

Omidi, G. R.; Shahsiah, M.

On the choice number of packings. (English) Zbl 1258.05038
J. Comb. Des. 20, No. 11-12, 504-507 (2012).

Summary: In this note, we show that for positive integers s and k , there is a function $D(s, k)$ such that every t - (v, k, λ) packing with at least $D(s, k)\lambda^{k-t}s^{t-2}v^{\binom{v-2}{t-2}}/\binom{k-2}{t-2}$ edges, $2 \leq t \leq k-1$, has choice number greater than s .

Consequently, for integers s, k, t , and λ there is a $v_0(s, k, t, \lambda)$ such that every t - (v, k, λ) design with $v > v_0(s, k, t, \lambda)$ has choice number greater than s .

MSC:

05C15 Coloring of graphs and hypergraphs

05C65 Hypergraphs

05C70 Edge subsets with special properties (factorization, matching, partitioning, covering and packing, etc.)

Keywords:

hypergraph; t -design; choice number; packing

Full Text: [DOI](#)

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