

# WEILIANG (LEON) LIU

Industrial Systems Engineering and Management, National University of Singapore, Singapore

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\*Homepage\*: weiliangliu-nus.github.io

## EDUCATION

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### National University of Singapore (NUS)

2020 – 2024 (Expected)

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

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Stochastic modeling, diffusion analysis, optimal control, dynamic programming, robust optimization

Modern service systems operations, smart emergency response for social good, control and learning of queuing systems

## COMPLETED PAPERS

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

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

Under review

**First Place**, INFORMS 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.

Reject and resubmit at **Management Science**

[5] *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

## WORK IN PROGRESS

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[6] *Efficient Community Responder Crowdsourcing for Time-Critical Emergencies*

In preparation with Timothy C.Y. Chan et al, 2023

## SELECTED AWARDS

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First Place, INFORMS SOLA Best Student Paper Competition

2023

— “Given biennially for student papers judged to be the best in the broad field of facility location”

Chinese Government Award for Outstanding Students Abroad

2021

— “The highest government award granted by the Chinese government to Chinese students overseas”

President's Graduate Fellowship — "Awarded to Ph.D. candidates who show exceptional promise or accomplishment in research"	2020 - Present
Hong Yi Scholarship (3,500 USD)	2019
Overseas Research Excellence Scholarship (1,000 USD)	2019

## RESEARCH EXPERIENCES

<b>University of Toronto</b> Visiting Graduate Student, Dept. of Mechanical & Industrial Engineering Supervisor: Timothy C. Y. Chan	August - December, 2023
<b>University of Florida</b> Undergraduate Research Intern, Dept. of Industrial & Systems Engineering Supervisor: Xu Sun (now at Miami Herbert Business School)	June - September, 2019

## CONFERENCE PRESENTATIONS

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

## TEACHING EXPERIENCE

IE4213/EE4802: Learning from Data (Undergraduate, 60+ students), NUS	Springs of 2021, 2022, 2023
IE5005: Data Analytics for Industrial Engineers (Master, 230+ students), NUS	Falls of 2021, 2022

## COMPUTER SKILLS

<b>Programming Language</b>	C++, Python
<b>Software</b>	Gurobi, MATLAB, LaTeX, Mathematica

## PERSONAL

<b>Languages</b>	English (fluent), Mandarin (native), Cantonese (native)
<b>Interests</b>	Ultimate frisbee, traveling

## REFERENCES

<b>Zhisheng Ye</b> Associate professor National University of Singapore yez@nus.edu.sg	<b>Xu Sun</b> Assistant professor Miami Herbert Business School xzs767@bus.miami.edu	<b>Loon Ching Tang</b> Professor National University of Singapore isetlc@nus.edu.sg
<b>Timothy C. Y. Chan</b> Professor University of Toronto tcy.chan@utoronto.ca		