The product version of Erdos-Ko-Rado Theorem

张华军

浙江师范大学

Let n and k be two positive integers satisfying $n \geq 2k$. Let $\mathcal{A}$ be an intersecting family of $\subseteq \binom{[n]}{k}$. The Erdős-Ko-Rado Theorem states that

$$|\mathcal{A}| \leq \binom{n-1}{k-1}$$

and, except for the case of $n = 2k$, the equality holds if and only if there is an element $i \in [n]$ such that $\mathcal{A}$ consists of all subsets of $[n]$ which contains i. There are many generalizations of this theorem. In this talk, we will introduces some problems and results on the product version of this theorem.