VCU Discrete Mathematics Seminar

Intersecting Families of Spanning Trees

Prof Nathan Lindzey
(University of Memphis)

Wednesday, Feb. 26
1:00-1:50 EDT

In person! in 4145 Harris Hall. And on Zoom:
`https://vcu.zoom.us/j/92975799914`
`password=graphs2357`

A family of spanning trees of the complete graph on n vertices K_n is t-intersecting if any two members have a forest on t edges in common. We prove an Erdős-Ko-Rado result for t-intersecting families of spanning trees of K_n. In particular, we show there exists a constant $C > 0$ such that for all $n \geqslant C(\log n)t$ the largest t-intersecting families of spanning trees of K_n are the families consisting of all spanning trees that contain a fixed set of t disjoint edges (as well as the stars on n vertices for $t = 1$). The proof uses the spread approximation technique in conjunction with the Lopsided Lovász Local Lemma.

This is joint work with Peter Frankl, Glenn Hurlbert, Ferdinand Ihringer, Andrey Kupavskii, Karen Meagher, and Venkata Raghu Tej Pantangi

For the DM seminar schedule, see:

`https://go.vcu.edu/discrete`