A note on packing of two copies of a hypergraph

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Abstract

A *packing* of a hypergraph $\mathcal{H}$ is a permutation σ on $V(\mathcal{H})$ such that if an edge e belongs to $\mathcal{E}(\mathcal{H})$, then $\sigma(e)$ does not belong to $\mathcal{E}(\mathcal{H})$.

We prove that a hypergraph which do not contain neither empty edge $\emptyset$ nor complete edge $V(\mathcal{H})$ and has at most $\frac{1}{2}n$ edges is packable. Moreover, the corresponding permutation may be chosen as a cyclic one.

An 1-uniform hypergraph of order n with more than $\frac{1}{2}n$ edges shows that this result cannot be improved by increasing the size of $\mathcal{H}$.

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