

# Propositions

attached to the dissertation

## Vehicle Routing and Time Slot Management in Online Retailing

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## I

The use of efficient data structures for pre-calculation can significantly speed up heuristic solution methods for the vehicle routing problem with time-dependent travel times and route duration constraints.

*(Chapter 2)*

## II

Simulation of Dynamic Time Slot Management will only yield realistic results if the customer arrival times and the system computation times are taken into account.

*(Chapter 3)*

## III

In the Dynamic Time Slot Management setting of Chapter 3, the continuous use of improvement heuristics in the background increases the number of customers that can be accepted without increasing response times.

*(Chapter 3)*

## IV

A priori routing and time slot assignment offers a promising approach to simplify the management of time slots during the ordering process.

*(Chapter 4)*

## V

The expected revenue of an a priori route and time slot assignment can be calculated in an exponential number of operations using a dynamic program, improving the factorial number of operations needed by complete enumeration.

*(Chapter 4)*

## VI

For scientific progress it is crucial that the scientific community provides more incentives to the much-needed publishing of negative results and works of reproduction.

## VII

The planning process will be improved more by supporting logistic planners than by trying to replace them by automation.

## VIII

Software developers will never make their most useful products, unless they study closely how end users make use of their programs.

## IX

Because of their use of improvisation in musical accompaniment, Baroque keyboard players are jazz musicians *avant la lettre*.

## X

The ability to identify the pitch of musical notes without help of a reference tone (absolute pitch) is a disadvantage when performing music.

## XI

The beauty of error messages is the certainty that something is wrong.