Cong Yang

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Education

University of British Columbia
Ph.D., Candidate in Management Science — *Vancouver, BC*

- Committee: Woonghee Tim Huh (Chair), Steven M. Shechter, Hao Zhang (Co-chair)
- Dissertation Area: Decision Making under Uncertainty

University of California, Berkeley
Master of Science, Industrial Engineering and Operations Research — *Berkeley, CA*

University of California, Berkeley
Bachelor of Science, Industrial Engineering and Operations Research — *Berkeley, CA*

Research Interests

Partially Observable Markov Decision Process, 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 Decision Process:

[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

COMM 190: Introduction to Quantitative Decision Making (Undergraduate), UBC
Instructor, Summer 2025

IEOR 240: Optimization Analytics (Master of Engineering), UC Berkeley
Graduate Student Instructor, Fall 2019

IEOR 142: Introduction to Machine Learning and Data Analytics (Undergraduate), UC Berkeley
Graduate Student Instructor, Fall 2019

STAT 2: Introduction to Statistics (Undergraduate), UC Berkeley
Graduate Student Instructor, Summer 2019

BAMS 517: Decision Analysis Under Uncertainty (Master of Business Analytics), UBC
Teaching Assistant, Winter 2022-2025

BABS 506: Analyzing and Modelling Uncertainty (Master of Business Analytics), UBC
Teaching Assistant, Winter 2022-2025

BAMS 523: Managerial Decisions Modelling and Analytics (Master of Business Analytics), UBC
Teaching Assistant, Winter 2025

BAMS 500: Process Fundamentals (Master of Business Analytics), UBC
Teaching Assistant, Winter 2022

COMM 190: Introduction to Quantitative Decision Making (Undergraduate), UBC
Teaching Assistant, Winter 2021-2025

Service and Outreach

Reviewer: Operations Research

Talks

Exact Solution to a Machine Maintenance Problem with Multiple Unobservable States
- 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 | Python, Matlab, R, SQL, Julia, C++

Software Tools | TensorFlow, Gurobi, CAD SolidWorks

References

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