

# Huaiyang Zhong

Date Prepared: 06/01/2023

Assistant Professor

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Google Scholar: <https://scholar.google.com/citations?user=w6OvTsAAAAJhl=en>

## Expertise

Data Analytics, Optimization, Empirical Operations Management

## 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*

Operations Research and Management Related Papers:

[1] Li X\*, **Zhong H\***, Brandeau ML. (2021). Quantile Markov decision processes. *Operations Research*, forthcoming.

- 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 review at *Manufacturing & Service Operations Management*.

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. *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*. Jun 23:272989X221105079.
- Closely working with the Center for Disease Control and Prevention to develop a web-based tool to help correctional facilities understand the clinical outcomes and budgetary impact of hepatitis C screening and treatment program.
  - Collaborating with Indiana Department of Health to perform a pilot study in correctional facilities
- [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. Accepted at *Journal of Infectious Disease*.
- [8] **Zhong H**, Aaron A, Hiebert L, Serumondo J, Zhuo Y, Adee M, Gallican NR, Ward J, Chhatwal, J. (2023). Hepatitis C Elimination in Rwanda: Progress, Feasibility, and Economic Evaluation. Working paper
- [9] Chhatwal J, Aaron A, **Zhong H**, Sood N, Irvin R, Alter HJ, Zhuo Y, Sharfstein JM, Ward J. (2023). Projected Health Benefits and Health Care Savings from the United States National Hepatitis C Elimination Initiative. Working paper
- Closely working with Executive Office of the President in the White House to identify strategies to eliminate hepatitis C in the United States
  - Providing budgetary estimates and numerical evidence support to the Congressional Budget Office for planning the hepatitis C elimination budget

## 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 Decision 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

### **Scholar Service**

- Active reviewer for Healthcare Management Science, Addiction, American Journal of Addiction, Lancet Regional Health, Medical Decision Making, 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 Chair for INFORMS Annual Conference from 2017 to 2019.

### **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

### **Teaching Experience**

01/2023–05/2023	Instructor: ISE 5424 : Random Process (Virginia Tech)
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] Eileen M. Van Aken, Department Head and Professor, Grado Department of Industrial and Systems Engineering, Virginia Tech, [evanaken@vt.edu](mailto:evanaken@vt.edu), 540-231-6656
- [2] 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](mailto:brandeau@stanford.edu), (650) 725-1623
- [3] Tinglong Dai, Professor of Operations Management and Business Analytics at the Johns Hopkins Carey Business School. [dai@jhu.edu](mailto:dai@jhu.edu), (410) 234-9415