

## Publications

- [1] Tengyuan Liang, Alexander Rakhlin, and Xiyu Zhai. On the multiple descent of minimum-norm interpolants and restricted lower isometry of kernels. In Jacob Abernethy and Shivani Agarwal, editors, *Proceedings of Thirty Third Conference on Learning Theory*, volume 125 of *Proceedings of Machine Learning Research*, pages 2683–2711. PMLR, July 2020.
- [2] Tengyuan Liang and Alexander Rakhlin. Just interpolate: Kernel “Ridgeless” regression can generalize. *The Annals of Statistics*, 48(3):1329–1347, June 2020.
- [3] Tengyuan Liang and Hai Tran-Bach. Mehler’s Formula, Branching Process, and Compositional Kernels of Deep Neural Networks. *arXiv:2004.04767*, April 2020.
- [4] Xialiang Dou and Tengyuan Liang. Training neural networks as learning data-adaptive kernels: Provable representation and approximation benefits. *Journal of the American Statistical Association*, 0(0):1–14, 2020.
- [5] Tengyuan Liang and Pragya Sur. A Precise High-Dimensional Asymptotic Theory for Boosting and Minimum-L1-Norm Interpolated Classifiers. *arXiv:2002.01586*, February 2020.
- [6] T. Tony Cai, Tengyuan Liang, and Alexander Rakhlin. Weighted message passing and minimum energy flow for heterogeneous stochastic block models with side information. *Journal of Machine Learning Research*, 21(11):1–34, 2020.
- [7] Tengyuan Liang. Estimating Certain Integral Probability Metric (IPM) is as Hard as Estimating under the IPM. *arXiv:1911.00730*, November 2019.
- [8] Tengyuan Liang and Weijie J. Su. Statistical inference for the population landscape via moment-adjusted stochastic gradients. *Journal of the Royal Statistical Society: Series B (Statistical Methodology)*, 81(2):431–456, 2019.
- [9] Tengyuan Liang and James Stokes. Interaction matters: A note on non-asymptotic local convergence of generative adversarial networks. In Kamalika Chaudhuri and Masashi Sugiyama, editors, *The 22nd International Conference on Artificial Intelligence and Statistics*, volume 89 of *Proceedings of Machine Learning Research*, pages 907–915. PMLR, April 2019.
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- [11] Tengyuan Liang. On How Well Generative Adversarial Networks Learn Densities: Nonparametric and Parametric Results. *arXiv:1811.03179*, November 2018.
- [12] Max H. Farrell, Tengyuan Liang, and Sanjog Misra. Deep Neural Networks for Estimation and Inference. *arXiv:1809.09953*, September 2018.

- [13] Belinda Tzen, Tengyuan Liang, and Maxim Raginsky. Local optimality and generalization guarantees for the langevin algorithm via empirical metastability. In Sébastien Bubeck, Vianney Perchet, and Philippe Rigollet, editors, *Proceedings of the 31st Conference on Learning Theory*, volume 75 of *Proceedings of Machine Learning Research*, pages 857–875. PMLR, July 2018.
- [14] T. Tony Cai, Tengyuan Liang, and Alexander Rakhlin. Computational and statistical boundaries for submatrix localization in a large noisy matrix. *The Annals of Statistics*, 45(4):1403–1430, August 2017.
- [15] Satyen Kale, Zohar Karnin, Tengyuan Liang, and Dávid Pál. Adaptive feature selection: Computationally efficient online sparse linear regression under RIP. In Doina Precup and Yee Whye Teh, editors, *Proceedings of the 34th International Conference on Machine Learning*, volume 70 of *Proceedings of Machine Learning Research*, pages 1780–1788, International Convention Centre, Sydney, Australia, August 2017. PMLR.
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