Yao Li

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EDUCATION

Kellogg School of Management, Northwestern University   Evanston, IL

Ph.D., Operations Management   Expected 2026

- Advisor: Jan A. Van Mieghem
- Committee: Lauren Xiaoyuan Lu, Itai Gurvich, Rob Bray

Claremont McKenna College   Claremont, CA

B.A., Mathematics   2020

RESEARCH INTERESTS

Areas: Digital platforms; human-AI interaction; data-driven decision making.
Methodologies: game-theoretic modeling; stochastic modeling; causal inference; field experiments.

RESEARCH

Research Publications

- ***(Job Market paper)* Fulfillment by Amazon as a Strategic Lever: Anticompetitive or Welfare Enhancing?** [link]
  With: Lauren Xiaoyuan Lu, Jan A. Van Mieghem, Wenqiang Xiao
  ***Under Review** at **Management Science**, 2025*
- **An Investigation into the Probability That This is the Last Year of the Economic Expansion.** [link]
  With: Manfred Keil, Edward Leamer
  ***Published** in **Journal of Forecasting**, 2023.*

Working Papers

- **Appointment Interval Optimization and Type-Dependent Appointment Customization.** [Working paper available upon request]
  With: Itai Gurvich, Jan A. Van Mieghem
- **Using Term Spreads to Forecast the End of Economic Expansions in the U.S.** [link]
  With: Manfred Keil, Edward Leamer
- **A Cost-Benefit Analysis of Policy Stringency During the COVID-19 Crisis Using U.S. State Data.** [Working paper available upon request]
  With: Manfred Keil, James Symons

Work in Progress

- **Platform Logistics Competition with Third-Party Logistics (3PL).** [Model development in progress]
  With: Lauren Xiaoyuan Lu, Jan A. Van Mieghem, Wenqiang Xiao
  Follow-up to "Fulfillment by Amazon" project, extending the model to include independent 3PL providers and cross-platform logistics adoption.

- **Does AI Help or Hinder Learning? Evidence from a Field Experiment in a Supply Chain Simulation Game.** [Data collection and analysis ongoing]
  With: Yue Zhang, Lauren Xiaoyuan Lu
  Field experimental evidence from a supply chain simulation game, measuring how AI assistance affects rule comprehension, decision-making, and performance.

- **How LLMs can be Designed and Evaluated to Support Decision-making in Business Operations?** [Chatbot demo available upon request]
  Developing a retrieval-augmented generation (RAG) assistant that answers operations questions from textbooks and papers, with safeguards for reliability and traceability. Explores how large language models can enhance learning and decision support in operations.

- **Digital Twin for Labor & Delivery Operations.** [Working paper in preparation]
  With: Simrita Singh, Jan A. Van Mieghem.
  Developing a simulation-based digital twin of hospital labor & delivery units to evaluate staffing policies, patient-flow interventions, and efficiency trade-offs.

Op-Ed Pieces

- **The Recession of 2023: Is it a Myth or a Reality?** [link]
  With: Manfred Keil
  *Published in **The Sun**, January 5, 2023.*
- **Think Smart as we Plan for Job Growth in the Inland Empire.** [link]
  With: Manfred Keil
  *Published in **The Sun**, February 11, 2020.*

INDUSTRY EXPERIENCE

Analytics Intern, **Tencent Research Institute**, **Beijing, China** 2019

Produced a 95-page anti-monopoly analysis defining market boundaries and benchmarking Tencent's position using segmentation methods and cross-sector financial metrics.

Analytics Intern, **Amino Capital, Palo Alto, CA** 2019

Translated startup data into investor-ready dashboards and authored 22 data-driven posts to support strategic VC communications and engagement.

AWARDS

Second place, *'Mining COVID-19 Testing Data: Understanding Behavior and Providing Actionable Insights' Data Science Competition*, Gies College of Business, University of Illinois Urbana-Champaign 2023

Arndt Fellow, Lowe Institute of Political Economy, CMC, Claremont, CA 2020

Best Thesis in Economics: *The Impact of Antitrust Policies that Prevent Platforms from Competing with Users: A Game-theoretic Analysis,* CMC, Claremont, CA 2020

TALKS

Fulfillment by Amazon as a Strategic Lever: Anticompetitive or Welfare Enhancing? (Previously: Operations Strategies of Retail Platforms: Competing Through Logistics Service)

- *Upcoming:* **INFORMS Annual Meeting 2025, Atlanta GA**
- *Upcoming:* **Conference on Information Systems and Technology (CIST) 2025, Atlanta GA**
- Finalist, YinzOR Conference 2025 Flash Talk Competition, Pittsburgh, PA
- INFORMS Annual Meeting 2024, October 22, Seattle WA
- POMS Annual Conference 2025, May 9, Atlanta GA

Appointment Interval Optimization – Data-driven analysis at a dentistry

- INFORMS Annual Meeting 2022, October 16, Indianapolis IN
- INFORMS Healthcare 2023, July 26, Toronto Canada
- INFORMS Annual Meeting 2023, October 15, Phoenix AZ

TEACHING ASSISTANT

OPNS 430 Operations Management MBA core	Spring 2022, Winter and Fall 2023, Winter 2024
OPNSX 430 Operations Management Executive MBA core	Spring 2023, Spring 2024, Spring 2025
OPNS 454 Strategic Decisions in Operations MBA elective	Fall 2021, Fall 2022, Fall 2023, Spring 2024
OPNSX 454 Strategic Decisions in Operations Executive MBA elective	Fall 2022, Fall 2023, Fall 2024
OPNS 450 Analytical Decision Modeling MBA elective	Summer 2022
OPNS 451 Data Analytics with Large Language Models MBA elective	Winter 2024
OPNS 455 Supply Chain Management MBA elective	Spring 2023
OPNS 912 Service Management and Analytics MBA elective	Winter 2022
OPNS 521 Foundations of Operations Management PhD core	Fall 2022

SKILLS

Python (pandas, numpy, sklearn, pytorch, tensorflow, keras, transformers, faiss, langchain), R, Mathematica, MatLab, SQL