Lin Fan

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Education

2017–Present **PhD Student, Management Science and Engineering**, *Stanford University*.
- Research interests: interface of machine learning and data-driven operations research
- Specializations: applied probability, sequential learning and decision-making, statistical inference for stochastic processes, stochastic simulation
- Advisor: Professor Peter W. Glynn

2014–Present **PhD Student, Mechanical Engineering**, *Stanford University*.
- Advanced to candidacy in 2015
- Currently inactive in program

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

Awards

Finalist, 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

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

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

Work In Progress

1. with W. Ba, P.W. Glynn, J.M. Harrison, Approximations for Bernoulli Bandits.
2. with P.W. Glynn, M. Pelger, Subsample-based Estimation of Markov Chain Expectations.
3. with P.W. Glynn, Gradient Estimation for Stochastic Networks.
4. with P.W. Glynn, Efficient Parametric Estimation of Markov Chain Expectations.

Journal Publications

1. 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.

Earlier Journal Publications

2. 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.
3. 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.
4. 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.
5. 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 Assistantships (at Stanford)

Stochastic Modeling (MS&E 221), Winter 2019, Spring 2021, Spring 2022

Fundamentals of Data Science (MS&E 226), Fall 2018, Fall 2019, Fall 2020

Stochastic Calculus and Control (MS&E 322), Spring 2019

Introduction to Stochastic Modeling (MS&E 121), Spring 2017

Introduction to Matrix Methods (CME/EE 103), Fall 2016

Work Experience

Summer 2010, Summer 2011 **Engineering Intern**, *National Renewable Energy Laboratory*, Golden, CO.
- Science Undergraduate Laboratory Internship Program, US Department of Energy
- Project: forecasting and simulation tools for optimizing operation of large-scale wind farms

Professional Service

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