Devansh Jalota

Assistant Professor, ISyE
Georgia Institute of Technology

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Academic Employment

Assistant Professor 2026 - Present
Georgia Institute of Technology, Atlanta, GA
Industrial and Systems Engineering (ISyE)

Postdoctoral Research Scientist 2025–2026
Columbia University, New York, NY
Data Science Institute
Mentors: Sharon Di, Adam Elmachtoub

Education

Stanford University, Stanford, CA. 2019–2025
Ph.D. in Computational and Mathematical Engineering, GPA: 4.11
Thesis Advisors: Marco Pavone, Yinyu Ye

University of California, Berkeley, Berkeley, CA. 2015–2019
B.S. in Civil and Environmental Engineering
B.A. in Applied Mathematics
Technical GPA: 4.00; CGPA: 3.99

Fellowships and Awards

INFORMS JFIG Best Paper Award, Finalist 2025

Columbia Data Science Institute Postdoctoral Fellowship 2025-2026

INFORMS TSL Best Student Paper Award, Finalist 2024

Stanford Interdisciplinary Graduate Fellowship, Stanford University 2022-2025
Received three years of full tuition ($60,000 annually) and stipend ($50,400 annually) support, granted to only 30 Stanford Ph.D. students annually for commitment to interdisciplinary research.

TOTAL Innovation Scholar, Stanford University 2020-2021
Received one year of full tuition ($60,000 annually) and stipend ($50,400 annually) support from TOTAL, awarded to only three Stanford students in the Institute for Computational and Mathematical Engineering.

WINE 2020 Best Presentation, 16th Conference on Web and Internet Economics 2020

ICME Graduate Fellowship, Stanford University 2019-2020
Received one year of complete tuition ($60,000 annually) and stipend ($50,400 annually) support from Stanford's Institute for Computational and Mathematical Engineering.

KC Mahindra Education Trust Scholarship for Post Graduate Studies 2019
Received $5,000 of funding support for initiating post-graduate studies in the United States. Awarded to only 90 applicants annually across India.

Departmental Citation, Civil and Environmental Engineering, UC Berkeley 2019
Awarded to the top graduating senior in Civil and Environmental Engineering at UC Berkeley.

John C. Shimmick Scholarship, UC Berkeley 2019
Received a $2000 scholarship for excellence in Civil and Environmental Engineering at UC Berkeley.

Tau Beta Pi Scholarship, UC Berkeley 2017
Received a $750 scholarship for excellence as an Engineering major at UC Berkeley.

Runner-Up, Commitments Challenge, Clinton Global Initiative 2016
Secured over $11,000, achieving the second-highest fundraising amount in the Commitments Challenge of the Clinton Global Initiative, to launch a community-driven initiative for installing economically viable water purifiers in a housing community of over 1,000 slum-relocated residents in Mumbai.

KRAFT Award for Freshman, UC Berkeley 2016
Received $500 as a scholarship for achieving a 4.0 GPA in the first semester of undergraduate studies at UC Berkeley.

Dream Wizard Young Philanthropist Award, Standard Chartered 2014
Recognition for raising $15,000 of funds, the highest among all young philanthropists in Mumbai, for the education of 250 underprivileged girl children in Mumbai.

Outstanding Cambridge Learner Award, Dhirubhai Ambani International School 2013
Recognition for topping the world in Advanced Mathematics and Physical Education in 10th board exams for IGCSE.

Honor Societies: Phi Beta Kappa, Tau Beta Pi, Chi Epsilon, National Society of Leadership and Success, Society of Collegiate Leadership and Achievement, Golden Key International

Preprints and Working Papers

[1] **D. Jalota**, S. Di, and A. N. Elmachtoub, "Simple vs. Optimal Congestion Pricing," 2026. (Submitted)

[2] **D. Jalota** and M. Tsao, "Informal and Privatized Transit: Incentives, Efficiency and Coordination," 2026. (Submitted)

[3] **D. Jalota***, H. Sun*, and N. Azizan, "Online Learning for Equilibrium Pricing in Markets under Incomplete Information," 2026. (Minor Revision at *Operations Research*)

★ 2025 INFORMS JFIG Best Paper Award, Finalist

- Preliminary version presented at CDC'2023

[4] **D. Jalota**, M. Ostrovsky, and M. Pavone, "When Simple is Near-Optimal in Security Games," 2024.

- Preliminary version presented at INFORMS IOS'2024, INFORMS RMP'2024, and ISMP'2024

[5] **D. Jalota***, M. Tsao*, and M. Pavone, "Catch Me If You Can: Combatting Fraud in Artificial Currency Based Government Benefits Programs," 2024.

- Preliminary version presented at "Cooperative Multi-Agent Systems Decision-making and Learning" Workshop at AAAI'24
- Accepted for presentation at RMP'2025

Journal Publications

[1] **D. Jalota**, M. Ostrovsky, and M. Pavone, "Matching with Transfers under Distributional Constraints," Games and Economic Behavior, 152:313-332, 2025.

[2] **D. Jalota** and Y. Ye, "Stochastic Online Fisher Markets: Static Pricing Limits and Adaptive Enhancements," Operations Research, 73(2):798-818, 2025.

[3] **D. Jalota**, K. Solovey, K. Gopalakrishnan, S. Zoepf, H. Balakrishnan, and M. Pavone, "When Efficiency meets Equity in Congestion Pricing and Revenue Refunding Schemes," IEEE Transactions on Control of Network Systems, 11(2):1127-1138, 2024.

[4] **D. Jalota**, M. Pavone, Q. Qi, and Y. Ye, "Fisher Markets with Additional Linear Constraints: Equilibrium Properties and Efficient Distributed Algorithms," Games and Economic Behavior, 141:223-260, 2023.

[5] **D. Jalota**, D. Paccagnan, M. Schiffer, and M. Pavone, "Online Routing Over Parallel Networks: Deterministic Limits and Data-driven Enhancements," INFORMS Journal on Computing, 35(3):560-577, 2023.

[6] **D. Jalota**, K. Solovey, M. Tsao, S. Zoepf, and M. Pavone, "Balancing Fairness and Efficiency in Traffic Routing via Interpolated Traffic Assignment," Journal of Autonomous Agents and Multiagent Systems, 37(32), 2023.

★ 2024 INFORMS TSL Best Student Paper Award, Finalist

[7] S. Lapardhaja, **D. Jalota**, J. Doig, A. Almubarak, and M. Cassidy, "Testing alternative policies for underused carpool lanes on narrow freeways," Transportation Research Part A, 149:139-149, 2021.

[8] D. De Clercq*, **D. Jalota***, R. Shang, K. Ni, Z. Zhang, A. Khan, Z. Wen, L. Caicedo, and K. Yuan, "Machine learning powered software for accurate prediction of biogas production: a case study on industrial-scale Chinese production data," Journal of Cleaner Production, 218:390-399, 2019.

[9] A. Bharti and **D. Jalota**, "Community-based Water Quality Improvement in a Rehabilitated Slum Building," Journal of Pollution Effects & Control, 3(1), 2015.

Conference Proceedings

[1] D. Berriaud, E. Elokda, **D. Jalota**, E. Frazzoli, M. Pavone, and F. Dorfler, "To Spend or to Gain: Online Learning in Repeated Karma Auctions," in Proc. International Conference on Autonomous Agents and Multiagent Systems, (*AAMAS*), 2025.

[2] C. Chiu, **D. Jalota**, and M. Pavone, "Credit vs. Discount-Based Congestion Pricing: A Comparison Study," in Proc. IEEE Conference on Decision and Control, (*CDC*), 2024.

[3] **D. Jalota** and Y. Ye, "Stochastic Online Fisher Markets: Static Pricing Limits and Adaptive Enhancements," in The Conference of Web and Internet Economics, (*WINE*), 2023.

[4] **D. Jalota**, K. Gopalakrishnan, N. Azizan, R. Johari, and M. Pavone, "Online Learning for Traffic Routing under Unknown Preferences," in Proc. International Conference on Artificial Intelligence and Statistics, (*AISTATS*), 2023.
Media: Stanford HAI

[5] **D. Jalota***, H. Sun*, and N. Azizan, "Online Learning for Equilibrium Pricing in Markets under Incomplete Information," in Proc. IEEE Conference on Decision and Control, (*CDC*), 2023.

★ 2025 INFORMS JFIG Best Paper Award, Finalist

[6] **D. Jalota**, J. Lazarus, A. Bayen, and M. Pavone, "Credit-based Congestion Pricing: Equilibrium Properties and Optimal Scheme Design," in Proc. IEEE Conference on Decision and Control, (*CDC*), 2023.

[7] **D. Jalota**, K. Solovey, M. Tsao, S. Zoepf, and M. Pavone, "Balancing Fairness and Efficiency in Traffic Routing via Interpolated Traffic Assignment," in Proc. International Conference on Autonomous Agents and Multiagent Systems, (*AAMAS*), 2022.

★ 2024 INFORMS TSL Best Student Paper Award, Finalist

[8] **D. Jalota**, K. Solovey, K. Gopalakrishnan, S. Zoepf, H. Balakrishnan, and M. Pavone, "When Efficiency meets Equity in Congestion Pricing and Revenue Refunding Schemes," Proc. Equity and Access in Algorithms, Mechanisms and Optimization, (*EAAMO*), 2021.
Media: New York Times, Stanford HAI

[9] **D. Jalota**, M. Pavone, Q. Qi, and Y. Ye, "Markets for Efficient Public Good Allocation with Social Distancing," in The Conference on Web, and Internet Economics, (*WINE*), 2020.

* indicates equal contribution

Conference and Workshop Talks

Simple vs. Optimal Congestion Pricing
INFORMS Transportation Science & Logistics Conference (TSL'26) Jul 2026

Combatting Fraud in Welfare Programs: Theory and Applications in Smart Mobility
2025 INFORMS Annual Meeting Oct 2025
INFORMS Revenue Management and Pricing Conference (RMP'25) Jul 2025

Credit-based vs. Discount-based Congestion Pricing
IEEE International Conference on Decision and Control (CDC'24) Dec 2024

Algorithm and Incentive Design for Sustainable Resource Allocation: Beyond Classical Fisher Markets
Cornell Young Researchers Workshop Oct 2024

When Simple is Near Optimal in Security Games
2024 INFORMS Annual Meeting Oct 2024
International Symposium on Mathematical Programming (ISMP'24) Jul 2024
INFORMS Revenue Management and Pricing Conference (RMP'24) Jul 2024
INFORMS Optimization Society Conference (IOS'24) Mar 2024

Stochastic Online Fisher Markets: Static Pricing Limits and Adaptive Enhancements
INFORMS Optimization Society Conference (IOS'26) Mar 2026
International Conference on Continuous Optimization (ICCOPT'25) Jul 2025
International Conference on Web and Internet Economics (WINE'23) Dec 2023
2023 INFORMS Annual Meeting Oct 2023
Equilibrium Computation at EC Workshop (EC'23) Jul 2023
INFORMS Revenue Management and Pricing Conference (RMP'23) Jul 2023

Incentive Design for Future Mobility Systems: Congestion Pricing from the Lens of Equity
UC Davis – Stanford Workshop on Smart Mobility, UC Davis May 2024
Clean-slate Approaches to Crewed and Uncrewed Air Traffic Operations Workshop Sep 2023

Artificial Currency Based Welfare Programs: From Optimal Design to Audit Games
CMASDL Workshop (AAAI'24) Feb 2024

Credit-based Congestion Pricing: Equilibrium Properties and Optimal Scheme Design
IEEE International Conference on Decision and Control (CDC'23) Dec 2023
INFORMS Transportation Science and Logistics Conference (TSL'23) Jul 2023

Tutorial on Algorithms for Transit Optimization
IEEE Conference on Smart Computing (SmartComp'23) Jun 2023

Online Learning for Traffic Routing under Unknown Preferences
International Conference on Artificial Intelligence and Statistics (AISTATS'23) Apr 2023

Balancing Fairness and Efficiency in Traffic Routing via Interpolated Traffic Assignment
2024 INFORMS Annual Meeting, TSL Best Student Paper Award Session Oct 2024
CMASDL Workshop (AAAI'24) Feb 2024
Conference on Autonomous Agents and Multi-Agent Systems (AAMAS'22) May 2022

When Efficiency meets Equity in Mobility Management
Workshop on Co-Design and Coordination of Future Mobility Systems (ITSC'22) Oct 2022

When Efficiency meets Equity in Congestion Pricing and Revenue Refunding Schemes
2022 INFORMS Annual Meeting Oct 2022
Equity and Access in Algorithms, Mechanisms and Optimization (EAAMO'21) Oct 2021

Markets for Efficient Public Good Allocation with Social Distancing
International Conference on Web and Internet Economics (WINE'20) Dec 2020

Other Presentations and Invited Talks

Simple vs. Optimal Congestion Pricing

MTA Congestion Pricing Team, New York City May 2026

Toward Practical and Equitable Congestion Pricing
Autonomy Seminar, Dartmouth College May 2026
C2SMART Center, New York University Apr 2026

Online Learning for Equilibrium Pricing in Markets Under Incomplete Information
Guest Lecture EE-290 (Learning Enabled Multi-Agent Systems), UC Berkeley Feb 2026

Optimal and Fair Routing in Transportation Networks
Guest Lecture CEOR E4011 (Civil Infrastructure Systems Optimization), Columbia Oct 2025
Guest Lecture IEOR 4418 (Transportation Analytics & Logistics), Columbia Sep 2025

Societal-scale Equilibrium Computation in Security and Signaling Games: Theory and Applications in Smart Mobility
Algorithms, Combinatorics and Optimization (ACO) Seminar, UC Irvine May 2025

Algorithmic Sustainability for Resource Allocation in Large-scale Sociotechnical Systems
eMERGE Seminar, UC Berkeley Oct 2025
ICME Research Symposium, Stanford University May 2025
PhD Defense, Stanford University Apr 2025
Semiautonomous Seminar Series, UC Berkeley Feb 2025

Algorithm and Incentive Design for Sustainable Resource Allocation: Beyond Classical Fisher Markets
Ashoka University, India Dec 2025
Industrial Engineering and Operations Research Seminar, Columbia University Feb 2025
Economics and Computation Group Seminar, Microsoft Research Jan 2025
Industrial and Systems Engineering Seminar, University of Washington Jan 2025
Decision Sciences Seminar, Duke University (Fuqua School of Business) Jan 2025
Industrial Engineering and Operations Research Seminar, IIT Bombay Jan 2025
Operations Management Seminar, Indian School of Business Dec 2024
Autonomy Talks, Virtual Dec 2024
Decision Sciences Seminar, INSEAD Nov 2024
Information Systems and Analytics Seminar, National University of Singapore Nov 2024
Industrial and Systems Engineering Seminar, Georgia Institute of Technology Nov 2024
Industrial and Systems Engineering Seminar, University of Southern California Nov 2024
Operations and Logistics Division Seminar Series, UBC Sauder Oct 2024

Technologies for Autonomy in Future Mobility Systems: Congestion Pricing from the Lens of Equity
Sustainable Mobility Seminar (CEE 272M), Stanford University Apr 2025

When Simple is Near Optimal in Security Games
Market Design Seminar, Stanford University May 2024
Operations Research Student Seminar, Stanford University Feb 2024

Stochastic Online Fisher Markets: Static Pricing Limits and Adaptive Enhancements
Stanford AFTLAB PhD Student Workshop, Stanford University May 2024
Air India – Stanford Meeting, Stanford University Jul 2023
Amazon Science Seminar, Virtual Feb 2023

Beyond Classical Fisher Markets: Additional Constraints and Online Allocations
Amin Saberi's Group Meeting, Stanford University May 2024

Incentive Design for Future Mobility Systems: Congestion Pricing from the Lens of Equity
Center for Automotive Research at Stanford Webinar, Stanford University Apr 2024
Sustainable Mobility Seminar (CEE 272M), Stanford University Apr 2024
Indian Institute of Management, Mumbai Nov 2023
AIR Lab Meeting, UC Berkeley Sep 2023

Matching with Transfers under Distributional Constraints
Equity and Access in Algorithms, Mechanisms and Optimization (EAAMO'22) Oct 2022
Matching under Preferences (MATCH-UP'22) Aug 2022

Incentive Design for Future Mobility Systems: Congestion Pricing from the Lens of Fairness and Learning
Google Research, Mountain View Aug 2022

Markets for Efficient Public Good Allocation with Social Distancing
Workshop on Mechanism Design for Social Good (MD4SG'20) Aug 2020
Operations Research Summer Seminar, Stanford University Jul 2020
Data Science & AI Summer Seminar Series, Stanford University Jun 2020

Carpool Lane Dynamics – Alleviating Traffic Congestion in Narrow Lane Highways
Undergraduate Research Opportunity Program, UC Berkeley Mar 2018

The Living Levee: Wastewater Effluent Polishing in Subsurface Wetlands Unit Process Wetlands
ReNUWIT'17, Stanford University May 2017

Mumbai's Urban Water Challenges and Possible Solutions for its Slum Communities
Townes/Tagore Symposium, UC Berkeley Sep 2016

Community Water Purifiers for the Underprivileged and Poor
Clinton Global Initiative Conference, UC Berkeley Apr 2016

Teaching

Stanford University
AA203 (Optimal and Learning Based Control) Spring 2023
AA203 (Optimal and Learning Based Control) Spring 2022

University of California Berkeley
Math 53 (Multivariable Calculus) Spring 2018

Academic Service

Workshop Organizer:

IEEE Conference on Decision and Control, 2023 (CDC'23), Singapore Dec 2023
Learning Enabled Control and Coordination for Societally Aware Transportation Systems
Workshop Website: Link

2023 CPS-IoT Week, San Antonio, TX May 2023
Bridging Learning and Algorithmic Fairness in the Operation of Urban Infrastructure and Network Systems
Workshop Website: Link

Conference Session Organizer:

2024 INFORMS Annual Meeting, Seattle, WA Oct 2024
Data-driven and Optimization Foundations for Emerging Mobility Systems

2024 INFORMS Annual Meeting, Seattle, WA Oct 2024
Design and Optimization of Societally-aware Mobility Systems

2024 INFORMS Optimization Society Conference, Houston, TX Mar 2024
New Frontiers in Urban Transportation: Algorithmic Approaches and Market Mechanisms

2023 INFORMS Annual Meeting, Pheonix, AZ Oct 2023
Data-driven Operation of Emerging Mobility Systems

Panels:

Moderator, CDC 2023, Singapore Dec 2023
Methodological Challenges for Societally Aware Transportation Systems (Workshop on *Learning Enabled Control and Coordination for Societally Aware Transportation Systems*)
Panelists: Karl Johannson, Andreas Malikopoulos, George Pappas

Moderator, CDC 2023, Singapore Dec 2023
Concluding Panel: Future Directions (Workshop on *Learning Enabled Control and Coordination for Societally Aware Transportation Systems*)
Panelists: Hamsa Balakrishnan, Christos Cassandras, Kaidi Yang

Moderator, CPS-IoT Week, San Antonio, TX May 2023
Introductory Panel: Methodological Challenges (Workshop on *Bridging Learning and Algorithmic Fairness in the Operation of Urban Infrastructure and Network Systems*)
Panelists: Navid Azizan, Siddhartha Banerjee, Shushman Choudhury

Service and Outreach:

Mentor, DE&I program for Undergraduate Diversity in Research 2021 - 2022
Mentored an undergraduate student to conduct research as part of Stanford University's Management Science & Engineering Department's DE&I program for undergraduate diversity in research

Member of CEE Undergraduate Studies Committee, UC Berkeley 2018 - 2019

Redesigned freshman level Civil and Environmental Engineering (CEE) class and capstone design courses to increase retention rates in CEE and positively influence the undergraduate engineering experience through improved course and research offerings

Reviewing:

Program Committee: ACM Conference on Economics and Computation (EC'25, EC'26)

Journals: Operations Research (OR), Management Science (MS), Transportation Science (TS), Journal of Economic Theory (JET), Theoretical Economics (TE), Transportation Research Part B, Transportation Research Part E, Transport Policy, IEEE Transactions on Intelligent Transportation Systems (T-ITS), IEEE Transactions on Control Systems Technology (TCST), IEEE Control Systems Letters (L-CSS)

Conferences: ACM Conference on Equity and Access in Algorithms, Mechanisms, and Optimization (EAAMO'26) European Symposium on Algorithms (ESA'26), IEEE Conference on Decision and Control (CDC'24, CDC'22), ACM Symposium on Discrete Algorithms (SODA'22), Learning for Dynamics and Control Conference (L4DC'24), American Controls Conference (ACC'23)

Recognized with **Outstanding Service as a Reviewer of L-CSS** in 2022

Industry Experience

Google, *Research Intern (Auction Mechanisms)*, Mountain View, CA Jun 2023 - Sep 2023
Developed fundamentally grounded approaches to tune auctions to balance revenue and user experience in Ads markets

Lawrence Berkeley National Lab, *Research Assistant*, Berkeley, CA Sep 2018 - May 2019
Formulated optimization algorithms to solve mixed integer programs to manage distributed energy resources in the electric grid

Tesla, *Service Supply Chain Intern*, Fremont, CA May 2018 - Aug 2018
Developed inventory allocation algorithm to rebalance inventory to eliminate order backlog at service centers and implemented anomaly detection algorithms to detect big changes in part consumption for better demand planning and part forecasting

Bio-Tesseract, *Data Scientist*, Berkeley, CA Jan 2018 - May 2018
Built predictor system and visualization tool for revenue predictions at biogas facilities in China based on user specified waste inputs

Center for Future Urban Transport, *Research Assistant*, Berkeley, CA Aug 2017 - May 2019
Analyzed bottleneck formation dynamics along the US 101 Highway, modelled freeway traffic congestion using Aimsun, and performed simulations for optimal carpool lane design

Suez, *Engineering Summer Intern*, Haworth, NJ Jun 2017 - Aug 2017
Predicted future water sales for Suez' Haworth facility, analyzed customer meter data to understand water use patterns, and developed hydraulic model to optimize the system's operation

The Water Connection Project, *Founder*, Mumbai, India Mar 2016 - Aug 2016
Analyzed Mumbai's water distribution problems through 150 household surveys to develop a house-

hold water purifier and installed economically viable water purifiers in overhead water tanks in a housing community of over 1000 slum relocated residents in Mumbai

Press

New York Times
Why I Welcome New York City's New Congestion Pricing Plan — Jan 2024

Stanford Center for Human Centered AI (Stanford HAI)
Counting Cars: New AI-Driven Approach Fine-Tunes Road Tolls to Reduce Traffic — Apr 2023
An Equitable Approach to Reducing Traffic Through Congestion Pricing — Dec 2021