

LARGEST EIGENVALUES OF THE DISCRETE P -LAPLACIAN OF TREES WITH DEGREE SEQUENCES*

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Abstract. Trees that have greatest maximum p -Laplacian eigenvalue among all trees with a given degree sequence are characterized. It is shown that such extremal trees can be obtained by breadth-first search where the vertex degrees are non-increasing. These trees are uniquely determined up to isomorphism. Moreover, their structure does not depend on p .

Key words. Discrete p -Laplacian, Largest eigenvalue, Eigenvector, Tree, Degree sequence, Majorization.

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