Cong Yang

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EDUCATION

University of British Columbia

Ph.D., Candidate in Management Science (Expected 2026)   *Vancouver, BC*

- Advisors: Woonghee Tim Huh, Steven M. Shechter, Hao Zhang
- Dissertation Area: Decision Making under Uncertainty

University of California, Berkeley

Master of Science, Industrial Engineering and Operations Research (2019)   *Berkeley, CA*

University of California, Berkeley

Bachelor of Science, Industrial Engineering and Operations Research (2018)   *Berkeley, CA*

RESEARCH INTERESTS

Partially Observable Markov Dynamic Programming, Inventory Control, Healthcare Operations Research, Stochastic Optimization, Learning Algorithm.

PAPERS (* INDICATES FIRST OR CO-FIRST AUTHOR. IF INDICATES THE 5-YEAR OR LATEST IMPACT FACTOR FOR MEDICAL JOURNALS.)

Partially Observable Markov Dynamic Programming:

[1]   Optimal Control of a Partially Observable Markov Deterioration Process (link)
Cong Yang* and Hao Zhang
Major Revision in ***Management Science***

Optimization and Learning:

[2]   Optimal Policy for Inventory Management with Periodic and Controlled Resets (link)
Yoon Lee, Yonatan Mintz, Anil Aswani, Zuo-Jun Max Shen, and **Cong Yang**
Manufacturing & Service Operations Management, 2025

[3]   A Nonparametric Learning Algorithm for a Stochastic Multi-echelon Inventory Problem (link)
Cong Yang* and Woonghee Tim Huh
Production and Operations Management, 2024

[4]   Optimal Control for Multi-Product Additive Manufacturing Systems
Harry Zhang, **Cong Yang***, Woonghee Tim Huh, Sergii Kravchenko.
Manuscript in preparation.

Healthcare Operations Research:

[5]   Feasibility of reidentifying individuals in large national physical activity data sets from which protected health information has been removed with use of machine learning (link)
Liangyuan Na, **Cong Yang***, Chi-Cheng Lo, et al
JAMA Network Open (IF: 10.5), 2018

   ⋆ Finalists and Honorable Mention at INFORMS Operations Research Prize, 2019

[6]   The Impact of Organ Blood Type Conversion on Kidney Paired Donation: A Simulation and Optimization Study
Cong Yang*, Woonghee Tim Huh, Steven Shechter, James Lan
To be submitted to ***American Journal of Transplanation*** (IF: 8.2)

Awards

The University of British Columbia Affiliated Fellowships Doctoral Program	
This fellowship is awarded annually to approximately 50 doctoral students pursuing full-time research-based degrees at the university of British Columbia in recognition of their outstanding academic record, exceptional background and promising future.	2023
Shelby L. Brumelle Memorial Graduate Scholarship Competition, UBC	2023 & 2025
President's Academic Excellence Initiative PhD Award, UBC	2021-2025
Dean Earle D MacPhee Memorial Graduate Scholarship, UBC	2021-2025
International Tuition Award, UBC	2021-2025
Finalists & Honorable Mention at INFORMS Undergraduate Student Operations Research Prize	2019

Teaching Experience and Research Mentorship

Introduction to Quantitative Decision Making, UBC, COMM 190
Undergraduate, 40-50 students
Instructor, Summer 2025

Decision Analysis Under Uncertainty, UBC, BACS 517
Graduate (Master of Business Analytics), 80-100 students
Teaching Assistant, Winter 2022-2025

Analyzing and Modelling, UBC, BACS 506
Graduate (Master of Business Analytics), 80-100 students
Teaching Assistant, Winter 2022-2025

Introduction to Quantitative Decision Making, UBC, COMM 190 (COMM 290)
Undergraduate, 800-1000 students
Teaching Assistant, Winter 2021-2025

Process Fundamentals, UBC, BACS 500
Graduate (Master of Business Analytics), 30-50 students
Teaching Assistant, Winter 2022

Optimization Analytics, UC Berkeley, IEOR 240
Graduate (Master of Engineering), 80-100 students
Graduate Student Instructor, Fall 2019

Introduction to Machine Learning and Data Analytics, UC Berkeley, IEOR 142
Undergraduate, 80-100 students
Graduate Student Instructor, Fall 2019

Introduction to Statistics, UC Berkeley, STAT 2
Undergraduate, 30-50 students
Graduate Student Instructor, Summer 2019

Service and Outreach

Reviewer: Operations Research

Talks

Optimal Control of a Partially Observable Markov Deterioration Process
- INFORMS 2024 Annual Meeting, Seattle, WA, United States

A Nonparametric Learning Algorithm for a Stochastic Multi-echelon Inventory Problem
- INFORMS 2023 Annual Meeting, Phoenix, AZ, United States

The Impact of Organ Blood Type Conversion on Kidney Paired Donation: A Simulation and Optimization Study
- INFORMS 2023 Healthcare Conference, Toronto, ON, Canada

Feasibility of reidentifying individuals in large national physical activity data sets from which protected health information has been removed with use of machine learning
- INFORMS 2019 Annual Meeting, Seattle, WA, United States
- INFORMS 2019 Healthcare Conference, Boston, MA, United States

Skills

Languages | *Fluent:* English; *Native:* Mandarin, Cantonese

Programming | *Proficient:* Python, Matlab, R; *Prior experience:* SQL, Julia, C++

Software Tools | TensorFlow, Gurobi, CAD

References

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