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Rescheduling of Manufacturing Flow Shop under Different Types of Disruption

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Abstract : Now our days, Almost all manufacturing facilities need to use production planning and scheduling systems to increase productivity and to reduce production costs. Real-life production operations are subject to a large number of unexpected disruptions that may invalidate the original schedules. In these cases, rescheduling is essential to minimize the impact on the performance of the system. In this work we consider flow shop layouts that have seldom been studied in the rescheduling literature. We generate and employ three types of disruption that interrupt the original schedules simultaneously. We develop rescheduling algorithms to finally accomplish the twofold objective of establishing a standard framework on the one hand; and proposing rescheduling methods that seek a good trade-off between schedule quality and stability on the other.

Keywords : flow shop scheduling, uncertainty, rescheduling, stability
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