

Maciej Cisiński

AGH University of Science and Technology

TREE PACKING CONJECTURE

The Gyárfás tree packing conjecture says that any set of trees on $2, 3, \dots, n$ vertices has an edge-disjoint packing into complete graph on n vertices. Bollobás version of conjecture says that for every $k \geq 1$ there is $n_0(k)$ such that if $n > n_0(k)$, then every set of k trees $T_n, T_{n-1}, \dots, T_{n-k+1}$ such that T_{n-i} has $n-i$ vertices pack into K_n . These versions of conjecture have partial results. Gyárfás's conjecture in case, where all trees are either path or star. Bollobás's conjecture with $k \leq 5$. In the talk we present some results and we focus on Bollobás's conjecture for almost-paths and almost-stars.

This is joint work with Andrzej Żak.

References

- [1] A. Gyárfás, J. Lehel, *Packing trees of different order into K_n* , Combinatorics, 1978.
- [2] C. L. Liu, S. Zaks, *Decomposition of graphs into trees*, Congressus Numerantium, 1977.
- [3] A. Żak, *Packing large trees of consecutive orders*, Discrete Mathematics, 2015.