EXTREMAL AND PROBABILISTIC COMBINATORICS (MS - ID 20)

Packing *D*-degenerate graphs

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A family $\{H_1, \ldots, H_k\}$ of graphs packs in a host graph G, if there is a colouring of the edges of G with colours $1, \ldots, k$ so that there is a copy of H_i in the subgraph of G induced by colour i. A conjecture of Gyárfás from 1976, now referred to as the Tree Packing Conjecture, says that if T_i is an *i*-vertex tree for each $1 \leq i \leq n$, then $\{T_1, \ldots, T_n\}$ packs in the complete graph K_n . We shall present a result on packing D-degenerate graphs which has direct implications on the Tree Packing Conjecture.