Huaiyang Zhong

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Grado Department of Industrial and Systems Engineering
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Expertise

Empirical Operations Management, Sequential Decision Making

Education

09/2016 - 09/2020	Ph.D., Management Science and Engineering, Stanford University
	Supervisor: Margaret Brandeau
09/2014 - 09/2016	M.S., Management Science and Engineering, Stanford University
05/2010 - 05/2014	B.Eng., Industrial and Systems Engineering, National University of Singapore

Honors and Awards

Runner up, INFORMS Decision Analysis Society Best Student Paper Award, 2019
Doctoral Fellowship, Stanford University Department of Management Science and Engineering, 2017 - 2020
Third Prize, Citadel Datathon, Correlation One, 2018
First Prize, Syngenta Crop Challenge, INFORMS, 2016
First Class Honors, National University of Singapore, 2014
Dean's List, National University of Singapore, 2010–2014

Research Papers

* *Indicates equal contribution*
† *Student*
Operations Research and Management Science Related Papers:

[1] Li X*, **Zhong H***, Brandeau ML. (2021). Quantile Markov decision processes. *Operations Research*, 70(3):1428-1447.

- Runner-up for 2019 INFORMS Decision Analysis Society Best Student Paper Award

[2] **Zhong H**, Wang G, Dai T. (2023) Wheels on the Bus: Impact of vaccine rollouts on demand for public transportation. Under first round of revision at *Production and Operations Management*.

Healthcare Application Papers:

[1] **Zhong H**, Li X, Ermon S, Lobel D, Brandeau ML. (2018). Hierarchical modeling of seed variety yields and decision making for future planting plans. *Environment, Systems and Decisions*, 28(4), 458-470.

- Winner of 2015 INFORMS Syngenta Crop Challenge

[2] **Zhong H**, Arjmand IK, Brandeau ML, Bendavid E. (2019). Clinical outcomes and cost-effectiveness of treating depression in HIV-infected populations in sub-Saharan Africa: A model-based analysis. *AIDS Care*, 20, 1-7.

- Nominated for Society of Medical Decision Making Lee B. Lusted Student Poster Award

[3] Adee M, Zhuo Y, Zhan T, Chen Q, Toumi A, Ayer T, Nwankwo C, **Zhong H**, Puenpatom A, Chhatwal, J. (2021). A tool to inform Hepatitis C elimination: A case for Hepatitis C elimination in China. *Clinical Liver Disease*, 17(3), 99.

[4] Adee M, Zhuo Y, **Zhong H**, Zhan T, Aggarwal R, Shilton S, Chhatwal J. (2021) Cost-effectiveness of Hepatitis C testing pathways in Georgia using Hep C Testing Calculator. *Nature Scientific Reports*, 11, 21382

[5] Adee M, **Zhong H**, Reipold E, Zhuo Y, Shilton S , Chhatwal J. (2021) Cost-effectiveness of a core-antigen based rapid diagnostic test for hepatitis C. *Value in Health*, 25(7), 1107-1115.

[6] **Zhong H**, Brandeau ML, Yazdi G , Wang J, Nolen S, Hagan L, Thompson W, Assoumou S, Linas B, Salomon J. (2021). Metamodeling for policy simulations with multivariate outcomes. *Medical Decision Making*, 42(7), 872-884.

[7] Alec A, **Zhong H**, Hiebert L, Zhuo Y, Adee M, Paraschiv A, Stratulat S, Ward J, Chhatwal J. (2023). Hepatitis C elimination in Moldova is feasible and cost-saving: A modeling study. *The Journal of Infectious Disease*, 228(13), 189-197.

[8] **Zhong H**, Aaron A, Hiebert L, Serumondo J, Zhuo Y, Adee M, Gallican NR, Ward J, Chhatwal, J. (2024). Hepatitis C elimination in Rwanda: Progress, feasibility, and economic Evaluation. *Value in Health*, 27(7):918-925

Grant

[1] +Policy Research Fellowship, Virginia Tech
Title: Pain and Risk Assessment for Aging Rural Populations: Implications for Clinical Practice and Health Policy.
Awarded Amount: $9,998; Time: 2023-10 to 2024-06

[2] Alzheimer's and Related Diseases Research Award Fund, Virginia Center on Aging
Title: Developing Statitiscal Analysis for Cognitive Impairment and Chronic Pain Interactions: A Preliminary Step Towards Integrated Care
Awarded Amount: $49,996; Time: 2024-07 to 2024-06

Conference Presentations

[1] Clinical Outcomes and Cost-Effectiveness of Treating Depression in HIV-Infected Populations in Sub-Saharan Africa: A Model-Based Analysis. INFORMS Annual Meeting, Nashville, 2016

[2] Health Outcomes and Cost-Effectiveness of Treating Depression in HIV-Infected Populations in Sub-Saharan Africa. Society of Medical Decison Making Annual Conference, Vancouver, 2016

[3] Hierarchical Modeling of Seed Variety Yields and Decision Making for Future Planting Plans. INFORMS Annual Meeting, Nashville, 2016

[4] Hierarchical Modeling of Seed Variety Yields and Decision Making for Future Planting Plans. INFORMS Conference on Business Analytics and Operations Research, Orlando, 2016

[5] A Treatment Model for Choosing Optimal ART Initiation Time. INFORMS Annual Meeting, Houston, 2017

[6] Quantile Markov Decision Processes. INFORMS Annual Meeting, Houston, 2017

[7] Optimal Antiretroviral Monitoring Under Different Economic Conditions. INFORMS Annual Meeting, Phoenix, 2018

[8] Monitoring HIV Treatment Under Different Resource Settings. INFORMS Annual Meeting, Seattle, 2019

[9] Metamodeling for Policy Simulations with Multivariate Outcomes, Society of Medical Decision Making Annual Conference, Portland, 2019

[10] A Web Tool for Assessing Screening and Treatment Strategies in Correctional Facilities. National Hepatitis Corrections Network Webinar, 2020

[11] Cost-effectiveness of a Core Antigen Based Rapid Diagnostic Test for Hepatitis C, Society of Medical Decision Making Annual Meeting, Virtual, 2021

[12] Wheels on the Bus: Impact of Vaccine Rollouts on Demand for Public Transportation, INFORMS Annual Conference, Anaheim, 2021

[13] A Tool To Inform Global Hepatitis C Elimination In Developing Countries, INFORMS Annual Conference, Anaheim, 2021

[14] Towards Hepatitis C Elimination in Rwanda: Strategies for the Last Mile, INFORMS Annual Conference, Indianapolis, 2022

[15] Wheels on the Bus: Impact of Vaccine Rollouts on Demand for Public Transportation, POMS Annual Conference, Orlando, 2023

[16] Wheels on the Bus: Impact of Vaccine Rollouts on Demand for Public Transportation, INFORMS Annual Conference, Phoenix, 2023

[17] The "Netflix Model": A New Payment Model for Asymptomatic Disease Management , POMS Annual Conference, Minneapolis, 2024

[18] The "Netflix Model": A New Payment Model for Asymptomatic Disease Management , EURO Operations Research Conference, Copenhagen, 2024

Scholar Service

- Active reviewer for Manufacturing & Service Operations Management, Production and Operations Management, IISE Healthcare Systems Engineering, Healthcare Management Science, Addiction, American Journal of Addiction, Lancet Regional Health, Medical Decision Making, Medical Decision Making: Policy and Practice, Journal of Acquired Immune Deficiency Syndrome, Liver International, Frontiers in Public Health, Journal of Comparative Effectiveness Research, International Journal of Automation and Control, Symmetry.
- Session Chairs for INFORMS Annual Conference from 2017, 2018, 2019, 2024

Invited Talk

- Healthcare Decision-Making: From Practice to Theory
  - Invited by Virginia Tech, University of Massachusetts (Amherst), George Mason University, . Queen's University, Hong Kong University, Fudan University
- Medical Decision-Making: A Case Study of Hepatitis C Elimination
  - Invited by Mississippi State University, Virginia Tech

Teaching Experience

01/2023–05/2023	Instructor: ISE 5424 : Random Process (Virginia Tech), Teaching Evaluation: 5.8/6
04/2019–06/2019	Instructor: MS&E 190 : Methods and Models for Policy and Strategy Analysis (Stanford University)
06/2017–06/2018	Teaching Assistant: MS&E 111: Introduction to Optimization (Stanford University)
09/2016–12/2016	Teaching Assistant: MS&E 207: Interactive Management Science (Stanford University)
06/2015–08/2015	Teaching Assistant: MS&E 244: Economic Growth and Development (Stanford University)
08/2011–12/2011	Teaching Assistant: CS1020E: Programming Methodology and Data Structure (National University of Singapore)

References

[1] Margaret L. Brandeau, Coleman F. Fung Professor in the School of Engineering and Professor (by Courtesy) of Medicine, Department of Management Science and Engineering, Stanford University, brandeau@stanford.edu, (650) 725-1623

[2] Tinglong Dai, Professor of Operations Management and Business Analytics at the Johns Hopkins Carey Business School. dai@jhu.edu, (410) 234-9415

[3] Jagpreet Chhatwal, Associate Professor in Harvard Medical School and Massachusett General Hospital, jagchhatwal@mgh.harvard.edu,(617) 724-4487