WEILIANG LIU

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ACADEMIC EMPLOYMENT

University of Chicago, Booth School of Business   2024 – Present
Postdoctoral Principal Researcher
Supervisor: Amy R. Ward

EDUCATION

National University of Singapore   2020 – 2024
Ph.D. in Industrial Systems Engineering & Management
Advisors: Loon Ching Tang and Zhisheng Ye

Shanghai Jiao Tong University   2016 – 2020
B.E. in Industrial Engineering & Management
Upper-Level GPA: 90.69/100 (Ranked 2/52)

RESEARCH INTERESTS

Optimal design and operations of modern service systems, queuing control, data-driven decision making
Cardiac arrest emergency response, voluntary/on-demand workforce management, online matching, drone delivery

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

[0] *Matching Impatient and Heterogeneous Demand and Supply while Learning*
In preparation with Amy R. Ward and Xun Zhang

[1] *Community Responder Crowdsourcing for Time-Critical Emergencies*
Liu, W., Sun, Q., Tang, L. & Ye, Z.
Under review at **Management Science**

[2] *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

[3] *Location-Allocation of Emergency Service Systems in Light Traffic: Application to Lift-Trap Rescue*
Wang, X., Liu, W., Tang, L. & Ye, Z.
Reject and resubmit at **Management Science**

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

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

TALKS

Community Responder Crowdsourcing for Time-Critical Medical Emergencies
INFORMS 2024 Annual Meeting, Seattle, USA   October 2024 (Scheduled)

Matching Impatient and Heterogeneous Demand and Supply while Learning
TTIC Summer Workshop on Data-Driven Decision Processes, Chicago, USA   August 2024 (Scheduled)
Reinforcement Learning for Stochastic Networks, Toulouse, France   June 2024

Expanding Service Capabilities Through an On-Demand Workforce
INFORMS 2023 Annual Meeting, Phonix, USA   October 2023

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

University of Florida   June - September, 2019
Dept. of Industrial & Systems Engineering
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