

1133-05-265

Xiaofeng Gu*, Department of Mathematics, University of West Georgia, Carrollton, GA 30118.

Edge-disjoint spanning trees and spanning 2-connected subgraphs.

Motivated by the well known spanning tree packing theorem by Nash-Williams and Tutte, we discover a sufficient partition condition of packing spanning 2-connected subgraphs and spanning trees. As a corollary, it is shown that every $(4k + 2l)$ -connected and essentially $(6k + 2l)$ -connected graph contains k spanning 2-connected subgraphs and l spanning trees that are pairwise edge-disjoint. Utilizing it, we show that every 6-connected and essentially 8-connected graph G contains a spanning tree T such that $G - E(T)$ is 2-connected. (Received July 28, 2017)