

Paired-Domination of Graphs

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Abstract

Let $G = (V, E)$ be a simple graph without isolated vertices. A set $S \subseteq V$ is a paired-dominating set if every vertex in $V \setminus S$ has at least one neighbor in S and the subgraph induced by S contains a perfect matching. The paired-domination number of G , denoted by $\gamma_{pr}(G)$, is the minimum cardinality of a paired-dominating set of G . The paired-domination problem is to determine the paired-domination number of graphs. This talk intends to introduce some results of the analysis of hardness on paired-domination problem, polynomial time algorithms for some special graphs and some upper bounds of $\gamma_{pr}(G)$.

Keywords: Paired-domination; Polynomial time algorithm; Upper Bounds