
GLENCORA BORRADAILE, Oregon State University

Finding all min st-cuts in planar graphs

Gomory and Hu observed that minimum st-cuts in an edge-weighted, undirected graph, for all pairs of vertices, can be represented compactly by a tree. Not only that, they showed that one can find this tree with only $n - 1$ minimum cut computations. Using the duality of cuts and cycles and small, balanced separators, we show how to find such a tree for weighted, undirected planar graphs in $O(n \text{ poly } \log n)$ time.

Joint with Sankowski and Wulff-Nilsen