

# Abhishek Shetty

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## Research Interests

Machine Learning, Theoretical Computer Science, Applied Probability

## Education

- 2021– **Ph.D in Computer Science**, *University of California*, Berkeley.
- 2019–2020 **Ph.D in Computer Science**, *Cornell University*, Ithaca.
- 2013–2017 **B.Sc. (Research) in Mathematics**, *Indian Institute of Science*, Bangalore.  
*First Class with Distinction*

## Employment

2017–2019 **Research Fellow**, *Microsoft Research India*, Bangalore.

## Publications

### Conference Proceedings

- C1 **Smoothed Analysis of Online and Differentially Private Learning**, with Nika Haghtalab and Tim Roughgarden.  
Conference on Neural Information Processing Systems (NeurIPS) Spotlight Presentation, 2020
- C2 **Effect of Activation Functions on the Training of Overparametrized Neural Nets**, with Abhishek Panigrahi and Navin Goyal.  
International Conference on Learning Representations (ICLR), 2020
- C3 **Non-Gaussian Component Analysis using Entropy Methods**, with Navin Goyal.  
Annual ACM SIGACT Symposium on Theory of Computing (STOC), 2019
- C4 **Sampling and Optimization on Convex Sets in Riemannian Manifolds of Non-Negative Curvature**, with Navin Goyal.  
Conference on Learning Theory (COLT), 2019
- C5 **Exponential Weights on the Hypercube in Polynomial Time**, with Sudeep Raja Putta.  
International Conference on Artificial Intelligence and Statistics (AISTATS), 2019

### Preprints

- P1 **Fractional Pseudorandom Generators from Any Fourier Level**, with Eshan Chattopadhyay, Jason Gaitonde, Chin Ho Lee and Shachar Lovett.  
Under Submission, arXiv:2008.01316

## Workshops

- W1 **Smoothed Analysis of Differentially Private and Online Learning**, with Nika Haghtalab and Tim Roughgarden.  
Workshop on the Theory and Practice of Differential Privacy (TPDP), 2020

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## Selected Awards and Honors

- 2019–2020 Cornell University Fellowship  
2013–2017 Kishore Vigyan Protsahan Yojana Fellowship  
2009–13 National Talent Search Scholarship

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## Talks

- 2019 **Non-Gaussian Component Analysis**, Microsoft Research New England, Cornell Theory Seminar, Bangalore Probability Seminar, Microsoft Research India, STOC 2019.  
2019 **Sampling and Optimization on Convex Sets in Riemannian Manifolds of Non-Negative Curvature**, COLT 2019.

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## Teaching

- Spring 20 **Teaching Assistant**, Cornell University.  
Foundations of Modern Machine Learning  
Fall 16 **Teaching Assistant**, Indian Institute of Science.  
Computational Complexity Theory (E0 224)  
Fall 16 **Teaching Assistant**, Indian Institute of Science.  
Theoretical Foundations of Cryptography

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## Professional Activities

- 2018–19 **Organizer**, Microsoft Research India Theory Lunch Seminar.  
2019 **Organizer**, Cornell Learning Theory Reading Group.  
2019 **Reviewer**, Annual Symposium on Theory of Computing (STOC) '20.  
2020 **Reviewer**, Conference on Learning Theory (COLT) '20.  
2020 **Reviewer**, International Conference on Machine Learning (ICML) '20.  
2019 **Reviewer**, Annual Symposium on Discrete Algorithms (SODA) '20.  
2018 **Reviewer**, Annual Conference on Foundations of Software Technology and Theoretical-Computer Science (FSTTCS) '18.  
2018 **Reviewer**, Annual International Cryptology Conference (CRYPTO) '19.  
2017 **Reviewer**, International Conference on Practice and Theory of Public-Key Cryptography (PKC) '18.