

Dheeraj Mysore Nagaraj

CONTACT INFORMATION	E18-440A Massachusetts Institute of Technology 50 Ames Street Cambridge, MA, 02142 USA	e-mail: dheeraj@mit.edu
EDUCATION	Ph.D. Electrical Engineering and Computer Science, Massachusetts Institute of Technology. September 2016 - present. M.Tech VLSI and Microelectronics, IIT Madras. May 2016. B.Tech Electrical Engineering, IIT Madras. May 2016.	
RESEARCH INTERESTS	I seek to solve theoretical machine learning problems using ideas from Probability Theory and Statistics and in the process, obtain novel insights into Probability Theory itself. I am currently devising methods to compare two different probability distributions over high dimensional spaces and use this to understand the behavior of sparse Ising models. As part of this, I am also working on novel methods to obtain concentration inequalities for dependent random variables in high dimensions. I am also interested in understanding generalization in various stochastic optimization algorithms.	
AWARDS	Philips India Prize, 2016 Todai IIT Scholarship, 2012 KVPY Fellowship (Kishore Vaidyanath Pratsahan Yojana), 2009	
MANUSCRIPTS	Guy Bresler and Dheeraj Nagaraj. Stein's Method for Stationary Distributions of Markov Chains with Application to Ising Models. <i>Submitted to Annals of Applied Probability</i> , arxiv: 1712.05743 Guy Bresler and Dheeraj Nagaraj. Comparing Structured and Unstructured Models. <i>In preparation</i> .	
JOURNAL PUBLICATIONS	Dheeraj M N and Todd A Brun. Continuous Limit of Discrete Quantum Walks. <i>Physical Review A</i> , 2015.	
GRADUATE COURSES	<i>Mathematics</i> : Abstract Algebra, Topology, Theory of Probability, Measure Theory, Functional Analysis, Advanced Discrete Probability <i>Electrical Engineering and Computer Science</i> : Algorithms for Inference, Optimization Methods, Inference and Information <i>Physics</i> : Quantum Mechanics II, Quantum Field Theory, Advanced Statistical Physics, Physical Applications of Stochastic Processes, Quantum Information and Quantum Computation	