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h   **hirata@cc.utsunomi…**   Tue, 26 Feb 2019, 23:03
to mohdhatta.kl, nabhan.alileman, hairi.kl, me

Message from PaperCept Conference Management System

Message originated by Mitsuo Hirata

To: Dr. mohd hatta mohammed ariff
From: Prof. Takeshi Mizuno, Prof. Toru Namerikawa, Prof. Mitsuo Hirata, Assoc. Prof. Makoto Yokoyama and Assoc. Prof. Masaki Takahashi
Re: (405) Model Predictive Controller for Path Tracking and Obstacle Avoidance Manoeuvre on Autonomous Vehicles

Dear Colleague:

It is our pleasure to inform you that the paper referenced above, for which you are listed as the corresponding author, has been accepted for presentation at, and publication in the proceedings of 2019 12th Asian Control Conference (ASCC), ASCC 2019, which will be held in Kitakyushu, Fukuoka, Japan, between June 9-12, 2019. To have your paper selected is a significant achievement. Congratulations!

Please review this message carefully since it contains important information regarding your paper and the conference.

The reviewers' comments and associate editor's summary can be accessed by logging into your account for ASCC 2019 through http://controls.papercept.net/ and following the link for reviews for this paper. It is important that any critical comments therein are adequately addressed before the final paper is uploaded. Please take seriously the comments and summary when preparing your final manuscript.

The advance program for the conference will be available soon on the conference website at,

http://www.ascc2019.org/

Comments to the author
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In this paper, path tracking control method for
front-steering vehicle is studied. To consider real vehicle
behavior, the nonlinear vehicle dynamics, the load shift
due to acceleration and the tire force characteristics are
modeled. To consider this nonlinearity, nonlinear-MPC is
introduced. The evaluation is conducted in obstacle
avoidance scenario, and high tracking performance is shown
comparing with the Stanley controller in mid and high
speed.

Specific comments:
1.
This paper is interesting, but vehicle dynamics was not
presented clearly. For example, if readers didn't very
familiar with vehicle dynamics, they might be confused
about relationship between steering angle, X,Y position,
and tire forces.

2.
In this paper, though constant longitudinal speed is
assumed, tire saturation model Eq.(5) is introduced. How to
calculate longitudinal force Fx?

3.
In section IV, the gain Q is set to 25. Usually the
weighting matrices for 3-dimentional vector is set to
matrix \in R^{3*3}. Is there any reason for such setting?