

Vehicle Routing Problems with Intermediate Stops

There are numerous practical vehicle routing applications in which vehicles have to stop at certain facilities along their routes in order to be able to continue their service, e.g., for (i) replenishment of the goods to be delivered, (ii) refueling (or recharging in case of battery electric vehicles), or (iii) unloading of collected goods or disposal of waste. These stops differ from regular customer stops in two aspects: first, they are optional, and second, they depend on the state of the vehicle with respect to load and fuel level.

In the talk, we give an introduction to this family of vehicle routing problems, putting the main focus on problems with recharging or refueling. We provide an overview of application areas, describe the problem variants considered in the literature, and discuss the developed algorithms and their performance. Finally, we present interesting topics for future research.