

## New results for dominating sets and 2-packings in graphs

Farhad Shahrokhi, University of North Texas

Let  $G = (V, E)$  be a graph. We construct in  $O(|V| + |E|)$  time a dominating set  $D$  and 2-packing  $P$  so that

$$|D| \leq \hat{m}(G)|P|$$

where  $\hat{m}(G)$  or the *mighty degeneracy* of  $G$  is a parameter no grater than the degeneracy of  $G$ . Consequences in domination and intersection graph theory are discussed.

Keywords: Domination theory in graphs, 2-packings, domination sets