“Comparative analysis of congestion phenomena in road and rail transportation”

In this thesis, congestion phenomena in road and rail transportation have to be analyzed and compared. For this purpose, first, essential system differences regarding characteristics relevant for congestion phenomena are to be identified and analyzed. This includes, for example, the causes of traffic jams and delays, the propagation of congestion within the respective network, the predictability of congestion for transport users or the impact on overall travel times. Furthermore, an extensive literature review on theoretical approaches that are used to study congestion phenomena in the two fields has to be carried out. Based on the research, similarities as well as differences in the methods have to be pointed out to finally derive a statement on cross-transferability between the methods for the two modes of transport.

In a next step, at least three transport relations are to be chosen. For these relations available historical data on congestion for rail and road traffic have to be researched and compared. It is to analyse how the congestion phenomena have changed over time and whether measures implemented have led to a change.