

Erdős-Ko-Rado Properties of some Finite Groups

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Let G be a subgroup of the symmetric group $Sym(X)$ and A be a subset of G , where $X = \{1, 2, \dots, n\}$. The subset A is said to be intersecting if for any pair of permutations $\sigma, \tau \in A$ there is $i \in X$ such that $\sigma(i) = \tau(i)$. A group G has Erdős-Ko-Rado (EKR) property, if the size of any intersecting subset of G is bounded above by the size of a point stabilizer in G . The group G has the strict EKR property if every intersecting set of maximum size is the coset of the stabilizer of a point.

In some recent papers [1–4], the Erdős-Ko-Rado property of 2–transitive groups and the groups $PGL_2(q), PGL_3(q)$ are investigated. In this talk, we report our recent results on the Erdős-Ko-Rado property of some different classes of finite groups.

References

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- [4] K. Meagher, P. Spiga, An Erdős-Ko-Rado-type theorem for $PGL_3(q)$. *SIAM J. Discrete Math.* **28** (2014) 918–941.