Lin Fan

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Education

2017–Present **PhD Student, Management Science and Engineering**, *Stanford University*.
- Advised by Prof. Peter W. Glynn

2014–2017 **PhD Student, Mechanical Engineering**, *Stanford University*.
- Advanced to candidacy in 2015

2017 **MS Statistics**, *Stanford University*.

2015 **MS Mechanical Engineering**, *Stanford University*.

2012 **BS Mechanical Engineering**, *Georgia Institute of Technology*.
- With Highest Honors
- Minor in Biology

Research Interests

- Broadly at the interface of data-driven operations research and machine learning
- Specializations in applied probability, sequential decision-making under uncertainty, statistical inference for stochastic processes, stochastic simulation
- Applications of interest include online experimentation, service operations, economic time series, renewable energy and sustainability

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

Preprints/In Submission

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

1. L. Fan, P.W. Glynn, *The Fragility of Optimized Bandit Algorithms*
   - 2nd place, George Nicholson Student Paper Competition, 2022
2. L. Fan, P.W. Glynn, *Diffusion Approximations for Thompson Sampling*
3. L. Fan, P.W. Glynn, *The Typical Behavior of Bandit Algorithms*
4. L. Fan, P.W. Glynn, *Nonparametric Estimation of Markov Chain Expectations*
5. L. Fan, P.W. Glynn, M. Pelger, *Change-Point Testing for Risk Measures in Time Series*

Journal Publications

6. P.W. Glynn, L. Fan, M.C. Fu, J. Hu, Y. Peng, *Central Limit Theorems for Estimated Functions at Estimated Points*, Operations Research, 68, 2020

Selected Work in Progress

Approximations for Bernoulli Bandits, with W. Ba, P.W. Glynn, J.M. Harrison

Subsample-based Estimation of Markov Chain Expectations, with P.W. Glynn, M. Pelger

Gradient Estimation for Stochastic Networks, with P.W. Glynn

Efficient Parametric Estimation of Markov Chain Expectations, with P.W. Glynn

Earlier Journal Publications

7. J. Yen, D.W. Murphy, L. Fan, D.R. Webster, *Sensory-Motor Systems of Copepods involved in their Escape from Suction Feeding*, Integrative and Comparative Biology, 55, 2015
8. J. Wang, T.B. Kouznetsova, Z.S. Kean, L. Fan, B.D. Mar, T.J. Martinez, S.L. Craig, *A Remote Stereochemical Lever Arm Effect in Polymer Mechanochemistry*, Journal of the American Chemical Society, 136, 2014
9. L. Rosenfeld, L. Fan (co-first author), Y. Chen, S.K.Y. Tang, *Break-Up of Droplets in a Concentrated Emulsion Flowing Through a Narrow Constriction*, Soft Matter, 10, 2014
10. L. Fan, D. Potter, T. Sulchek, *Constant Tip-Surface Distance with Atomic Force Microscopy via Quality Factor Feedback*, Review of Scientific Instruments, 83, 2012

Conference Presentations

1. 2022 INFORMS Annual Meeting, *The Fragility of Optimized Bandit Algorithms*
2. 2020 INFORMS Annual Meeting, *Nonparametric Estimation of Markov Chain Expectations*
3. 2018 NBER-NSF Time Series Conference, *Change-Point Testing and Estimation for Risk Measures in Time Series*

Teaching Experience

Stochastic Modeling, MS&E 221
- Core course for MS students; taught by Prof. Peter Glynn
- TA in Winter 2019, Spring 2021; Head TA in Spring 2022

Fundamentals of Data Science, MS&E 226
- Core course for MS students; taught by Prof. Ramesh Johari
- Co-Head TA in Fall 2018, Fall 2019, Fall 2020

Stochastic Calculus and Control, MS&E 322
- PhD-level course; taught by Prof. Peter Glynn
- TA in Spring 2019

Introduction to Stochastic Modeling, MS&E 121
- Core course for undergraduate students; taught by Prof. Sam Chiu
- TA in Spring 2017

Introduction to Matrix Methods, CME/EE 103
- Undergraduate-level course; taught by Prof. Stephen Boyd
- TA in Fall 2016

Work Experience

Summer 2010, 2011 **Engineering Intern**, *National Renewable Energy Laboratory*, Golden, CO.
- Developed simulation tools for performance evaluation of large-scale wind farms
- Science Undergraduate Laboratory Internship Program, US Department of Energy

Professional Service

Reviewer for *Operations Research*, *Management Science*, *Annals of Applied Probability*