

Solving Container Loading Problems By Co-operative Co-evolutionary Genetic Algorithm

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ABSTRACT

Container loading problems are frequently encountered in industries such as manufacturing, food and logistics. A good utilization of containers can always result in cost savings. Container loading problems are of the NP-Complete type, and they are solved to be efficient by genetic algorithm. This thesis proposed a new co-operative co-evolutionary genetic algorithm (C.C.G.A.) for solving container loading problem. The proposed heuristic rule is used to partition the entire loading sequence into a number of shorter sequences. Each partitioned sequence is then represented by a species member in the CCGA search. And it is used by "bottom-back-left" packing approach in compliance with simulation results.

Keywords : container, loading, genetic algorithms, co-operative co-evolutionary genetic algorithm.

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