GLENN HURLBERT, Virginia Commonwealth University
Recent results on the Holroyd-Talbot Conjecture

In 2005 Holroyd and Talbot generalized the Erdős-Ko-Rado realm to graphs by restricting the family of all r-subsets of n elements under consideration to the family $\mathcal{I}^r(G)$ of independent sets of size r in a graph G on n vertices. Say that a subfamily of $\mathcal{I}^r(G)$ is a $star$ if the intersection of its sets (its $center$) is nonempty. Let $\mathcal{F}$ be an intersecting subfamily of $\mathcal{I}^r(G)$ and denote the minimum size of a maximal independent set in G by $\mu(G)$. They conjectured that if $r \leq \mu(G)/2$ then the size of $\mathcal{F}$ is at most the size of some star.

After a brief history of earlier results by Deza-Frankl, Bollobás-Leader, and others, I will present more recent theorems and open problems with various collaborators including Feghali, Frankl, Kamat, and Meagher. Among the results are injective proofs of the Erdős-Ko-Rado and Hilton-Milner theorems, certification of the Holroyd-Talbot conjecture for smaller r on sparse graphs, and partial results and conjectures on trees regarding where the center of a largest star can be.