

工程与应用

单纯形法在城轨列车惰行点搜索中的应用

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摘要 讨论了单纯形优化算法在城市轨道交通列车惰行点搜索方面的应用, 列车运行因受多重因素影响, 确定必要的惰行起点在实际情况的约束下并不容易。通过分析列车站内运行惰行点搜索特点、约束条件及寻解空间等, 详细介绍了二维空间中单纯形法寻找合适列车惰行点的实现过程。借助于单列车仿真系统的帮助, 通过问题的寻优结果分析, 研究了这种启发式搜索方法在确定惰行点方面的可行性和性能表现。

关键词 [单纯形法](#) [惰行点搜索](#) [运行时间](#) [站间运行](#)

分类号

Application of simplex method in coast points searching for urban mass transit trains

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Abstract

The paper discusses an application of simplex method in coast points searching for urban mass transit trains. Identifying the necessary coast starting points under the constraints of current conditions is not simple as train movement is governed by multiple factors. The characteristic, restricting and solution space etc about coast points searching in inter-station run are analyzed. The approaching of two-dimensional simplex method in coast points searching is introduced in detail. With the aid of a single train simulator, the feasibility and performance of this searching measure in locating coast points are also investigated according to searching results.

Key words [simplex method](#) [coast points searching](#) [runtime](#) [inter-station run](#)

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