ON SEQUENTIAL HEURISTIC METHODS FOR THE MAXIMUM INDEPENDENT SET PROBLEM

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Abstract

We consider sequential heuristics methods for the Maximum Independent Set (MIS) problem. Three classical algorithms, VO [4], MIN [5], or MAX [3], are revised. We combine Algorithm MIN with $\alpha$-redundant vertex technique [1]. Induced forbidden subgraph sets, under which, the algorithms give a maximum independent set are described. Caro-Wei bound [2, 6] is verified and performance of algorithms on some special graphs is considered.

Keywords: Maximum Independent Set, Heuristic, MIN, MAX, VO.

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References


