WEILIANG (LEON) LIU

The University of Chicago Booth School of Bussiness, Chicago, IL 60637, USA

Email: weiliang.liu@chicagobooth.edu

Homepage: weiliangliuo.github.io

ACADEMIC EMPLOYMENT

The University of Chicago, Booth School of Business　　　　　　　August 2024 – Present
Principal Researcher
Mentor: Amy R. Ward

EDUCATION

National University of Singapore　　　　　　　　　　　August 2020 – February 2025
Ph.D. in Industrial Systems Engineering & Management
Dissertation: Next-Generation Emergency Medical Services: Optimal Network Design and Community Responder Crowdsourcing

Shanghai Jiao Tong University　　　　　　　　　　　　September 2016 – June 2020
B.E. in Industrial Engineering & Management

SELECTED AWARDS

National Semiconductor Golden Medal and Prize, National University of Singapore　　2025
Finalist, POMS-HK Best Student Paper Competition　　　　　　　　　　　　　　2025
First Place, INFORMS Society on Location Analysis (SOLA) Best Student Paper Competition　　2023
Chinese Government Award for Outstanding Students Abroad (6,000 USD)　　　　　2021
President's Graduate Fellowship, National University of Singapore　　　　2020 – 2024

RESEARCH INTERESTS

Modern service operations, socially responsible operations, queuing control, data-driven decision making

PUBLICATIONS

[1] Robust Data-Driven Design of a Smart Cardiac Arrest Response System
Liu, W., Sun, Q., Tang, L. & Ye, Z.
Accepted by **Production & Operations Management** (2025+)
First Place, INFORMS Society on Location Analysis (SOLA) Best Student Paper Competition, 2023

[2] Expanding Service Capabilities Through an On-Demand Workforce
Sun, X. & Liu, W.
Operations Research (2025) Vol. 73, No. 1, pp. 363-384

[3] Energy-Aware and Delay-Sensitive Management of a Drone Delivery System
Liu, W. & Sun, X.
Manufacturing & Service Operations Management (2022) Vol. 24, No. 3, pp. 1294–1310

[4] Modeling and Optimization for Emergency Medical Services Network
Liu, R., Liu, W. , Liu, Y., Pan, E. & Xie, X.
IEEE Transactions on Automation Science and Engineering (2022) Vol. 19, Issue 4, pp. 3520 - 3535

WORKING PAPERS

[5] Data-Driven Matching for Impatient and Heterogeneous Demand and Supply
Liu, W., Ward, A., & Zhang, X.
Submitted to **Mathematics of Operations Research**

[6] Community Responder Crowdsourcing for Time-Critical Emergencies
Liu, W., Chan, T., Tang, L. & Ye, Z.
Major revision at **Management Science**
Finalist, POMS-HK Best Student Paper Competition, 2025

[7] Location-Allocation of Emergency Service Systems in Light Traffic: Application to Lift-Trap Rescue
Wang, X., Liu, W., Tang, L. & Ye, Z.
Major revision at **Operations Research**

RESEARCH VISITS

University of Toronto (Dept. of MIE)   August - December, 2023
Host Supervisor: Timothy C. Y. Chan
University of Florida (Dept. of ISE)   June - September, 2019
Host Supervisor: Xu Sun

INVITED TALKS

Data-Driven Matching for Impatient and Heterogeneous Demand and Supply
Data-Driven Techniques in Operations Research Workshop, Shenzhen, China   November 2025 (Scheduled)
BIRS Workshop: Dynamic Allocation and Matching, Banff, Canada   March 2025
The 15th POMS-HK International Conference, Hong Kong, China   January 2025
TTIC Summer Workshop on Data-Driven Decision Processes, Chicago, USA   August 2024
Reinforcement Learning for Stochastic Networks, Toulouse, France   June 2024

Community Responder Crowdsourcing for Time-Critical Medical Emergencies
INFORMS 2025 Annual Meeting, Atlanta, USA   October 2025 (Scheduled)
The 15th POMS-HK Best Student Paper Competition Session, Hong Kong, China   January 2025
INFORMS 2024 Annual Meeting, Seattle, USA   October 2024

Expanding Service Capabilities Through an On-Demand Workforce
INFORMS 2023 Annual Meeting, Phonix, USA   October 2023
The 4th SRSE International Conference   December 2022

Robust Data-Driven Design of a Smart Cardiac Arrest Response System
INFORMS 2023 SOLA Best Student Paper Competition Session, Phonix, USA   October 2023
CSAMSE 2023 Annual Meeting (Session Chair), Shenzhen, China   July 2023
POMS 2023 Annual Meeting, Orlando, USA   May 2023

Energy-Aware and Delay-Sensitive Management of a Drone Delivery System
The 3rd SRSE International Conference   November 2021

TEACHING

The University of Chicago Booth School of Business
Bus 40110: Managing Service Operations (MBA, 80+ students in two sessions)   Winter of 2025
National University of Singapore
IE4213/EE4802: Learning from Data (Undergraduate, 60+ students)   Springs of 2021, 2022, 2023
IE5005: Data Analytics for Industrial Engineers (Master, 230+ students)   Falls of 2021, 2022

SERVICES

Journal reviewer for Queueing Systems
Conference reviewer for M&SOM, 2025
Judge for INFORMS Public Sector Operations Research (PSOR) Best Paper Competition, 2024, 2025

PERSONAL

Languages	Cantonese (native), Mandarin (native), English (fluent)
Hobbies	Ultimate frisbee, Auto chess, traveling