Zhe Liu

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ACADEMIC APPOINTMENT

Imperial College London, Imperial Business School London, UK
Department of Analytics, Marketing & Operations
Assistant Professor of Operations Management 2019–current

EDUCATION

Columbia University, Graduate School of Business New York, NY
Ph.D., Operations Management 2013–2019
Advisors: Awi Federgruen, Costis Maglaras

Tsinghua University Beijing, China
B.S., Industrial Engineering 2009–2013
Advisor: Zuo-Jun Max Shen

RESEARCH INTERESTS

Revenue management: operations and design of sharing economy platforms, assortment optimization

Supply chain management: multi-sourcing, inventory management

JOURNAL PUBLICATIONS

[1] Dual Sourcing under Internal and External Volatilities, ***Manufacturing & Service Operations Management***, forthcoming, 2025. (with Awi Federgruen and Jiaqi Lu)
  • MSOM Supply Chain Management SIG Invited Talk, 2021

[2] Ride-Hailing Networks with Strategic Drivers: The Impact of Platform Control Capabilities on Performance, ***Manufacturing & Service Operations Management***, 25(5): 1890-1908, 2023 (with Philipp Afèche and Costis Maglaras)
  • MSOM Service SIG Invited Talk, 2018

[3] Combined Pricing and Inventory Control with Multiple Unreliable Suppliers, ***Operations Research Letters***, 51(1): 60-66, 2023 (with Awi Federgruen and Jiaqi Lu)

[4] Dual Sourcing: Creating and Utilizing Flexible Capacities with a Second Supply Source, ***Production and Operations Management***, 31(7): 2789-2805, 2022 (with Awi Federgruen and Lijian Lu)
  • 2nd Place, POMS College of SCM Student Paper Competition, 2018
  • 2nd Place, POMS-HK Best Student Paper Competition, 2019

[5] Synthesis and Generalization of Structural Results in Inventory Management: A Generalized Convexity Property, ***Mathematics of Operations Research***, 45(2): 547-575, 2020 (with Awi Federgruen and Lijian Lu)
  • Finalist, George Nicholson Student Paper Competition, 2018
  • MSOM Supply Chain Management SIG Invited Talk, 2018

WORKING PAPERS

[6] Sourcing with Demand Updates, ***Management Science***, major revision. (with Awi Federgruen and Jiaqi Lu)
  • MSOM Supply Chain Management SIG Invited Talk, 2023

[7] Operating Three-sided Marketplace: Pricing and Spatial Staffing in Food Delivery Systems, ***Management Science***, major revision. (with Yiwen Shen and Yanwei Sun)
  • 1st Place, INFORMS Service Science Best Cluster Paper Award, 2024
  • 2nd Place, CSAMSE Best Paper Award, 2024

[8] Information Design and Pricing in Lead-Selling Platforms with Supply Competition, ***Management Science***, major revision. (with Yanwei Sun, Niloofar Zamani-Foroushani and Jiahua Wu)

- Proceedings of the 25th ACM Conference on Economics and Computation, *EC'24*

[9] Assortment Optimization and Pricing in a Queue, ***Management Science***, reject & resubmit. (with Kalyan Talluri and Shixin Wang)

[10] On-Off Systems with Strategic Customers, ***Operations Research***, under review. (with Yanwei Sun and Chiwei Yan)

[11] Trip Radar: a Controlled Decentralized System to Enhance Matchmaking in Ride-Hailing, *to be submitted*. (with Hongfan Chen, Anran Li and Quan Zhou)

[12] Robust Weakly Coupled Markov Decision Processes, *in preparation*. (with Fupeng Sun and Wolfram Wiesemann)

[13] Surge Pricing and Dynamic Matching for Hotspot Demand Shock in Ride-Hailing Networks, *in preparation*. (with Philipp Afèche and Costis Maglaras)

[14] The Price of Prestige: Exclusive Pricing and Selling of Luxury Bands and Resale Market Dynamics, *in preparation*. (with Anran Li and Rachel Q. Zhang)

OTHER WORKS	Inventory Strategies for Service-Sensitive Demands, *Undergraduate Thesis*, 2013. (Advisor: Zuo-Jun Max Shen)
	Service Parts Demand Forecasting and Multi-Echelon Inventory Network Design, *Research Report for Caterpillar Logistics*, 2013. (with K. Wang, W. Zhu and X. Zhao)
	Multistage Stochastic Mixed-Integer Programs for Optimizing Gas Contract and Maintenance Scheduling, *Permanent working paper*, 2012. (with Siqian Shen)
	Intermittent Demand Forecasting of Slow Moving Parts, *Tsinghua University Student Journal*, 4(2): 34-49, 2012. (with Jialing Tao and Yi Yang)
CASES	ILUMÉXICO: A Built-for-Assembly Supply Chain Strategy, *Columbia CaseWorks*, ID: 170203, 2017. (with Awi Federgruen and Abigail Talcott-Schlaifer)

INDUSTRY   **Research Scientist Intern**, Amazon, Seattle   June–Aug. 2018

TEACHING   **Imperial College Business School**, London, UK
- Big Data, AI and Machine Learning (MBA elective)   2020–2025
- Decision Analytics (MBA core)   2021–2022
- Optimization (PhD core)   2020, 2022–2025
- Maths and Statistics Foundations for Analytics (MSBA core)   2019–2025

London Business School, London, UK
- Demand and Revenue Management (PhD elective)   2020, 2022, 2024
- Advanced Optimization (PhD elective)   2023

Columbia Business School, New York, NY
- MBA Excel Workshop—Advanced Level   2015–2017
- Intro to Spreadsheet Optimization and Simulation (MSE master)   2016–2017

HONORS AND AWARDS
- 1st Place, INFORMS Service Science Best Cluster Paper Award, 2024
- 2nd Place, CSAMSE Best Paper Award, 2024
- MSOM Supply Chain Management SIG Invited Talk, 2023
- Management Science Meritorious Service Award, 2022
- MSOM Meritorious Service Award, 2022
- MSOM Supply Chain Management SIG Invited Talk, 2021
- 2nd Place, POMS-HK Best Student Paper Competition, 2019
- Finalist, George Nicholson Student Paper Competition, 2018
- 2nd Place, POMS College of SCM Student Paper Competition, 2018

- Doctoral Fellow Presentation at Deming Cup Award Ceremony, 2018
- Chazen Institute for Global Business Research Award, 2018
- MSOM Service SIG Invited Talk (8/66 submissions), 2018
- MSOM Supply Chain Management SIG Invited Talk (8/43 submissions), 2018
- Deming Doctoral Research Fellowship, 2016
- Deming Doctoral Research Fellowship, 2015
- Doctoral Fellowship, Columbia Business School, 2013–2018
- Tsinghua University Outstanding Undergraduate Student Award, 2013.
- Beijing Outstanding Undergraduate Student Award, 2013.
- President Jiang Nan-Xiang Scholarship, Tsinghua University, 2012.
- 1st Place, 30th Tsinghua Challenge Cup Research and Innovation Contest, 2012.
- Changhong Scholarship, Tsinghua University, 2011.
- Outstanding Prize (Top 4/8000) in 27th National College Physics Contest, 2011.
- OOCL Scholarship, Tsinghua University, 2010.

SERVICES
- PhD Director of the Analytics & Operations area, Imperial College Business School
- Guest Associate Editor for *Naval Research Logistics*
- Journal referee for *Management Science*, *Manufacturing & Service Operations Management*, *Operations Research*, *Operations Research Letters*, *Production & Operations Management*, *Transportation Science*, *Transportation Research Part B*
- External reviewer for the Research Grants Council (RGC) of Hong Kong
- Committee Member of the INFORMS RMP Jeff McGill Student Paper Award, 2024–2025
- Reviewer for the MSOM Service SIG Conference, 2022, 2024
- Reviewer for the MSOM Supply Chain Management SIG Conference, 2020–2022, 2025
- Judge for the POMS-HK Best Student Paper Competition, 2023–2024
- Judge for the MSOM Student Paper Competition, 2024–2025
- Judge for the CSAMSE Best Paper Competition, 2024
- Judge for the POMS College of Service Operations Management Best Student Paper Competition, 2025
- Committee Member of the 2026 INFORMS TSL Conference, 2025
- Organizer of the 2023 INFORMS RMP Annual Conference, Imperial College Business School

STUDENT
SUPERVISION

Current PhD students
- Niloofar Zamani-Foroushani, 2021 –
- Yanwei Sun, 2022 –
- Fupeng Sun, 2023 –

INVITED SEMINARS
- University of Macau, Faculty of Business Administration   2025
- IESE Business School   2025
- Xi'an Jiaotong University, School of Management   2025
- Durham University, Business School   2024
- Control and Optimization Seminar, Imperial College London   2024
- Hong Kong University of Science and Technology, Department of IEDA   2023
- Chinese University of Hong Kong, Shenzhen, School of Data Science   2023
- Hong Kong Polytechnic University   2022
- Rotman Young Scholar Seminar Series, University of Toronto   2022
- Chinese University of Hong Kong, CUHK Business School   2022
- Shanghai Jiao Tong University, Antai College of Economics and Management   2021
- University of Science and Technology of China, School of Management   2021
- Tianjin University, College of Management and Economics   2021
- Fudan University, School of Management   2020

- University College London, School of Management   2019
- Imperial College London, Imperial College Business School   2019
- University of Toronto, Rotman School of Management   2019
- University of Miami, Miami Business School   2019
- Indiana University, Kelley School of Business   2019
- University of Hong Kong, Faculty of Business and Economics   2019
- City University of Hong Kong, College of Business   2019
- Hong Kong University of Science and Technology, HKUST Business School   2019
- Northwestern University, Kellogg School of Management   2018

CONFERENCE
TALKS
- INFORMS RMP Section Conference, Columbia University   July 2025
- MSOM Annual Conference, London Business School, London   June 2025
- INFORMS Annual Meeting, Seattle, WA   Oct. 2024
- INFORMS RMP Section Conference, UCLA   July 2024
- MSOM Annual Conference, Minneapolis, MN (2 talks)   July 2024
- INFORMS Annual Meeting, Phoenix, AZ   Oct. 2023
- Marketplace Innovation Workshop (virtual)   May 2023
- INFORMS RMP Section Conference (virtual), Chicago Booth   June 2022
- Marketplace Innovation Workshop (virtual)   May 2022
- INFORMS Annual Meeting (virtual), Anaheim, CA   Oct. 2021
- CSAMSE Annual Conference, Shanghai, China   July 2021
- INFORMS RMP Section Conference (virtual), Johns Hopkins University June 2021
- MSOM Annual Conference (virtual), Indiana University   June 2021
- INFORMS Annual Meeting (virtual) (2 talks)   Nov. 2020
- INFORMS Annual Meeting, Seattle, WA (3 talks)   Oct. 2019
- 5th Annual Fashion Operations and Retailing Conference, London, UK   Oct. 2019
- MSOM Annual Conference, Singapore   July 2019
- INFORMS RMP Section Conference, Stanford, CA   June 2019
- POMS-HK Int'l Conference (Student Paper Competition), Hong Kong   Jan. 2019
- INFORMS Annual Meeting, Phoenix, AZ (3 talks; George Nicholson Student Paper Competition)   Nov. 2018
- MSOM Service SIG Meeting, Dallas, TX   July 2018
- MSOM Supply Chain Management SIG Meeting, Dallas, TX   July 2018
- MSOM Annual Conference, Dallas, TX (2 talks)   July 2018
- INFORMS RMP Section Conference, Toronto, Canada   June 2018
- POMS Annual Conference (Student Paper Competition), Houston, TX   May 2018
- INFORMS Annual Meeting, Houston, TX (2 talks)   Oct. 2017
- Amazon Supply Chain Optimization Summit (Poster), Seattle, WA   Oct. 2017
- CSAMSE Annual Conference, Guangzhou, China   July 2017
- MSOM Annual Conference, Chapel Hill, NC   June 2017
- Marketplace Innovation Workshop, Stanford, CA   June 2017
- Deming Doctoral Fellow Seminar, New York, NY   April 2017
- INFORMS Annual Meeting, Nashville, TN (3 talks)   Nov. 2016
- MSOM Annual Conference, Auckland, New Zealand (2 talks)   July 2016
- INFORMS RMP Section Conference, New York, NY   June 2016
- Trans-Atlantic Doctoral Conference, London, UK   May 2016
- Deming Doctoral Fellow Seminar, New York, NY   April 2016

Last updated on June 30, 2025