
CONTACT	hssaine@marshall.usc.edu	https://sites.google.com/usc.edu/chamsi-hssaine
RESEARCH INTERESTS	Design and operations of online marketplaces; data-driven decision-making; revenue management and pricing.	
CURRENT POSITION	University of Southern California Data Sciences and Operations, <i>Marshall School of Business</i> <ul style="list-style-type: none">Assistant Professor	August 2023 –
PRIOR POSITIONS	Amazon, Supply Chain and Optimization Technologies <ul style="list-style-type: none">Postdoctoral Researcher<ul style="list-style-type: none">Host: Garrett van Ryzin	July 2022–July 2023
EDUCATION	Cornell University , Ithaca, NY <ul style="list-style-type: none">Ph.D. in Operations Research<ul style="list-style-type: none">Advisor: Prof. Siddhartha BanerjeeMinors: Applied Mathematics, Production and OperationsM.S. in Operations Research	May 2022 March 2020
	Princeton University , Princeton, NJ <ul style="list-style-type: none">B.S.E. in Operations Research and Financial Engineering<ul style="list-style-type: none">Honors: Magna Cum LaudeMinor: Applied and Computational Mathematics	June 2016
WORKING PAPERS	Sequential Fair Allocation with Evolving Budgets Siddhartha Banerjee, Chamsi Hssaine, Chido Onyeze, Sean Sinclair. In preparation. Fair Learning Algorithms for Points-Based Rewards Programs: On the Sufficiency of Greedy Chamsi Hssaine, Yichun Hu, Ciara Pike-Burke. In preparation. End-of-Horizon Load Balancing Problems: Algorithms and Insights Daniel Freund, Chamsi Hssaine, Jiayu (Kamessi) Zhao. In preparation. The Data-Driven Censored Newsvendor Problem Chamsi Hssaine, Sean Sinclair. Submitted. Target-Following Online Resource Allocation Using Proxy Assignments Chamsi Hssaine, Garrett van Ryzin, Huseyin Topaloglu. Submitted. Online Fair Allocation of Perishable Resources Siddhartha Banerjee, Chamsi Hssaine, Sean Sinclair. Major Revision in <i>Operations Research</i> . Runner-Up for the 2024 INFORMS Service Science Diversity, Equity, Inclusion and Justice Paper Competition.	

Price Competition Under a Consider-Then-Choose Model with Lexicographic Choice
Siddhartha Banerjee, Chamsi Hssaine, Vijay Kamble.
Major Revision in *Manufacturing & Service Operations Management*.

JOURNAL
PUBLICATIONS

Plan Your System and Price for Free: Fast Algorithms for Multimodal Transit Operations
Siddhartha Banerjee, Chamsi Hssaine, Qi Luo, Samitha Samaranyake.
Transportation Science, 2024.

Fair Incentives for Repeated Engagement
Daniel Freund, Chamsi Hssaine.
Production and Operations Management, 2024.

Real-Time Approximate Routing for Smart Transit Systems
Siddhartha Banerjee, Chamsi Hssaine, Noémie Périvier, Samitha Samaranyake.
ACM Measurement and Analysis of Computing Systems (ACM POMACS), 2021.
(Invited based on acceptance to *ACM SIGMETRICS '21*, June 2021.)
Finalist for the 2021 INFORMS Minority Issues Forum Paper Competition.

REFEREED
CONFERENCE
PUBLICATIONS

Fair Incentives for Repeated Engagement
Daniel Freund, Chamsi Hssaine.
Earlier version appeared as extended abstract in *19th Conference on Web and Internet Economics (WINE '23)*, December 2023.

Online Fair Allocation of Perishable Resources
Siddhartha Banerjee, Chamsi Hssaine, Sean Sinclair.
Earlier version appeared as extended abstract in *ACM SIGMETRICS '23*, June 2023.

Real-Time Approximate Routing for Smart Transit Systems
Siddhartha Banerjee, Chamsi Hssaine, Noémie Périvier, Samitha Samaranyake.
Earlier version appeared as extended abstract in *ACM SIGMETRICS '21*, June 2021.

Information Signal Design for Incentivizing Team Formation
Siddhartha Banerjee, Chamsi Hssaine.
Extended abstract in *14th Conference on Web and Internet Economics (WINE '18)*, December 2018.

HONORS AND
AWARDS

Runner-up for the INFORMS Service Science Best Diversity, Equity, Inclusion and Justice Paper Competition, October 2024
– For “Online Fair Allocation of Perishable Resources,” joint with Sid Banerjee and Sean Sinclair.

Simons-Berkeley Research Fellowship (declined), Fall 2022

Finalist for the INFORMS Minority Issues Forum Paper Competition, October 2021
– For “Real-Time Approximate Routing for Smart Transit Systems,” joint with Sid Banerjee, Noémie Périvier, and Samitha Samaranyake.

Selected for the Young Researchers Workshop at Cornell ORIE, October 2021

Selected for the Rising Stars program in EECS at UC Berkeley, November 2020

Selected for the Stanford GSB Rising Scholars Conference, October 2020

Popular Poster Award, Mechanism Design for Social Good Workshop, June 2019

Kenneth H. Condit Prize, Princeton University, June 2016

Departmental award for leadership through academic achievement and community service

INVITED TALKS

Target-Following Online Resource Allocation Using Proxy Assignments

- National University Singapore, Singapore, February 2025.
- BIRS Workshop on Dynamic Allocation and Matching, Banff, Canada, March 2025.

Online Fair Allocation of Perishable Resources

- DSO PhD student Seminar, University of Southern California, Los Angeles, CA, September 2023.

Balls-into-Bins and The Power of Flexibility in Load Balancing Systems

- Amazon, Promise Research Meeting, December 2022.

Pseudo-Competitive Games and Algorithmic Pricing

- Rotman Young Scholar Series, Rotman School of Management OM Department, University of Toronto, September 2022.
- Workshop on Algorithms for Learning and Economics, Naxos, Greece, June 2022.
- Meta, Virtual, April 2022.
- DRO Seminar, Columbia Business School, Columbia University, New York, NY, January 2022.
- DSO Seminar, University of Southern California, Los Angeles, CA, January 2022.
- IOE Seminar, University of Michigan, Virtual, December 2021.
- Bensadoun School of Retail Management Seminar, McGill University, Virtual, December 2021.
- OID Seminar, Wharton School, University of Pennsylvania, Philadelphia, PA, December 2021.
- ISyE Seminar, Georgia Institute of Technology, Atlanta, GA, November 2021.
- ORIE Young Researchers Workshop, Cornell University, October 2021.
- CS Theory Seminar, Cornell University, September 2021.

Satisficing Search and Algorithmic Price Competition

- Imperial College-LBS-UCL OR/MS PhD Seminar, Virtual, March 2021.

Real-Time Approximate Routing for Smart Transit Systems

- Vanderbilt University, TransitScope Lab Group, Virtual, January 2021.

CONFERENCE
PRESENTATIONS

Target-Following Online Resource Allocation

- INFORMS Applied Probability Society Conference, Atlanta, GA, July 2025.
- 35th Annual POMS Conference, Atlanta, GA, May 2025.
- INFORMS Annual Meeting, Seattle, WA, October 2024.

Online Fair Allocation of Perishable Resources

- INFORMS Annual Meeting, Seattle, WA, October 2024.
- INFORMS MSOM Conference, Minneapolis, MN, June 2024.
- INFORMS Annual Meeting, Phoenix, AZ, October 2023.
- INFORMS MSOM Conference, Montréal, Canada, June 2023.
- SIGMETRICS, Orlando, FL, June 2023.
- ACM Conference on Equity and Access in Algorithms, Mechanisms, and Optimization (EAAMO'22), Arlington, VA, October 2022.
- Simons Institute Data-Driven Decision Processes Program Workshop, Berkeley, CA, October 2022.

Online Congestion Control for Inbound Capacity Management

- SIAM Conference on Optimization, Seattle, WA, June 2023.
- Amazon Postdoc Summit, Austin, TX, April 2023.

Pseudo-Competitive Games and Algorithmic Pricing

- INFORMS Annual Meeting, Anaheim, CA, October 2021.
- ORIE Young Researchers Workshop, Cornell University, October 2021.

Satisficing Search and Algorithmic Price Competition

- Revenue Management and Pricing Conference, Virtual, June 2021.
- Marketplace Innovation Workshop (Poster), Virtual, May 2021.
- Stanford GSB Rising Scholars Conference, Virtual, October 2020.
- INFORMS Annual Meeting, Virtual, October 2020.
- Kellogg-Wharton OM Workshop, Virtual, July 2020.

Pricing a Mobility Marketplace

- INFORMS Annual Meeting, Seattle, WA, October 2019.
- Young Researchers Workshop (flash talk), Cornell University, October 2019.
- Mechanism Design for the Social Good Workshop, EC'19, June 2019.
- Marketplace Innovation Workshop, Stanford University, June 2019.

ACADEMIC SERVICE

Reviewer: Operations Research, Management Science, MSOM, Mathematics of Operations Research, Stochastic Systems, Performance Evaluation, IISE Transactions, ACM-SIAM Symposium on Discrete Algorithms (SODA'23), ACM Conference on Economics and Computation (EC '19, '20, '21), IEEE American Control Conference (ACC '20)

Program Committees: MSOM 2024 Conference, ACM Conference on Economics and Computation (EC'24, EC'23), ACM Conference on Equity and Access in Algorithms, Mechanisms, and Optimization (EAMMO) '22, Workshop on Operations of People-Centric Systems at EC'21

Paper Award Committees: George Nicholson Student Paper Competition (2024), RMP Jeff McGill Student Paper Award (2024), Public Sector Operations Research (PSOR) Best Paper Award (2024)

UNIVERSITY SERVICE

At University of Southern California:

- Seminar co-organizer for Operations Management group within DSO, 2023-Present
- DSO Women in Data Science Committee, 2023-Present

At Cornell University:

- ORIE PhD Diversity Ambassador, Cornell University, 2021-2022
- Panelist, Academic Street Smarts Workshop for 1st Year PhD students in OR, Cornell University, 2020-2021
- Cornell Tech Liaison, Operations Research Graduate Students' Association, Cornell University, 2019-2020
- Mentoring Chair, Women in OR, Cornell University, 2018-2020
- Member, Graduate Women in Science, Cornell University, 2016-2022

TEACHING

BUAD 311, Introduction to Operations Management: Instructor, Spring 2024-2025
ORIE 4580/5580, Simulation Modeling and Analysis: Teaching Assistant, Fall 2018
ORIE 3800, Information Systems Analysis: Teaching Assistant, Spring 2017-2018
ORIE 3500/5500, Probability and Stochastic Systems: Teaching Assistant, Fall 2016

PRIOR INDUSTRY EXPERIENCE

Amazon, Sponsored Products, Applied Scientist Intern, June-August 2020

Project title: “Long-Term Impacts of Sponsored Products Interventions on Amazon Shoppers: Estimation and Optimization”

RAND Corporation, Summer Associate, May-August 2018

Project title: “Informing agent-based models with social influence networks: Sampling a large-scale urban network and learning from egocentric network data”

Deutsche Bank, Summer Associate, June-August 2015

CASTLE Labs, Research Intern, May-August 2014

Project title: “Developing a probability model for power grid faults using incomplete information”