

Disjoint paths in planar graphs

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Abstract

Let G be a planar network and let there be terminals (nodes) $s_i t_i$, $i = 1, 2, \dots, k$. Suppose also there is a fractional multicommodity flow that sends at most one unit of flow for any pair, and a total flow of F between the terminals. Then we can find a subset of $\Omega(F)$ of the demands that can be routed with $O(1)$ (at most 4 at this point) congestion on each edge.

Joint work with C. Chekuri, S. Khanna.