Review of: "Simulation of Control System for a Half-Car Suspension System for Passenger Vehicle Application by Designing an LQR Controller"

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Potential competing interests: No potential competing interests to declare.

Dear authors, the results demonstrate a correct performance of the implemented LQR control. With the information provided, a correct development of the control and the modeling of the system is observed; however, a significant contribution to the field of vehicle control is not observed. Very similar proposals have been observed in references placed in this same article as is the case of the second one.

However it is observed that it has a good basis for further research, as a recommendation could implement controls that had not yet been implemented for this specific problem; also with the development that already have can make a good comparison of these.

I also have some observations in the development of the document.

* In line 9 of the Abstract: "its performance is superior (PPS)" implies that the performance of the passive systems are superior to the active ones, therefore I recommend to improve the wording of this part.

* For figure 1 it is recommended to improve the quality of the image since the correct reading of the information placed there is difficult; in addition, there are two variables Fksr on the right side of the image, which should not coincide with the name, the same happens for Fksf.

* The equations named there do not coincide with the information placed in image 1, as is the case of equation 1 which has the variables FAF and FAR which are not evident in the image.

* The initial image on page 7 has no name and lacks a description.

* I recommend to give a better mathematical development to the LQR equations, since they only indicate that they use a matlab toolbox, it would be valuable to have the LQR equations (u(t) and how to obtain the K) in this section.

I hope that my recommendations will be of help to improve the development of your research.