Lin Fan

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### Education

2017–2023 Stanford University, Stanford, CA.

- PhD in Management Science and Engineering
- Concentration area: Operations Research
- Advisor: Peter W. Glynn

2014–2017 Stanford University, Stanford, CA.

- PhD Candidate in Mechanical Engineering (incomplete degree)
- 2017 Stanford University, Stanford, CA.
  - MS in Statistics
- 2015 Stanford University, Stanford, CA.
  - MS in Mechanical Engineering
- 2012 Georgia Institute of Technology, Atlanta, GA.
  - BS in Mechanical Engineering (with highest honors)
  - Minor in Biology

# Employment

2024- Kellogg School of Management, Northwestern University, Evanston, IL.

Assistant Professor of Operations

2023-2024 Amazon, New York, NY.

Postdoctoral Scientist in Supply Chain Optimization Technologies

### Research Interests

- Broadly at the interface of applied probability and data-driven operations
- Specializations in multi-armed bandits, reinforcement learning, statistical inference for stochastic processes, and stochastic simulation

#### **Awards**

- o 2<sup>nd</sup> place, George Nicholson Student Paper Competition, 2022
- Stanford Centennial Teaching Assistant Award, 2021
- Dantzig-Lieberman Operations Research Fellowship, 2019, 2021
- National Science Foundation Graduate Research Fellowship, 2013
- Winner, 22<sup>nd</sup> Annual SAIC-Georgia Tech Student Paper Competition, 2011

### Journal Publications

- 1. Central Limit Theorems for Estimated Functions at Estimated Points
  - o with Peter W. Glynn, Michael C. Fu, Jiangiang Hu, Yijie Peng
  - Operations Research, 2020
- 2. The Fragility of Optimized Bandit Algorithms
  - o with Peter W. Glynn
  - Operations Research, 2024
  - o 2<sup>nd</sup> place, George Nicholson Student Paper Competition, 2022

# Preprints/Under Review

Latest versions are accessible here: https://linfanf.github.io/research/

- 3. Diffusion Approximations for Thompson Sampling
  - o with Peter W. Glynn
- 4. Poisson Limits of Bernoulli Bandits
  - o with Wenjia Ba, Peter W. Glynn, J. Michael Harrison
- 5. Statistical Inference for Markov Chains with Known Structure
  - o with Peter W. Glynn
- 6. The Typical Behavior of Bandit Algorithms
  - o with Peter W. Glynn
- 7. Robustness Benefits of Structured Bandits
- 8. Change-Point Testing for Risk Measures in Time Series
  - o with Junting Duan, Peter W. Glynn, Markus Pelger

# In Preparation/Work in Progress

- 9. Regret Distribution of Bandits with Heavy-tailed Rewards
- 10. Subsample-based Inference for Markov Chains with Known Structure
  - o with Peter W. Glynn
- 11. Smoothed Estimation for Markov Chains with Known Structure
  - o with Peter W. Glynn
- 12. Semiparametric Inference for Markov Chains with Known Structure
  - o with Peter W. Glynn

## Earlier Journal Publications

- 13. Constant Tip-Surface Distance with Atomic Force Microscopy via Quality Factor Feedback
  - with Daniel Potter, Todd Sulchek
  - Review of Scientific Instruments, 2012
  - Winner, 22<sup>nd</sup> Annual SAIC-Georgia Tech Student Paper Competition, 2011
- 14. Break-Up of Droplets in a Concentrated Emulsion Flowing Through a Narrow Constriction
  - o with Liat Rosenfeld, Yunhan Chen, Sindy K.Y. Tang
  - o Soft Matter, 2014
- 15. A Remote Stereochemical Lever Arm Effect in Polymer Mechanochemistry
  - with Junpeng Wang, Tatiana B. Kouznetsova, Zachary S. Kean, Brendan D. Mar, Todd J. Martinez, Stephen L. Craig
  - o Journal of the American Chemical Society, 2014
- 16. Sensory-Motor Systems of Copepods Involved in Their Escape from Suction Feeding
  - o with Jeannette Yen, David W. Murphy, Donald R. Webster
  - Integrative and Comparative Biology, 2015

# Teaching

2025- Core Operations Management

Role: Instructor

Institution: Kellogg School of Management

Level: MBA

2019–2023 Stochastic Calculus and Control

• Role: Teaching Assistant

Institution: Stanford University, Management Science and Engineering

o Level: PhD

2019–2022 Stochastic Modeling

Role: Teaching Assistant

o Institution: Stanford University, Management Science and Engineering

Level: MS

2018–2020 Fundamentals of Data Science

• Role: Teaching Assistant

o Institution: Stanford University, Management Science and Engineering

Level: MS

2017 Introduction to Stochastic Modeling

Role: Teaching Assistant

o Institution: Stanford University, Management Science and Engineering

Level: Undergraduate

2016 Introduction to Matrix Methods

• Role: Teaching Assistant

Institution: Stanford University, Electrical Engineering

Level: Undergraduate

## Professional Service

#### Session Chair

- 2023 INFORMS Annual Meeting, Applied Probability Society
- 2024 INFORMS Annual Meeting, Applied Probability Society
- 2025 INFORMS Applied Probability Society Conference
- 2025 INFORMS Annual Meeting, INFORMS Computing Society

## Referee

- Operations Research
- Management Science
- Manufacturing & Service Operations Management
- Mathematics of Operations Research
- Annals of Applied Probability
- INFORMS Journal on Computing