Abstract

Eigenvalues of a graph are the eigenvalues of its adjacency matrix. The multiset of eigenvalues is called its spectrum. There are many properties which can be explained using the spectrum like energy, connectedness, vertex connectivity, chromatic number, perfect matching etc. Laplacian spectrum is the multiset of eigenvalues of Laplacian matrix. The Laplacian energy of a graph is the sum of the absolute values of its Laplacian eigenvalues. In this paper we calculate the Laplacian energy of some grid based networks.
On Laplacian Energy of Certain Mesh Derived Networks

- Kasteleyn (1967). Graph theory and crystal psysics. Graph theory and theoretical physics (ed. F. Harary), London, 43-110.

Index Terms

Computer Science

Applied Mathematics
Keywords
  Grid  cylinder  torus  energy  Laplacian energy