



An adaptive multistart tabu search approach to solve the maximum clique problem

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Résumé en anglais	Given an undirected graph $G=(V,E)$ with vertex set $V=\{1,\dots,n\}$ and edge set $E\subseteq V\times V$. The maximum clique problem is to determine in G a clique (i.e., a complete subgraph) of maximum cardinality. This paper presents an effective algorithm for the maximum clique problem. The proposed multistart tabu search algorithm integrates a constrained neighborhood, a dynamic tabu tenure mechanism and a long term memory based restart strategy. Our proposed algorithm is evaluated on the whole set of 80 DIMACS challenge benchmarks and compared with five state-of-the-art algorithms. Computational results show that our proposed algorithm attains the largest known clique for 79 benchmarks.
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