论文与报告

多次打扰下单机双目标的滚动部分重调度

王冰, 席裕庚

School of Information Engineering; Shandong University at Weihai 264209; Institute of Automation; Shanghai Jiaotong University Shanghai 200030 收稿日期 2005-8-10 修回日期 2006-1-8 网络版发布日期 2006-10-25 接受日期

This paper discusses the single-machine rescheduling problem with efficiency and stability as criteria, where more than one disruption arises in large-scale dynamic circumstances. Partial rescheduling (PR) strategy is adopted after each disruption and a rolling mechanism is driven by events in response to disruptions. Two kinds of objective functions are designed respectively for PR sub-problem involving in the interim and the terminal of unfinished jobs. The analytical result demonstrates that each local objective is consistent with the global one. Extensive computational experiment was performed and the computational results show that the rolling PR strategy with dual objectives can greatly improve schedule stability with little sacrifice in efficiency and provide a reasonable trade-off between solution quality and computational efforts.

关键词 <u>Disruptions</u> <u>efficiency and stability</u> <u>partial rescheduling</u> <u>rolling mechanism</u> 分类号

Rolling Partial Rescheduling with Dual Objectives for Single Machine Subject to Disruptions

WANG Bing, XI Yu-Geng

School of Information Engineering; Shandong University at Weihai Weihai 264209; Institute of Automation; Shanghai Jiaotong University Shanghai 200030

Abstract

DOI:

This paper discusses the single-machine rescheduling problem with efficiency and stability as criteria, where more than one disruption arises in large-scale dynamic circumstances. Partial rescheduling (PR) strategy is adopted after each disruption and a rolling mechanism is driven by events in response to disruptions. Two kinds of objective functions are designed respectively for PR sub-problem involving in the interim and the terminal of unfinished jobs. The analytical result demonstrates that each local objective is consistent with the global one. Extensive computational experiment was performed and the computational results show that the rolling PR strategy with dual objectives can greatly improve schedule stability with little sacrifice in efficiency and provide a reasonable trade-off between solution quality and computational efforts.

Key words Disruptions efficiency and stability partial rescheduling rolling mechanism

本文信息 Supporting info ► PDF(124KB) ▶ [HTML全文](OKB) ▶ 参考文献[PDF] ▶参考文献 服务与反馈 ▶ 把本文推荐给朋友 ▶加入我的书架 ▶加入引用管理器 ▶ 复制索引 ► Email Alert ▶ 文章反馈 ▶浏览反馈信息 相关信息 ▶ 本刊中 包含 "Disruptions"的 相

关文章

· 王冰

席裕庚

▶本文作者相关文章

扩展功能

通讯作者 王冰 wangbing@sdu.edu.cn