

# WEILIANG (LEON) LIU

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## ACADEMIC EMPLOYMENT

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### **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

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### **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

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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

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Modern service operations, socially responsible operations, applied probability, 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.

**Production & Operations Management** (2026) Vol. 35, Issue 1

**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.

Minor revision at **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

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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

## ACADEMIC SERVICES

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**Communication officer and webmaster:** INFORMS Applied Probability Society (APS)

**Journal reviewer:** Manufacturing and Service Operations Management, Queueing Systems, Journal of Simulation

**Conference reviewer:** M&SOM (2025), ACM Conference on Economics and Computation (EC'26)

**Conference session chair:** POMS-HK (2026)

**Paper competition judge:** INFORMS Public Sector Operations Research (PSOR) Best Paper Competition (2024, 2025)

## INVITED TALKS

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**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

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

**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

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#### **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)

Springs of 2021, 2022, 2023

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

Falls of 2021, 2022

### PERSONAL

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#### **Languages**

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

#### **Hobbies**

Ultimate frisbee, Auto chess, traveling