**EDUCATION** 

Columbia University, Graduate School of Business, New York, NY

2020-present

Ph.D. candidate in Decision, Risk and Operations division.

Advisors: Prof. Omar Besbes and Prof. Yash Kanoria

University of Michigan, Ann Arbor, MI

2018-2020

Master of Science in Electrical and Computer Engineering.

Advisor: Prof. Vijay Subramanian

Indian Institute of Technology Madras, Chennai, India

2014-2018

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

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" as an extended abstract in EC'22: Proceedings of the 2022 ACM Conference on Economics and Computation.
- ★ Finalist, 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

Feature Based Dynamic Matching with Yilun Chen, Yash Kanoria and Wenxin Zhang.

Major Revision in Operations Research

EC'23: Proceedings of the 2023 ACM Conference on Economics and Computation.

The Fault in Our Recommendations: On the Perils of Optimizing the Measurable with Omar Besbes and Yash Kanoria. Journal Version Under Preparation
RecSys'24: 18th ACM Conference on Recommender Systems Proceedings

Impact of Rankings and Personalized Recommendations in Marketplaces with Omar Besbes and Yash Kanoria. Journal Version Under Preparation

Conference Publications 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

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.

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 and decision support tools 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.

 $\bigstar$  Industry Category Winner at Microsoft OneWeek Hackathon

Teaching

#### Columbia University, Teaching Assistant

Experience

Business Analytics (MBA Core)

Operations Management (EMBA Core)

Business Analytics (EMBA core)

Foundations of Optimization (PhD core)

Fall 2023

Spring 2023

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

AWARDS

Finalist, Michael H. Rothkopf Junior Researcher Paper Prize, 2024 (winner to be announced)

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 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++, MATLAB, HTML/CSS

Tools: Git,  $\LaTeX$ 

SELECTED TALKS

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

RecSys'24: ACM Conference on Recommender Systems, Bari, Italy
October 2024

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

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, 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
Economics and Computation, Boulder, CO	July 2022
MSOM Annual Conference, Munich	June 2022
RMP Annual Conference, Online	June 2022