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Dustin G. Mixon* (mixon.23@osu.edu). *Sketching semidefinite programs for faster clustering.*

Many clustering problems enjoy solutions by semidefinite programming. Theoretical results in this vein frequently consider data with a planted clustering and a notion of signal strength such that the semidefinite program exactly recovers the planted clustering when the signal strength is sufficiently large. In practice, semidefinite programs are notoriously slow, and so speedups are welcome. In this talk, we show how to sketch a popular semidefinite relaxation of a graph clustering problem known as minimum bisection, and our analysis supports a meta-claim that the clustering task is less computationally burdensome when there is more signal. (Received January 18, 2021)