
MUSTAPHA AOUCHICHE, GERAD and HEC Montréal

On (distance) Laplacian energy and (distance) signless Laplacian energy of graphs

The energy $\mathcal{E}(G)$ of a simple graph G is the sum of absolute values of the eigenvalues of its adjacency matrix. The Laplacian energy, the signless Laplacian energy and the distance energy of graph G are denoted by $LE(G)$, $SLE(G)$ and $DE(G)$, respectively. This talk is about distance Laplacian energy DLE and distance signless Laplacian energy $DSLE$ of a connected graph. We give lower bounds on distance Laplacian energy DLE in terms of order n for graphs and trees, and characterize the corresponding extremal graphs. Also, we discuss some relationships between DE , $DSLE$ and DLE of connected graph G .