Abstract

Today graph theory is one of the most flourishing branches of modern mathematics. Graphs are useful in enhancing the understanding of the organization and behavioural characteristics of complex systems. The study of domination in graphs originated around 1850 has become the source of interest to the researchers.

Interval graphs have drawn the attention of many researchers for over 40 years. They form a special class of graphs with many interesting properties and revealed their practical relevance for modeling problems arising in the real world. The theory of domination in graphs introduced by Ore [11] and Berge [6] is a fast-growing area of research in graph theory today. An introduction and an extensive overview on domination in graphs and related topics is surveyed and detailed in the two books by Haynes et al. [1, 2].

The concept of signed Roman dominating function was introduced by Ahangar et al. [4]. They present various lower and upper bounds on the signed Roman domination number of a graph
and characterized the graphs which have these bounds. The minimal signed Roman dominating functions of corona product graph of a path with a star is studied by Siva Parvathi [13].

In this paper a study of signed Roman domination in an interval graph with alternate cliques of size 3 is carried out.

References


Index Terms

Computer Science Applied Mathematics

Keywords
Signed Roman dominating function, Signed Roman domination number, Interval family, Interval graph.