

Miles E. Lopes

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EMPLOYMENT Assistant Professor, UC Davis, July 2015 - Present

EDUCATION

- UC Berkeley
 - Ph.D. in Statistics, completed May 2015
Thesis Advisor: Prof. Peter J. Bickel
 - M.S. in Computer Science, completed May 2014
- UCLA
 - B.S. in Mathematics, completed June 2008
 - B.S. in Physics, completed June 2008
Summa Cum Laude, Highest Departmental Honors in Mathematics

RESEARCH INTERESTS High-dimensional Statistics and Machine Learning

- Resampling methods for high-dimensional and large-scale data
- Randomized algorithms for data analysis
- Compressed sensing

RESEARCH VISITS AND INTERNSHIPS

- Google, Mountain View CA, June-August 2014
Host: Aiyou Chen
Quantitative Marketing Team
- INRIA, Grenoble, France, April - July 2013
Advisors: Zaïd Harchaoui and Anatoli Juditsky
Research topic: Estimating quadratic functionals in nonparametric models
- Sandia National Laboratory, Livermore, CA, May - August 2012
Advisor: Philip Kegelmeyer
Research topic: Algorithmic convergence of ensemble classifiers

GRANTS AND FELLOWSHIPS

- NSF DMS Grant 1613218, Principal Investigator, 2016 – present, \$150,000
“Resampling Methods for High-Dimensional and Large-Scale Data”

- NSF Graduate Research Fellowship (GRFP), 2010-2015
- DOE Computational Science Graduate Fellowship (CSGF), 2010-2014
- National Defense Science & Engineering Graduate Fellowship (NDSEG), 2010
(declined in order to accept CSGF and GRFP)
- Chancellor's Fellowship, UC Berkeley, 2009
(UC Berkeley's top fellowship for incoming graduate students)

AWARDS AND HONORS

- Nonparametric Statistics Workshop (University of Michigan), Travel Award, 2016
- NIPS Travel Award, 2014
- Bay Area Chapter of American Statistical Association, Travel Award, 2013
- Laha Award, Institute of Mathematical Statistics, 2012
- NSF travel grant to attend World Congress of Probability and Statistics, 2012
- William V. Power Award, UC Berkeley, 2009
(awarded to an incoming student who will bring new perspective to research)
- Sherwood Prize, UCLA Dept. Mathematics, 2008
(UCLA's highest graduation award for undergraduate mathematics)
- Phi Beta Kappa (National Honor Society), 2008

RESEARCH PAPERS

- *A Bootstrap Method for Error Estimation in Randomized Matrix Multiplication*
Authors: M. E. Lopes, S. Wang, M. W. Mahoney
Technical report (in preparation), 2017
- *A Sharp Bound on the Computation-Accuracy Tradeoff for Majority Voting Ensembles*
Author: M.E. Lopes
Technical report (submitted), 2016
- *Unknown Sparsity in Compressed Sensing: Denoising and Inference*
Author: M. E. Lopes
IEEE Transactions on Information Theory, 2016
- *A Residual Bootstrap for High-Dimensional Regression with Near Low-Rank Designs*
Author: M. E. Lopes
Advances in Neural Information Processing Systems (NIPS), 2014.
(included in spotlight presentations; top 4.8% of submissions)

- *Estimating Unknown Sparsity in Compressed Sensing*
Author: M.E. Lopes
International Conference on Machine Learning (ICML), 2013.
- *A More Powerful Two-Sample Test in High Dimensions using Random Projection*
Authors: M. E. Lopes, L. Jacob, and M. J. Wainwright,
Advances in Neural Information Processing Systems (NIPS), 2011.

PRESENTATIONS

- IMS-China 2017, invited talk
- University of Georgia Statistics Department Colloquium, 2017, invited talk
- NIPS 2016, workshop talk
- UC Davis Department of Computer Science Colloquium, 2016, contributed talk
- University of Michigan Workshop on Nonparametric Statistics, 2016, poster presentation
- UC Davis, Peter Hall Memorial Conference, 2016, contributed talk
- International Indian Statistical Association, 2016, invited talk
- JSM 2016, invited talk
- World Congress of Probability and Statistics 2016, contributed talk
- Modern Massive Datasets (MMDS), 2016, poster presentation
- International Society for Nonparametric Statistics (ISNPS) 2016, contributed talk
- UC Davis Statistical Sciences Symposium 2016, contributed talk
- JSM 2015, contributed talk
- Sensing and Analysis of High Dimension Data (SAHD), July 2015, poster presentation
- JSM 2015, contributed talk
- University of Michigan Dept. Statistics 2014, invited talk
- UC Davis Dept. Statistics 2014, invited talk
- UC San Diego Dept. Mathematics 2014, invited talk
- NIPS 2014, spotlight talk
- JSM 2014, contributed talk
- Modern Massive Datasets (MMDS) 2013, poster
- JSM 2013, contributed talk
- NIPS 2013, workshop poster presentation
- Interface Symposium on Big Data Analytics 2013, invited talk
- ICML 2013, spotlight talk

- JSM 2013, contributed talk
- NIPS 2012, workshop poster presentation
- World Congress of Probability and Statistics 2012, contributed talk
- JSM 2012, contributed talk
- NIPS 2011, poster presentation
- International Workshop on Sequential Methodologies, 2011, contributed talk

TEACHING

- Instructor for Stat 130B UC Davis, Winter 2017
Upper division introduction to mathematical statistics
- Instructor for Stat 200A UC Davis, Fall 2016
Masters level introduction to probability
- Instructor for Stat 251 UC Davis, Winter 2016
Graduate topics course on concentration inequalities and high-dimensional statistics
- Instructor for Stat 130A UC Davis, Fall 2016, Fall 2015
Upper division introduction to probability
- Graduate student instructor for Stat 154 UC Berkeley, Fall 2014
Upper division introduction to machine learning
- Graduate student instructor for Stat 201A/201B UC Berkeley, Fall 2012
Introduction to probability and statistics (masters-level)

SERVICE

- NSF grant panel reviewer (Division of Mathematical Sciences)
- Referee for:
 - Annals of Statistics
 - Journal of the Royal Statistical Society (JRSSB)
 - IEEE Transactions on Information Theory
 - IEEE Transactions on Signal Processing
 - Journal of the American Statistical Association (JASA)
 - Journal of Multivariate Analysis
 - Biometrika
 - International Conference on Machine Learning (ICML)
 - Australian and New Zealand Journal of Statistics
 - Journal of Computational and Graphical Statistics (JCGS)
 - Journal of Statistical Computation and Simulation
- Organizer
JSM Invited Session on “Resampling Methods for High-Dimensional Inference”, 2016
- Co-Organizer
UC Davis Statistical Sciences Symposium, 2016
- Co-Organizer
“Random Solutions to Big Problems”, Interface Symposium, 2013