

Spectrum and L -Spectrum of the Cyclic Graph

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Let G be a finite group. The cyclic graph Γ_G is a simple graph with the vertex set G . Two elements $x, y \in G$ are adjacent in the cyclic graph if and only if $\langle x, y \rangle$ is cyclic [4]. Another graph is the power graph $P(G)$, that was introduced by Kelarev and Quinn in [3]. Two elements $x, y \in G$ are adjacent in the power graph if and only if one is a power of the other. In this paper we continue the work of [1] on computing Laplacian eigenvalues of the power graph of the cyclic and dihedral groups and two unpublished papers [2, 5] in computing eigenvalues of the power graph and its main supergraph for some certain finite groups. As considered application, the algebraic connectivity, the number of spanning trees and Laplacian energy of these graphs were computed for the dihedral, semi-dihedral, cyclic and dicyclic groups.

References

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