

Connection Game

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Classic Generalized Steiner Tree problem

In the classic generalized Steiner tree, we are given an undirected graph G with non-negative edge costs and a set of terminals. The goal is find the a subgraph of G that connects all terminals and minimizes the cost.

Introduction of Selfish Agents

However, when players start to have self-interests, some players might need to pay more if they choose to discard self-interests to archive best centralized optimum.

Given an undirected graph G with non-negative edge costs and N players, each player is interested in connecting a set of terminals (nodes in G) via buying a subgraph of G . Players offer each edge in G certain amount of money and they would like to pay a little as possible.

How Selfish Agents Cause Deviation from Central OPT