

# **Parallel Tabu Search In A Heterogeneous Environment**

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## **Summary**

We discuss a parallel tabu search algorithm with implementation in a heterogeneous environment. Two parallelization strategies are integrated: functional decomposition and multi-search threads. In addition, domain decomposition strategy is implemented probabilistically. The performance of each strategy is observed and analyzed in terms of speeding up the search and finding better quality solutions. Experiments were conducted for the VLSI cell placement. The objective was to achieve the best possible solution in terms of interconnection length, timing performance, circuit speed, and area. The multiobjective nature of this problem is addressed using a fuzzy goal-based cost computation.

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