

Zbl 565.05042

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Cube-supersaturated graphs and related problems. (In English)

Progress in graph theory, Proc. Conf. Combinatorics, Waterloo/Ont. 1982, 203-218 (1984).

[For the entire collection see Zbl 546.00007.]

For a graph H and an integer $n \geq 1$, let $\text{ex}(n, H)$ denote the maximum number of edges of a graph G on n vertices that contains no copy of H . This paper considers the following conjecture: for every graph H with v vertices and e edges and for every $c > 0$, there is a constant $d > 0$ such that every graph G on n vertices with $E \geq (1 + c)\text{ex}(n, H)$ edges contains at least $d \cdot E^e / n^{2e-v}$ copies of H . This conjecture holds for every nonbipartite H by the results of the authors [Combinatorica 3, 181- 192 (1983; Zbl 529.05027)]. (See also [P. Frankl and V. Rödl, Hypergraphs do not jump, *ibid.* 4, 149-159 (1984)].) If true, the conjecture is best possible. This interesting paper proves the conjecture and some related results for various special cases.

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05C35 Extremal problems (graph theory)

00A07 Problem books

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