YAOSHENG XU

PERSONAL INFORMATION

Email:	Yaosheng.Xu@chicagobooth.edu	
Phone:	(607) 280-2760	
Current position:	Principal Researcher	*Advisor: Barış Ata*
	Booth School of Business	
	University of Chicago	

EDUCATION

Cornell University 08/2017 – 08/2022
Ph.D. in Statistics. *Advisor: Jim Dai*

Shandong University 09/2014 – 07/2017
M.S. in Probability and Mathematical Statistics

Shandong University 09/2010 – 08/2014
B.S. in Statistics

WORK EXPERIENCE

Principal Researcher. 06/2024 – present
Full-time, Booth School of Business, University of Chicago.

Applied Scientist. Full-time, Amazon.com. 08/2022 – 05/2024

Applied Scientist Intern. Amazon.com. 06/2021 – 08/2021

PUBLICATIONS AND PREPRINTS

1. Barış Ata and Yaosheng Xu.
   Dynamic Control of a Stochastic Matching System in Heavy Traffic: An Effective Computational Method for High-Dimensional Problems. Under review. Link

2. Yaosheng Xu.
   Explicit Steady-State Approximations for Parallel Server Systems with Heterogeneous Servers. Under review. Link

3. J. G. Dai, Peter Glynn and Yaosheng Xu.
   Asymptotic Product-Form Steady-State for Generalized Jackson Networks in Multi-Scale Heavy Traffic. Minor revision at **Operations Research**. Link

4. Jin Guang, Yaosheng Xu, and J. G. Dai.
   Steady-State Convergence of the Continuous-Time Routing System with General Distributions in Heavy Traffic.
   ACM SIGMETRICS, 9(1): 1-29, 2025. Link

   A short version is accepted at Workshop on Mathematical Performance Modeling and Analysis (MAMA) of ACM SIGMETRICS 2024. Link

5. Xin Bing, Yang Ning and Yaosheng Xu.
   Adaptive Estimation in Multivariate Response Regression with Hidden Variables.
   Annals of Statistics, 50(2): 640–672, 2022. Link

6. Mondher Bellalah, Yaosheng Xu, Detao Zhang.
   Intertemporal Optimal Portfolio Choice based on Labor Income within Shadow Costs of Incomplete Information and Short Sales.
   Annals of Operations Research, 281: 397–422, 2019. Link

WORK IN PROGRESS

1. Barış Ata and Yaosheng Xu.
   Dynamic Dispatch and Relocation Control for Ride-Hailing Systems Incorporating Travel Times.

WORKSHOPS AND CONFERENCE PRESENTATIONS

1. INFORMS APS Conference. Invited Talk. Atlanta, GA. June 30 – July 3, 2025.
   Title: Dynamic Control of Stochastic Matching Systems in Heavy Traffic: An Effective Computational Method for High-Dimensional Problems

2. INFORMS Annual Meeting. Invited Talk. Seattle, WA. October 20 – 23, 2024.
   Title: Explicit Steady-State Approximations for Parallel Server Systems with Heterogeneous Servers and Class-dependent Service Time

3. INFORMS APS showcase. Flash Talk. Seattle, WA. October 22, 2024.
   Title: Asymptotic steady-state independence for generalized Jackson Networks in multi-scale heavy traffic

4. INFORMS Annual Meeting. Invited Talk. Anaheim, CA. October 24 – 27, 2021.
   Title: Explicit Steady-state Approximations For Parallel-server Systems

5. Fields-China Joint Industrial Problem Solving Workshop in Finance. Toronto, ON. May 8 – 12, 2017.
   Title: Influence Factors for the Chinese Stock Index Futures Basis

RESEARCH INTERESTS AND SKILLS

Operations Research and Management
Stochastic Optimization and Control, Dynamic Matching, AI-driven Diffusion Control, Stochastic Processing Networks, Queueing Theory, Multi-Scale Heavy Traffic, Load-balancing Systems, LLM Inference.

Statistics and Data Science
High-Dimensional Statistics, Multivariate Analysis, Causal Inference, Model Selection and Regularization, Experimental Design.

Programming Languages
Python, C++, R, MATLAB.

TEACHING EXPERIENCE

Supervised courses as Teaching Assistant at Cornell University

- STSCI/BTRY 3080: Probability Models and Inference
- ORIE 3510/5510: Introduction to Engineering Stochastic Processes
- STSCI 4740: Data Mining and Machine Learning
- BTRY 6020: Statistical Methods
- STSCI 2150: Introductory Statistics for Biology

REFERENCES

Prof. Jim Dai
Leon C. Welch Professor of Engineering
Operations Research and Information Engineering (ORIE)
Cornell University
E-mail: jd694@cornell.edu
Phone: +1 (607) 379-1922

Prof. Baris Ata
Sigmund E. Edelstone Distinguished Service Professor
Booth School of Business
University of Chicago
E-mail: Baris.Ata@chicagobooth.edu
Phone: +1 (773) 807-9107

Prof. Peter Glynn
Thomas W. Ford Professor
Department of Management Science & Engineering
Stanford University
E-mail: glynn@stanford.edu
Phone: +1 (650) 725-1624

Prof. Yang Ning
Associate Professor
Department of Statistics and Data Science
Cornell University
E-mail: yn265@cornell.edu
Phone: +1 (607) 255-3759