SHUKAI LI

Northwestern University
shukaili2024@u.northwestern.edu
(August, 2023)

EDUCATION

Northwestern University, Evanston *2019 - Present*
PhD in Operations Research
Dept. of Industrial Engineering & Management Science

Northwestern University, Evanston *2020*
Master of Science, Industrial Engineering & Management Science

Peking University, Beijing *2018*
Bachelor of Science, Math
Bachelor of Art, Medicine

RESEARCH INTERESTS

Applications	Supply chain management, with an emphasis on healthcare and retail industries
Methodology	Stochastic model analysis, reinforcement learning, optimization

PUBLICATIONS & WORKING PAPERS

Theory of Markov Chain Finite Approximation:

S Li, S Mehrotra. Part III, Application: Optimizing equitable resource allocation in parallel any-scale queues with service abandonment and its application to liver transplant. Under review at *Operations Research*.

- Finalist, INFORMS IBM Best Student Paper Award 2023.

S Li, S Mehrotra. Part II, Theory: A new finite approximation method for evaluating steady-state performance of a continuous-state Markov chain with an application to queues with customer abandonment. Under review at *Mathematics of Operations Research*.

S Li, S Mehrotra. (2022). Part I, Foundation: Numerical methods for integral equations of the second kind with non-smooth solutions of bounded variation. *SIAM Journal on Numerical Analysis*.

Online Learning & Revenue Management:

V Goyal, **S Li (alphabetical order)**, S Mehrotra. Learning to price under competition for multinomial logit demand. Under review at *Operations Research*.

- Nemhauser Prize for Best Student Paper, Northwestern University, 2023.

S Li, Q Luo, Z Huang, C Shi. Online learning for constrained assortment optimization under Markov chain choice model. Major revision at *Operations Research*.

Health Economics & Transportation:

Z Zafari, **S Li**, MN Eakin, M Bellanger, RM Reed. (2021). Projecting long-term health and economic burden of COPD in the United States. *Chest*.

S Li, Q Luo, R Hampshire. (2021). Optimizing large on-demand transportation systems through stochastic conic programming. *European Journal of Operational Research*.

Q Luo, **S Li**, R Hampshire. (2021). Design of multimodal network for mobility-as-a-service: first/last mile free floating bikes and on-demand transit. *EURO Journal on Transportation and Logistics*.

S Li, B Jiao, Z Zafari, P Muennig. (2019). Optimising the cost-effectiveness of speed limit enforcement cameras. *Injury Prevention.*

- Cited by the New York Governor for NYC's new speed camera policy.

S Li, D Zhang, Z Chen. (2019). Impact of the new cooperative medical scheme on individual healthcare utilization and expenditure. *The Chinese Economy.*

S Li, Q Zhang, P Muennig. (2018). Subjective assessments of income and social class on health and survival: An enigma. *SSM-Population Health.*

D Zhang, X Pan, **S Li**, D Liang, Z. Hou, Y Li, L Shi. (2018). Impact of the national essential public health services policy on hypertension control in China. *American Journal of Hypertension.*

Z Zafari, B Jiao, B Will, **S Li**, PA Muennig. (2018). The trade-off between optimizing flight patterns and human health: a case study of aircraft noise in queens, NY, USA. *International Journal of Environmental Research and Public Health.*

B Jiao, Z Zafari, B Will, K Ruggeri, **S Li**, P Muennig. (2017). The cost-effectiveness of lowering permissible noise levels around US airports. *International Journal of Environmental Research and Public Health.*

AWARDS

Finalist, INFORMS IBM Best Student Paper Award, 2023.

Nemhauser Prize for Best Student Paper, Northwestern University, 2023.

Walter P. Murphy Fellowship, Northwestern University, 2019.

Tan Siu Lin Exchange Program Fund Fellowship, Peking University, 2017.

PROFESSIONAL SERVICES

Social Committee Member, Northwestern University Society of Women Engineers Executive Board, 2023 - 2024.

Board Member, INFORMS Student Chapter at Northwestern University, 2023 - 2024.

Session Chair, INFORMS Healthcare Conference 2023.

Reviewer for Management Science Reproducibility Project: member of "consortium co-authorship" and reviewer for replication of accepted papers.

Reviewer for journals: Management Science, Naval Research Logistics.

CONFERENCE PRESENTATIONS

INFORMS Annual Meeting 2023. Learning to price under competition for multinomial logit demand.

INFORMS Annual Meeting 2023. Optimizing equitable resource allocation in parallel any-scale queues with service abandonment and its application to liver transplant.

INFORMS Revenue Management & Pricing Conference 2023: Learning to price under competition for multinomial logit demand.

INFORMS Annual Meeting 2022: Optimizing resource allocation in parallel any-scale queues: a problem motivated from modeling the national organ transplant system and improving equity of waiting time.

INFORMS Annual Meeting 2021: Approximate solutions to distribution integral equations in a generalized Fredholm form.

WORK EXPERIENCE

Full-time:

The University of Hong Kong, Hong Kong *Sept. 2018 - Jul. 2019*
Teaching Assistant
I worked as a teaching assistant for the business analytics master program at the business school. Courses include machine learning, big data, time series analysis, operations management, python programming, and financial engineering.

City University of Hong Kong, Hong Kong *Jan. 2018 - Jul. 2018*
Research Assistant

Internship:

University of Michigan, Ann Arbor *Fall 2017*
Research Assistant

Columbia University, New York City *Winter 2016, Summer 2017*
Research Assistant

Shougang Hospital of Peking University, Beijing *Spring 2017*
Medical Intern

Stanford University, Palo Alto *Summer 2016*
Research Assistant