عنوان مقاله:

Vehicle Lateral Motion Control using Fuzzy Controllerin the Automated Highway System

محل انتشار:

سیزدهمین کنفرانس بین المللی مهندسی حمل و نقل و ترافیک (سال: 1392)

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خلاصه مقاله:

The automation of the overtaking manoeuver is considered to be one of thetoughest challenges in the development of autonomous vehicles. This operationconsists of two lane changes—one from the right to the left lane of the road, andthe other is to return to the right lane after passing. This paper studies theproblem of automatic lateral control of highway vehicles that move inside apartially unknown environment, under the assumption of parametric uncertaintyin the model that describes the motion of vehicles. To improve such problem, afuzzy logic controller (FLC) is applied to implement an efficient and accuratepositioning of Vehicles in Automated highway system (AHS). The simulationresults show that the control method can control the lateral motion of a vehiclemore effectively and have a good performance.

کلمات کلیدی:

Fuzzy logic controller, lateral control, robust design

لینک ثابت مقاله در پایگاه سیویلیکا: