

Propositions

attached to the thesis

Public Transport and Passengers Optimization Models that Consider Travel Demand

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Friday 17 September 2021 at 10:30 hours

I

Timetable evaluation functions should be designed with utmost care. Even if they are created with the same intentions, they do not necessarily lead to a consistent evaluation.

(Chapter 2)

II

The integration of passenger route choice models into timetable optimization has the potential to find better timetables for passengers than state-of-the-art methods.

(Chapter 3)

III

Seemingly a constant in operators' services, a line plan should be revised regularly to provide the best returns for operators and the best level of service for passengers.

(Chapter 4)

IV

The number of required vehicles can be reduced drastically by using carsharing as a substitute for private cars.

(Chapter 5)

V

It is possible to solve large vehicle scheduling problems for on-demand services to optimality in a rolling horizon fashion: by splitting them into smaller pieces, solving each piece individually, and composing the solutions.

(Chapter 6)

VI

Problems might be simple in theory yet unsolvable in practice.

VII

Optimization approaches can find best solutions in complex situations but they lack intuition.

VIII

A developed country is not a place where the poor have cars. It is where the rich use public transportation.

Gustavo Pedro, Mayor of Bogota, Colombia

IX

One of the biggest problems of public transport is the last mile, and one of the most common assumptions in public transport optimization is that passengers live at stations.

X

What we create only becomes good when we enjoy doing it.

XI

All the problems of mankind come from the fact that people do not stay at home.

based loosely on Blaise Pascal