Effects of assistance of anticipatory driving on driver's behaviour during deceleration situations

Abstract:
In this work, the investigation of the assistance of anticipatory driving is presented. The goal is to explore the effects of such an assistance system on driver's behaviour in deceleration situations. The influence of the system is derived using the comparison between assisted and unassisted drives performed in a fixed-base simulator. The benefits are evaluated via analyzing driving and visual data with respect to safety, comfort, and efficiency criteria. The results show that drivers with assistance start decelerating significantly earlier in some of the investigated situations, predominantly by coasting a vehicle. The mean maximum decelerations are reduced from 8,5m/s² to 6,2m/s² in the safety critical situation, and the fuel consumption tends to sink on 4.

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