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Graph Theory and the Erdős-Ko-Rado Theorem

My favourite theorem is the Erdős-Ko-Rado theorem. This theorem is a cornerstone result in extremal set theory that describes the size and structure of the largest intersecting set system. This is the type of problem that makes mathematicians happy; it is easy to understand, the result is exactly what we would hope for, there are many generalizations and a multitude of proofs of this theorem.

In this talk I will focus the different proofs of this result that use graph theory and show how these proofs can be used to prove some of the generalizations of this theorem.