

Jackie Baek

CONTACT	baek@stern.nyu.edu	https://jwbaek.github.io
EMPLOYMENT	New York University, Stern School of Business Assistant Professor, Technology, Operations & Statistics	2023 -
	Simons Institute for the Theory of Computing, UC Berkeley Research Fellow in the program <i>Data-Driven Decision Processes</i>	Fall 2022
EDUCATION	Massachusetts Institute of Technology Ph.D. in Operations Research Thesis: Decision-Making Under Uncertainty: From Theory to Practice Advisor: Vivek F. Farias	2016 - 2022
	University of Waterloo Bachelor of Mathematics Joint Honours Computer Science & Combinatorics and Optimization	2011 - 2016
JOURNAL PUBLICATIONS	Policy Optimization for Personalized Interventions in Behavioral Health Jackie Baek, Justin J. Boutilier, Vivek F. Farias, Jónas Oddur Jónasson, Erez Yoeli <i>Manufacturing and Service Operations Management</i> , 2025 – Winner, <i>Pierskalla Best Paper Award 2024</i>	
	The Limits to Learning a Diffusion Model Jackie Baek, Vivek F. Farias, Andreea Georgescu, Retsef Levi, Tianyi Peng, Deeksha Sinha, Joshua Wilde, Andrew Zheng <i>Management Science</i> , 2025 – Appeared in the <i>22nd ACM conference on Economics and Computation</i> , 2021	
	Fair Exploration via Axiomatic Bargaining Jackie Baek, Vivek F. Farias <i>Management Science</i> , 2024 – Appeared in <i>NeurIPS 2021 (Spotlight, top 3% of submissions)</i> – Second Place, <i>MSOM Student Paper Competition 2022</i> – Finalist, <i>George Nicholson Student Paper Competition 2021</i> – Finalist, <i>RMP Jeff McGill Student Paper Award 2021</i> – Honorable Mention, <i>MIT ORC Best Student Paper Competition 2021</i> – Oral presentation, <i>ACM Conference on Equity & Access in Algorithms, Mechanisms, & Optimization (EAAMO)</i> , 2021	
	Bifurcating Constraints to Improve Approximation Ratios for Network Revenue Management with Reusable Resources Jackie Baek, Will Ma <i>Operations Research</i> , 2022 Appeared in the <i>12th International Symposium on Algorithmic Game Theory</i> , 2019	
	Evaluation of individual and ensemble probabilistic forecasts of COVID-19 mortality in the United States COVID-19 Forecast Hub (298 authors) <i>Proceedings of the National Academy of Sciences</i> , 2022 – This paper resulted from contributing COVID-19 forecasts (from the paper “The Limits to Learning a Diffusion Model”) to the COVID-19 Forecast Hub.	

	A Game-Theoretic Analysis of Reallocation Mechanisms for Airport Landing Slots Jackie Baek, Hamsa Balakrishnan <i>IEEE Transactions on Intelligent Transportation Systems</i> , 2020		
CONFERENCE PUBLICATIONS (NO JOURNAL VERSION)	When Collaborative Filtering is not Collaborative: Unfairness of PCA for Recommendations David Liu, Jackie Baek, Tina Eliassi-Rad <i>ACM Conference on Fairness, Accountability, and Transparency (FAccT)</i> 2025		
	TS-UCB: Improving on Thompson Sampling With Little to No Additional Computation Jackie Baek, Vivek F. Farias <i>International Conference on Artificial Intelligence and Statistics (AISTATS)</i> 2023		
	Social Learning with Bounded Rationality: Negative Reviews Persist under Newest First Jackie Baek, Atanas Dinev, Thodoris Lykouris Major revision, <i>Operations Research</i> – Appeared in the <i>25th ACM conference on Economics and Computation</i> , 2024		
WORKING PAPERS	The Feedback Loop of Statistical Discrimination Jackie Baek, Ali Makhdoumi Major revision, <i>Management Science</i> – Appeared in the <i>ACM Conference on Equity and Access in Algorithms, Mechanisms, and Optimization (EAAMO)</i> , 2025		
	Hiring under Congestion and Algorithmic Monoculture: Value of Strategic Behavior Jackie Baek, Hamsa Bastani, Shihan Chen		
	Leveraging Reusability: Improved Competitive Ratio of Greedy for Reusable Resources Jackie Baek, Shixin Wang		
	NYU Stern Instructor, Operations Management (Undergraduate Core) 2024, 2025 Guest Lecture for PhD class 2022, 2024		
	Columbia University Guest Lecture for PhD class (IEOR 8100) 2024		
TEACHING	Wharton School, University of Pennsylvania Guest Lecture for PhD class 2022		
	MIT Sloan Teaching Assistant, Operations Management (MBA Sloan Fellows) 2020 Teaching Assistant, The Analytics Edge (MBA) 2018 Instructor (one lecture), Computing in Optimization and Statistics 2017, 2018		
	2025: BIRS Workshop on Dynamic Allocation and Matching, OM in the Wild Workshop, CMU Tepper		
INVITED TALKS			

2024: BIRS Workshop on Combinatorial Optimization for Online Platforms, NYU Langone HiBRID Cafe, TTIC Workshop on Data-Driven Decision Processes, NYU Theory CS Seminar

2023: CUHK Business School, IMSI Workshop on Analytics for Improved Healthcare, NYU Digital Health Research Workgroup, UMass Amherst CS Theory

2022: Northwestern Kellogg, Columbia IEOR, USC Marshall, Johns Hopkins Carey, NYU Stern, Stanford GSB, Duke Fuqua, Yale SOM, Michigan Ross, Chicago Booth, UToronto Rotman Young Scholar Seminar, Caltech RSRG, LinkedIn Responsible AI, Workshop on Information and Learning

2021: UPenn Wharton, UBC Sauder, UNC Kenan-Flagler, Cornell ORIE, MIT OM Seminar, MIT Data Science Lab Seminar, Cornell Young Researchers Workshop

SERVICE

Reviewer for Journals: *Management Science*, *Operations Research*, *Manufacturing & Service Operations Management*, *Operations Research Letters*, *Mathematics of Operations Research*, *European Journal of Operational Research*, *Journal of Machine Learning Research*, *IEEE Control Systems Letters*, *IEEE Transactions on Intelligent Transportation Systems*, *INFORMS Journal on Computing*, *Health Care Management Science*

Program Committee/Reviewer for Conferences: *EC 2023-2025*, *FAccT 2022-2025*, *EAAMO 2023-2025*, *WINE 2022*, *ALT 2023*, *The Web Conference 2023*, *AISTATS 2023*, *NeurIPS 2023*, *ICLR 2024*, *COLT 2024*, *MSOM SIG 2024-2025*, *RMP Student Paper Competition 2024*, *MSOM Student Paper Competition 2025*

Co-chair, Pierskalla Best Paper Award 2025

Co-organizer, TTIC Summer Workshop on *Data-Driven Decision Processes: From Theory to Practice* 2024

Co-organizer, NYC Operations Day 2024, 2025

Organizer, Stern OM Seminar Series 2023, 2024

Member, Stern OM Faculty Recruiting Committee 2023, 2024

Member, Stern OM PhD Admissions Committee 2024, 2025

HONORS AND AWARDS

Winner, Pierskalla Best Paper Award 2024

Management Science Meritorious Service Award 2024

Management Science Distinguished Service Award 2023

Second Place, MSOM Student Paper Competition 2022

Finalist, George Nicholson Student Paper Competition 2021

Finalist, RMP Jeff McGill Student Paper Award 2021

Honorable Mention, MIT ORC Best Student Paper Competition 2021

Finalist, Post-Pandemic Supply Chain and Healthcare Management Best Paper Competition 2021

Runner-up, MIT LIDS Student Conference Best Presentation 2018

NSERC Undergraduate Student Research Award 2015

Mathematics National Scholarship, University of Waterloo 2011 - 2016

WORK
EXPERIENCE

GRAIL <i>Machine Learning Engineer Intern</i> Investigated genomic features on its ability to improve detecting early-stage cancer	Palo Alto, CA Summer 2018
Snap <i>Software Engineer Intern</i> Improved app startup performance by implementing incremental updates	Venice, CA Fall 2014, Summer 2016
Bloomberg <i>Software Engineer Intern</i> Optimized a financial dashboard using a dependency graph to minimize redundant function calls	London, UK Fall 2015
Dropbox <i>Software Engineer Intern</i> Optimized sync by implementing delta compression using finite-state machines	San Francisco, CA Fall 2013, Spring 2014
LogicBlox <i>Software Engineer Intern</i>	Atlanta, GA Spring 2013
Axentra <i>Software Engineer Intern</i>	Ottawa, Canada Summer 2012