THE UNIVERSITY OF CHICAGO | **DEPARTMENT OF STATISTICS**

MASTER'S THESIS PRESENTATION

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A Generalization of Subspace Clustering Method to Attributed Network

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ABSTRACT

Low rank representation and Sparse subspace clustering are widely used methods for subspace clustering, with the objective of mitigating the curse of dimensionality brought by high-dimensional data. In this manuscript, we propose a generalization of the traditional low rank representation method and sparse subspace clustering methods to a graph-based setting, enabling their application for denoising and clustering of attributed networks with high-dimensional node attributes. In contrast with other community detection methods for networks with high-dimensional features, our proposed method consistently follows the homophily assumption for all node attributes. We conduct extensive simulation experiments and analyze real data to demonstrate the superiority of our proposed method over traditional low rank representation and sparse subspace clustering methods.