

ANANYA UPPAL
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EMPLOYMENT

Postdoctoral Fellow Institute for the Foundations of Machine Learning (IFML) University of Texas, Austin	July 2021 - Current
Postdoctoral Research Fellow Simon's Institute for the Theory of Computing University of California, Berkeley	January 2022 - May 2022

EDUCATION

Ph.D., Algorithms, Combinatorics and Optimization Carnegie Mellon University	May 2021 G.P.A. 3.83/4.00
Master of Science, Algorithms, Combinatorics and Optimization Carnegie Mellon University	December 2019 G.P.A. 3.83/4.00
Bachelor of Science, Computer Science and Mathematics University of Illinois at Urbana-Champaign (UIUC)	May 2015 G.P.A. 3.88/4.00

PUBLICATIONS & PREPRINTS

Robust Density Estimation under Besov IPMs Ananya Uppal, Shashank Singh, Barnabas Poczos <i>Advances in Neural Information Processing Systems 2020: Spotlight</i> Acceptance Rate: 2.96%	December 2020
Nonparametric Density Estimation and Convergence of GANs under Besov IPM Losses Ananya Uppal, Shashank Singh, Barnabas Poczos <i>Advances in Neural Information Processing Systems 2019: Oral</i> Acceptance Rate: 0.053% Outstanding Paper Award Honorable Mention: 3 of 6743 Submissions	December 2019
Nonparametric Density Estimation under Adversarial Losses Shashank Singh, Ananya Uppal, Boyue Li, Chun-Liang Li, Manzil Zaheer, Barnabas Poczos <i>Advances in Neural Information Processing Systems 2018</i> Acceptance Rate: 20.8%	December 2018
Spacing Distribution of a Bernoulli Sampled Sequence Abigail L. Turner, Ananya Uppal, Peng Xu <i>ArXiv preprint arXiv:1510.03500</i>	October 2015

EXPERIENCE

Undergraduate Research Mentor Mentored undergraduate research project on tracking bond indices. Principal Financial Group	Summer 2019
Reviewer for Journals Annals of Statistics Journal of Machine Learning Research IEEE Transactions on Information Theory	2020, 2022 2020, 2021 2019
Reviewer for Conferences Advances in Neural Information Processing Systems (NeurIPS)	2018-2021

International Conference on Machine Learning (ICML)	2020, 2022
International Conference on Learning Representations (ICLR)	2020

Graduate Teaching Assistant

Carnegie Mellon University

Computational Finance	Spring 2019-2021
Optimization	Fall 2017 - Fall 2018
Operations Research	Spring 2017
Linear Algebra	Spring 2016
Integration and Approximation	Fall 2015

Lead NetMath Mentor (UIUC)

Spring 2014, Fall 2014

Help manage administrative duties such as training new mentors, helping improve the experience of students taking courses at NetMath.

PROJECTS

Survey of Distribution Regression Methods

Spring 2018

Statistical Machine Learning Course Project, Prof. Larry Wasserman

- Studied and summarized the state of the art algorithms for distribution regression.

Research on Random Discrete Sets

Fall 2013, Spring 2014, Fall 2014

Illinois Geometry Lab (UIUC)

- Observed that gap distributions in subsets obtained by sampling the Farey sequence with Bernoulli trials are exponential and verified similar results, both numerically and theoretically, for other equi-distributed sequences.

Research on Outer Billiards in Hyperbolic Plane

Summer 2013

Institute for Computational and Experimental Research in Mathematics - Brown University

- Visualized periodicity of points around a convex polygonal table in hyperbolic plane under the outer billiards map and studied the behavior of these orbits.

Research on applications of n -dimensional integrals

Fall 2012, Spring 2013

- Studied volume of intersections of n -D cylinders and the generalizations of the “broken stick” problem.

Presented research on n -dimensional integrals at various conferences

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| • MAA MathFest | August 2013 |
| • Young Mathematicians Conference
Ohio State University, Columbus, OH | August 2013 |
| • Undergraduate Topology and Geometry Conference
University of Texas at Austin, Austin, Texas | February 2013 |
| • Undergraduate Research Symposium
University of Illinois at Urbana-Champaign, Urbana, Illinois | April 2013 |

RELEVANT COURSEWORK

Machine Learning

Intermediate Statistics
Statistical Machine Learning

Mathematics

Differential Geometry
Convex Optimization

Algorithms

Graduate Algorithms
Integer Programming

HONORS & AWARDS

NeurIPS 2019 Honorable Mention for Outstanding Paper Award	2019
Most Outstanding Major Award in Mathematics and Computer Science	2015
Edmund J. James Scholar at UIUC	2011 - 2014
Dean's List	Fall 2011, Spring 2012