

EMPLOYMENT	Columbia Business School NY, USA Postdoctoral Researcher in the Decision, Risk, and Operations Division 2024 - 2026 Advisors: Assaf Zeevi and Hongseok Namkoong
EDUCATION	Stanford University CA, USA PhD in Management Science and Engineering 2018 - 2024 Advisors: Peter Glynn and Jose Blanchet <i>Markov Chain Convergence Analysis: From Pen and Paper to Deep Learning</i> University of Science and Technology of China Anhui, China BSc in Mathematics and Applied Mathematics 2014 - 2018
RESEARCH INTERESTS	Multi-armed bandits Markov chain convergence analysis Deep learning for applied probability Stochastic simulation
ONGOING RESEARCH	What does Thompson Sampling Optimize? (with Hongseok Namkoong and Assaf Zeevi) We rediscover Thompson Sampling as an online optimization algorithm that minimizes immediate squared regret adaptively regularized by an uncertainty measure. Non-compact Deep Contractive Drift Calculator (with Jose Blanchet and Peter Glynn) We automate the convergence analysis of Markov chains on non-compact state spaces by reducing the task to function approximation (via neural networks) on compact sets.
PUBLICATIONS	Y. Qu, J. Blanchet, and P. Glynn. Computable Bounds on Convergence of Markov Chains in Wasserstein Distance. <i>Annals of Applied Probability</i> , accepted, 2025, <i>arXiv</i> . – Applied Probability Society Best Student Paper Prize, 2023 – Applied Probability Society Conference Best Poster Award, 2023 Y. Qu, J. Blanchet, and P. Glynn. Deep Learning for Computing Convergence Rates of Markov Chains. <i>NeurIPS</i> (spotlight), 2024. P. Glynn. and Y. Qu. On a New Characterization of Harris Recurrence for Markov Chains and Processes. <i>Mathematics</i> , 2023.
PREPRINTS	Y. Qu, T. Rokicki, and H. Yang. Rubik’s Cube Scrambling Requires at Least 26 Random Moves. <i>arXiv</i> , 2024. Y. Qu, R. Kant, Y. Chen, B. Kitts, S. Gultekin, A. Flores, and J. Blanchet. Double Distributionally Robust Bid Shading for First Price Auctions. <i>arXiv</i> , 2024. Y. Qu, J. Blanchet, and P. Glynn. Strong Limit Interchange Property of a Sequence of Markov Processes. Y. Qu, J. Blanchet, and P. Glynn. Estimating the Convergence Rate to Equilibrium of a Markov Chain via Simulation. Y. Qu and P. Glynn. Bias of Markov Chain Sample Quantile. Y. Qu and P. Glynn. Uniform Edgeworth Expansions for Markov Chains.

TEACHING	I served as a teaching assistant for the following MS&E courses:	
	324: Stochastic Methods in Engineering	2021, 2022, 2023, 2024
	323: Stochastic Simulation	2020, 2024
	321: Stochastic Systems	2023
	221: Stochastic Modeling	2020
	220: Probabilistic Analysis	2019, 2022
	211: Introduction to Optimization	2021
	125: Introduction to Applied Statistics	2020
	260: Introduction to Operations Management	2020
AWARDS	Centennial Teaching Assistant Award	2024
	Applied Probability Society Best Student Paper Prize	2023
	Applied Probability Society Conference Best Poster Award	2023
	Dantzig-Lieberman Operations Research Fellowship	2021
	Guo Moruo Scholarship	2017
ACADEMIC SERVICE	I reviewed papers submitted to the following journals and conferences:	
	European Journal of Operational Research	
	Mathematics of Operations Research	
	Annals of Applied Probability	
	Operations Research	
	NeurIPS 2025	
REFERENCES	Peter Glynn Thomas Ford Professor Stanford University glynn@stanford.edu	Jose Blanchet Professor Stanford University jose.blanchet@stanford.edu
	Assaf Zeevi Kravis Professor of Business Columbia Business School assaf@gsb.columbia.edu	Hongseok Namkoong Assistant Professor Columbia Business School namkoong@gsb.columbia.edu