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"Metaheurísticas Seqüenciais e Paralelas Aplicadas a Problemas de Escalonamento e Roteamento"

In this work, we propose sequential metaheuristic algorithms based on GRASP (*Greedy Randomized Adaptive Search Procedure*) and VNS (*Variable Neighborhood Search*) and several parallel strategies to be applied on them. The proposed algorithms are applied to two combinatorial optimization problems. The first one consists on the Task Scheduling Problem and the other one is a generalization for the Traveling Salesman Problem (TSP), called the Traveling Purchaser Problem (TPP). The parallel versions are based on master-worker, completely distributed and independent models, using static and dynamic load balance. The performance of the proposed algorithms is analysed comparing them among themselves and with their respective sequential versions. Moreover, the quality of each parallel technique used is analysed, considering time execution and the quality of solutions.