HUMMY SONG

The Wharton School University of Pennsylvania Jon M. Huntsman Hall, Suite 500 3730 Walnut Street, Philadelphia, PA 19104 Phone: (215) 573-5046 Fax: (215) 898-3664 hummy@wharton.upenn.edu oid.wharton.upenn.edu/profile/hummy

ACADEMIC POSITIONS & AFFILIATIONS

2022–2024 2024– 2023– 2016– 2021–2022	The Wharton School, University of Pennsylvania Associate Professor of Operations, Information and Decisions Associate Professor of Health Care Management (secondary) Assistant Professor of Operations, Information and Decisions Assistant Professor of Health Care Management (secondary) Research Associate, Population Aging Research Center Faculty Affiliate, Analytics at Wharton Senior Fellow, Leonard Davis Institute of Health Economics Claude Marion Endowed Faculty Scholar Lecturer of Operations, Information and Decisions	Philadelphia, PA		
2021–	Corporal Michael J. Crescenz VA Medical Center Research Associate (WOC)	Philadelphia, PA		
EDUCATION				
2017 2011 2008	Ph.D., Health Policy Management, Harvard University M.P.P., Harvard Kennedy School of Government A.B., <i>magna cum laude</i> , Harvard College	Cambridge, MA Cambridge, MA Cambridge, MA		

REFEREED PUBLICATIONS

*Authors listed alphabetically Practitioner coauthor

- 1. Song H, Armony M, Roels G. Queue Configurations and Operational Performance: An Interplay between Customer Ownership and Queue Length Awareness. *Manufacturing & Service Operations Management* (forthcoming).
- 2. *Lim JM, Song H, ^PYang JJ. 2024. The Spillover Effects of Capacity Pooling in Hospitals. *Management Science* (forthcoming).
 - 2nd Place, 2022 POMS College of Healthcare Operations Management Best Paper Competition
- 3. Candon M, Bergman A, Rose A, Song H, David G, Spetz J. 2023. The Relationship between Scope of Practice Laws for Task Delegation and Nurse Turnover in Home Health. *Journal of the American Medical Directors Association* 24(11): 1773-1778.E2.
- 4. *Bergman A, David G, Song H. 2023. "I Quit": Schedule Volatility as a Driver of Voluntary Employee Turnover. *Manufacturing & Service Operations Management* 25(4): 1416-1435.
 - <u>Knowledge@Wharton</u>, <u>LDI Blog</u>

5. PBressman E, PKohn R, Song H, PGreysen SR. 2023. Geographic Cohorting by Clinical Care Team: A Narrative Review. *Annals of Palliative Medicine* 12(4): 855-862.

- 6. *Kim S-H, Song H, Valentine M. 2023. Learning in Temporary Teams: The Varying Effects of Partner Exposure by Team Member Role. *Organization Science* 34(1): 433-455.
 - *Knowledge@Wharton*
- 7. Bergman A, Song H, David G, Spetz J, Candon M. 2022. The Role of Schedule Volatility in Home Health Nursing Turnover. *Medical Care Research and Review* 79(3): 382-393.
 - LDI Blog
- 8. Song H, Andreyeva E, David G. 2022. Time is the Wisest Counselor of All: The Value of Provider-Patient Engagement Length in Home Health Care. *Management Science* 68(1): 420-441.
 - Home Health Care News
- 9. PFriedman AB, PGervasi S, Song H, Bond AM, PChen AT, Bergman A, David G, PBailey JM, PBrooks R, PSmith-McLallen A. 2022. Telemedicine Catches On: Changes in the Utilization of Telemedicine Services During the Covid-19 Pandemic. *Am. Journal of Managed Care* 28(1): e1-e6.
 - LDI Blog
- 10. Song H, ^PMcKenna R, ^PChen AT, David G, ^PSmith-McLallen A. 2021. The Impact of the Non-essential Business Closure Policy on Covid-19 Infection Rates. *International Journal of Health Economics and Management* 21(4): 387-426.
 - <u>Reuters, Philadelphia Inquirer, WHYY, CBS News, Knowledge@Wharton, Wharton Business</u> <u>Daily, Philadelphia Inquirer</u>
- 11. *Armony M, Roels G, Song H. 2021. Capacity Choice Game in a Multi-Server Queue: Existence of a Nash Equilibrium. *Naval Research Logistics* 65(5): 663-678.
- 12. *Armony M, Roels G, Song H. 2021. Pooling Queues with Strategic Servers: The Effects of Customer Ownership. *Operations Research* 69(1): 13-29.
 - Wall Street Journal, Knowledge @ Wharton, INSEAD Knowledge
- 13. Song H, Bergman A, ^PChen AT, ^PEllis D, David G, ^PFriedman AB, Bond AM, ^PBailey JM, ^PBrooks R, ^PSmith-McLallen A. 2021. Disruptions in Preventive Care: Mammograms During the Covid-19 Pandemic. *Health Services Research* 56(1): 95-101.
 - Quartz, Science News, Knowledge@Wharton, LDI Blog
- 14. PKohn R, Harhay MO, Bayes B, Song H, PHalpern SD, PKerlin MP, PGreysen SR. 2021. Influence of Bedspacing on Outcomes of Hospitalised Medicine Service Patients: A Retrospective Cohort Study. *BMJ Quality & Safety* 30(2): 116-122.
- 15. Song H, Tucker AL, ^PGraue R, ^PMoravick S, ^PYang JJ. 2020. Capacity Pooling in Hospitals: The Hidden Consequences of Off-Service Placement. *Management Science* 66(9): 3825-3842.
 - Featured article in September 2020 issue.
 - Knowledge@Wharton, Management Science Blog
- 16. PKohn R, Harhay MO, PWeissman GE, PAnesi GL, Bayes B, Song H, PHalpern SD, PGreysen SR, PKerlin MP. 2020. The Association of Geographic Dispersion With Outcomes Among Hospitalized Pulmonary Service Patients. *Annals of the American Thoracic Society* 17(2): 249-252.

17. Song H, Tucker AL, ^PMurrell KL, ^PVinson DR. 2018. Closing the Productivity Gap: Improving Worker Productivity through Public Relative Performance Feedback and Validation of Best Practices. *Management Science* 64(6): 2628-2649.

- Finalist, 2019 Best OM Paper in *Management Science* Award
- Finalist, 2015 MSOM Student Paper Competition
- Hon. Mention, 2015 INFORMS Behavioral OM Section Best Working Paper Award
- 18. Song H, Ryan M, Tendulkar S, Fisher J, Martin J, Peters AS, ^PFrolkis JP, Rosenthal MB, ^PChien AT, Singer SJ. 2017. Team Dynamics, Clinical Work Satisfaction, and Patient Care Coordination Between Primary Care Providers. *Health Care Management Review* 42(1): 28-41.
 - 2nd Place, 2015 AOM Annual Meeting Health Care Management Division Best Paper Award
- 19. Song H, Tucker AL. 2016. Performance Improvement in Health Care Organizations. *Foundations and Trends in Technology, Information and Operations Management* 9(3-4): 153-309.
- 20. Song H, Tucker AL, ^PMurrell KL. 2015. The Diseconomies of Queue Pooling: An Empirical Investigation of Emergency Department Length of Stay. *Management Science* 61(12): 3032-3053.
 - 1st Place, 2018 M&SOM Service Management SIG Best Paper Award.
 - 1st Place, 2015 INFORMS Health Applications Society Best Student Paper Competition.
 - 1st Place, 2014 AcademyHealth Annual Research Meeting Organizational Behavior and Management Division's Best Abstract.
 - Wall Street Journal, Knowledge@Wharton, Wharton Magazine
- 21. Song H, ^PChien AT, Fisher J, Martin J, Peters AS, ^PHacker K, Rosenthal MB, Singer SJ. 2015. Development and Validation of the Primary Care Team Dynamics Survey. *Health Services Research* 50(3): 897-921.

ADDITIONAL PUBLICATIONS

*Authors listed alphabetically Practitioner coauthor

- 22. PGoerke M, PSkrzipale S, Song H, PZacherl C. 2024. Opportunities and Challenges of AI-based Resource Planning and Optimization in Hospitals. In V. Henke, G. Hülsken, H. Schneider, J. Varghese (Eds.), *Health Data Management: Key Factor for Successful Hospitals*. Springer Gabler, Wiesbaden.
- 23. *Kim S-H, Song H. How Digital Transformation Can Improve Hospitals' Operational Decisions. *Harvard Business Review online* January 18, 2022. https://hbr.org/2022/01/how-digital-transformation-can-improve-hospitals-operational-decisions.
 - <u>Becker's Hospital Review</u>, <u>Healthcare IT Today</u>, <u>Knowledge@Wharton</u>, <u>Wharton Business Daily</u>, <u>LDI News</u>
- 24. Song H, PEzaz G, PGreysen SR, PHalpern SD, PKohn R. How Hospitals Can Meet the Needs of Non-Covid Patients During the Pandemic. *Harvard Business Review online* July 14, 2020. https://hbr.org/2020/07/how-hospitals-can-meet-the-needs-of-non-covid-patients-during-the-pandemic.
 - Knowledge@Wharton, Wharton Business Daily, Penn Today
- 25. *Song H, Veeraraghavan S. 2018. Quality of Care: An Operations Perspective of Health Care Quality. In T. Dai and S. Tayur (Eds.), *Handbook of Healthcare Analytics: Theoretical Minimum for Conducting 21st Century Research on Healthcare Operations*. Wiley.

WORKING PAPERS

*Authors listed alphabetically Practitioner coauthor

- 26. Lekwijit S, Song H, Terwiesch C, ^PChaiyachati K. Multi-Channel Healthcare Operations: The Impact of Video Visits on the Usage of In-person Care.
- 27. *Jeon HH, Lucarelli C, ^PMazarati JB, ^PNgabo D, Song H. Last-mile Delivery in Health Care: Drone Delivery for Blood Products in Rwanda.
 - 2nd Place, 2023 INFORMS Public Sector OR Best Paper Competition
 - Finalist, 2023 INFORMS Health Applications Society Best Student Paper Competition
 - *Bloomberg*
- 28. Jeon HH, Kim S-H, Song H, PKim K, PCho S, PHong JH. Redesigning Shift Work to Incorporate Heterogeneous Worker Preferences.
- 29. Song H, Huckman RS. Cohort Turnover and Operational Performance: The July Phenomenon in Teaching Hospitals.
 - Finalist, 2015 POMS College of Healthcare Operations Management Best Paper Competition

AWARDS AND HONORS

Research

2nd Place, INFORMS Public Sector OR Best Paper Competition, 2023

Finalist, INFORMS Health Applications Society Best Student Paper Competition, 2023

Winner, POMS Early Career Research Accomplishments Award, 2022

2nd Place, POMS College of Healthcare Operations Management Best Paper Competition, 2022

Finalist, Best OM Paper in Management Science Award, 2019

1st Place, M&SOM Service Management SIG Best Paper Award, 2018

1st Place, INFORMS Health Applications Society Best Student Paper Competition, 2015

Finalist, MSOM Student Paper Competition, 2015

Hon. Mention, INFORMS Behavioral OM Section Best Working Paper Award, 2015 Finalist, POMS College of Healthcare Operations Management Best Paper Competition, 2015

2nd Place, AOM Annual Meeting Health Care Management Division Best Paper Award, 2015 1st Place, AcademyHealth Organizational Behavior and Management Division Best Abstract

Award, 2014

Thomas T. Hoopes Prize for outstanding undergraduate honors thesis, Harvard College, 2008

Teaching

Poets & Quants Top 50 Undergraduate Professors, 2022

Wharton Teaching Excellence Award, 2018, 2019, 2020, 2021, 2023

Goes Above and Beyond the Call of Duty Wharton MBA Core Teaching Award, 2018

Harvard University Derek Bok Center Certificate of Distinction in Teaching, 2010, 2013, 2014

Service

Distinguished Service Award, Management Science, 2020, 2021

Meritorious Service Award, Management Science, 2017

Meritorious Service Award, M&SOM, 2017, 2018, 2020, 2021, 2022

Joan P. Curhan Citizenship Award, Harvard PhD Program in Health Policy, 2015

FELLOWSHIPS AND GRANTS

Zicklin Center for Governance & Business Ethics (\$4,000), 2024–2026

Analytics at Wharton (\$10,000), 2024–2026

Global Initiatives Research Program (\$4,000), 2024–2026

Analytics at Wharton (\$15,000), 2023–2025

Mack Institute Research Fellowship (\$13,000), 2023–2024

Mack Institute Research Fellowship (\$4,000), 2023–2024

Fishman-Davidson Center Research Grant (\$10,000), 2022–2023

Wharton Dean's Research Fund (\$15,000), 2022-2024

VA HSR&D Investigator Initiated Research (IIR) (\$1,167,902), 2021–2025

Mack Institute Research Fellowship (\$10,000), 2021–2022

Wharton Dean's Research Fund (\$17,000), 2020–2022

Wharton-INSEAD Centre for Global Research and Education (€6,275), 2020–2021

Mack Institute Research Fellowship (\$10,000), 2020–2021

Mack Institute Research Fellowship (\$7,000), 2019–2021

Global Initiatives Research Program (\$15,000), 2019–2021

Wharton Dean's Research Fund (\$18,760), 2019–2021

Fishman-Davidson Center Research Grant (\$10,000), 2019–2020

Fishman-Davidson Center Research Grant (\$10,000), 2018–2019

Wharton Dean's Research Fund (\$12,000), 2017–2019

Harvard Business School Doctoral Fellowship, 2011–2016

Daniel A. Buckley Scholarship, Harvard University, 2011–2015

Daniel A. Buckley Scholarship, Harvard Kennedy School, 2009–2011

Cogan Family Fund for Humanitarian Studies (\$2,500), 2010

Harvard Kennedy School Summer Internship Fund (\$2,500), 2010

Charles Warren Center (\$2,230), 2007–2008

Center for American Political Studies (\$1,000), 2007–2008

Harvard College Research Program (\$2,000), 2007–2008

INVITED TALKS AT ACADEMIC INSTITUTIONS

2024 Deans' Distinguished Visiting Professorship Series, Perelman School of Medicine, University of Pennsylvania

Zicklin School of Business, Baruch College

CORS Healthcare Operations SIG

Miami Herbert Business School, University of Miami

Columbia Business School, Columbia University

2023 Stern School of Business, New York University

INSEAD

Johnson College of Business, Cornell University

College of Business, University of Texas at San Antonio

Institute for Mathematical and Statistical Innovation (IMSI), University of Chicago

School of Management, University College London

London Business School

MIT Sloan School of Management, MIT

2022 Lee Kong Chian School of Business, Singapore Management University

Gies College of Business, University of Illinois Urbana-Champaign

Center for Health Incentives & Behavioral Economics & Division of Health Policy, Perelman

School of Medicine, University of Pennsylvania

	Harvard Business School, Harvard University
	Columbia Business School, Columbia University
	Whiting School of Engineering, Johns Hopkins University
2021	Scheller College of Business, Georgia Institute of Technology
	SNU Business School, Seoul National University
	Booth School of Business, University of Chicago
2020	School of Management, University of College London [cancelled due to Covid-19]
	CBS DRO Healthcare Conference, Columbia University [cancelled due to Covid-19]
	Yale School of Management, Yale University
2019	McCombs School of Business, University of Texas at Austin
	Symposium on Healthcare Operations, Carey Business School, Johns Hopkins University
2018	Stern School of Business, New York University
	ISOM Workshop on Empirical Research, Goizueta Business School, Emory University
	Center for Health Incentives & Behavioral Economics, University of Pennsylvania
	Wisconsin School of Business, University of Wisconsin-Madison
	Center for Healthcare Delivery Science, Beth Israel Deaconess Medical Center
2017	Duke Strategy Conference, Fuqua School of Business, Duke University
	Department of Emergency Medicine, Perelman School of Medicine, University of Pennsylvania
2016	Emergency Department Clinical Operations Team, Hospital of the University of Pennsylvania
	Carlson School of Management, University of Minnesota
	Anderson School of Management, University of California, Los Angeles
	Marshall School of Business, University of Southern California
	Stanford Graduate School of Business, Stanford University
	Olin School of Business, Washington University in St. Louis
	Columbia Business School, Columbia University
	The Wharton School, University of Pennsylvania
	London Business School
	INSEAD
	Ross School of Business, University of Michigan
	Haas School of Business, University of California, Berkeley
	Booth School of Business, University of Chicago
	Kenan-Flagler Business School, University of North Carolina at Chapel Hill
	MIT Sloan School of Management, MIT
2015	Kellogg School of Management, Northwestern University
	Goizueta Business School, Emory University
	Moore School of Business, University of South Carolina
	Fisher College of Business, The Ohio State University
	Darden School of Business, University of Virginia

INVITED CONFERENCE & WORKSHOP PRESENTATIONS

2024	INFORMS Annual Meeting
	SWIMS Workshop
	MSOM Conference Healthcare Special Interest Group
2023	INFORMS Annual Meeting
	Choice Symposium
	INFORMS Healthcare Conference
	MSOM Conference Healthcare Special Interest Group
	Columbia/Wharton Management, Analytics, & Data (MAD) Conference
2022	Singapore Management University Winter Camp [discussant]

INFORMS Annual Meeting

Wharton Workshop on Empirical Research in Operations Management

ASHEcon

MSOM Conference

MSOM Conference Healthcare Special Interest Group

MSOM Conference Healthcare Special Interest Group [discussant]

AcademyHealth Annual Research Meeting

Penn Health Policy Retreat, University of Pennsylvania

POMS Annual Conference

Sustainable OM Workshop

2021 Caribbean Health Economics Symposium

NBER Health Economics Program Meeting

INFORMS Annual Meeting

Wharton Workshop on Empirical Research in Operations Management

ASHEcon

MSOM Conference Healthcare Special Interest Group

POMS Annual Conference

2020 INFORMS Annual Meeting

Penn Health Policy Retreat, University of Pennsylvania

2019 INFORMS Annual Meeting

INFORMS Healthcare Conference

MSOM Conference Healthcare Special Interest Group

Organization Theory in Health Care Conference

Elevating HOME & VNAA National Leadership Conference

2018 INFORMS Annual Meeting

Wharton Workshop on Empirical Research in Operations Management

MSOM Conference

MSOM Conference Healthcare Special Interest Group

INFORMS International Conference

POMS Annual Conference

2017 INFORMS Annual Meeting

INFORMS Healthcare Conference

MSOM Conference Service Special Interest Group

POMS Annual Conference

2016 INFORMS Annual Meeting

Penn Health Policy Retreat, University of Pennsylvania

POMS Annual Conference

Learning in Social Contexts Conference, Carnegie Mellon University & University of Pittsburgh

2015 INFORMS Annual Meeting

Patient-Centric Healthcare Management in the Age of Analytics Conference

Wharton Workshop on Empirical Research in Operations Management

AOM Annual Meeting

INFORMS Healthcare Conference

Behavioral Operations Conference

Harvard Business School Program for Research in Markets & Organizations Seminar

AcademyHealth Annual Research Meeting

POMS Annual Conference

Society of General Internal Medicine Annual Meeting

2014 AOM Annual Meeting

Harvard Business School Program for Research in Markets & Organizations Seminar

AcademyHealth Annual Research Meeting

2013 INFORMS Annual Meeting

MSOM Conference

INFORMS Healthcare Conference

AOM Annual Meeting

2012 Unite for Sight, Global Health & Innovation Conference

TEACHING

Instructor, The Wharton School, University of Pennsylvania

OIDD 101: Introduction to Operations and Information Management (UG Core), 2017, 2018, 2019, 2021, 2023, 2024

OIDD 615: Operations Strategy (MBA Core), 2017, 2018, 2019

OIDD 897/HCMG 898: Healthcare and Business in Ghana (Global Modular Course), 2022, 2023, 2024

Management Development Program (Executive Education), 2020, 2021, 2022, 2023, 2024

Health Care Leadership and Management (Executive Education), 2024

Wharton Global Youth Program, 2024

Guest Lecturer, Various Institutions

Proseminar in Health Services Research (PhD Course), The Wharton School, 2017, 2018, 2019, 2020, 2021, 2022, 2023

OIDD PhD Seminar (PhD Course), The Wharton School, 2018, 2020, 2021, 2022, 2023

Empirical Methods in Operations Management (PhD Course), McCombs School of Business, The University of Texas at Austin, 2019

Empirical Technology & Operations Management (PhD Course), Harvard Business School, 2018, 2022, 2024

Teaching Fellow, Harvard University

GHHP 50: Quality of Health Care in America (UG Elective), 2013, 2014

USW 11: American Health Care Policy (UG Elective), 2010

STAT E102: Fundamentals of Biostatistics (Continuing Education), 2010

EDITORIAL SERVICE

Associate Editor

Operations Research2024-PresentService Science2024-PresentManagement Science2021-Present

Reviewer

Management Science, Manufacturing & Service Operations Management, Operations Research, Organization Science, Production and Operations Management, Service Science, Journal of Operations Management, Naval Research Logistics, Organizational Behavior and Human Decision Processes, Annals of Emergency Medicine

PROFESSIONAL SERVICE

Organization of Conferences

Cluster Co-chair, MSOM/Healthcare Cluster, INFORMS Annual Meeting 2023 Cluster Co-chair, Healthcare Economics Cluster, INFORMS Healthcare Conference 2019

Organization of Competitions

Committee Member, Bonder Scholarship for Applied OR in Health Services 2018, 2019

Judging Service for Competitions

MSOM Student Paper Competition 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024
POMS College of Healthcare OM Best Paper Competition 2017, 2020, 2021, 2022, 2023, 2024
INFORMS Public Sector OR Best Paper Competition 2022
INFORMS Behavioral OM Best Working Paper Award 2017, 2020, 2022, 2023
INFORMS Health Application Society Student Paper Competition 2019, 2023
INFORMS Health Application Society Pierskalla Award 2017

Refereeing Service for Conferences

MSOM Service SIG 2022 MSOM Healthcare SIG 2018, 2019, 2020, 2021, 2022, 2023 Academy of Management Conference 2015

Refereeing Service for Grants

Research Grants Council of Hong Kong 2018

Invited Speaking Engagements

Panelist, INFORMS Annual Meeting
Panelist, Organization Theory in Health Care Conference
Panelist, POMS Doctoral Consortium
2019

Organization of Sponsored/Invited Sessions in International Conferences

Session Chair, INFORMS Healthcare Conference
Session Chair, INFORMS Annual Meeting
Session Chair, POMS Annual Conference
2017, 2019, 2021, 2022
2016, 2017, 2018, 2019, 2020, 2021, 2022
2017, 2018

Professional Memberships

Institute for Operations Research and Management Sciences (INFORMS), Manufacturing and Service Operations Management Society (MSOM), Production and Operations Management (POMS), AcademyHealth

ACADEMIC SERVICE

University of Pennsylvania

LDI-Penn Medicine Research Laboratory Joint Steering Committee	2021-2024
Penn Medicine Strategic Planning	2022-2023
LDI Strategic Planning Committee	2021-2022
Speaker, Penn Center for Teaching & Learning Graduate Workshop	2018

The Wharton School

HCMG Department Review Committee 2024-Present

Wharton Research Data Services (WRDS) Advisory Board	2020-2024
Panelist, Wharton-INSEAD Doctoral Consortium	2017, 2022
Speaker, Wharton Undergraduate Healthcare Club Luncheon Series	2018
Panelist, Women in Business Academia Conference	2017

The Wharton School, Operations, Information, and Decisions Department

Department Chair Search Committee	2024-2025
OM Seminar Committee	2021-2024
OID Seminar Committee	2016-2018, 2020-2021

Harvard Business School

Wyss Doctoral Mentoring Awards Committee	2013-2016
Doctoral Programs Student Advisory Committee	2011-2016

PhD Dissertations Supervised

Lesley Meng, graduated 2019 (Committee member)

First placement: Assistant Professor, Yale School of Management, Yale University

Tan (Suparerk) Lekwijit, graduated 2021 (Committee member)

First placement: Assistant Professor, Carey School of Business, Arizona State University

Jong Myeong Lim, graduated 2022 (Co-advisor)

First placement: Post-doctoral Fellow, Tuck School of Business, Dartmouth College

H. Harriet Jeon, expected graduation 2025 (Advisor)

Pre-Docs Supervised

Haksoo Lee (PhD program placement: Wharton Finance)

Catherine Wang (PhD program placement: Wisconsin Operations Management)

Yihao Yuan (PhD program placement: Wharton Marketing)

Bolun Xiao

OTHER PROFESSIONAL EXPERIENCE

- Research, TAMTAM (Together Against Malaria), Mukono and Gulu, Uganda
- Policy Research, The Century Foundation, New York, NY
- Policy Research, Campaign for Tobacco-Free Kids, Washington, DC

OUTSIDE ACTIVITIES

Member, Board of Directors, SmartLabs, 2021-2024