

# WEILIANG (LEON) LIU

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## ACADEMIC EMPLOYMENT

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**The University of Chicago, Booth School of Business**

August 2024 – Present

Principal Researcher

Mentor: Amy R. Ward

## EDUCATION

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**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

Upper-Level GPA: 90.69/100 (Ranked 2/52)

## SELECTED AWARDS

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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

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

## PUBLICATIONS

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[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

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

Liu, W., Ward, A., & Zhang, X.

To be 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

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**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

## TEACHING EXPERIENCE

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**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

## TALKS

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**Data-Driven Matching for Impatient and Heterogeneous Demand and Supply**

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, 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

## PERSONAL

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**Languages** Cantonese (native), Mandarin (native), English (fluent)

**Interests** Ultimate frisbee, traveling