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- [1] N. Ailon, M. Charikar, and A. Newman. Aggregating inconsistent information: ranking and clustering. *Journal of the ACM (JACM)*, 55(5):23:1–23:27, 2008.
- [2] D. Arthur and S. Vassilvitskii.  $k$ -means++: The advantages of careful seeding. In *Proceedings of the 2007 ACM-SIAM Symposium on Discrete Algorithms (SODA '07)*, pages 1027–1035, 2007.
- [3] M. Asteris, A. Kryillidis, D. Papailiopoulos, and A. G. Dimakis. Bipartite correlation clustering: Maximizing agreements. In *Proceedings of the 2016 International Conference on Artificial Intelligence and Statistics (AISTATS '16)*, volume 51, pages 121–129, 2016.
- [4] M. Asteris, D. S. Papailiopoulos, and G. N. Karystinos. The sparse principal component of a constant-rank matrix. *IEEE Transactions on Information Theory*, 60(4):2281–2290, 2014.
- [5] N. Bansal, A. Blum, and S. Chawla. Correlation clustering. *Machine Learning*, 56(1-3):89–113, 2004.
- [6] A. Bhattacharya and R. K. De. Divisive correlation clustering algorithm (DCCA) for grouping of genes: detecting varying patterns in expression profiles. *Bioinformatics*, 24(11):1359–1366, 2008.
- [7] M. Charikar, V. Guruswami, and A. Wirth. Clustering with qualitative information. In *Proceedings of the 2003 International Symposium on Foundations of Computer Science, (FOCS '03)*, pages 524–533. IEEE, 2003.
- [8] M. Charikar, V. Guruswami, and A. Wirth. Clustering with qualitative information. *Journal of Computer and System Sciences*, 71(3):360–383, 2005.
- [9] T. M. Cover and B. Efron. Geometrical probability and random points on a hypersphere. *The Annals of Mathematical Statistics*, pages 213–220, 1967.
- [10] J.-A. Ferrez, K. Fukuda, and T. M. Lieblich. Solving the fixed rank convex quadratic maximization in binary variables by a parallel zonotope construction algorithm. *European Journal of Operational Research*, 166(1):35–50, 2005.
- [11] M. R. Garey and D. S. Johnson. *Computers and Intractability: A Guide to the Theory of NP-completeness*. WH Freeman and Company, New York, 1979.
- [12] A. Grover and J. Leskovec. node2vec: Scalable feature learning for networks. In *Proceedings of the 2016 ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD '16)*, pages 855–864. ACM, 2016.
- [13] F. K. Hwang, S. Onn, and U. G. Rothblum. A polynomial time algorithm for shaped partition problems. *SIAM Journal on Optimization*, 10(1):70–81, 1999.
- [14] G. N. Karystinos and A. P. Liavas. Efficient computation of the binary vector that maximizes a rank-deficient quadratic form. *IEEE Transactions on information theory*, 56(7):3581–3593, 2010.
- [15] S. Kim, S. Nowozin, P. Kohli, and C. D. Yoo. Higher-order correlation clustering for image segmentation. In *Advances in neural information processing systems (NIPS '11)*, pages 1530–1538, 2011.
- [16] V. Klee. Separation properties of convex cones. *Proceedings of the American Mathematical Society*, 6(2):313–318, 1955.
- [17] P. P. Markopoulos, G. N. Karystinos, and D. A. Pados. Optimal algorithms for-subspace signal processing. *IEEE Transactions on Signal Processing*, 62(19):5046–5058, 2014.
- [18] A. McCallum and B. Wellner. Conditional models of identity uncertainty with application to noun coreference. In *Advances in neural information processing systems (NIPS '05)*, pages 905–912, 2005.
- [19] M. E. Newman. Finding community structure in networks using the eigenvectors of matrices. *Physical Review E*, 74(3):036104:1–036104:19, 2006.
- [20] S. Onn and L. J. Schulman. The vector partition problem for convex objective functions. *Mathematics of Operations Research*, 26(3):583–590, 2001.
- [21] D. S. Papailiopoulos, A. G. Dimakis, and S. Korkythakis. Sparse pca through low-rank approximations. In *Proceedings of the 2013 International Conference on Machine Learning (ICML '13)*, pages 747–755, 2013.
- [22] D. S. Papailiopoulos, I. Mitliagkas, A. G. Dimakis, and C. Caramanis. Finding dense subgraphs via low-rank bilinear optimization. In *Proceedings of the 2014 International Conference on Machine Learning (ICML '14)*, volume 14, pages 1890–1898, 2014.
- [23] L. Peel, D. B. Larremore, and A. Clauset. The ground truth about metadata and community detection in networks. *arXiv*, cs.SI:1608.05878, 2016.
- [24] B. Perozzi, R. Al-Rfou, and S. Skiena. DeepWalk: Online learning of social representations. In *Proceedings of the 2014 ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD '14)*, pages 701–710, 2014.
- [25] R. A. Rankin. On the closest packing of spheres in  $n$  dimensions. *Annals of Mathematics*, 48(4):1062–1081, 1947.
- [26] K. Stinson, D. F. Gleich, and P. G. Constantine. A randomized algorithm for enumerating zonotope vertices. *arXiv preprint arXiv:1602.06620*, 2016.
- [27] A. L. Traud, P. J. Mucha, and M. A. Porter. Social structure of facebook networks. *Physica A: Statistical Mechanics and its Applications*, 391(16):4165–4180, 2012.
- [28] J. Van Gael and X. Zhu. Correlation clustering for crosslingual link detection. In *Proceedings of the 2007 International Joint Conference on Artificial Intelligence (IJCAI '07)*, pages 1744–1749, 2007.
- [29] X. Zhang and M. Newman. Multiway spectral community detection in networks. *Physical Review E*, 92(5):052808, 2015.