

An Improved Approach to Solve Two-Level Hierarchical Time Minimization Transportation Problem

Authors : Kalpana Dahiya

Abstract : This paper discusses a two-level hierarchical time minimization transportation problem, which is an important class of transportation problems arising in industries. This problem has been studied by various researchers, and a number of polynomial time iterative algorithms are available to find its solution. All the existing algorithms, though efficient, have some shortcomings. The current study proposes an alternate solution algorithm for the problem that is more efficient in terms of computational time than the existing algorithms. The results justifying the underlying theory of the proposed algorithm are given. Further, a detailed comparison of the computational behaviour of all the algorithms for randomly generated instances of this problem of different sizes validates the efficiency of the proposed algorithm.

Keywords : global optimization, hierarchical optimization, transportation problem, concave minimization

Conference Title : ICOA 2020 : International Conference on Optimization Algorithms

Conference Location : Paris, France

Conference Dates : July 20-21, 2020