

## Abstract

We use probabilistic methods to find lower bounds on the maximum number, in a graph with domination number  $\gamma$ , of dominating sets of size  $\gamma$ . We find that we can randomly generate a graph that, w.h.p., is dominated by almost all sets of size  $\gamma$ . At the same time, we use a modified version of the adjacency matrix to obtain lower bounds on the number of sets of a given size that do not dominate a graph on  $n$  vertices.

This is a joint work with Samuel Connolly, Zachary Gabor, and Anant Godbole.