

The class of trees with nonsingular acyclic matrix with most $n - 2$ P -vertices

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This paper concerns P -vertices and P -set of nonsingular acyclic matrices. A vertex is P -vertex iff $m_{A(i)} = m_A + 1$ where m_A is multiplicity of eigenvalue 0 in matrix A . It is shown that double star DS_n with n vertices is an example of tree such that for each nonsingular matrix A whose graph is DS_n the number of P -vertices of A is most $n - 2$. Also, here is constructed a nonsingular matrix whose graph is double star with exactly $n - 2$ P -vertices.

References

- [1] A. Lj. Erić and C. M. da Fonseca, The maximum number of P -vertices of some nonsingular double star matrices, *Discrete Math.* **313** (2013), 2192–2194.