

Stability in networks

Ágnes Cseh

University of Technology Berlin

Abstract

The well-known notion of stable matchings can be extended in several interesting ways, one of them operates with network flows. In the stable flow problem, we are given a directed network, where the vertices symbolize vendors, while the edges stand for the possible deals between them. We talk about stability if there is no pair of vendors who mutually want to change the current flow of goods. In this talk, we shortly summarize the results currently known about the problem. Besides showing algorithms to find such flows, we also sketch problems related to max flows, flows over time, restricted edges, multicommodity flows and uncoordinated markets.