

A hybrid based genetic algorithm for solving a capacitated fixed-charge transportation problem

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ABSTRACT.

This paper is focusing on an important transportation application encountered in supply chains, namely the capacitated two-stage fixed-charge transportation problem. For solving this complex optimization problem we described a novel hybrid heuristic approach obtained by combining a genetic algorithm based on a hash table coding of the individuals with a powerful local search procedure. The proposed algorithm was implemented and tested on an often used collection of benchmark instances and the computational results obtained showed that our proposed hybrid heuristic algorithm delivered competitive results compared to the state-of-the-art algorithms for solving the considered capacitated two-stage fixed-charge transportation problem.

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