# Su Li

20 Edward Street, Toronto, Canada(+1)404-376-0512  $\diamond$ dclisu@tamu.edu

## ACADEMIC POSITIONS

University of Toronto, Toronto, CanadaJul 2024 - Jul 2025Postdoctoral Fellow, Department of Mechanical and Industrial EngineeringSupervisors: Dr. Vahid Sarhangian, Dr. Adam Diamant, and Dr. Andre Augusto CireProject: Approximate dynamic programming with applications in healthcareSupervisors in healthcare

## EDUCATION

Texas A&M University, College Station, Texas	Sep 2019 - May 2024
Doctor of Philosophy in Industrial Engineering	GPA: 4.00/4.00
Advisor: Dr. Hrayer Aprahamian	
<b>Georgia Institute of Technology</b> , Atlanta, Georgia Masters of Science in Industrial Engineering	Aug 2017 - Dec 2018 GPA: 3.60/4.00
The Hong Kong Polytechnic University, Hong Kong SAR	Sep 2013 - Jun 2017
Bachelors of Engineering in Industrial and System Engineering	GPA: 3.76/4.00 (First Class Honors)
Minor in Software Engineering	

# **RESEARCH INTERESTS**

- Combinatorial optimization, network, and graph analysis
- Markov decision processes and approximate dynamic programming
- Applications in healthcare decision-making

# PUBLICATIONS

- 1. Li, S., & Aprahamian, H. (2024). An optimization-based framework to minimize the spread of diseases in social networks with heterogeneous nodes. *IISE Transactions*, 56(2), 128-142.
- 2. Li, S., & Aprahamian, H. (2024). Quantifying the benefits of customized vaccination strategies: A network-based optimization approach. *Naval Research Logistics (NRL)*, 71(1), 64-86.
- Li, S., Aprahamian, H., Nouiehed, M., & El-Amine, H. (2024). An Optimization-Based Orderand-Cut Approach for Fair Clustering of Data Sets. *INFORMS Journal on Data Science*, 3(2), 124-144.
- 4. Barth, J., Li, S., Aprahamian, H., & Gupta, D. (2024). Spatiotemporal vaccine allocation policies for epidemics with behavioral feedback dynamics. *Naval Research Logistics (NRL)*, 71(1), 109-139.

# SUBMITTED PAPERS/WORKING PAPERS

- 1. Li, S., Aprahamian, H. & Chatterjee, S. (2024). A Convex Relaxation-Based Spatial Branching Approach for Optimal Robust Group Testing Designs under Prevalence Rate and Dilution Behavior Uncertainty. *Third round revision at INFORMS Journal on Computing*.
- 2. Li, S., Lin, J., & Aprahamian, H. (2024). An Integrated Strategy for Controlling Infectious Disease Outbreaks: Social Distancing, Mass Screening, and Vaccine Distribution. *Working paper*.
- 3. Lin, J., Li, S., & Aprahamian, H. (2024). A Multi-period Mass Screening Framework for the Optimal Control of Infectious Disease Outbreaks. *Working paper*.

### HONORS AND AWARDS

Outstanding Doctor of Philosophy in Industrial Engineering Student, Texas A&M University, 2023 Department Entry Scholarship, Texas A&M University, 2019 Dean's Honors List of Faculty of Engineering, The Hong Kong Polytechnic University, 2013-2017 Commercial Radio 50th Anniversary Scholarship, 2016 Department Entry Scholarship, The Hong Kong Polytechnic University, 2013

## CONFERENCE PRESENTATIONS

- INFORMS Annual Meeting 2022, Indianapolis, Indiana.
- INFORMS Annual Meeting 2023, Phoenix, Arizona.
- ISMP 2024, Montréal, Canada.
- INFORMS Annual Meeting 2024, Seattle, Washington.
- INFORMS Computing Society Conference 2025, Toronto, Canada.

### ACADEMIC SERVICE

### **Conference Session Chair**

- Breaking the Chain: Using OR to Control Infectious Outbreaks, INFORMS Annual Meeting 2023.
- Strengthening Healthcare Systems for Preparedness, INFORMS Annual Meeting 2024.

#### Journal Peer Reviewer

INFORMS Journal on Data Science/Health Care Management Science/INFOR: Information Systems and Operational Research/Journal of Supercomputing

# **RESEARCH/TEACHING EXPERIENCE**

Teaching Assistant	
Texas A&M University, College Station, Texas	May 2022 - Dec 2023
Courses:	
ISEN $620/320$ Survey Optimization/Operation Research I	
ISEN 340 Operation Research II	
ISEN 302 Economic Analysis of Engineering Projects	
ISEN 230 Informatics for Industrial Engineers	
Research Assistant	
Texas A&M University, College Station, Texas	Sep 2019 - May 2024
Georgia Institute of Technology, Atlanta, Georgia	May 2018 - Dec 2018
- Conducted analysis of emergency call data, including time series analysis,	and optimized officers'

- working zones for the Atlanta Police Department under the supervision of Dr. Yao Xie.
- Developed and implemented the Just-In-Sequence (JIS) algorithm and designed the user interface for layout software under the supervision of Dr. Benoit Montreuil.

### SKILLS

Front-end Web Development: HTML, CSS, PHP, JavaScript, jQuery, SQL.
Optimization Software: Gurobi, LINGO, AMPL, Excel Solver.
Programming Techniques: Python, MATLAB, R, C, C++, Java, VBA.
Drawing Software: Solidworks, AutoCAD, CorelDRAW.