

Proof of the Contiguity Conjecture and Lognormal Limit for the Symmetric Perceptron (with Emmanuel Abbe and Allan Sly)

IEEE 62nd Symposium on Foundations of Computer Science (FOCS 2022)

Mean Field Behavior during the Big Bang Regime for Coalescing Random Walks (with Jonathan Hermon, Dong Yao, and Lingfu Zhang)

Annals of Probability, 50(5): pp. 1813–1884 (2022)

A Trace Theorem for Sobolev Spaces on the Sierpinski Gasket (with Shiping Cao, Robert Strichartz, and Prem Talwai)

Communications on Pure and Applied Analysis, 19(7): pp. 3901–3916 (2020)

Computing Eigenvalues and Eigenfunctions of Schrödinger Equations Using a Model Reduction Approach (with Zhiwen Zhang)

Communications in Computational Physics, 24: pp. 1073–1100 (2018)

INVITED TALKS &
LECTURES

California Institute of Technology CM+X Seminar, May 2026.

University of Chicago Theory Seminar (Combinatorics and TCS Seminar), Mar 2026.

UCLA Statistics & Data Science Seminar, Mar 2026.

Harvard University Theory of Computation Seminar, Dec 2025.

2025 INFORMS Annual Meeting, Applied Probability Society Cluster, Oct 2025, Atlanta.

IDEAL Workshop: Inference in High Dimensions: Algorithms and Statistics, Oct 2025, Northwestern University.

Rutgers/DIMACS Theory of Computing Seminar, Oct 2025.

University of Delaware Applied Economics and Statistics Department Seminar, Sep 2025.

2025 Joint Statistical Meetings, Recent Advances in High-Dimensional Probability and Combinatorial Optimization, Aug 2025, Nashville, Tennessee.

Rocky Mountain Summer Workshop on Algorithms, Probability and Combinatorics, Jun 2025, Colorado State University Mountain Campus, Bellvue, Colorado.

Detection, Estimation, and Reconstruction in Networks, Apr 2025, SLMath, Berkeley, California.

University of Southern California Department of Mathematics Colloquium, Mar 2025.

DYOGENE/ERC NEMO Seminar series, Mar 2025, online.

Cornell University ORIE Colloquium, Mar 2025 .

Johns Hopkins University AMS/MINDS Seminar Series, Feb 2025.

Washington University in St Louis Department of Statistics and Data Science Seminar, Feb 2025.

University of Pennsylvania Wharton School Department of Statistics and Data Science Seminar, Feb 2025.

Yale University Department of Statistics and Data Science Seminar, Feb 2025.

Stanford University Statistics Seminar, Feb 2025.

University of Florida Mathematics Colloquium, Jan 2025.

Introductory Workshop: Probability and Statistics of Discrete Structures, Jan 2025, SLMath, Berkeley, California

University of Pennsylvania Probability and Combinatorics Seminar, Jan 2025.

University of Illinois Urbana-Champaign Department of Statistics Seminar, Jan 2025.

The Ohio State University Department of Mathematics Seminar, Jan 2025.

Georgia Institute of Technology College of Computing Seminar, Jan 2025.
Probability and Statistical Physics, TSIMF, Jan 2025.
HKUST IAS-HKWM-EASIAM Joint Workshop on Recent Advances on Scientific Computing, Random Matrices and Data Science, Dec 2024, Hong Kong University of Science and Technology, Hong Kong.
Hong Kong Probability Seminar, Dec 2024, University of Hong Kong, Hong Kong.
Low-Degree Polynomial Methods in Average-Case Complexity, Dec 2024, American Institute of Mathematics, Pasadena, California.
Duke University Fuqua School of Business Decision Sciences Seminar, Dec 2025.
University of Florida Statistics Department Seminar, Dec 2025.
Stanford University Probability Seminar, Nov 2024.
AMS Fall 2024 Western Sectional Meeting, Oct 2024, UC Riverside.
2024 INFORMS Annual Meeting, Applied Probability Society Cluster, Oct 2024, Seattle.
Frontiers of Statistical Mechanics and Theoretical Computer Science, Aug 2024, Banff International Research Station.
Stochastic Networks Conference 2024, Jul 2024, KTH Royal Institute of Technology.
Workshop on Random Matrices and Applications, May 2024, ICERM.
Summer School 2024: Probability, Algorithms, and Inference, May 2024, Georgia Tech.
2024 Joint Mathematics Meetings, AMS Special Session on Thresholds in Random Structures, Jan 2024, San Francisco.
LA Probability Forum, Nov 2023, Caltech.
Northwestern University Probability Seminar, Nov 2023.
National University of Singapore Joint Statistics, Data Science & Machine Learning Seminar, Oct 2023.
Stanford University Probability Seminar, Oct 2023.
Georgia Tech Stochastics Seminar, Sep 2023.
Peking University Summer School on Probability, Jun 2023.
Stanford University Applied Math Seminar, May 2023.
Stanford University Women in Theory Forum, Apr 2023.
Duke University Applied Math and Analysis Seminar, Apr 2023.
UC Davis Probability Seminar, Feb 2023.
UC Berkeley Probability Seminar, Nov 2022.
UC Irvine Combinatorics and Probability Seminar, Oct 2022.
Stanford University Probability Seminar, Sep 2022.
NYU Student Probability Seminar, May 2022, online.
HKU Numerical Analysis Seminar, May 2022, online.
Penn Local Probability Seminar, Apr 2022.
2022 Joint Mathematics Meetings, AAAS Special Session on Stochastic Processes on Networks, Apr 2022, online.
UIC Probability and Combinatorics Seminar, Mar 2022, online.
Princeton University PACM Colloquium, Feb 2022.
LU-NU-UMN Joint Probability Seminar, Feb 2022, online.
Stanford University Statistics Seminar, Feb 2022, online.

Princeton University PACM Graduate Student Seminar, Jan 2022.
 Harvard University Probabilitas Seminar, Dec 2021, online.
 Northeast Probability Seminar, Nov 2021, online.
 Random Graphs and Statistical Inference Workshop, Banff International Research Station, Aug 2021, online.
 Columbia-Princeton Probability Day, May 2021, online.
 Princeton University PACM Graduate Student Seminar, Apr 2021, online.
 University of Basel Seminar in Probability Theory and Statistics, Apr 2021, online.
 Princeton University PACM Graduate Student Seminar, Feb 2021, online.
 Northeast Probability Seminar, Nov 2020, online.
 Princeton University PACM Graduate Student Seminar, Nov 2019.
 Duke University Graduate Student Probability Seminar, Oct 2019.
 International Workshop on Inference on Graphical Models, Oct 2019, Columbia University.

PROFESSIONAL SERVICES

Organizer of Stanford Statistics Seminar: Winter 2023, Winter 2024, Summer 2024, Spring 2025.

Organizer of Stanford Probability Seminar: Spring 2023.

Reviews & quick opinions for journals: Annals of Applied Probability, Annals of Statistics, Communications in Mathematical Physics, Combinatorics, Probability and Computing, Electronic Journal of Probability, Information and Inference: A Journal of the IMA, Inventiones Mathematicae, Journal of Physics A, Random Structures & Algorithms, SIAM Journal on Computing.

Reviews for conferences: ACM Symposium on Theory of Computing (STOC), ACM-SIAM Symposium on Discrete Algorithms (SODA), Conference on Neural Information Processing Systems (NeurIPS), IEEE Symposium on Foundations of Computer Science (FOCS), International Conference on Artificial Intelligence and Statistics (AISTATS).

TEACHING

Yale University

S&DS 6060 Modern Discrete Probability	Spring 2026, Instructor.
S&DS 6000 Advanced Probability	Fall 2025, Instructor.

Stanford University

STATS218 Introduction to Stochastic Processes II	Spring 2025, Instructor.
STATS117 Theory of Probability I	Spring 2025, Instructor.
STATS218 Introduction to Stochastic Processes II	Spring 2024, Instructor.
STATS317 Stochastic Processes	Winter 2024, Instructor.
STATS218 Introduction to Stochastic Processes II	Spring 2023, Instructor.
STATS116 Theory of Probability	Fall 2022, Instructor.

Princeton University

MAT100 Calculus Foundations	Fall 2020, Preceptor.
MAT201 Multivariable Calculus	Fall 2019, Assistant Instructor.
MAT202 Linear Algebra with Applications	Spring 2019, Assistant Instructor.