

# WEILIANG (LEON) LIU

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

Email: [weiliangliu@u.nus.edu](mailto:weiliangliu@u.nus.edu)

\*Homepage\*: [weiliangliu-nus.github.io](https://weiliangliu-nus.github.io)

## EDUCATION

---

### 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

---

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

Service operations, healthcare operations, learning in queues

## COMPLETED PAPERS

---

[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

---

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

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

## RESEARCH EXPERIENCES

---

### University of Toronto

August - December, 2023

Visiting Graduate Student, Dept. of Mechanical & Industrial Engineering

Supervisor: Timothy C. Y. Chan

### University of Florida

June - September, 2019

Undergraduate Research Intern, Dept. of Industrial & Systems Engineering

Supervisor: Xu Sun (now at Miami Herbert Business School)

## 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

## SELECTED AWARDS

---

First Place, INFORMS SOLA Best Student Paper Competition — “Given biennially for student papers judged to be the best in the broad field of facility location”	2023
Chinese Government Award for Outstanding Students Abroad — “The highest government award granted by the Chinese government to Chinese students overseas”	2021
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

## 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

---

### **Zhisheng Ye**

Associate professor  
National University of Singapore  
yez@nus.edu.sg

### **Xu Sun**

Assistant professor  
Miami Herbert Business School  
xxs767@bus.miami.edu

### **Loon Ching Tang**

Professor  
National University of Singapore  
isetlc@nus.edu.sg

### **Timothy C. Y. Chan**

Professor  
University of Toronto  
tcy.chan@utoronto.ca