

Preemptive scheduling of jobs
with position-dependent processing times
on two parallel identical machines

Abstract

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In the thesis, we consider preemptive scheduling of jobs with position-dependent processing times on two parallel identical machines with the maximum completion time criterion. We present a review of the literature of the main models of job preemption. We propose a new model of position-dependent job preemption in which jobs may be preempted but only restricted preemption of a single job is allowed. We present several properties of this problem. We present two exact algorithms and two heuristic algorithm for its solution. We discuss the results of numerical experiments conducted to compare the proposed algorithms.



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