

**Glover, Fred****Tabu search. I.** (English) [Zbl 0753.90054](#)  
ORSA J. Comput. 1, No. 3, 190-206 (1989).

Summary: This paper presents the fundamental principles underlying tabu search as a strategy for combinatorial optimization problems. Tabu search has achieved impressive practical successes in applications ranging from scheduling and computer channel balancing to cluster analysis and space planning, and more recently has demonstrated its value in treating classical problems such as the traveling salesman and graph coloring problems. Nevertheless, the approach is still in its infancy, and a good deal remains to be discovered about its most effective forms of implementation and about the range of problems for which it is best suited. This paper undertakes to present the major ideas and findings to date, and to indicate challenges for future research. Part I of this study indicates the basic principles, ranging from the short-term memory process at the core of the search to the intermediate and long term memory processes for intensifying and diversifying the search. Included are illustrative data structures for implementing the tabu conditions (and associated aspiration criteria) that underlie these processes. Part I concludes with a discussion of probabilistic tabu search and a summary of computational experience for a variety of applications.

**MSC:**[90C27](#) Combinatorial optimization[90-08](#) Computational methods for problems pertaining to operations research and mathematical programmingCited in **3** Reviews  
Cited in **678** Documents**Keywords:**[tabu search](#)**Full Text:** [DOI](#)