Dorsa Majdi

PhD Student in Economics | Stanford GSB

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Graduate Study

I am currently a **third-year PhD** student in Economics at Stanford Graduate School of Business. My graduate studies focus on microeconomic theory and market design. Over the past two years, I have completed extensive coursework in matching and market design, game theory, contract theory, network theory, optimization, reinforcement learning, causal inference, industrial organization, econometrics, and behavioral economics.

Previously, I earned a silver medal in the Iranian National Mathematics Olympiad, received my **B.Sc. in Computer Engineering** from Sharif University of Technology in Iran, and completed my **M.S. in Management Science and Engineering** at Stanford University.

Research Interests and Ongoing Projects

My research interests lie primarily at the intersection of **microeconomic theory and computer science**, with a focus on market design, network theory and reinforcement learning. My ongoing research projects include:

1. **Diffusion of New Technologies over Networks: Dynamic Control of Word-of-Mouth.** I develop a dynamic model of product adoption over a social network, motivated by the diffusion of costly emerging technologies such as AI. I study how optimally targeting the exposure of adopters and non-adopters over time can accelerate diffusion.
2. **Managing Congestion in Electricity Interconnection Queues.** With rising electricity demand, particularly from data centers, interconnection queues have become increasingly congested and inefficient. I formalize a source of inefficiency, which I call *exacerbated congestion*, and explore how market design tools, including queue design and multidimensional screening, can mitigate it.
3. **Dynamic Behavioral Choice Models of User Interactions with Recommender Systems.** I develop a dynamic search-based model of user choice and preference learning in recommender systems to understand how these systems shape user behavior and evaluate their welfare implications.
4. **AI Alignment under Endogenous Auditing.** I develop a dynamic principal-agent model in which a human learns about an AI agent's competence and alignment while endogenously deciding how extensively to audit its recommendations.

Faculty Advisors: I work most closely with Matt Jackson, Paul Milgrom, Mike Ostrovsky, Andy Skrzypacz, Mohammad Akbarpour, and Lihua Lei.