

Designing Approximation Algorithms for Vertex Cover problems on 3-regular hypergraphs

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Abstract

We introduce, compare and contrast two different paths to developing Approximation Algorithms for two closely related hitting set problems in graphs. In this talk we will start slowly with the classical, and familiar Vertex Cover problem in graphs to motivate and build intuition for the frameworks upon which our recent algorithms Cluster Vertex Deletion, and Feedback Vertex Set in Tournaments rely. We then give a brief overview of the main ideas from these algorithms.