

A Proof of the Tree Packing Conjecture

Parikshit Chalise, Johns Hopkins University

Antwan Clark, Johns Hopkins University Edinah K. Gnang*, Johns Hopkins University

We prove a conjecture of Gyárfás (1976), which asserts that any family of trees T_1, \dots, T_n where each T_k has k vertices packs into K_n . Our proof employs the polynomial method by identifying trees with functions in the transformation monoid $Z_n^{Z_n}$.

Keywords: graph decomposition, tree packing, polynomial method, functional graph theory