARCH INTEREST

Digital Marketplace; Machine Learning; Artificial Intelligence; Operations Management; Quantitative Marketing; Causal Inference; Structural Estimation.

PUBLICATIONS

- Zhiyu Zeng, Nick Clyde, Hengchen Dai, Dennis J. Zhang, Zhiwei Xu and Max Shen (2025). The Value of Customer-Related Information on Service Platforms: Evidence From a Large Field Experiment. **Manufacturing & Service Operations Management**.
- Zikun Ye, Zhiqi Zhang, Dennis J. Zhang, Heng Zhang, Renyu Zhang (2025). Deep Learning Based Causal Inference for Large-Scale Combinatorial Experiments: Theory and Empirical Evidence. **Management Science**.
- Bing Bai, Tat Y. Chan, Dennis J. Zhang and Fuqiang Zhang (2025). The Value of Logistic Flexibility in E-commerce. **Management Science**.
- Xiaoyang Long, Jiankun Sun, Hengchen Dai and Dennis J. Zhang (2024). Choice Overload with Search Cost and Anticipated Regret: Theoretical Framework and Field Evidence. **Manufacturing & Service Operations Management**.
- Ali Aouad, Jacob Feldman, Danny Segev and Dennis J. Zhang (2024). Click-Based MNL: Algorithmic Frameworks for Modeling Click Data in Assortment Optimization. **Management Science**.
- Jun Li, Zoey Jiang and Dennis J. Zhang (2023). A High-Dimensional Choice Model for Online Retailing. **Management Science**.

- Zhiyu Zeng, Hengchen Dai, Dennis J. Zhang, Heng Zhang, Renyu Zhang, Zuo-Jun Max Shen, Zhiwei Xu (2022). The Impact of Social Nudges on User-Generated Content on Social Network Platforms. **Management Science**.
- Xinyu Cao, Dennis J. Zhang and Lei Huang (2022). The Impact of COVID-19 Pandemic on the Behavior of Online Gig Workers. **Manufacturing & Service Operations Management**.
- Bing Bai, Hengchen Dai, Dennis J. Zhang and Fuqiang Zhang (2022). The Impact of AI on Workers' Perceived Fairness: Evidence from a Field Experiment. **Manufacturing & Service Operations Management**.
- Zikun Ye, Dennis J. Zhang, Heng Zhang, Renyu Zhang, Xin Chen and Zhiwei Xu (2022). Cold Start on Online Advertising Platforms: Data-Driven Algorithms and Field Experiments. **Management Science**.
- Joren Gijsbrechts, Robert N. Boute, Jan A. Van Mieghem and Dennis J. Zhang (2021). Can Deep Reinforcement Learning Improve Inventory Management? Performance on Dual Sourcing, Lost Sales and Multi-Echelon Problems. **Manufacturing & Service Operations Management**.
- Jake Feldman and Dennis J. Zhang (2021). Customer Choice Models versus Machine Learning: Finding Optimal Product Displays on Alibaba. **Operations Research**.
- Zhenling Jiang, Tat Chan and Dennis J. Zhang (2021). Effects of Bonus on the Demand for Auto Loans and the Long-Term Consequences. **Journal of Marketing Research**.
- Jiankun Sun, Dennis J. Zhang, Haoyuan Hu and Jan A. Van Mieghem (2020). Predicting Human Discretion to Adjust Algorithmic Prescription: A Large-Scale Field Experiment in Bin Packing Warehouse Operations. **Management Science**.
- Zekun Liu, Dennis J. Zhang and Fuqiang Zhang (2020). Information Sharing on Retail Platforms. Forthcoming at **Manufacturing & Service Operations Management**.
- Dennis J. Zhang and Ming Hu (2020). NetEase Cloud Music Data. Forthcoming at **Manufacturing & Service Operations Management**.
- Dennis J. Zhang, Hengchen Dai and Lingxiu Dong (2019). The Value of Pop-Up Stores on Retailing Platforms: Evidence from a Field Experiment with Alibaba. Forthcoming at **Management Science**.
- Dennis J. Zhang, Hengchen Dai and Lingxiu Dong (2019). The Long-term and Spillover Effects of Price Promotions on Retailing Platforms: Evidence from a Large Randomized Experiment on Alibaba. Forthcoming at **Management Science**.
- Lamar Pierce, Laura Wang and Dennis J. Zhang (2019). Peer Bargaining and Productivity in Teams: Evidence on the Inequitable Division of Pay. Forthcoming at **Manufacturing & Service Operations Management**.
- Hengchen Dai and Dennis J. Zhang (2018). Prosocial Goal Pursuit in Crowdfunding: Evidence from Kickstarter. **Journal of Marketing Research**.
- Ruomeng Cui, Jun Li and Dennis J. Zhang (2018). Reducing Discrimination with Reviews in the Sharing Economy: Evidence from Field Experiments on Airbnb. Forthcoming at **Management Science**.

- Ruomeng Cui, Dennis J. Zhang and Achal Bassamboo (2017). Learning from Inventory Availability Information: Evidence from Field Experiments on Amazon. **Management Science**, 65(3), 1216-1235.
- Ruomeng Cui, Antonio Moreno-Garcia, Santiago Gallino, and Dennis J. Zhang (2017). The Operational Value of Social Media Information. **Production and Operations Management** 27(10), 1749-1769.
- Dennis J. Zhang, Gad Allon, and Jan A. Van Mieghem (2016). Does social interaction improve learning outcomes? Evidence from field experiments on massive open online courses. **Manufacturing & Service Operations Management** 19(3), 347-367.
- Dennis J. Zhang, Itai Gurvich, Jan A. Van Mieghem, Eric Park, Mark V. Williams, and Robert S. Young (2016). Hospital Readmission Reduction Program: An Economic and Operational Analysis. **Management Science** 62(11), 3351-3371.

BOOKS,
PRACTITIONER
AND CONFERENCE
PUBLICATIONS

- Mengxin Wang, Heng Zhang, Dennis J. Zhang (2024). Harnessing Large Language Models for Market Research: A Data-augmentation Approach. *2024 NeurIPS Workshop on Statistical Frontiers in LLMs and Foundation Models*
- Zikun Ye, Zhiqi Zhang, Dennis J. Zhang, Heng Zhang, Renyu Zhang (2023). Deep Learning Based Causal Inference for Large-Scale Combinatorial Experiments: Theory and Empirical Evidence. *23th ACM Conference on Economics and Computation (EC'23)*
- Hamsa Bastani, Dennis J. Zhang and Heng Zhang (2020). Applied Machine Learning in Operations Management. *Springer Innovative Technology at the Interface of Finance and Operations*
- Antonio Moreno, Jun Li and Dennis J. Zhang (2019). Agent Pricing in the Sharing Economy: Evidence from Airbnb. Sharing Economy: Making Supply Meet Demand. In *Springer Series in Supply Chain Management*.
- Jun Li, Dennis J. Zhang and Ruomeng Cui (2017). A Better Way to Fight Discrimination in the Sharing Economy. *Harvard Business Review*.
- Dennis J. Zhang, Jiadong Wang, Shayan Garani Srinivasa, and Lara Dolecek (2011). Achieving Flexibility in LDPC Code Design by Absorbing Set Elimination. *Proc. Asilomar Conference on Signals, Systems, and Computers*.

PAPERS UNDER
REVIEW OR
REVISION

- Guangying Chen, Lu Cheng, Zhengling Qi, Tat Chan and Dennis J. Zhang. A New Estimator for Randomized Controlled Trials with Non-Compliance: Theory and Empirical Evidence. Major Revision at **Marketing Science**.
- Mengxin Wang, Heng Zhang, Dennis J. Zhang. Harnessing Large Language Models for Market Research: A Data-augmentation Approach. Major Revision at **Marketing Science**.
- Chenshan Hu, Xiaoyang Long, Jiankun Sun and Dennis J. Zhang. Green E-commerce: Environmental Impact of Fast Delivery. Major Revision at **Management Science**.
- Nick Clyde, Bing Bai and Dennis J. Zhang. The Impact of Ride Sharing on Healthcare Access. Major Revision at **Management Science**.

- Annie Shi, Tat Chan and Dennis J. Zhang. Using Algorithm Scores to Measure the Impacts of Targeted Promotional Messages. Risky Revision at **Journal of Marketing Research**.
- Guangying Chen, Tat Chan and Dennis J. Zhang. The Effects of Diversity in Algorithmic Recommendations on Digital Content Consumption: A Field Experiment. Major Revision at **Management Science**.
- Chenshan Hu, Xinyu Cao, Jiankun Sun and Dennis J. Zhang. From Forced to Voluntary AI Adoption. Major Revision at **Manufacturing & Service Operations Management**.
- Hengchen Dai, Xiaoyang Long and Dennis J. Zhang. Wage Transparency, Negotiation, and Reference-dependent Utility. Major Revision at **Organization Science**.
- Meng Liu, Cheng Lu, Xiang Hui, Dennis J. Zhang. Referrers vs. Referees: How Do Reactivation Referral Programs Work on Social Media? Risky Revision at **Journal of Marketing Research**.
- Zhiyu Zeng, Zhiqi Zhang, Dennis J. Zhang and Tat Chan. The Impact of Recommender Systems on Content Consumption and Production: Evidence from Field Experiments and Structural Modeling. Major Revision at **Management Science**.
- Xinyu Cao, Shilei Luo, Dennis J. Zhang. How the Power of Pay Gets Amplified in Gig Economy. Risky Revision at **Journal of Marketing Research**.
- Peibo Zhang, Xinyu Cao, Ruomeng Cui and Dennis J. Zhang. Dynamic Discrimination on Online Platforms. Major Revision at **Management Science**.
- Guangying Chen, Tat Chan and Dennis J. Zhang. The Intended and Unintended Consequences of Privacy Protection in Social Media: A Large-Scale Field Experiment and Structural Analysis. Working Paper.

EDITORIAL SERVICES

- Area Editor, Machine Learning and Data Science, **Operations Research**
- Associate Editor, **M&SOM**
- Associate Editor, **Marketing Science**
- Associate Editor, Marketing Department, **Management Science**
- Ad-hoc Referee: *Journal of Political Economy, American Economic Review, Marketing Science, Operations Research, Journal of Marketing Research, Information System Research, Journal of Law and Economics, Organizational Behavior and Human Decision Processes.*

PHD STUDENTS

- **Current Advisees:** Zhiqi Zhang, Sikun Xu, Shilei Luo, Peibo Zhang, Cheng Lu, Jiayi Zhang
- **Past Advisees:**
 1. Jiankun Sun (2019, Committee Member and JMP Coauthor), Northwestern Kellogg OM Ph.D., Assistant Professor of Operations Management, Imperial College London.

2. Zhenling Jiang (2019, Committee Member and Coauthor), WashU Olin Marketing PhD., Assistant Professor of Marketing, University of Pennsylvania.
3. Joren Gijsbrechts (2020, Committee Member and JMP Coauthor), KU Leuven OM PhD., Assistant Professor of Operations Management, ESADE.
4. Bing Bai (2023, Committee Co-Chair), WashU Olin OM PhD., Assistant Professor of Operations Management, McGill University.
5. Zikun Ye (2023, Committee Co-Chair), UIUC IEOR PhD., Assistant Professor of Marketing, University of Washington.
6. Daniel Chen (2024, Committee Member and Coauthor), Wharton OM PhD., Assistant Professor of Operations Management, Boston College.
7. Zack Wang (2025, Committee Member and JMP Coauthor), WashU Olin Marketing PhD., Assistant Professor of Marketing, Hong Kong University.
8. Zhiyu Zeng (2025, JMP Coauthor), WashU Olin Postdoc, Assistant Professor of Operations Management, Shanghai Jiaotong University.
9. Nick Clyde (2025, Committee Chair), WashU Olin OM PhD., Assistant Professor of Operations Management, Florida State University.
10. Annie Shi (2025, Committee Co-Chair), WashU Olin Marketing PhD., Assistant Professor of Marketing, University of Florida.
11. Chenshan Hu (2025, Committee Chair), WashU Olin OM PhD., Assistant Professor of Operations Management, University of Colorado Boulder.
12. Guangying Chen (2025, Committee Co-Chair), WashU Olin Marketing PhD., Assistant Professor of Marketing, University of Southern California.

• **Past Students (Committee Member, Not Research Advisor):**

1. Duo Shi (2018, Committee Member), (Tenured) Associate Professor of Operations Management, CUHK Shenzhen.
2. Fasheng Xu (2019, Committee Member), Assistant Professor of Operations Management, University of Connecticut.
3. Fan Yang (2023, Committee Member), Assistant Professor of Marketing, UCL.

HONORS AND AWARDS

• **Career Award**

1. 2022 POMS Early Career Research Accomplishments Award

• **Paper Award**

1. (2024) Winner, INFORMS Behavioral Operation Management Best Working Paper Competition
“Green E-Commerce: Environmental Impact of Fast Delivery”
2. (2024) Finalist, 2024 Service Science Best Cluster Paper Award
“How Forced Intervention Facilitates Long-Term Algorithm Adoption”
3. (2024) Runner-up, 2024 INFORMS ISS Cluster Best Paper Award
“A New Estimator for Randomized Controlled Trials with Non-Compliance: Theory and Empirical Evidence”
4. (2023) Second Place, 2023 CSAMSE Best Paper Award Competition
“Deep Learning Based Causal Inference for Large-Scale Combinatorial Experiments: Theory and Empirical Evidence.”

5. (2023) Finalist, 2023 Best Paper in *Operations Research*
‘Customer Choice Models versus Machine Learning: Finding Optimal Product Displays on Alibaba.’
6. (2023) Winner, 2023 Best OM Paper in *Management Science*:
‘Reducing Discrimination with Reviews in the Sharing Economy: Evidence from Field Experiments on Airbnb.’
7. (2022) Finalist, 2022 Best OM Paper in *Management Science*:
‘Learning from Inventory Availability Information: Evidence from Field Experiments on Amazon.’
8. (2022) Industry Studies Association’s 2021 Ralph Gomory Best Industry Studies Paper Award:
‘Peer Bargaining and Productivity in Teams: Evidence on the Inequitable Division of Pay.’
9. (2021) Second Place, 2021 CSAMSE Best Paper Award Competition
“The Impact of AI on Workers’ Perceived Fairness: Evidence from a Field Experiment.”
10. (2021) INFORMS Revenue Management and Pricing Section Jeff McGill Student Paper Prize:
“Cold Start to Improve Market Thickness on Online Advertising Platforms: Data-Driven Algorithms and Field Experiments.”
11. (2021) Finalist, 2021 Behavioral Operations Management Best Working Paper Award:
“Wage Transparency, Negotiation, and Reference-dependent Utility.”
12. (2021) Finalist, 2021 Wharton People Analytics White Paper Competition
“The Impact of AI on Workers’ Perceived Fairness: Evidence from a Field Experiment.”
13. (2021) Finalist, Best Accepted Papers in 2021 Academy of Management Meeting
“The Impact of AI on Workers’ Perceived Fairness: Evidence from a Field Experiment.”
14. (2020) Honorable Mention, M&SOM 2020 Responsible Research Award
“Reducing Discrimination with Reviews in the Sharing Economy: Evidence from Field Experiments on Airbnb.”
15. (2020) Finalist, 2020 CBOM Junior Scholar Paper Competition.
“The Impact of AI on Workers’ Perceived Fairness: Evidence from a Field Experiment.”
16. (2020) Winner, 2020 Olin Research Award.
“Predicting Human Discretion to Adjust Algorithmic Prescription: A Large-Scale Field Experiment in Bin Packing Warehouse Operations.”
17. (2019) Winner, 2019 Revenue Management Practice Award
“Taking Assortment Optimization from Theory to Practice: Evidence from Large Field Experiments on Alibaba.”
18. (2019) Finalist, 2019 Best Service Science Paper Award Competition
“The Spillover Effects of Employee-Customer Interactions: Field Evidence from an Online Education Platform.”
19. (2019) Finalist, 2019 Innovative Applications in Analytics Award
“Taking Assortment Optimization from Theory to Practice: Evidence from Large Field Experiments on Alibaba.”
20. (2019) Winner, 2019 Olin Research Award.
“Taking Assortment Optimization from Theory to Practice: Evidence from Large Field Experiments on Alibaba.”
21. (2018) Finalist, Competition at the 2018 Wharton People Analytics Conference:
“Peer Bargaining and Productivity in Teams: Evidence on the Inequitable Division of Pay.”

22. (2018) Finalist, 2018 POMS Applied Research Challenge:
“How Do Price Promotions Affect Customer Behavior on Retailing Platforms? Evidence from a Large Randomized Experiment on Alibaba.”
23. (2018) Finalist, 2018 POM-CBOM Junior Scholar Competition:
“How Do Price Promotions Affect Customer Behavior on Retailing Platforms? Evidence from a Large Randomized Experiment on Alibaba.”
24. (2017) Winner, 2017 Behavioral Operations Management Best Working Paper Award:
“Reducing Discrimination with Reviews in the Sharing Economy: Evidence from Field Experiments on Airbnb.”
25. (2014) Winner, 2014 POMS College of Healthcare Operations Management Best Paper Award:
“Hospital Readmission Reduction Program: An Economic and Operational Analysis.”

- **Service Award**

1. (2020) Management Science Distinguished Service Award
2. (2020) M&SOM Distinguished Service Award
3. (2019) Management Science Distinguished Service Award
4. (2019) M&SOM Distinguished Service Award
5. (2018) Management Science Distinguished Service Award
6. (2018) M&SOM Distinguished Service Award
7. (2017) Management Science Distinguished Service Award
8. (2017) M&SOM Distinguished Service Award

- **Teaching Award**

1. (2019) Reid Teaching Award—Master of Science in Business Analytics—Financial Technology
2. (2019) Reid Teaching Award—Master of Science in Business Analytics—Customer

RESEARCH
PRESENTATIONS

Invited Talks

- **University Invited Seminar:**

- 2025-2026: University of Toronto, University of Southern California, University of Chicago, University of Notre Dame, Indiana University, Stanford University.
- 2024-2025: Fisher College of Business, Ohio State University; Leeds School of Business, UC Boulder; University of Florida; IEOR-DRO Joint Seminar, Columbia University; McDonough School of Business, Georgetown University; Ross Business School, University of Michigan; McGill Desautels Faculty of Management; Chinese University of Hong Kong; Rice University; John Hopkins University; Southern Methodist University; Carnegie Mellon University; Wharton, University of Pennsylvania; MIT Marketing Department.
- 2023-2024: Kellogg School of Management, Northwestern University; Emory University Goizueta Business School; George Washington University School of Business; Questrom School of Business, Boston University; Cornell University Conference
- 2022-2023: The University of Tennessee, Knoxville, University of Michigan’s Ross Marketing Area, NYU Stern School of Business, University of Toronto’s Rotman School of Management

- 2021-2022: University of Chicago, National University of Singapore, University of California Riverside, Case Western University, Binghamton University
 - 2019-2020: University of California Berkeley, UIUC, University of Maryland, UT Dallas, Shanghai University of Finance and Economics, Shanghai Jiao Tong University
 - 2018-2019: University of Washington Foster School of Business, Johns Hopkins Carey Business School, Peking University, Guanghua School of Management, Georgia Tech Scheller College of Business, NYU Stern School of Business
 - 2017-2018: London Business School, Imperial College Business School, Massachusetts Institute of Technology, HKUST Business School, UCLA Management and Organization, Northwestern University, Kellogg School of Management, Cornell University, Harvard Business School,
 - 2016-2017: Washington University in St. Louis, University of Science and Technology of China, Fudan University School of Management, NYU Shanghai, HKUST Business School, Northwestern University, Kellogg School of Management,
 - 2015-2016: Washington University in St. Louis, Carnegie Mellon University, Duke University, UNC Kenan-Flagler Business School, Indiana University, Yale School of Management, University of Michigan.
- **Company**
 - 2023-2024: Halara
 - 2021-2022: Amazon, Tiger Analytics
 - 2019-2020: Kuaishou (Kwai), TAL Education Group, Expedia Group
 - 2018-2019: Chehaoduo, Helijia, Kuaishou (Kwai), Alibaba Digital Economy Initiative
 - 2017-2018: Cainiao, Alibaba, VIPKID

MEDIA COVERAGE

1. “3 Ways to Retrain Your Mind to Get Out of Credit Card Debt.” February 2020, *New York Times*
2. “You’re Right. You’re Spending More Time Sitting on That Plane.” September 2019, *New York Times*
3. “Attention Passengers: Your Next Flight Will Likely Arrive Early. Here’s Why. Turns out padding airline schedules is good for business.” November 2018, *Inc.*
4. “Attention Passengers: Your Next Flight Will Likely Arrive Early. Here’s Why.” November 2018, *Kellogg Insight*
5. “Why Kickstarter Funders Quickly Kick in the Last 5 Percent.” August 2018, *UCLA Anderson Review*
6. “Online Coupons Work in the Moment but Don’t Seem to Alter the Seller-Shopper Relationship.” June 2018, *UCLA Anderson Review*
7. “Want to Improve Your Sales Forecast? Check Your Company’s Facebook Feed.” September 2017, *Kellogg Insight*
8. “What Makes an Online Flash Sale Successful?” June 2017, *Kellogg Insight*.
9. “No simple fix to weed out racial bias in the sharing economy,” March 2017, *The Globe and Mail*.
10. “New Research Looks At Ways To Help Stop Airbnb Racial Discrimination,” March 2017, *National Public Radio (NPR)*.

11. “Study: How new Airbnb nondiscrimination policy may be worse,” January 2017, *the Source, Washington University in St. Louis*.
12. “A Gentle Nudge Can Increase Participation in MOOCs,” December 2015, *Kellogg Insight*.
13. “Could Email Fix A Troubled Form of Online Education?” December 2015, *ChicagoInno*.

TEACHING
EXPERIENCE

Washington University in St. Louis

- Instructor for “**Artificial Intelligence and Machine Learning for Business Applications Part A Ver 2**” – PhD Course, 2024.
- Instructor for “**Artificial Intelligence and Machine Learning for Business Applications Part B**” – PhD Course, 2023.
- Instructor for “**Artificial Intelligence and Machine Learning for Business Applications Part A**” – PhD Course, 2022.
- Instructor for “**Data-Driven Decision Making for Executives**” – Core EMBA Course at Washington University - IIT Mumbai EMBA Program, 2022, 2023, 2024.
- Instructor for “**Data Analytics and Decisions**” – Core EMBA Course at Washington University - Fudan University EMBA Program, 2021, 2022, 2023, 2024.
- Instructor for “**Data-Driven Decision Making for Executives**” – Core EMBA Course at Washington University in St Louis, 2021, 2022, 2023, 2024.
- Instructor for “**Data Analytics for Government Leaders**” – Executive Education at Brookings Institution, Washington DC (designed by me), 2019.
- Instructor for “**Deep Learning for Business Strategy**” – Executive Education at Center for Customer Analytics and Big Data (designed by me), 2018.
- Instructor for “**Introduction to Data Science with Python**” – Core Master of Business Analytics Class (co-designed with Jake Feldman), 2018 - 2022.
- Instructor for “**Operations Management**” – Core Undergraduate Class, 2016-2017.