

Disjoint-Path Facility Location: Theory and Practice

Date Tuesday, March 29

Time 4 pm

Location 317 Mudd

Abstract: Internet service providers hope to provide their customers with superior Internet connectivity, but do they always do so? How can an ISP even know what quality of service it's providing to its customers? To this end, researchers recently proposed a new scheme an ISP could use in order to estimate the packet loss rates experienced by its customers.

To implement the new scheme, one has to approximately solve an interesting NP-Hard optimization problem on the ISP's network. Specifically, one must choose a small set of network nodes such that from each customer node there are arc-disjoint paths to *two* of the selected nodes. I will discuss recent work, mostly at AT&T, attacking this problem and its surprisingly good results, in light of the problem's provable inapproximability in the worst case.

This is joint work with many people.