

# Guang CHENG

Institute of Operations Research and Analytics  
National University of Singapore  
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*Last Updated in February 2025*

## EDUCATION

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**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

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

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

## PUBLISHED WORK

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- 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

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- 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

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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

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### 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

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### *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

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

## SERVICES AND ACTIVITIES

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### 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

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

## SKILLS

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

**Languages:** English (Fluent), Mandarin (Native)