计算机工程与应用 2007 43 (24): 179-181 ISSN: 1002-8331 CN: 11-2127/TP

工程与应用

车辆路径问题的禁忌搜索算法研究

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收稿日期 修回日期 网络版发布日期 2007-8-9 接受日期

摘要 简要回顾了车辆路径问题的禁忌搜索算法的发展现状，提出了一种改进的禁忌搜索算法。该算法将路径问题按不同的车辆-顾客分配结构分解成若干子问题，然后用禁忌搜索算法求解每个子问题，最后从所有子问题的最优解中选出全局最优解。理论分析和实验结果表明该算法比以往的算法有以下优点：拓展了搜索空间，提高了最优解的效果;是一种将问题进行空间分解的并行算法，可采用多台计算机同时运算以减少整体运行时间。

关键词 物流 车辆路径问题 禁忌搜索算法

分类号

Study on tabu search algorithm for stochastic vehicle routing problem

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Abstract

On the basis of describing the vehicle routing problem briefly，a new improved tabu search algorithm is presented.In this algorithm，routing problem is divided into several sub-problems according to vehicle-customer assigning structure，and an inner tabu search algorithm is applied for each sub-problem，at last the answer of the whole problem is find among the answers of all sub-problems.Two conclusions are drawn by computation results and theory：the algorithm extends the search scope，improving the optimisation effect;The algorithm is a collateral algorithm that can be run by several computer at the same time to decrease the whole optimisation time.

Key words logistics Stochastic Vehicle Routing problem（SVRP） tabu search algorithm

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