Combinatorics Seminar

Wednesday, Nov. 17, 2010

2:00 pm in Hume 331

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Domination and independent domination in graphs

ABSTRACT

A dominating set for a graph $G = (V, E)$ is a subset D of V such that every vertex not in D is joined to at least one vertex in D by some edge. If a dominating set D is an independent set, that is, no edge between any two vertices in D, then D is called an independent dominating set. Let $\gamma(G)$ denote the number of vertices in a smallest dominating set for G and $i(G)$ denote the number of vertices in a smallest independent dominating set for G. In this talk, we will begin with an introduction to the history of domination in graphs and some related basic concepts in graph theory, and then present some lower and upper bounds for both $\gamma(G)$ and $i(G)$. Several problems we are now working on will also be discussed.