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"Um Framework Orientado a Objeto para Aplicações Baseadas em Busca Tabu"

The Tabu Search metaheuristic (TS) is an adaptive process used in the solution of combinatorial optimization problems, which guides a subordinate neighborhood search heuristic, in such a way that the exploration of the solution space is not interrupted or confounded by the absence of non-improving moves. An increasing number of algorithms based in TS have been recently developed, and several successful experiences have been reported for real-life problems in different fields. One important characteristic of the TS algorithm design process is the lack of software support during implementation. The fact that TS is a metaheuristic, meaning that it is generically described, has been overlooked. As a result, no significant progress has been made in the development of programming tools, special libraries or software reutilization techniques, which might be any help during the implementation of such algorithms. Object-oriented frameworks may be considered as an attempt to reduce this gap, because they represent "almost-ready" programs, which encapsulate reusable functionality and provide a generic software architecture build from sets of objects of collaborative extensible classes. In this work, we describe an OO framework for the development of tabu search algorithms for combinatorial optimization problems.