群蟻演算法於開放型排程問題求解模式建構

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摘 要

生產排程主要的議題即是在各種生產條件限制下，決定所有需處理工件在某些生產設備上的處理順序，使生產成本達到最經濟化或滿足顧客之需求。 開放型工廠(open shop)此一領域，近年來逐漸受到學者注意，開放型工廠排程問題的特色在於所有工件在機器上並無固定之處理順序，基於此問題潛在的困難性與複雜度，過去大部分的研究皆將工件的整備時間、拆卸時間納入處理時間一併考量。但實務上，整備時間和拆卸時間之重要性不容忽視，且生產過程延遲與否，為一重要績效衡量指標。因此本研究是以總工件延遲最小化為目標，探討工件整備時間、處理時間與拆卸時間分離之開放型排程問題，以群蟻演算法為主架構發展二種啟發式解法求解，而實驗結果顯示，架構二演算法配合適當的螞蟻數及殘留係數即可快速收斂解值，並獲得不錯的求解品質。

關鍵詞 : 開放型工廠 ; 獨立整備時間 ; 相依拆卸時間 ; 群蟻演算法

目錄

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