蟻群演算法於具非等效平行機台考量之排程問題研究

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摘 要

製造工廠中，由於機器設備不同或者機器設備的老舊，造成同一種產品的處理時間在不同機器上的生產速率不一致，因此排程的決策者必須考量如何有效的將工作指派給機台加工，以減低各工作在機台上的加工時間，並提昇產出率。此類型的排程問題即所謂的非等效平行機台排程問題。 由於各個工作在同一台機器上的整備時間通常會因為前一個工作的不同而造成整備時間的不一致，因此本研究在將相依整備時間納入研究，在總流程時間最小化之目標下，建構以蟻群演算法為主架構的兩種啟發式演算法，並將其與模擬退火法與禁忌搜尋法比較。研究結果顯示，架構二在適合的參數組合下，具有不錯的求解效能。

關鍵詞 : 非等效平行機台 ; 相依整備時間 ; 總流程時間 ; 蟻群演算法 ; 模擬退火法 ; 禁忌搜尋法

目錄

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