

WEILIANG (LEON) LIU

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ACADEMIC EMPLOYMENT

The University of Chicago, Booth School of Business

August 2024 – Present

Principal Researcher

Supervisor: Amy R. Ward

EDUCATION

National University of Singapore

August 2020 – January 2025

Ph.D. in Industrial Systems Engineering & Management

Advisors: Loon Ching Tang and Zhisheng Ye

Shanghai Jiao Tong University

September 2016 – June 2020

B.E. in Industrial Engineering & Management

RESEARCH INTERESTS

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

Medical emergency response, voluntary/on-demand workforce management, drone delivery, matching platforms

PUBLICATIONS

[1] *Expanding Service Capabilities Through an On-Demand Workforce*

Sun, X. & Liu, W.

Forthcoming at **Operations Research** (2023)

[2] *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

[3] *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 (2021) Vol. 19, Issue 4, pp. 3520 - 3535

WORKING PAPERS

[1] *Data-Driven Matching for Impatient and Heterogeneous Demand and Supply*

In preparation with Amy R. Ward and Xun Zhang

[2] *Community Responder Crowdsourcing for Time-Critical Emergencies*

Liu, W., Chan, T., Tang, L. & Ye, Z.

Major revision at **Management Science**

[3] *Robust Data-Driven Design of a Smart Cardiac Arrest Response System*

Liu, W., Sun, Q., Tang, L. & Ye, Z.

Major revision at **Production & Operations Management**

First Place, INFORMS Society on Location Analysis (SOLA) Best Student Paper Competition, 2023

[4] *Location-Allocation of Emergency Service Systems in Light Traffic: Application to Lift-Trap Rescue*

Wang, X., Liu, W., Tang, L. & Ye, Z.

SELECTED AWARDS

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	2020 – 2024
Hong Yi Scholarship (3,500 USD)	2019
Overseas Research Excellence Scholarship (1,000 USD)	2019

TEACHING EXPERIENCE

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

TALKS

Data-Driven Matching for Impatient and Heterogeneous Demand and Supply

INFORMS 2025 APS Conference	July 2025 (Scheduled)
POMS 2025 Annual Conference Atlanta, USA	May 2025 (Scheduled)
The 15th POMS-HK International Conference, Hong Kong, China	January 2025 (Scheduled)
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 2024 Annual Meeting, Seattle, USA	October 2024
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Expanding Service Capabilities Through an On-Demand Workforce

INFORMS 2023 Annual Meeting, Phoenix, USA	October 2023
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Robust Data-Driven Design of a Smart Cardiac Arrest Response System

CSAMSE 2023 Annual Meeting (Session Chair), Shenzhen, China	July 2023
POMS 2023 Annual Meeting, Orlando, USA	May 2023

RESEARCH VISITS

University of Toronto

Dept. of Mechanical & Industrial Engineering	August - December, 2023
Host Supervisor: Timothy C. Y. Chan	

University of Florida

Dept. of Industrial & Systems Engineering	June - September, 2019
Host Supervisor: Xu Sun	

COMPUTER SKILLS

Programming Language	C++, Python
Software	Gurobi, MATLAB, LaTeX, Mathematica

PERSONAL

Languages	Cantonese (native), Mandarin (native), English (fluent)
Interests	Ultimate frisbee, traveling