

Max Simchowitz

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EDUCATION	University of California, Berkeley , Berkeley, CA USA Ph.D., Computer Science advised by Benjamin Recht and Michael I. Jordan <ul style="list-style-type: none">Cumulative GPA: 4.0 Princeton University , Princeton, NJ USA A.B., Mathematics <ul style="list-style-type: none"><i>Summa Cum Laude</i>, Major GPA 4.00, Cumulative GPA 3.99Senior Thesis: <i>Dictionary Learning and Anti-Concentration</i>, advised by Sanjeev AroraJunior Thesis: <i>Zero-Inflated Poisson for Recommendation</i>, advised by David M. BleiCertificate in Statistics and Machine Learning	2015 - present June 2015
AWARDS	<i>Best Paper</i> , ICML, 2018. <i>Berkeley Fellowship (supported by the Rose Hill Foundation)</i> , UC Berkeley, 2018. <i>Tong Leong Lim Pre-Doctoral Prize</i> , UC Berkeley, 2017. <i>NSF GRFP Fellowship</i> , 2015-2017 <i>George B. Covington Prize for Excellence in Mathematics</i> , Princeton University, 2015. <i>Phi Beta Kappa, Early Induction</i> (Top 2% of Graduating Class), Princeton University, 2014. <i>Shapiro Prize for Academic Excellence</i> , Princeton University, 2012, 2013. <i>Manfred Pyka Memorial Prize for Physics</i> , Princeton University, 2012. <i>Quin Morton '36 Prize for Writing</i> , Princeton University, 2012.	
PUBLICATIONS	“Learning Without Mixing: Towards A Sharp Analysis of Linear System Identification,” Max Simchowitz, Horia Mania, Stephen Tu, Benjamin Recht, Michael I. Jordan. <i>COLT</i> , 2018. “Delayed Impact of Fair Machine Learning,” Lydia T. Liu, Sarah Dean, Esther Rolf, Max Simchowitz, Moritz Hardt. <i>ICML</i> , 2018. Best Paper Award. “Tight Query Complexity Lower Bounds for PCA via Finite Sample Deformed Wigner Law,” Max Simchowitz, Ahmed El Alaoui, Benjamin Recht. <i>STOC</i> , 2018. “Approximate Ranking from Pairwise Comparisons,” Reinhard Heckel, Max Simchowitz, Kannan Ramchandran, Martin J. Wainwright. <i>AISTATS</i> , 2018. “The Simulator: Towards a Richer Understanding of Adaptive Sampling in the Moderate-Confidence Regime,” Max Simchowitz, Kevin Jamieson, and Benjamin Recht. <i>COLT</i> , 2017. “Best-of-K Bandits,” Max Simchowitz, Kevin Jamieson, and Benjamin Recht. <i>COLT</i> , 2016. “Gradient Descent Converges to Minimizers,” Jason D. Lee, Max Simchowitz, Michael I. Jordan, and Benjamin Recht. <i>COLT</i> , 2016. “Low-rank Solutions of Linear Matrix Equations via Procrustes Flow,” Stephen Tu, Ross Boczar, Max Simchowitz, Mahdi Soltanolkotabi, Benjamin Recht. <i>ICML</i> , 2016. <i>Additional preprints</i> : https://people.eecs.berkeley.edu/~msimchow/publications.html	
INVITED TALKS	May 2018, Machine Learning Seminar, University of Washington. April 2018, Machine Learning Theory Seminar, Princeton University.	
TEACHING	Teaching Assistant, UC Berkeley CS 189/289A, Introduction to Machine Learning, Fall 2018. Teaching Assistant, UC Berkeley EE 227C, Convex Optimization and Approximation, Spring 2018. https://ee227c.github.io/ . <i>Link for course notes</i> .	

RELEVANT COURSE- WORK:	<p>Berkeley Coursework: Theoretical Statistics (classical), Theoretical Statistics (High-Dimensional), Probability Theory (Random Processes, Measure-Theoretic), Convex Optimization, Convex Optimization and Approximation (Algorithm Focused), Robust Control, Adaptive Learning and Decision Making, Fairness in Machine Learning.</p> <p>Graduate Coursework at Princeton: Coding Theory and Random Graphs, Advanced Algorithm Design, Theoretical Machine Learning, Advanced Optimization (Convex and Stochastic), Statistical Learning and Nonparametric Estimation, High-Dimensional Statistics, Measure-Theoretic Probability Theory, Natural Algorithms, Overcoming Computational Intractability in Machine Learning.</p> <p>Selected Undergraduate Coursework at Princeton: Interacting with Data, Junior Seminar in High Dimensional Data Analysis, Representation Theory, Integration Theory and Hilbert Spaces, Topology, Algebra II (rings and fields), Data Structures and Algorithms, Analytic Combinatorics, Philosophical Logic, Lagrangian Mechanics, Organic Chemistry.</p>	
SERVICE	<p>Conference Reviewing Neural Information Processing Systems (NIPS), Artificial Intelligence and Statistics (AISTats)</p> <p>Journal Reviewing Journal of Machine Learning Research (JMLR)</p>	
PROFESSIONAL EMPLOYMENT	<p>Data Science Engineering Intern, DataMinr, New York, NY</p> <p>Developed Spectral Clustering library to for ranking tweet relevance.</p>	June - July 2014