

# Nima Anari

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Stanford, CA 94305

## Research Interests

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Sampling algorithms and Markov chains

Parallel algorithms

High-dimensional expanders

Geometry of polynomials

## Academic Positions

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**Stanford University** ..... 9/2019 - present

Assistant Professor of Computer Science.  
Robert N. Noyce Faculty Fellow.

**Simons Institute for the Theory of Computing** ..... 1/2019 - 5/2019

Microsoft Research Fellow.

**Stanford University** ..... 1/2018 - 8/2019

Research Engineer in Computer Science.

**Simons Institute for the Theory of Computing** ..... 8/2017 - 12/2017

Research Fellow.

**Stanford University** ..... 1/2016 - 8/2017

Postdoctoral Scholar in Management Science and Engineering, Hosted by Amin Saberi.

## Education

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**University of California, Berkeley** ..... 8/2010 - 12/2015

Ph.D. in Computer Science.  
Advisor: Satish Rao.

**Sharif University of Technology** .....9/2006 - 7/2010  
B.Sc. in Computer Engineering and B.Sc. in Pure Mathematics.

## Honors and Awards

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**Michael and Sheila Held Prize** ..... 2025  
National Academy of Sciences

**Frontiers of Science Award** ..... 2023  
International Congress of Basic Science.

**Sloan Research Fellowship** ..... 2021  
Alfred P. Sloan Foundation.

**NSF CAREER Award** ..... 2021  
National Science Foundation.

**STOC 2019 Best Paper Award** ..... 2019  
For the paper “Log-Concave Polynomials II: High-Dimensional Walks and an FPRAS for Counting Bases of a Matroid.”

**Google Faculty Research Award** ..... 2019  
Google.

**Microsoft Research Fellow** ..... 2019  
Simons Institute for the Theory of Computing.

**Simons-Berkeley Research Fellow** ..... 2017  
Simons Institute for the Theory of Computing.

**Berkeley Fellowship for Graduate Studies** ..... 2010 - 2012  
University of California, Berkeley.

**Ranked 14th Team** ..... ICPC 2009  
ACM International Collegiate Programming Contest World Finals.

**Ranked 13th Team** ..... ICPC 2008  
ACM International Collegiate Programming Contest World Finals.

**First Prize** ..... IMC 2008  
International Mathematics Competition.

**First Prize** ..... IMC 2007  
International Mathematics Competition.

**Outstanding Student Award** ..... 2007, 2008, 2009  
Sharif University of Technology.

**Silver Medal** ..... IOI 2006  
International Olympiad in Informatics.

**Gold Medal** ..... IMO 2006  
International Mathematical Olympiad.

**Silver Medal** ..... IMO 2005  
International Mathematical Olympiad.

## Teaching

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**CS 161: Design and Analysis of Algorithms** ..... Winter 2025  
Stanford University.

**CS 221: Artificial Intelligence: Principles and Techniques** ..... Autumn 2024  
Stanford University.

**CS 221: Artificial Intelligence: Principles and Techniques** ..... Spring 2024  
Stanford University.

**CS 161: Design and Analysis of Algorithms** ..... Winter 2024  
Stanford University.

**CS 263: Counting and Sampling** ..... Autumn 2023  
Stanford University.

**CS 161: Design and Analysis of Algorithms** ..... Winter 2023  
Stanford University.

**CS 263: Counting and Sampling** ..... Autumn 2022  
Stanford University.

**CS 161: Design and Analysis of Algorithms** ..... Winter 2022  
Stanford University.

**CS 221: Artificial Intelligence: Principles and Techniques** ..... Spring 2021  
Stanford University.

**CS 161: Design and Analysis of Algorithms** ..... Winter 2021  
Stanford University.

**CS 263: Counting and Sampling** ..... Autumn 2020  
Stanford University.

**CS 221: Artificial Intelligence: Principles and Techniques** ..... Spring 2020  
Stanford University.

**CS 260: Geometry of Polynomials in Algorithm Design** ..... Winter 2020  
Stanford University.

## Mentoring

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**Alireza Haqi** ..... Ph.D., 2025 - present  
Co-advised with Moses Charikar.

**Eric Ma** ..... Ph.D., 2025 - present  
Co-advised with Tselil Schramm.

**Aniket Das** ..... Ph.D., 2025 - present  
Co-advised with Tselil Schramm.

**CJ Chen** ..... Undergrad, 2024  
LINXS Program (Summer Research).

**Carlo Baronio** ..... Undergrad, 2024  
CURIS Program (Summer Research).

**Chloë Blake** ..... Undergrad, 2023  
LINXS Program (Summer Research).

**Thanawat Sornwanee** ..... Undergrad, 2023  
CURIS Program (Summer Research).

**Misha Ivkov** ..... Ph.D., 2022 - present  
Co-advised with Tselil Schramm.

**Brian Xu** ..... Undergrad, 2022  
CURIS Program (Summer Research).

**Katherine Yu** ..... Undergrad, 2022  
CURIS Program (Summer Research).

**Yizhi Huang** ..... Undergrad, 2022  
UGVR Program (Summer Research).

**Tianyu Liu** ..... Postdoc, 2022 - 2023  
Computing Innovation Fellow.

**Frederic Koehler** ..... Postdoc, 2022 - 2023  
Motwani Postdoctoral Fellow. Co-hosted with Omer Reingold and Gregory Valiant.

**Callum Burgess** ..... Undergrad, 2021  
CURIS Program (Summer Research).

**Nathan Hu** ..... Undergrad, 2020  
CURIS Program (Summer Research).

**Armaun Sanayei** ..... Undergrad, 2020  
CURIS Program (Summer Research).

**Thuy-Duong (June) Vuong** ..... Ph.D., 2019 - 2024  
Co-advised with Moses Charikar.

## Professional Service

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**Workshop Organizer** ..... 3/2025  
Co-organized workshop on “The geometry of polynomials in combinatorics and sampling” at the American Institute of Mathematics.

**Program Committee Member** ..... FOCS 2024

**Program Committee Member** ..... ICALP 2024

**Program Committee Member** ..... STOC 2023

**Program Committee Member** ..... ITCS 2021

**Program Committee Member** ..... STOC 2020

**Program Committee Member** ..... RANDOM 2020

**Workshop Organizer** ..... STOC 2019  
Co-organized workshop on “Nash Welfare, Market Equilibrium, and Stable Polynomials.”

**Program Committee Member** ..... APPROX 2019

**Workshop Organizer** ..... FOCS 2016  
Co-organized workshop on “Approximating Traveling Salesman Problems using Algebraic Techniques.”

## Miscellaneous Jobs

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**Microsoft Research, Redmond** ..... 5/2015 - 8/2015  
Intern in the Theory Group.

**Google, New York** ..... 5/2014 - 8/2014  
Intern in the Algorithms Research Group.

**Jane Street, New York** ..... 5/2013 - 8/2013  
Intern.

**Facebook, Menlo Park** ..... 5/2012 - 8/2012  
Intern.

**D.E. Shaw & Co., New York** ..... 6/2011 - 8/2011  
Intern.

## Invited Talks

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**Yale University** ..... 10/2024  
Foundations of Data Science Institute conference on “Recent Advances and Future Directions for Sampling.”

**Cargese Workshop on Combinatorial Optimization** ..... 9/2024  
Tutorials on the Theme of “Sampling and Counting.”

**Banff International Research Station** ..... 8/2024  
Workshop on “Frontiers of Statistical Mechanics and Theoretical Computer Science.”

**Simons Institute for the Theory of Computing** ..... 7/2024  
Reunion workshop on “Analysis and TCS.”

**Northwestern University** ..... 3/2024  
Department of Mathematics Colloquium.

**Stanford University** ..... 2/2024  
Probability Seminar.

**International Congress of Basic Science** ..... 7/2023

**Simons Institute for the Theory of Computing** ..... 6/2023  
Workshop on “Beyond the Boolean Cube.”

<b>CanadAM 2023</b> .....	6/2023
Plenary Speaker.	
<b>Harvard University</b> .....	5/2023
Theory Seminar.	
<b>Oberwolfach Research Institute for Mathematics</b> .....	3/2023
Workshop on “New Directions in Real Algebraic Geometry.”	
<b>Banff International Research Station</b> .....	3/2023
Workshop on “Algebraic Aspects of Matroid Theory.”	
<b>Stanford University</b> .....	1/2023
Combinatorics Seminar.	
<b>University of Minnesota and Lehigh University</b> .....	10/2022
Joint Probability Seminar.	
<b>University of California, Santa Barbara</b> .....	8/2022
Summer School on “New Tools for Optimal Mixing of Markov Chains: Spectral Independence and Entropy Decay.”	
<b>Center for Discrete Mathematics and Theoretical Computer Science (DIMACS)</b> .....	5/2022
Workshop on “Entropy and Optimization.”	
<b>University of Cambridge</b> .....	2/2022
Probability Seminar.	
<b>Oberwolfach Research Institute for Mathematics</b> .....	11/2021
Workshop on “Combinatorial Optimization.”	
<b>Simons Foundation, New York</b> .....	11/2021
Workshop on “High-Dimensional Expanders.”	
<b>University of Illinois, Urbana-Champaign</b> .....	11/2021
Theory Seminar.	
<b>STOC 2021</b> .....	6/2021
Invited Tutorial on “Log-Concave Polynomials.”	
<b>Tata Institute of Fundamental Research</b> .....	1/2021
Workshop on Uniqueness Methods in Statistical Mechanics .....	
	12/2020

<b>Institute for Advanced Studies (IAS)</b> .....	10/2020
Computer Science and Discrete Math Seminar.	
<b>Highlights of Algorithms (HALG)</b> .....	8/2020
<b>Purdue University</b> .....	4/2020
Theory Seminar.	
<b>University of California, Berkeley</b> .....	3/2020
Theory Seminar.	
<b>MIT</b> .....	1/2020
Workshop on “Learning Under Complex Structure.”	
<b>University of California, Los Angeles</b> .....	11/2019
Combinatorics Seminar.	
<b>Georgia Tech</b> .....	11/2019
Invited Lectures.	
<b>Highlights of Algorithms (HALG)</b> .....	6/2019
<b>Banff International Research Station</b> .....	5/2019
Workshop on “Geometry of Real Polynomials.”	
<b>Simons Institute for the Theory of Computing</b> .....	5/2019
Workshop on “Hyperbolic Polynomials and Hyperbolic Programming.”	
<b>Bay Area Discrete Math Workshop (BADMath)</b> .....	4/2019
<b>University of California, Berkeley</b> .....	4/2019
Probability Seminar.	
<b>Simons Institute for the Theory of Computing</b> .....	3/2019
Workshop on “Deterministic Counting, Probability, and Zeros of Partition Functions.”	
<b>Simons Institute for the Theory of Computing</b> .....	2/2019
Workshop on “Beyond Randomized Rounding and the Probabilistic Method.”	
<b>University of California, San Diego</b> .....	1/2019
Theory Seminar.	
<b>Simons Institute for the Theory of Computing</b> .....	1/2019
Workshop on “Geometry of Polynomials Bootcamp.”	

<b>Stanford University</b> .....	11/2018
Probability Seminar.	
<b>EPFL</b> .....	11/2018
Workshop on “Applications of Partition Functions.”	
<b>MIT</b> .....	10/2018
Algorithms and Complexity Seminar.	
<b>EPFL</b> .....	10/2018
Workshop on “Theoretical Challenges in Partition Functions.”	
<b>Harvard University</b> .....	9/2018
Theory of Computing Seminar.	
<b>Banff International Research Station</b> .....	9/2018
Workshop on “The Traveling Salesman Problem: Algorithms & Optimization.”	
<b>Georgia Tech</b> .....	4/2018
ARC Colloquium.	
<b>Institute for Pure &amp; Applied Mathematics (IPAM)</b> .....	4/2018
Workshop on “Expected Characteristic Polynomial Techniques and Applications.”	
<b>TCS+</b> .....	3/2018
<b>Simons Institute for the Theory of Computing</b> .....	9/2017
Workshop on “Discrete Optimization via Continuous Relaxation.”	

## Manuscripts and Working Papers

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- 50 **Fast Spanning Tree Sampling in Broadcast Congested Clique** .....
- Nima Anari, Alireza Haqi
- CoRR, abs/2603.25018
  
- 49 **Parallel Sampling via Autospeculation** .....
- Nima Anari, Carlo Baronio, CJ Chen, Alireza Haqi, Frederic Koehler, Anqi Li, Thuy-Duong Vuong
- CoRR, abs/2511.07869
  
- 48 **Batch Active Learning Using Determinantal Point Processes** .....
- Erdem Biyik, Kenneth Wang, Nima Anari, Dorsa Sadigh
- CoRR, abs/1906.07975

# Publications

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- 47) **Diffusion Models are Secretly Exchangeable: Parallelizing DDPMs via Auto Speculation** . . . . ICML 2025  
Hengyuan Hu, Aniket Das, Dorsa Sadigh, Nima Anari  
Forty-second International Conference on Machine Learning, ICML 2025, Vancouver, BC, Canada, July 13-19, 2025
- 46) **Fast parallel sampling under isoperimetry** . . . . . COLT 2024  
Nima Anari, Sinho Chewi, Thuy-Duong Vuong  
The Thirty Seventh Annual Conference on Learning Theory, June 30 - July 3, 2023, Edmonton, Canada, 247
- 45) **Parallel Sampling via Counting** . . . . . STOC 2024  
Nima Anari, Ruiquan Gao, Aviad Rubinfeld  
Proceedings of the 56th Annual ACM Symposium on Theory of Computing, STOC 2024, Vancouver, BC, Canada, June 24-28, 2024
- 44) **Trickle-Down in Localization Schemes and Applications** . . . . . STOC 2024  
Nima Anari, Frederic Koehler, Thuy-Duong Vuong  
Proceedings of the 56th Annual ACM Symposium on Theory of Computing, STOC 2024, Vancouver, BC, Canada, June 24-28, 2024
- 43) **Universality of Spectral Independence with Applications to Fast Mixing in Spin Glasses** . . . . SODA 2024  
Nima Anari, Vishesh Jain, Frederic Koehler, Huy Tuan Pham, Thuy-Duong Vuong  
Proceedings of the 2024 ACM-SIAM Symposium on Discrete Algorithms, SODA 2024, Alexandria, VA, USA, January 7-10, 2024
- 42) **Batch Active Learning of Reward Functions from Human Preferences** . . . . . J. Hum.-Robot Interact.  
Erdem Biyik, Nima Anari, Dorsa Sadigh  
J. Hum.-Robot Interact., 13  
ACM Trans. Hum. Robot Interact., 13
- 41) **Log-concave polynomials III: Mason’s ultra-log-concavity conjecture for independent sets of matroids** . . . . Proc. Amer. Math. Soc.  
Nima Anari, Kuikui Liu, Shayan Oveis Gharan, Cynthia Vinzant  
Proc. Amer. Math. Soc., 152
- 40) **Parallel Sampling of Diffusion Models** . . . . . NeurIPS 2023  
Andy Shih, Suneel Belkhale, Stefano Ermon, Dorsa Sadigh, Nima Anari  
Advances in Neural Information Processing Systems 36: Annual Conference on Neural Information Processing Systems 2023, NeurIPS 2023, New Orleans, LA, USA, December 10 - 16, 2023  
NeurIPS spotlight.

- 39) **Distortion in metric matching with ordinal preferences** ..... EC 2023  
 Nima Anari, Moses Charikar, Prasanna Ramakrishnan  
 Proceedings of the 24th ACM Conference on Economics and Computation, EC 2023, London, United Kingdom, July 9-12, 2023
- 38) **Quadratic Speedups in Parallel Sampling from Determinantal Distributions** ..... SPAA 2023  
 Nima Anari, Callum Burgess, Kevin Tian, Thuy-Duong Vuong  
 Proceedings of the 35th ACM Symposium on Parallelism in Algorithms and Architectures, SPAA 2023, Orlando, FL, USA, June 17-19, 2023
- 37) **Parallel Discrete Sampling via Continuous Walks** ..... STOC 2023  
 Nima Anari, Yizhi Huang, Tianyu Liu, Thuy-Duong Vuong, Brian Xu, Katherine Yu  
 Proceedings of the 55th Annual ACM Symposium on Theory of Computing, STOC 2023, Orlando, FL, USA, June 20-23, 2023
- 36) **Optimal Sublinear Sampling of Spanning Trees and Determinantal Point Processes via Average-Case Entropic Independence** .... FOCS 2022  
 Nima Anari, Yang P. Liu, Thuy-Duong Vuong  
 63rd IEEE Annual Symposium on Foundations of Computer Science, FOCS 2022, Denver, CO, USA, October 31 - November 3, 2022  
 SIAM J. Comput., 54  
 Invited to special issue of SIAM Journal on Computing.
- 35) **From Sampling to Optimization on Discrete Domains with Applications to Determinant Maximization** .... COLT 2022  
 Nima Anari, Thuy-Duong Vuong  
 Conference on Learning Theory, 2-5 July 2022, London, UK, 178
- 34) **Entropic independence: optimal mixing of down-up random walks** ..... STOC 2022  
 Nima Anari, Vishesh Jain, Frederic Koehler, Huy Tuan Pham, Thuy-Duong Vuong  
 STOC '22: 54th Annual ACM SIGACT Symposium on Theory of Computing, Rome, Italy, June 20 - 24, 2022  
 Merged extended abstract of the two papers.
- 33) **Entropic Independence II: Optimal Sampling and Concentration via Restricted Modified Log-Sobolev Inequalities** .... STOC 2022 (merged)  
 Nima Anari, Vishesh Jain, Frederic Koehler, Huy Tuan Pham, Thuy-Duong Vuong  
 An extended abstract resulting from a merge with the paper "Entropic Independence I: Modified Log-Sobolev Inequalities for Fractionally Log-Concave Distributions and High-Temperature Ising Models" appeared in STOC 2022.
- 32) **Entropic Independence I: Modified Log-Sobolev Inequalities for Fractionally Log-Concave Distributions and High-Temperature Ising Models** .... STOC 2022 (merged)  
 Nima Anari, Vishesh Jain, Frederic Koehler, Huy Tuan Pham, Thuy-Duong Vuong  
 An extended abstract resulting from a merge with the paper "Entropic Independence II: Optimal Sampling and Concentration via Restricted Modified Log-Sobolev Inequalities" appeared in STOC 2022.

- 31 **Domain Sparsification of Discrete Distributions Using Entropic Independence** . . . . . ITCS 2022  
 Nima Anari, Michal Derezhinski, Thuy-Duong Vuong, Elizabeth Yang  
 13th Innovations in Theoretical Computer Science Conference, ITCS 2022, January 31 - February 3, 2022, Berkeley, CA, USA, 215
- 30 **The Bethe and Sinkhorn Permanents of Low Rank Matrices and Implications for Profile Maximum Likelihood** . . . . COLT 2021  
 Nima Anari, Moses Charikar, Kirankumar Shiragur, Aaron Sidford  
 Conference on Learning Theory, COLT 2021, 15-19 August 2021, Boulder, Colorado, USA, 134
- 29 **Sampling Arborescences in Parallel** . . . . . ITCS 2021  
 Nima Anari, Nathan Hu, Amin Saberi, Aaron Schild  
 12th Innovations in Theoretical Computer Science Conference, ITCS 2021, January 6-8, 2021, Virtual Conference, 185
- 28 **Learning Multimodal Rewards from Rankings** . . . . . CoRL 2021  
 Vivek Myers, Erdem Biyik, Nima Anari, Dorsa Sadigh  
 Conference on Robot Learning, 8-11 November 2021, London, UK, 164
- 27 **Fractionally log-concave and sector-stable polynomials: counting planar matchings and more** . . . . STOC 2021  
 Yeganeh Alimohammadi, Nima Anari, Kirankumar Shiragur, Thuy-Duong Vuong  
 STOC '21: 53rd Annual ACM SIGACT Symposium on Theory of Computing, Virtual Event, Italy, June 21-25, 2021
- 26 **Log-concave polynomials IV: approximate exchange, tight mixing times, and near-optimal sampling of forests** . . . . STOC 2021  
 Nima Anari, Kuikui Liu, Shayan Oveis Gharan, Cynthia Vinzant, Thuy-Duong Vuong  
 STOC '21: 53rd Annual ACM SIGACT Symposium on Theory of Computing, Virtual Event, Italy, June 21-25, 2021
- 25 **Matching Is as Easy as the Decision Problem, in the NC Model** . . . . . ITCS 2020  
 Nima Anari, Vijay V. Vazirani  
 11th Innovations in Theoretical Computer Science Conference, ITCS 2020, January 12-14, 2020, Seattle, Washington, USA, 151
- 24 **An Extension of Plücker Relations with Applications to Subdeterminant Maximization** . . . . APPROX 2020  
 Nima Anari, Thuy-Duong Vuong  
 Approximation, Randomization, and Combinatorial Optimization. Algorithms and Techniques, APPROX/RANDOM 2020, August 17-19, 2020, Virtual Conference, 176

- 23 **Isotropy and Log-Concave Polynomials: Accelerated Sampling and High-Precision Counting of Matroid Bases** . . . . FOCS 2020  
 Nima Anari, Michal Derezinski  
 61st IEEE Annual Symposium on Foundations of Computer Science, FOCS 2020, Durham, NC, USA, November 16-19, 2020
- 22 **Spectral Independence in High-Dimensional Expanders and Applications to the Hard-core Model** . . . . FOCS 2020  
 Nima Anari, Kuikui Liu, Shayan Oveis Gharan  
 61st IEEE Annual Symposium on Foundations of Computer Science, FOCS 2020, Durham, NC, USA, November 16-19, 2020  
 SIAM J. Comput., 53  
 Invited to special issue of SIAM Journal on Computing.
- 21 **Instance Based Approximations to Profile Maximum Likelihood** . . . . . NeurIPS 2020  
 Nima Anari, Moses Charikar, Kirankumar Shiragur, Aaron Sidford  
 Advances in Neural Information Processing Systems 33: Annual Conference on Neural Information Processing Systems 2020, NeurIPS 2020, December 6-12, 2020, virtual
- 20 **Nearly Optimal Pricing Algorithms for Production Constrained and Laminar Bayesian Selection** . . . . EC 2019  
 Nima Anari, Rad Niazadeh, Amin Saberi, Ali Shameli  
 Proceedings of the 2019 ACM Conference on Economics and Computation, EC 2019, Phoenix, AZ, USA, June 24-28, 2019
- 19 **Structured Robust Submodular Maximization: Offline and Online Algorithms** . . . . . AISTATS 2019  
 Nima Anari, Nika Haghtalab, Seffi Naor, Sebastian Pokutta, Mohit Singh, Alfredo Torrico  
 The 22nd International Conference on Artificial Intelligence and Statistics, AISTATS 2019, 16-18 April 2019, Naha, Okinawa, Japan, 89  
 INFORMS J. Comput., 33
- 18 **A Tight Analysis of Bethe Approximation for Permanent** . . . . . FOCS 2019  
 Nima Anari, Alireza Rezaei  
 60th IEEE Annual Symposium on Foundations of Computer Science, FOCS 2019, Baltimore, Maryland, USA, November 9-12, 2019  
 SIAM J. Comput., 54  
 Invited to special issue of SIAM Journal on Computing.
- 17 **Log-concave polynomials II: high-dimensional walks and an FPRAS for counting bases of a matroid** . . . . STOC 2019  
 Nima Anari, Kuikui Liu, Shayan Oveis Gharan, Cynthia Vinzant  
 Proceedings of the 51st Annual ACM SIGACT Symposium on Theory of Computing, STOC 2019, Phoenix, AZ, USA, June 23-26, 2019  
 Annals of Mathematics, 199  
 Invited to Theory of Computing.  
 Awarded **Best Paper** of STOC 2019.

- 16 **Log-Concave Polynomials I: Entropy and a Deterministic Approximation Algorithm for ...** FOCS 2018  
**Counting Bases of Matroids**  
 Nima Anari, Shayan Oveis Gharan, Cynthia Vinzant  
 59th IEEE Annual Symposium on Foundations of Computer Science, FOCS 2018, Paris, France, October 7-9, 2018  
 Duke Mathematical Journal, 170
- 15 **Planar Graph Perfect Matching Is in NC** ..... FOCS 2018  
 Nima Anari, Vijay V. Vazirani  
 59th IEEE Annual Symposium on Foundations of Computer Science, FOCS 2018, Paris, France, October 7-9, 2018  
 J. ACM, 67  
 Invited to special issue of SIAM Journal on Computing.
- 14 **Graph Clustering using Effective Resistance** ..... ITCS 2018  
 Vedat Levi Alev, Nima Anari, Lap Chi Lau, Shayan Oveis Gharan  
 9th Innovations in Theoretical Computer Science Conference, ITCS 2018, January 11-14, 2018, Cambridge, MA, USA, 94
- 13 **Smoothed Analysis of Discrete Tensor Decomposition and Assemblies of Neurons** ..... NeurIPS 2018  
 Nima Anari, Constantinos Daskalakis, Wolfgang Maass, Christos H. Papadimitriou, Amin Saberi, Santosh S. Vempala  
 Advances in Neural Information Processing Systems 31: Annual Conference on Neural Information Processing Systems 2018, NeurIPS 2018, December 3-8, 2018, Montréal, Canada
- 12 **Budget Feasible Procurement Auctions** ..... Oper. Res.  
 Nima Anari, Gagan Goel, Afshin Nikzad  
 Oper. Res., 66  
 Invited to GEB special issue on Algorithmic Game Theory.
- 11 **Approximating the Largest Root and Applications to Interlacing Families** ..... SODA 2018  
 Nima Anari, Shayan Oveis Gharan, Amin Saberi, Nikhil Srivastava  
 Proceedings of the Twenty-Ninth Annual ACM-SIAM Symposium on Discrete Algorithms, SODA 2018, New Orleans, LA, USA, January 7-10, 2018
- 10 **Nash Social Welfare for Indivisible Items under Separable, Piecewise-Linear Concave ...** SODA 2018  
**Utilities**  
 Nima Anari, Tung Mai, Shayan Oveis Gharan, Vijay V. Vazirani  
 Proceedings of the Twenty-Ninth Annual ACM-SIAM Symposium on Discrete Algorithms, SODA 2018, New Orleans, LA, USA, January 7-10, 2018
- 9 **Simply Exponential Approximation of the Permanent of Positive Semidefinite Matrices** ... FOCS 2017  
 Nima Anari, Leonid Gurvits, Shayan Oveis Gharan, Amin Saberi  
 58th IEEE Annual Symposium on Foundations of Computer Science, FOCS 2017, Berkeley, CA, USA, October 15-17, 2017

- 8 **Nash Social Welfare, Matrix Permanent, and Stable Polynomials** ..... ITCS 2017  
 Nima Anari, Shayan Oveis Gharan, Amin Saberi, Mohit Singh  
 8th Innovations in Theoretical Computer Science Conference, ITCS 2017, January 9-11, 2017, Berkeley, CA, USA, 67  
 Elevated to invited paper.
- 7 **A generalization of permanent inequalities and applications in counting and optimization** ..... STOC 2017  
 Nima Anari, Shayan Oveis Gharan  
 Proceedings of the 49th Annual ACM SIGACT Symposium on Theory of Computing, STOC 2017, Montreal, QC, Canada, June 19-23, 2017  
 Advances in Mathematics, 383
- 6 **Monte Carlo Markov Chain Algorithms for Sampling Strongly Rayleigh Distributions and Determinantal Point Processes** ..... COLT 2016  
 Nima Anari, Shayan Oveis Gharan, Alireza Rezaei  
 Proceedings of the 29th Conference on Learning Theory, COLT 2016, New York, USA, June 23-26, 2016, 49
- 5 **Effective-Resistance-Reducing Flows, Spectrally Thin Trees, and Asymmetric TSP** ..... FOCS 2015  
 Nima Anari, Shayan Oveis Gharan  
 IEEE 56th Annual Symposium on Foundations of Computer Science, FOCS 2015, Berkeley, CA, USA, 17-20 October, 2015  
 Invited to special issue of SIAM Journal on Computing.
- 4 **The Kadison-Singer Problem for Strongly Rayleigh Measures and Applications to Asymmetric TSP** ..... FOCS 2015 (merged)  
 Nima Anari, Shayan Oveis Gharan  
 Companion to the paper “Effective-Resistance-Reducing Flows, Spectrally Thin Trees, and Asymmetric TSP”.
- 3 **Mechanism Design for Crowdsourcing: An Optimal  $1-1/e$  Competitive Budget-Feasible Mechanism for Large Markets** ..... FOCS 2014  
 Nima Anari, Gagan Goel, Afshin Nikzad  
 55th IEEE Annual Symposium on Foundations of Computer Science, FOCS 2014, Philadelphia, PA, USA, October 18-21, 2014
- 2 **Euclidean Movement Minimization** ..... CCCG 2011  
 MohammadAmin Fazli, MohammadAli Safari, Nima Anari, Pooya Jalaly Khalilabadi, Mohammad Ghodsi  
 Proceedings of the 23rd Annual Canadian Conference on Computational Geometry, Toronto, Ontario, Canada, August 10-12, 2011  
 J. Comb. Optim., 32

- ① **Equilibrium Pricing with Positive Externalities** ..... WINE 2010  
Nima Anari, Shayan Ehsani, Mohammad Ghodsi, Nima Haghpandeh, Nicole Immorlica, Hamid Mahini,  
Vahab S. Mirrokni  
Internet and Network Economics - 6th International Workshop, WINE 2010, Stanford, CA, USA, December  
13-17, 2010. Proceedings, 6484  
Theor. Comput. Sci., 476