

WEILIANG (LEON) LIU

Email: wliu@se.cuhk.edu.hk

Homepage: weiliangliu.github.io

ACADEMIC EMPLOYMENT

The Chinese University of Hong Kong

Assistant Professor, Systems Engineering and Engineering Management

November 2025 – Present

The University of Chicago

Principal Researcher, Booth School of Business

Mentor: Amy R. Ward

August 2024 – October 2025

EDUCATION

National University of Singapore

Ph.D. in Industrial Systems Engineering & Management

Dissertation: Next-Generation Emergency Medical Services: Optimal Network Design and Community Responder Crowdsourcing

August 2020 – February 2025

Shanghai Jiao Tong University

B.E. in Industrial Engineering & Management

September 2016 – June 2020

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, 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.

Under review

Finalist, POMS-HK Best Student Paper Competition, 2025

[7] Location-Allocation of Emergency Service Systems in Light Traffic

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

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

The 16th POMS-HK International Conference (Session Chair), Shenzhen, China

January 2026 (Scheduled)

INFORMS 2025 Annual Meeting, Atlanta, USA

October 2025

The 15th POMS-HK Best Student Paper Competition Session, Hong Kong, China

January 2025

INFORMS 2024 Annual Meeting, Seattle, USA

October 2024

Location-Allocation of Emergency Service Systems in Light Traffic

The 16th POMS-HK International Conference, Shenzhen, China

January 2026 (Scheduled)

Expanding Service Capabilities Through an On-Demand Workforce

INFORMS 2023 Annual Meeting, Phoenix, 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, Phoenix, 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 Chinese University of Hong Kong

SEEM 3500: Quality Control and Management (Undergraduate)

Winter of 2026

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)

IE5005: Data Analytics for Industrial Engineers (Master, 230+ students)

Springs of 2021, 2022, 2023

Falls of 2021, 2022

SERVICES

Journal reviewer for Manufacturing and Service Operations Management, 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