Curriculum Vitae for James Sharpnack

Contact Details:

Email : jsharpna@ucdavis.edu
Postal : Department of Statistics, University of California at Davis
4107 Mathematical Sciences Building, One Shields Avenue, Davis, CA 95616

Professional Preparation:

The Ohio State University	Mathematics & Physics	2007	B.S.
Carnegie Mellon University	Machine Learning & Statistics	2013	Ph.D.

Appointments:

2015 - present	Assistant Professor, Statistics Department, University of California at Davis.
2013 - 2015	Postdoctoral Researcher, Mathematics Department, University of California at San Diego.

Publications:

1. V. Sadhanala, Y.-X. Wang, J. L. Sharpnack, and R. J. Tibshirani. Higher-order total variation classes on grids: Minimax theory and trend filtering methods. In *Advances in Neural Information Processing Systems*, pages 5802–5812, 2017

2. K. Lin, J. L. Sharpnack, A. Rinaldo, and R. J. Tibshirani. A sharp error analysis for the fused lasso, with application to approximate changepoint screening. In *Advances in Neural Information Processing Systems*, pages 6887–6896, 2017

3. O. H. M. Padilla, J. G. Scott, J. Sharpnack, and R. J. Tibshirani. The dfs fused lasso: Linear-time denoising over general graphs. *Journal of Machine Learning Research (accepted)*, 2018

4. Y.-X. Wang, J. Sharpnack, A. Smola, and R. J. Tibshirani. Trend filtering on graphs. *Journal of Machine Learning Research (To Appear)*, 2016

5. J. Sharpnack, A. Krishnamurthy, and A. Singh. Detecting activations over graphs using spanning tree wavelet bases. *International Conference on Artificial Intelligence and Statistics, JMLR W&CPJournal of*, 31:536–544, 2013

6. J. Sharpnack, A. Rinaldo, and A. Singh. Sparsistency of the edge lasso over graphs. *International Conference on Artificial Intelligence and Statistics, JMLR W&CP*, 22:1028–1036, 2012

7. J. Sharpnack, A. Rinaldo, and A. Singh. Changepoint detection over graphs with the spectral scan statistic. *International Conference on Artificial Intelligence and Statistics, JMLR W&CP*, 31:545–553, 2012

8. J. Sharpnack and A. Singh. Identifying graph-structured activation patterns in networks. In *Advances in Neural Information Processing Systems*, pages 2137–2145, 2010

9. J. Sharpnack and E. Arias-Castro. Exact asymptotics for the scan statistic and fast alternatives. *Electronic Journal of Statistics (To Appear)*, 2016

10. J. Sharpnack, A. Rinaldo, and A. Singh. Detecting anomalous activity on networks with the graph fourier scan statistic. *Signal Processing, IEEE Transactions on*, 64(2):364–379, 2016

11. A. Krishnamuthy, J. Sharpnack, and A. Singh. Recovering graph-structured activations using adaptive compressive measurements. In *Signals, Systems and Computers, 2013 Asilomar Conference on*, pages 765–769. IEEE, 2013

12. J. L. Sharpnack, A. Krishnamurthy, and A. Singh. Near-optimal anomaly detection in graphs using lovász extended scan statistic. In *Advances in Neural Information Processing Systems*, pages 1959–1967, 2013

13. M. Kolar and J. Sharpnack. Variance function estimation in high-dimensions. *International Conference of Machine Learning*, 12:1447–1454, 2012

Grants and Awards:

NSF DMS 1712996 "Point-to-Point Process Models for Spatio-temporal Networks" 2017—2020

Synergistic Activities:

1 *Teaching and Training:*
Currently advising 3 Ph.D. students. Has taught 6 statistics and probability courses (4 undergraduate and 2 graduate) at University of California at Davis and at San Diego.

2 *Department and University Committes:*
Served as committee member in Faculty Hiring (2016,2018), curriculum development at University of California at Davis.

3 *Referee:*
Served as referee for IEEE Transactions on Information Theory, Conference on Learning Theory, IEEE Transactions on Signal Processing, Applied and Computational Harmonic Analysis, Annals of Statistics, Neural Information Processing, International Conference on Machine Learning, Journal of the Royal Statistical Society, Journal of Machine Learning Research, Electronic Journal of Statistics, Artificial Intelligence and Statistics.