

## عنوان مقاله:

LTV-MPC Based Path Planning of an Autonomous Vehicle Via Convex Optimization

## محل انتشار:

بیست و یکمین کنفرانس مهندسی برق ایران (سال: 1392)

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## خلاصه مقاله:

This paper investigates the stochastic path planning of a vehicle in the presence of some moving obstacles and uncertainty sources. Upon a successive linearization, a Linear-Time Varying Model Predictive Control (LTV-MPC) is used as the planning method. The uncertainty is modelled by a Gaussian distribution and the obstacle avoidance mission is modelled in the form of linear constraints of the LTV-MPC. Finally by applying some algebraic simplification the LTV-MPC is converted to a convex optimization problem. There are strong algorithms for solving a convex optimization problem, thus the consequent path planning method can be solved efficiently and has high performance operation that will be obtained.

## کلمات کلیدی:

Stochastic path planning, LTV-MPC, Convex Optimization

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/208288>

