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A NECESSARY AND SUFFICIENT EIGENVECTOR CONDITION FOR A CONNECTED GRAPH TO BE BIPARTITE[*]

SEBASTIAN M. CIOABĂ[†]

Abstract. We give a necessary and sufficient condition for a graph to be bipartite in terms of an eigenvector corresponding to the largest eigenvalue of the adjacency matrix of the graph.

Key words. Graph, Bipartite, Principal eigenvector, Independent set.

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