Abstract

In a graph \( G = (V,E) \), a set \( M \subseteq V \) is called a monopoly set of \( G \) if every vertex \( v \in V - M \) has at least \( d(v)/2 \) neighbors in \( M \). The monopoly size \( mo(G) \) of \( G \) is the minimum cardinality of a monopoly set among all monopoly sets in \( G \). In this paper, the minimum monopoly distance energy \( E_{Md} \).
The Minimum Monopoly Distance Energy of a Graph

$(G)$
of a connected graph
$G$
is introduced and minimum monopoly distance energies of some standard graphs are computed. Some properties of the characteristic polynomial of the minimum monopoly distance matrix of $G$
are obtained. Finally, Upper and lower bounds for $E_{Md}(G)$
are established.

References

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Index Terms

Computer Science  Applied Mathematics

Keywords

Minimum monopoly set, minimum monopoly distance matrix, minimum monopoly distance eigenvalues, minimum monopoly distance energy