A family of sets is called *intersecting* if every pair of its sets intersect. An intersecting family is called a *star* if some element is in each of its sets. The Erdős-Ko-Rado Theorem states that if \( r \leq n/2 \) then the largest intersecting family of \( r \)-subsets of \([n]\) is a star.

A graph version considers all independent \( r \)-subsets of vertices of a graph \( G \). Then \( G \) is called \( r \)-EKR if no intersecting subfamily is larger than the largest star. In this context, the EKR theorem states that the empty graph on \( n \) vertices is \( r \)-EKR for \( r \leq n/2 \).

In 2005 Holroyd and Talbot conjectured that every graph \( G \) is \( r \)-EKR for \( r \leq \mu(G)/2 \), where \( \mu(G) \) is the *minimax independence number* (also *independent domination number*) of \( G \): the minimum size of a maximal independent set of \( G \).

In this talk we will review some historical results, present some new results, and share some open problems.

For the DM seminar schedule, see:

https://go.vcu.edu/discrete