VCU Discrete Mathematics Seminar

On EKR Graphs

Prof Glenn Hurlbert
VCU!

Tuesday, March 1
12:30–1:20
4145 Harris Hall

There has been much recent activity on generalizations of the Erdős-Ko-Rado theorem. In the scenario of Holroyd, Spencer, and Talbot, one studies intersecting families of independent sets of a graph G. For a vertex v, a v-star is such a family for which each set contains v. We call G r-EKR if no such family is larger than some v-star of r-sets.

Holroyd and Talbot conjectured that every graph is r-EKR for $r \leqslant \mu/2$, where $\mu = \mu(G)$ is the independent domination number of G, the minimum size of a maximal independent set. One of the broadest theorems along these lines is a result of Hurlbert and Kamat that verifies this conjecture for disjoint unions of chordal graphs containing a singleton component. Results for connected graphs have been harder to come by, although sporadic results do exist. Here we present recent progress on trees.

This is joint work with Vikram Kamat.

For more information on our schedule, see:
http://www.people.vcu.edu/~dcranston/DM-seminar/