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"Um Algoritmo Paralelo Assíncrono de Busca Tabu para o Problema de Escalonamento de Tarefas"

Parallel applications can be represented as task precedence graphs, which determine a partial task execution order. Task scheduling is an important problem in parallel machine performance. In the present work, we deal with the static task scheduling problem, considering communication costs and processor heterogeneity. We have developed a parallel asynchronous algorithm based on the tabu search metaheuristic for this scheduling problem. Several experiments were done in order to evaluate the algorithm performance. Comparative numerical results have shown the adaptability of tabu search to parallelization, the importance of tabu search diversification phases in obtaining high quality solutions, and the contribution of parallelism to the acquisition of consistent information on the solution space.