

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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