

Guang CHENG

Institute of Operations Research and Analytics
National University of Singapore
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EDUCATION

National University of Singapore, Singapore *2020 – Present*
Ph.D. Candidate in Operations Research and Analytics
Advisors: Joel Goh, Sıdıka Tunç Candoğan

University of Science and Technology of China, China *2016 – 2019*
M.S. in Management Science and Engineering

Jiangnan University, China *2012 – 2016*
B.S. in Industrial Engineering

RESEARCH INTERESTS

Topics: Data-Driven Medical Decision-Making and Healthcare Operations; Behavioral Interventions in Healthcare

Methodologies: Econometric Analysis; Field Experiments; Data Analytics; Causal Inference

PUBLISHED WORK

- Guang Cheng, Jingui Xie, Zhichao Zheng, Haidong Luo, Oon-Cheong Ooi. Extubation Decisions with Predictive Information for Mechanically Ventilated Patients in the ICU. *Management Science*. Article in Advance.
- Stephanie Q. Ko, Guang Cheng, Tze Yeong Teng, Joel Goh. Home-First or Hospital-First? A Propensity Score-Weighted Retrospective Cohort Study. *Journal of the American Medical Directors Association*, 2024, 25(9):105154.
- Guang Cheng, Sarah Y. Gao, Yancheng Yuan, Chenxiao Zhang, Zhichao Zheng. On the Test Accuracy and Effective Control of the COVID-19 Pandemic: A Case Study in Singapore. *INFORMS Journal on Applied Analytics*, 2022, 52(6):524-538.
- Jingui Xie, Guang Cheng, Zhichao Zheng, Haidong Luo, Oon-Cheong Ooi. To Extubate or Not to Extubate: Risk Factors for Extubation Failure and Deterioration with Further Mechanical Ventilation. *Journal of Cardiac Surgery*, 2019, 34(10): 1004–1011.

WORKING PAPERS

- Guang Cheng, Sıdıka Tunç Candoğan, Joel Goh, Bilal Gokpinar. The Role of Contextual Information in Customer Reviews: A Field Experiment on a Mental Health Platform. **Major Revision** at *Management Science*.
 - Finalist, 2025 POMS PITM Best Student Paper Competition
- Guang Cheng, Joshua M. Hagood, Ryan L. Melvin, Adam F. Kohutnicki, Mitchell H. Tsai, Joel Goh. The Impact of Introducing Release Times for Operating Rooms on Surgery Waiting Times.

WORK-IN-PROGRESS

7. Understanding Hospital-at-Home Adoption: A Game-Theoretic Analysis (with Eryn J. He, Joel Goh and Sergei Savin)
8. Reducing No-Shows and Encouraging Proactive Cancellations in Outpatient Clinics: A Behavioral Nudge Intervention Study (with Hong Ming Tan and Joel Goh)
9. Keep the Progress Going: Using Behavioral Nudges to Encourage Continued Mental Health Support (with Yueyang Zhong and Sıdıka Tunç Candoğan)

TEACHING EXPERIENCE

Instructor

- DAO1704 Decision Analytics using Spreadsheets (BBA) Spring 2023
 - Class size: 35 students
 - Teaching evaluation: 4.2/5 (department average: 4.0)
 - Delivered core analytics course for business undergraduates, integrating real-world healthcare and business applications.

Guest Lecturer

- DBA4811 Analytics for Consulting (BBA) Spring 2025
 - Conducted two lectures on machine learning techniques and their applications in operations and analytics.
- PHM5014 Causal Inference in Precision Medicine (MScPHM) Fall 2024
 - Presented the Safe Space experiment to illustrate real-world applications of causal inference, demonstrating how empirical methods inform policy and operational decisions in real business.

Teaching Assistant

- DBA4811 Analytics for Consulting (BBA) Spring 2025
- DBA5103 Operations Research and Analytics (MSBA) Fall 2022
- IE4214 Revenue Management and Pricing Analytics (BEng) Spring 2022

CONFERENCE PRESENTATIONS

The Role of Contextual Information in Customer Reviews: A Field Experiment on a Mental Health Platform

- POMS Annual Conference, Atlanta, Georgia, USA (scheduled) May 2025
- Workshop on Empirical Operations Management, Hong Kong, China Jan 2025
- The 15th POMS-HK International Conference, Hong Kong, China Jan 2025
- INFORMS Annual Meeting, Seattle, Washington, USA Oct 2024
- The 16th International Annual Conference of CSAMSE, Xiamen, China Jul 2024

The Impact of Introducing Release Policy for Operating Rooms on Surgery Waiting Times

- INFORMS Annual Meeting, Phoenix, Arizona, USA Oct 2023
- POMS Annual Conference, Orlando, Florida, USA May 2023
- The 13th POMS-HK International Conference, Hong Kong, China Jan 2023
- INFORMS Annual Meeting, Indianapolis, Indiana, USA Oct 2022
- POMS Annual Conference, Orlando, Florida, USA (Online) Apr 2022

Extubation Decisions with Predictive Information for Mechanically Ventilated Patients in ICU

- POMS Annual Conference, Orlando, Florida, USA (Online) Apr 2022
- The 13th International Annual Conference of CSAMSE, Shanghai, China (Online) Jul 2021
- The 10th POMS-HK International Conference, Hong Kong, China Jan 2019

PROFESSIONAL EXPERIENCE

- Visiting Scholar, Virginia Tech, Blacksburg, Virginia, USA, Aug 2023 – Dec 2023
- Research Assistant, Singapore Management University, Singapore, Jul 2019 – Jun 2020

SERVICES AND ACTIVITIES

Conference Session Chair

- INFORMS Annual Meeting Oct 2025
- INFORMS International Meeting Jul 2025
- POMS-HK International Conference Jan 2025
- POMS Annual Conference May 2023
- Analytics for X Conference Sept 2022
- POMS Annual Conference Apr 2022

Organizing Committee

- Analytics for X Conference Sept 2021

HONORS AND AWARDS

- Finalist, POMS PITM Best Student Paper Competition 2025
- Teaching Excellence for Graduate Instructor 2023
- NUS Research Scholarship, National University of Singapore 2020–2024
- JData Data Mining Competition Top 10, JD.com, inc. 2017
- National Scholarship, Ministry of Education of People's Republic of China 2015

SKILLS

Programming & Packages: Python, R, MATLAB, SQL, Gurobi

Languages: English (Fluent), Mandarin (Native)