Original Articles

On the Eigenvalue Two and Matching Number of a Tree

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摘要   In [6], Guo and Tan have shown that 2 is a Laplacian

eigenvalue of any tree with perfect matchings. For trees without

perfect matchings, we study whether 2 is one of its Laplacian

eigenvalues. If the matching number is 1 or 2, the answer is

negative; otherwise, there exists a tree with that matching number

which has (has not) the eigenvalue 2. In particular, we

determine all trees with matching number 3 which has the

eigenvalue 2.

关键词   Tree, Laplacian eigenvalues, matching number

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Abstract

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