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John T Saccoman* (sacomjt@shu.edu), Seton Hall University, Department of Mathematics & Computer Science, South Orange, NJ 07079. *A Survey of Laplacian Integral Graphs and Multigraphs.*

The number of spanning trees in a graph or multigraph is an important measure of vulnerability to disconnection by edge failure. The eigenvalues of the Laplacian matrix associated with the graph or multigraph are used to compute the number of spanning trees. We say that a graph is a split graph if its node set can be partitioned into a clique and an independent set. A split graph G is a threshold graph if, for all pairs of nodes u and v in G , $N(u) - \{v\} \subseteq N(v) - \{u\}$ whenever $\deg(u) \leq \deg(v)$. We present some infinite families of graphs and multigraphs of these types, or nearly of these types, whose Laplacian eigenvalues are all integers. (Received February 01, 2016)