

Review of manuscript Algorithms-594910: **Freeway Traffic Congestion Reduction and Environment Regulation via Model Predictive Control**

The manuscript relies on freeway traffic congestion reduction by means of model predictive control. The topic is indeed of interest, maths sound.

I however consider that the manuscript needs some revision, basically related to the way the ideas and results are presented. This is necessary in order to improve readability of the work.

1. *However, the on-line optimization problem in model predictive control (MPC) are normally non-linear, non-convex and with complicated constraints.* Well that is not totally true... these are actually very special cases since MPC is quite often design for linear or linearized system with linear constraints in order to get an easy to solve optimization problem (a QP basically).
2. Basic MPC literature is missing.
3. Do the authors refer to receding horizon when they talk about rolling horizon? If so, please use the correct terminology (receding horizon). If not, please explain what rolling horizon means.
4. After the literature review, the discussion jumps to the proposed algorithm. But the problem the authors intend to solve is not stated, so it is hard for the reader to understand what is the real proposal and why.
5. It is very hard to follow Section 4, which is the main result of the work. The author should rewrite it with the intent of increasing readability and making the capture of the ideas easier for the audience.
6. English is very poor and so it is difficult to follow authors' ideas.