Jiayu Kamessi Zhao

MIT Operations Research Center (ORC) Email: kamessi@mit.edu
Tel: +1 (313) 335-4077 Webpage: https://kamessizhao.github.io/

EDUCATION

Massachusetts Institute of Technology (MIT), Cambridge, MA
Candidate for PhD in Operations Research 2020 - 2025 (Expected)
GPA: 5.0/5.0 Advisor: Daniel Freund

Columbia University, New York, NY 2016 - 2020
B.S. in Operations Research: Financial Engineering
Summa Cum Laude

RESEARCH INTERESTS

My research studies how two-sided platforms can incentivize flexibility on both market sides to enhance operational efficiency. I am particularly interested in (i) the interactions among flexibility incentives on different market sides, and (ii) the implications of flexible operations for market design, e.g., developing incentive-compatible methods to deploy autonomous vehicles through gig economy platforms. I tackle these challenges using tools from game theory, stochastic decision-making, and online algorithms.

PUBLICATIONS AND PREPRINTS

"Two-sided Flexibility in Platforms," with Daniel Freund and Sébastien Martin.
Under Revision, 2024. Available at Arxiv 2404.04709.

- **MIT ORC Best Student Paper Award**, 2024
- Accepted for presentation at 2024 MSOM Conference
- Accepted for presentation at 2024 Revenue Management & Pricing Conference
- Accepted for presentation at 2024 Marketplace Innovation Workshop

"On the Supply of Autonomous Vehicles in Platforms," with Daniel Freund and Ilan Lobel. Major Revision at **Manufacturing & Service Operations Management**. Available at SSRN 4178508.

- **Twenty-Fifth ACM Conference on Economics and Computation (EC'24)**
- Accepted for presentation at **2024 MSOM Supply Chain Management SIG**
- Accepted for presentation at 2023 Revenue Management & Pricing Conference
- Accepted for presentation at 2023 Marketplace Innovation Workshop

"End-of-Horizon Load Balancing Problems: Algorithms and Insights," with Daniel Freund and Chamsi Hssaine.
Under Revision, 2024. Available at Arxiv 2306.01968.

"Overbooking with Bounded Loss," with Daniel Freund. 2022.
Mathematics of Operations Research 48(3): 1344-1363.

- **Twenty-Second ACM Conference on Economics and Computation (EC'21)**
- Accepted for presentation at 2021 Marketplace Innovation Workshop

WORK IN PROGRESS

"The Value of a Little Flexibility in Stable Matching," with Daniel Freund and Sébastien Martin.
"Incentivizing Driver Commitment through Priority Dispatch," with Daniel Freund.

EXPERIENCES

Uber Technologies, Inc., San Francisco, CA Summer 2023 & 2024
Applied Scientist Intern Supervisors: Ali Sadighian, Shaiza Qayyum, AJ Friend
- Uber Eats Eater Realtime Pricing Team (ERTP)

- Improved the convex optimization program for Uber Eats' real-time pricing and incentive design; enhanced the real-time acceptance rate model and the chained supply model for mitigating surge demand

MIT ORC, Cambridge, MA   2020 - Present
Research Assistant   Supervisor: Daniel Freund

Simons Institute for the Theory of Computing, UC Berkeley, CA   Fall 2022
Participant of the Data-Driven Decision Processes Program

Columbia IEOR Department, New York, NY   2018 - 2020
Research Assistant   Supervisors: Jay Sethuraman, Soulaymane Kachani.

TEACHING	**MIT**, Cambridge, MA

TA for *15.761 Operations Management* (MBA; 200 students). Spring 2022, 2023, 2024
TA for *15.S25 Experience in Operations Research* (PhD; 20 students)   Summer 2022

Columbia University, New York, NY
TA for *Math 2030 Ordinary Differential Equations* (Undergrad; 40 students) Fall 2018
TA for *IEOR E3658 Probability for Engineers* (Undergrad; 80 students)   Fall 2018

SELECTED TALKS

"Two-sided Flexibility in Platforms."
- MSOM Conference, Jul 2024, Minneapolis MN
- Marketplace Innovation Workshop, May 2024, Virtual
- MIT LIDS Student Conference, Feb 2024, Cambridge MA
- Xi'an Jiaotong University, Jan 2024, Xi'an, China
- Shanghai University of Finance and Economics, Dec 2023, Shanghai, China

"On the Supply of Autonomous Vehicles in Platforms"
- MSOM Conference Supply Chain Management SIG, Jun 2024, Minneapolis MN
- INFORMS Annual Meeting, Oct 2023, Phoenix AZ
- Cornell Young Researchers Workshop, Oct 2023, Ithaca NY
- INFORMS Annual Meeting, Oct 2022, Indianapolis IN
- Marketplace Innovation Workshop, May 2023, Virtual

"Overbooking with Bounded Loss."
- EC'21, Jul 2021, Virtual
- INFORMS Annual Meeting, Oct 2021, Virtual
- ORC Student Seminar, Apr 2022, Cambridge MA

PROFESSIONAL SERVICES	MIT ORC Seminar Series student coordinator	Fall 2023
	MIT Operations Management Seminar student co-organizer	2021 - 2023

HONORS AND AWARDS	MIT ORC Best Student Paper Award,	2024
	The Sebastian B. Littauer Award, Columbia University	2020
	Tau Beta Pi Honor Society, Columbia University (NY Chapter)	2018 - 2020
	The Dean's List, Columbia University,	2016 - 2020
	C.P. Davis Scholar, Columbia University	2016