

# Solving Dynamic Vehicle Routing: An Alternative Metaheuristic Approach

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**Abstract:** An adapted Evolution strategy is proposed for solving the Dynamic (General) Vehicle Routing Problem (DVRP). Several Mutation and crossover operators are designed to deal with real-time demand information which is available only at the day of operation. A simulation was carried out in which intelligent planning of new online orders are dealt with. Several problems were generated to test the proposed algorithm. The problems were solved twice. First, they are solved off-line in which all orders are known prior to the day of operation. Second, they were solved in which orders are dynamic. The competitive ratio gave an average of 0.65.

**Keywords:** Dynamic Vehicle Routing; General Vehicle Routing; Adapted Evolution Strategy; Intelligent Real-time Planning.