Mark Sapir  
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“Dimension growth of groups”

Abstract:

Let $X$ be a graph and $r > 0$, we say that $r$-dimension of $X$ is $k$ if we can color $X$ in $k$ colors so that all monochromatic clusters have uniformly bounded diameters and $k = k(r)$ is the smallest possible. We prove that the function $k(r)$ for the Thompson group is exponential if we additionally assume that the clusters have at most exponential (in $r$) sizes. I will also talk about connection between dimension growth, expansion in graphs, Ramsey theory and property A. This is a joint work with A. Dranishnikov.