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Heuristics in Vehicle Routing - From theory to practice

Practical routing differs from theoretical routing in many ways.

Many algorithms that solve the theoretical vehicle routing problems take advantage of the mathematical structure of these problems. Small changes in assumptions can render the algorithm designed for a specific problem unsuitable for the new structure.

In a consulting field one wants to devise methods for solving vehicle routing problems at as general a level as possible to make them usable for many different cases.

Furthermore the computing time is essential in real life cases. Many exact algorithms focuses on the fact, that the algorithm converges to an optimal solution and do not take the computing time into consideration.

Therefore heuristic algorithms are almost always preferable to exact algorithms in the consulting area.

The presentation will go through a heuristic based on Tabu-search and the general structure of it that makes it suitable for a variety of cases.

Furthermore it will include a case demonstration of how local preferences and constraints can easily be incorporated within the structure.