

Guangzhou Discrete Mathematics Seminar



Improved bound on vertex degree version of Erdős Matching Conjecture

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For a k -uniform hypergraph H , let $\delta_1(H)$ denote the minimum vertex degree of H , and $\nu(H)$ denote the size of a maximum matching in H . In this work, we show that for sufficiently large integer n , and integers $k \geq 3$ and $m \geq 1$, if H is a k -graph with $|V(H)| = n \geq 2mk$ and $\delta_1(H) > \binom{n-1}{k-1} - \binom{n-m}{k-1}$, then $\nu(H) \geq m$. This improves upon an earlier result of Bollobás, Daykin and Erdős (1976) for the range $n > 2k^3(m+1)$.

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