

The Double TSP with MultipleStacks - Heuristic Solution Approaches

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Abstract:

The talk introduces the Double Travelling Salesman Problem with Multiple Stacks. The Double TSP with Multiple Stacks is dealing with the determination of the shortest route performing pickups and deliveries in two separated networks (one for pickups and one for deliveries) using only one container. The container is loaded and unloaded from the end of the container. Repacking is not allowed. Instead each item can be positioned in one of several “rows” in the container such that each row can be considered a LIFO (last in, first out) stack. No mutual constraints exist between the rows. In a typical instance the container has three rows each having up to 11 items. Four different solution methods based on metaheuristics are presented and some computational results are given along with lower bounds on the objective value.