

Erdős-Jacobson-Lehel Conjecture

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Abstract. Let $D = (d_1, d_2, \dots, d_n)$ be an integer sequence with $d_1 \geq d_2 \geq \dots \geq d_n \geq 0$. We say that D is *graphic* if there is a graph G with D its degree sequence. In those circumstances, we say that G is a *realization* of D . We consider an extremal problem for graphs as introduced by Erdős, Jacobson and Lehel in 1991. That is to find the minimum even integer t such that every graphic sequence $D = (d_1, d_2, \dots, d_n)$ with $\sum_{i=1}^n d_i$ at least t has a realization containing K_k as a subgraph. They conjectured that $t = (k-2)(2n-k+1) + 2$. In this talk, we will survey the methods on solving this conjecture and recent results in this area on K_k -graphic sequences.

This is joint work with Jiong-Sheng Li and Rong Luo.