OSCAR HERNAN MADRID PADILLA

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EMPLOYMENT

Assistant Professor
University of California, Los Angeles　　　　　　　　　July 2019 - - present

Neyman Visiting Assistant Professor
University of California–Berkeley　　　　　　　　　July 2017 - - June 2019

EDUCATION

Ph.D., Statistics, The University of Texas at Austin　　　2013 - - May 2017
　　Advisor: James G. Scott
　　GPA : 3.92/4
Bachelor in Mathematics, Universidad de Guanajuato　　　2009-2013
　　GPA : 9.84/10

RESEARCH INTERESTS

Network estimation problems, sequential analysis, graphical models, nonparametric statistics, and Bayesian statistics.

PUBLICATIONS

"Adaptive Non-Parametric Regression With the K-NN Fused Lasso." **Oscar-Hernan Madrid-Padilla**, James Sharpnack, Yanzhen Chen, and Daniela Witten. **Biometrika (Just-Accepted). 2019.** *https://arxiv.org/abs/1807.11641.*

"Sequential nonparametric tests for a change in distribution: an application to large-scale radiological survey." **Oscar-Hernan Madrid-Padilla**, Alex Athey, Reinhart, and James G. Scott. **Journal of the American Statistical Association, Vol. 114, Issue 526, 514-528, 2019.**

"The DFS Fused Lasso: Linear-Time Denoising over General Graphs." **Oscar-Hernan Madrid-Padilla**, James Sharpnack, James G. Scott, and Ryan Tibshirani. *Journal of Machine Learning Research, Vol. 18, No. 176, 1-36, 2018.*

"A deconvolution path to mixtures." **Oscar-Hernan Madrid-Padilla**, Nicholas Polson, and James G. Scott. *Electronic Journal of Statistics Volume 12, Number 1 (2018), 1717-1751.*

"Worst case portfolios of dynamic monetary utility functions." Daniel Hernandez Hernandez, **Oscar-Hernan Madrid-Padilla**. *Stochastics, Vol. 90, Number 1 (2018),*

"Tensor decomposition with generalized lasso penalties." **Oscar-Hernan Madrid-Padilla**, James G. Scott. *Journal of Computational and Graphical Statistics 2017, 26:3, 537-546.*

"Priors for Random Count Matrices Derived from a Family of Negative Binomial Processes." Mingyuan Zhou, **Oscar-Hernan Madrid-Padilla**, and James G. Scott.

Journal of the American Statistical Association 2016, Vol. 111, No. 515, 1144-1156, Theory and Methods.

"Vector-space markov random fields via exponential families." Wesley Tansey, **Oscar-Hernan Madrid-Padilla**, Arun Sai Suggala, Pradeep Ravikumar. *Proceedings of the The 32nd International Conference on Machine Learning.* 2015.

PAPERS UNDER REVIEW

"Optimal nonparametric change point detection and localization." **O.-H. Madrid-Padilla**, Yi Yu, Daren Wang, Alessandro Rinaldo. *https://arxiv.org/abs/1905.10019.* 2019.

"Distributed Cartesian Power Graph Segmentation for Graphon Estimation." Shitong Wei, **Oscar-Hernan Madrid-Padilla**, and James Sharpnack. *https://arxiv.org/abs/1805.09978.* 2018.

"Graphon estimation via nearest neighbor algorithm and 2D fused lasso denoising" **Oscar-Hernan Madrid-Padilla**, Yanzhen Chen. *https://arxiv.org/abs/1805.07042.* 2018.

"Nonparametric density estimation by histogram trend filtering." **Oscar-Hernan Madrid-Padilla**, James G. Scott. *http://arxiv.org/abs/1509.04348.* 2015.

TEACHING

Instructor, at University of California, Berkeley:

Linear Models, Fall 2017.
  My Instructor Rating: 5.6 out of 7.
  Department Average Rating : 5.0 out of 7.
  Class size: 71.
Game Theory, Spring 2018.
  My Instructor Rating: 5.5 out of 7.
  Department Average Rating : 5.3 out of 7.
  Class size: 62.
Linear Models, Fall 2018.
  My Instructor Rating: 5.9 out of 7.
  Department Average Rating : 5.3 out of 7.
  Class size: 100.
Linear Models, Spring 2019.
  My Instructor Rating: 5.5 out of 7.
  Department Average Rating : 5.1 out of 7.
  Class size: 86.

Teaching Assistant, at The University of Texas at Austin, for the following courses:

Introduction to Probability and Statistics.
Time Series.
Bayesian Statistics.
Statistical Modeling.
Experiments Design.
Statistics and Market Analysis.
Statistical models for big data.

Teaching Assistant, at The Universidad de Guanjuato, for:

Measure Theory.
Advanced Probability.
Calculus.
Real Analysis.
Topology.

Mathematics instructor for high school students in Guanajuato, Mexico, 2011-2013.

AWARDS

- Dissertation Fellowship, The University of Texas at Austin.
  Spring 2017.
- Graduate School Fellowship, The University of Texas at Austin.
  Summer 2016.
- Bonus Fellowship for Continuing Students, The University of Texas at Austin.
  2015.
- Research assistant scholarship, CIMAT.
  2012-2013.
- Best grades average of the bachelor degree in Mathematics, Universidad de Guanajuato.
  2011-2012.
- Excellence Scholarship, Mathematical Research Center (CIMAT, Mexico).
  2009-2013.
- Fourth absolute place at the Fermat Mathematical Contest, Mexico 2008.
- Honorable mention, Ibero–American Mathematical Olympiad.
  2009.
- Honorable mention, International Mathematical Olympiad.
  2008.

TALKS

- Fused Lasso on Graphs: Applications to Nonparametric Statistical Problems. Symposium on Data Sciences & and Statistics. May, 2019.
- Fused lasso in graph estimation problems. Research presentation.Department of Mathematics, University of Arizona. February 2019.
- Sequential nonparametric tests for a change in distribution: an application to detecting radiological anomalies. Research presentation. Biostatistics Department, University of Michigan. February 2019.
- Fused lasso in graph estimation problems. Research presentation. Marshall Business School, University of Southern California. February 2019.
- Sequential nonparametric tests for a change in distribution: an application to detecting radiological anomalies. Research presentation. Business School, Hong Kong University of Science and Technology. January 2019.
- Sequential nonparametric tests for a change in distribution: an application to detecting radiological anomalies. Research presentation. College of Business, City University of Hong Kong. January 2019.
- Sequential nonparametric tests for a change in distribution: an application to detecting radiological anomalies. Research presentation. Department of Statistics, Virginia Institute of Technology. January 2019.

- Fused lasso in graph estimation problems. Research presentation. Department of Statistics, Pennsylvania State University. January 2019.
- Fused lasso in graph estimation problems. Research presentation. Department of Pure Mathematics and Mathematical Statistics, University of Cambridge. January 2019.
- Fused lasso in graph estimation problems. Research presentation. Department of Mathematics & Statistics, Boston University. January 2019.
- Fused lasso in graph estimation problems. Research presentation. Department of Statistics and Applied Probability, University of California, Santa Barbara. January 2019.
- Sequential nonparametric tests for a change in distribution: an application to detecting radiological anomalies. Research presentation. School of Mathematical and Statistical Sciences , Arizona State University. January 2019.
- Fused lasso in graph estimation problems. Research presentation. Department of Statistics, University of California, Irvine. January 2019.
- Fused lasso in graph estimation problems. Research presentation. Department of Mathematics, University of Houston. December 2018.
- Fused lasso in graph estimation problems. Research presentation. Department of Statistics, North Carolina State University. December 2018.
- Fused lasso in graph estimation problems. Research presentation. Department of Statistics, University of California, Los Angeles. December 2018.
- Fused lasso in graph estimation problems. Research presentation. Department of Statistics, Texas &M. November 2018.
- Fused lasso in graph estimation problems. Seminar. Department of Statistics, University of California, Davis. November 2018.
- The DFS Fussed Lasso: Linear Time Denoising over General Graphs. Biostat Seminar. University of California, Berkeley. March 2018.
- The DFS Fussed Lasso: Linear Time Denoising over General Graphs. Yu Group. University of California, Berkeley. November 2017.
- The DFS Fussed Lasso: Linear Time Denoising over General Graphs. SLAB LAB SEMINAR. University of Washington. March 2017.
- The DFS Fussed Lasso: Linear Time Denoising over General Graphs. STATISTICS SEMINAR. The Department of Statistical Science, Cornell University. February 2017.
- The DFS Fussed Lasso: Linear Time Denoising over General Graphs. SEMINAR SERIES. Department of Statistics and Data Sciences, The University of Texas at Austin. October 2016.
- Worst case portfolios of dynamic monetary utility functions. XLV Congress of the Mexican Mathematical Society. 2012.

Editorial service   *Reviewer for*: Journal of the American Statistical Association, Journal of Computational and Graphical Statistics, Statistica Sinica, IEEE Transactions on Signal and Information Processing over Networks.

Professional service   *Judge for* the third annual Berkeley statistics DataFest on April 13-15, 2018