

## **A threshold for reconstruction in stochastic block models**

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A stochastic block model is a particular random graph model that exhibits a community structure: vertices are assigned labels, and then edges are added independently at random with probabilities depending on the labels of their endpoints. For sparse stochastic block models, there is a threshold below which it is not possible to reconstruct the communities given only the graph. We will discuss the proof of this result, and its connection to spectral algorithms (one interesting feature of sparse models is that standard spectral algorithms fail well short of the reconstruction threshold).

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