以啟發式演算法求解軸輻網路問題

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摘 要

軸幅式路網(hub-and-spoke network)的結構，有助於總運輸成本的降低，其中影響的關鍵在於轉接點(hub)的位址與需求點(nonhub)的分派決策。本研究主要針對轉接點位址問題(hub location problem, HLP)求解，主要目的在找到最佳的轉運點位址與需求點的分派決策，使整個網路中之總運輸成本最小化。由於HLP具有NP-Complete的特性，要在短時間內求得最佳解十分困難，故文獻中大多以啟發式方法求得近似解。 SAHUB演算法，為一模擬退火法(Simulated annealing, SA)及禁忌搜尋法(Tabu search, Tabu)中之禁忌名單(Tabu list)之結合。本研究之求解方法主要應用SAHUB演算法，再加入部分之修改而提出一個新的啟發式演算法 — SAHUBR。 為了測試演算法之穩健性，本研究以文獻中之例題，分別針對單一分派與多重分派下之HLP做測試，除了在參數分析部分找到最合適之參數組合外，並與文獻演算結果做比較。研究結果顯示，本研究所提出之SAHUBR演算法，能夠快速的尋找到最佳解，具有相當不錯之求解效能。

關鍵詞 : 轉接點位址問題

目錄

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