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Design's Inspired by the Erdös-Ko-Rado Theorem

The talk will cover the existence of t-(v, k, λ) designs with the additional property that λ is the maximum size of any t-intersecting subset of blocks. The Erdös-Ko-Rado theorem (EKR) proves that for any t and k, for a sufficiently large value of v, $v \geq v_0(t, k)$, the set of k-subsets of a set of size v forms such a design. Such a design occurs prominently in Katona's proof of EKR when $t = 1$; in fact, the existence of such a design is exactly what is needed to generalize this proof. Methods and results searching for such designs will be presented.