Akshit Kumar

ak4599@columbia.edu
akshitkumar.github.io

Education

Columbia University, Graduate School of Business, New York, NY — 2020-present
Ph.D. candidate in Decision, Risk and Operations division. GPA: 10.02/10.00
Advisors: Prof. Omar Besbes and Prof. Yash Kanoria

University of Michigan, Ann Arbor, MI — 2018-2020
Master of Science in Electrical and Computer Engineering. GPA: $4.27/4.00$.
Advisor: Prof. Vijay Subramanian
Masters' Thesis: *Finite Time Guarantees for Empirical Dynamic Programs*

Indian Institute of Technology Madras, Chennai, India — 2014-2018
Bachelor of Technology in Electrical Engineering, minor in Robotics. GPA: 8.81/10.00
Advisor: Prof. Rahul Vaze, Tata Institute of Fundamental Research
Bachelors' Thesis: *Speed Scaling under QoS constraints with finite buffer*

Research Interests

Dynamic Resource Allocation, Online Matching, Recommendation Systems

Journal Publications

Dynamic Resource Allocation: Algorithmic Design Principles and Spectrum of Achievable Performances with Omar Besbes and Yash Kanoria. *Forthcoming in Operations Research*
☛ An earlier version appeared with the title "The Multi-secretary problem with many types"
★ `Finalist, 2023 INFORMS George Nicholson student paper competition`
★ `Finalist, 2023 Jeff McGill RMP Best Student Paper Prize`

Conference Publications

Feature Based Dynamic Matching with Yilun Chen, Yash Kanoria and Wenxin Zhang. *EC'23: Proceedings of the 2023 ACM Conference on Economics and Computation.*
Major Revision at Operations Research

The Multi-secretary problem with many types with Omar Besbes and Yash Kanoria. *EC'22: Proceedings of the 2022 ACM Conference on Economics and Computation.*

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*.

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

Working Papers

The Fault in Our Recommendations: On the Perils of Optimizing the Measurable with Omar Besbes and Yash Kanoria. *Under Review*

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
Worked on designing algorithms and decision support tools for multi-objective optimization for order fulfillment problems.

Nokia Bell Labs, Paris, France — May 2018 - August 2018
Worked on developing and analysing decoding schemes for distributed wireless systems with applications in 5G and Internet of Things.

Microsoft Research, Bangalore, India June 2016 - August 2016
Worked on designing low cost solutions to enable precision agriculture for small farm holders. *Industry Category Winner at Microsoft OneWeek 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

Awards

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
Narula Doctoral Fellowship, Columbia Business School, 2023
Best Paper Award, COMPASS'19, 2019
Industry Category Winner at Microsoft OneWeek 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

Skills

Programming: Python, C/C++, JavaScript, PHP, HTML, CSS
Tools: Git, LaTeX, ROS

Selected Talks

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

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	May 2023

Feature-Based Dynamic Matching

MSOM Annual Conference, Minneapolis, MN	July 2024
Marketplace Innovation Workshop, Online	May 2024
RMP Annual Conference, London, England	June 2023

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Deming Doctoral Fellowship Seminar, Columbia Business School	May 2024

The multi-secretary problem with many types

INFORMS Annual Meeting, Indianapolis, IN	October 2022
Economics and Computation, Boulder, CO	July 2022
MSOM Annual Conference, Munich	June 2022
RMP Annual Conference, Online	June 2022