

**Iyer, Ananth V.; Ratliff, H. Donald; Vijayan, G.**

**Optimal node ranking of trees.** (English) Zbl 0661.68063

Inf. Process. Lett. 28, No. 5, 225-229 (1988).

We discuss the problem of ranking nodes of a tree, which is a restriction of the general node coloring problem. A tree is said to have rank number  $k$  if its vertices can be ranked using the integers  $1, 2, \dots, k$  such that if two nodes have the same rank  $i$ , then there is a node with rank greater than  $i$  on the path between the two nodes. The optimal rank number of a tree gives the minimum height of its node separator tree. We present an  $O(n \log n)$  algorithm for optimal node ranking of trees.

**MSC:**

**68P10** Searching and sorting

**68Q25** Analysis of algorithms and problem complexity

**68R10** Graph theory (including graph drawing) in computer science

Cited in **1** Review  
Cited in **40** Documents

**Keywords:**

node coloring; node separator; node ranking of trees

**Full Text:** [DOI](#)

**References:**

- [1] Iyer, A.V.; Ratliff, H.D.; Vijayan, G., Analysis of parallelism in assembly operations, ()
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- [3] Lewis, P.M.; Stearns, R.E.; Hartmanis, J., Memory bounds for recognition of context-free and context-sensitive languages, Proc. 6th ann. symp. on switching theory and logic design, 191-202, (1965)

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