عنوان مقاله:

Obstacle avoidance for an autonomous vehicle using force field method

محل انتشار:

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خلاصه مقاله:

This paper presents a force field concept for guiding a vehicle at a high speed maneuver. This method is similar to potential field method. In this paper, motion constrains like vehicles velocity, distance to obstacle and tire conditions and such lane change conditions as zero slop condition and zero lateral acceleration are discussed. After that, possible equations as vehicles path are investigated. Comparing advantages and disadvantages of ۷th, ۱۱th degree and a few other equations, followed by single mass and bicycle models lead to an improved method, which is presented in this paper.

کلمات کلیدی:

Potential field, Force field, Lateral acceleration, Tire stiffness, Obstacle avoidance