

Dear Editor,

This is the first submission of our novel robust sequential trajectory planning method, which is a Hamilton-Jacobi reachability-based method for guaranteed safe multi-vehicle path planning in the presence of disturbances and an adversarial intruder.

The proposed algorithm is an improvement over a previous algorithm, which is also under review for IEEE Transactions on Control System Technology. The previous algorithm required to re-solve the entire path planning problem after an intruder vehicle appears in the system. Since this re-planning is done in real time, the algorithm might be prohibitive for large-scale systems. In this work, we propose a novel algorithm that limits the re-planning to a *fixed number of vehicles*, irrespective of the total number of STP vehicles. Moreover, this design parameter can be chosen beforehand based on the computational resources available. These differences are further discussed in the submitted manuscript.

In addition to the main submission in the 2-column format, we have also included in the supplementary materials an extended version of the manuscript, which contains some additional analysis, as well as the same manuscript in a 1-column double-spaced format for ease of review.

Regards,
Somil