# 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

- 2nd 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, 22nd Annual SAIC–Georgia Tech Student Paper Competition, 2011

## Journal Publications

1. Central Limit Theorems for Estimated Functions at Estimated Points
   - with Peter W. Glynn, Michael C. Fu, Jianqiang Hu, Yijie Peng
   - *Operations Research*, 2020
2. The Fragility of Optimized Bandit Algorithms
   - with Peter W. Glynn
   - *Operations Research*, 2024
   - 2nd 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
   - with Peter W. Glynn
4. Poisson Limits of Bernoulli Bandits
   - with Wenjia Ba, Peter W. Glynn, J. Michael Harrison
5. Statistical Inference for Markov Chains with Known Structure
   - with Peter W. Glynn
6. The Typical Behavior of Bandit Algorithms
   - with Peter W. Glynn
7. Robustness Benefits of Structured Bandits
   - with Peter W. Glynn
8. Change-Point Testing for Risk Measures in Time Series
   - 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
    - with Peter W. Glynn
11. Smoothed Estimation for Markov Chains with Known Structure
    - with Peter W. Glynn
12. Semiparametric Inference for Markov Chains with Known Structure
    - 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$^{nd}$ Annual SAIC–Georgia Tech Student Paper Competition, 2011
14. Break-Up of Droplets in a Concentrated Emulsion Flowing Through a Narrow Constriction
    - with Liat Rosenfeld, Yunhan Chen, Sindy K.Y. Tang
    - *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
    - *Journal of the American Chemical Society*, 2014
16. Sensory-Motor Systems of Copepods Involved in Their Escape from Suction Feeding
    - 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
- Level: PhD

2019–2022 Stochastic Modeling
- Role: Teaching Assistant
- Institution: Stanford University, Management Science and Engineering
- Level: MS

2018–2020 Fundamentals of Data Science
- Role: Teaching Assistant
- Institution: Stanford University, Management Science and Engineering
- Level: MS

2017 Introduction to Stochastic Modeling
- Role: Teaching Assistant
- 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 Conference

Referee
- *Operations Research*
- *Management Science*
- *Mathematics of Operations Research*
- *Annals of Applied Probability*