工程与应用

改进的资源优化分配调度方法研究

薛联青[1]，靳宏昌[2]

1.河海大学 水文水资源与水利工程国家重点实验室，南京 210098
2.山东省南水北调工程建设管理局，济南 513000

摘要   资源优化分配和调度是一个传统的研究问题，目前在实际工程应用中，通常是以最小费用为目标，建立最优化的线性规划模型，但在多变量多参数约束的条件下，优化调度模型往往求解困难，甚至无解。以渠道土石方调配为例子，研究基于南水北调山东段100多公里的渠道土石方优化调度系统，提出了一个基于最近距离优先的土石方优化调度算法，该算法通过搜索所有相同最近的分段进行土石方调度，以实现最小费用优先的目标。最后通过实例论证了该算法的有效性，研究成果对相关类似的资源优化调度和分配研究具有重要的参考价值。

关键词   土石方   优化调度   最近距离优先
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Shortest distance-based priority scheduling algorithm for resource optimization

XUE Lian-qing[1]，JIN Hong-chang[2]

1.State Key Laboratory of Hydrology-Water Resources and Hydraulic Engineering，Hohai University，Nanjing 210098，China
2.Shandong Province South-North Water Diversion Project Construction Authority，Jinan 513000，China

Abstract

  It is a traditional research problem to optimize the allocation and scheduling of resources.In practical engineering applications，the linear programming optimization models are usually established to minimize computing cost，but the optimal scheduling model is often difficult to solve under more variable multi-parameter constraint conditions.This paper deploys channels earth to build an earth optimal scheduling system based on the South-North Water Diversion Shandong section of the channel for more than one hundred kilometers of earth.Based on the distance of earth and optimal scheduling algorithm，the algorithm searches all of the same recent sub-scheduling to earth in order to achieve the priority objectives of minimum cost.Finally，an example demonstrates the effectiveness of the algorithm performance.The paper research algorithm has important reference value to study the related resources for optimal scheduling and allocation.

Key words   earth   optimal scheduling   the shortest distance priority

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