On the distance Laplacian spectral radius of graphs.

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Summary: We determine the unique graphs with minimum distance Laplacian spectral radius among connected graphs with fixed number of pendent vertices, the unique trees with minimum distance Laplacian spectral radius among trees with fixed bipartition, the unique graphs with minimum distance Laplacian spectral radius among graphs with fixed edge connectivity at most half of the number of vertices. We also discuss the minimum distance Laplacian spectral radius of graphs with fixed connectivity. For \( k = 1, \ldots, \lfloor \frac{n-2}{2} \rfloor \), we determine the unique \( n \)-vertex tree with the \((k+1)\)-th smallest distance Laplacian spectral radius.

Keywords: distance Laplacian eigenvalues; distance Laplacian matrix; pendent vertices; tree; bipartition; edge connectivity; connectivity

doi:10.1016/j.laa.2015.02.033