Akshit Kumar

akshitkumar100@gmail.com
akshitkumar.github.io

EMPLOYMENT	**Yale University**, New Haven, CT	07/2025 – 06/2026
	Postdoctoral Researcher at Center for Algorithms, Data and Market Design	

EDUCATION	**Columbia University, Graduate School of Business**, New York, NY	09/2020 – 06/2025
	Ph.D. candidate in Decision, Risk and Operations division.	
	Advisors: Prof. Omar Besbes and Prof. Yash Kanoria	
	University of Michigan, Ann Arbor, MI	07/2018 – 05/2020
	Master of Science in Electrical and Computer Engineering.	
	Advisor: Prof. Vijay Subramanian	
	Indian Institute of Technology Madras, Chennai, India	08/2014 – 05/2018
	Bachelor of Technology in Electrical Engineering, minor in Robotics.	
	Advisor: Prof. Rahul Vaze, Tata Institute of Fundamental Research	

RESEARCH INTERESTS

I am broadly interested in the operations of online platforms. In particular, I develop models and methods to optimize the operations of these online platforms, with applications in order fulfillment, revenue management, matching markets and recommendation systems.

JOURNAL PUBLICATIONS

Feature-Based Dynamic Matching with Yilun Chen, Yash Kanoria and Wenxin Zhang.
Forthcoming in Operations Research
☛ Appeared as an extended abstract in *EC'23: ACM Conference on Economics and Computation.*
★ Third Place, 2025 Michael H. Rothkopf Junior Researcher Paper Prize
★ First Place, 2024 Jeff McGill RMP Best Student Paper Prize

Dynamic Resource Allocation: Algorithmic Design Principles and Spectrum of Achievable Performances with Omar Besbes and Yash Kanoria. *Operations Research 73(3):1273-1288*
☛ An earlier version appeared with the title "**The Multi-secretary problem with many types**" as an extended abstract in *EC'22: ACM Conference on Economics and Computation.*
★ Second Place, 2024 Michael H. Rothkopf Junior Researcher Paper Prize
★ Finalist, 2023 INFORMS George Nicholson Student Paper Competition
★ Finalist, 2023 Jeff McGill RMP Best Student Paper Prize

WORKING PAPERS

What Is Your AI Agent Buying? Evaluations, Implications and Emerging Questions for Agentic E-Commerce with Amine Allouah, Omar Besbes, Josue Figueroa and Yash Kanoria.
Under Review
☛ Accepted for WISE 2025 and MIT CODE 2025

Impact of Rankings and Personalized Recommendations in Marketplaces with Omar Besbes and Yash Kanoria. *Journal Version Under Preparation*
☛ Appeared as an extended abstract in *EC'25: ACM Conference on Economics and Computation*

CONFERENCE PUBLICATIONS

From Qualification Exams to Practice: Testing LLMs on Solving Stochastic Modeling Problems with Tianyi Peng, Yuhang Wu and Assaf Zeevi. *WSC'25: Proceedings of the 2025 Winter Simulation Conference*

MOTIF: Multi-Objective Tradeoff in F2P with Jikai Zou, Andrea Qualizza, Neo Huang, Shereif Reda and Yash Kanoria. *CSS'25: 2025 Amazon Consumer Science Summit*

The Fault in Our Recommendations: On the Perils of Optimizing the Measurable with Omar Besbes and Yash Kanoria. *RecSys'24: ACM Conference on Recommender Systems*

Breaking the Unit Throughput Barrier in Distributed System with Parikshit Hegde, Rahul Vaze, Amira Alloum, Cedric Adjih. *NCC'23: 29th National Conference on Communications*

Low-cost aerial imaging for small holder farmers with Ranveer Chandra et al. *COMPASS '19: Proceedings of the 2nd ACM SIGCAS Conference on Computing and Sustainable Societies*
★ Best Paper Award at COMPASS'19

Speed scaling under QoS constraints with finite buffer with Parikshit Hegde and Rahul Vaze. *WiOpt'18: 16th International Symposium on Modeling and Optimization in Mobile, Ad Hoc, and Wireless Networks.*

AWARDS	Third Place, Michael H. Rothkopf Junior Researcher Paper Prize, 2025
	First Place, Jeff McGill RMP Best Student Paper Prize, 2024
	Second Place, Michael H. Rothkopf Junior Researcher Paper Prize, 2024
	Rising Star, Stanford Management Science and Engineering, 2024
	Finalist, INFORMS George Nicholson student paper competition, 2023
	Finalist, Jeff McGill RMP Best Student Paper Prize, 2023
	Deming Doctoral Fellowship, Columbia Business School, 2023-2024
	Narula Doctoral Fellowship, Columbia Business School, 2023
	Best Paper Award, COMPASS'19, 2019
	Industry Category Winner at Microsoft Global Hackathon, 2016
	Recipient of Kishore Vaigyanik Protsahan Yojana (KVPY) Fellowship by Government of India, 2014
	Recipient of National Talent Search Examination (NTSE) scholarship by Government of India, 2011

PATENTS	US20180213186 A1 *Low-cost, Long-term Aerial Imagery*
	US20180213187 A1 *Aerial imaging of a region using above ground aerial camera platform*

INDUSTRY
INTERNSHIPS

Amazon, Bellevue, Washington   June 2023 - September 2023
  Designed algorithms for multi-objective optimization for order fulfillment problems.

Nokia Bell Labs, Paris, France   May 2018 - August 2018
  Developed decoding schemes for distributed wireless systems with applications in 5G.

Microsoft Research, Bangalore, India   June 2016 - August 2016
  Built low cost solutions to enable precision agriculture for small farm holders.
  ★ Industry Category Winner at Microsoft Global Hackathon

TEACHING
EXPERIENCE

Columbia University, **Teaching Assistant**
  Business Analytics (MBA Core)   Fall 2023
  Operations Management (EMBA Core)   Spring 2023
  Business Analytics (EMBA core)   Spring 2022
  Foundations of Optimization (PhD core)   Fall 2021

PROFESSIONAL
SERVICE

Co-organizer for the NYC Operations Day PhD Colloquium, 2024
Brown Bag (DRO Internal Seminar) series co-organizer, 2022-2024
DRO PhD student representative, 2022-2024
Reviewer for *Mathematics of Operations Research, Operations Research, Management Science*

PRESENTATIONS

What Is Your AI Agent Buying? Evaluation, Implications and Emerging Questions for Agentic E-Commerce
  Workshop on Information Systems and Economics (WISE), Nashville, TN   December 2025
  MIT Conference on Digital Experimentation (CODE), Boston, MA   November 2025
  Consumer Reports, New York, NY   November 2025
  Rotman Young Scholar Seminar, Online   November 2025
  Yale Computer Science and Economics Day, New Haven, CT   September 2025
  Workshop on AI and the Future of Collaborative Innovation, New York, NY   September 2025

Impact of Rankings and Personalized Recommendations in Marketplaces
  INFORMS Annual Conference, Atlanta, GA   October 2025
  RMP Annual Conference, New York, NY   July 2025
  EC'25: ACM Conference on Economics and Computation (EC), Stanford, CA   July 2025

Dynamic Resource Allocation: Theory and Practice

From Matching to Markets Workshop, Corsica, France	May 2025
University of Minnesota, ISE	January 2025
Mendoza School of Business, University of Notre Dame	January 2025
Yale School of Management	January 2025
Stanford Graduate School of Business	January 2025
Cornell ORIE, Ithaca	December 2024
Cornell Tech ORIE, New York	December 2024
Imperial College Business School	December 2024
Rotman School of Management, University of Toronto	December 2024
Indian School of Business	November 2024
NUS Business School	November 2024
NYU Stern School of Business	November 2024
Wharton School of the University of Pennsylvania	November 2024

The Fault in Our Recommendations: On the Perils of Optimizing the Measurable

Yale FDS Workshop on Social Algorithms (Poster)	October 2025
Netflix ML Seminar, Online	November 2024
RecSys'24: ACM Conference on Recommender Systems, Bari, Italy	October 2024

Dynamic Resource Allocation: Algorithmic Design Principles and Spectrum of Achievable Performances

WORDS, Duke Fuqua School of Business, Durham, NC	November 2024
Operations Rookiepalooza, Kellogg School of Management, Chicago, IL	October 2024
INFORMS Annual Conference, Seattle, WA	October 2024
Cornell Young Research Workshop, Ithaca, NY	October 2024
Purdue Operations Conference, West Lafayette, IN	August 2024
IEOR Seminar, IIT Bombay, Mumbai, India	August 2024
ISMP Conference, Montreal, Canada	July 2024
RMP Annual Conference, Los Angeles, CA	July 2024
MS&E Rising Stars Workshop, Stanford, CA	April 2024
INFORMS Annual Meeting, Phoenix, AZ	October 2023
Fulfillment Optimization Research Series, Amazon	August 2023
TIFR, Mumbai, India	May 2023

Feature-Based Dynamic Matching

INFORMS Annual Conference, Atlanta, GA	October 2025
INFORMS Annual Conference, Seattle, WA	October 2024
MSOM Annual Conference, Minneapolis, MN	July 2024
Marketplace Innovation Workshop, Online	May 2024
RMP Annual Conference, London, England	June 2023

A PROOF: Approximately PaReto Optimal Order Fulfillment

Deming Doctoral Fellowship Seminar, Columbia Business School	May 2024

The multi-secretary problem with many types

INFORMS Annual Meeting, Indianapolis, IN	October 2022
EC'22: ACM Conference on Economics and Computation, Boulder, CO	July 2022
MSOM Annual Conference, Munich	June 2022
RMP Annual Conference, Online	June 2022

SKILLS

Programming: Python, C/C++, MATLAB, HTML/CSS
Tools: Git, LaTeX