

The Color-balanced Spanning Tree Problem

Štefan Berežný; Vladimír Lacko

Abstract: Suppose a graph $G = (V, E)$ whose edges are partitioned into p disjoint categories (colors) is given. In the color-balanced spanning tree problem a spanning tree is looked for that minimizes the variability in the number of edges from different categories.

We show that polynomiality of this problem depends on the number p of categories and present some polynomial algorithm.

Keywords: spanning tree; matroids; algorithms; NP-completeness;

AMS Subject Classification: 05C05; 05C85; 90C27;