

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.

The review comments are as follows:

1. Some equations lack the introduction of parameters when they first appear, such as parameter J in (2). It is recommended to thoroughly review all equations in the manuscript and make the necessary revisions.
2. Different meanings of parameters should be represented by different symbols. Is the J in (2) the same variable as the J in (10)?
3. The system equations, as presented in Eq. (5), require clarification, including an explanation of state variables, coefficient matrices, output variables, etc.
4. Please ensure strict adherence to the formatting requirements of academic journals regarding font, size, and spacing in the manuscript.
5. Eq. (10) seems to contain an error. $x^T Q x$? It should be clearly explained how to reasonably determine matrices Q and R in (10), the methods used, and provide explicit clarification.
6. It is suggested to consult ISO2631 and conduct simulations to enhance the demonstration of vibration steadiness and ride comfort, illustrating the effectiveness of the control.

The current form of the manuscript suggests that it should be rejected. It is recommended to make the necessary revisions based on these suggestions and resubmit the manuscript for a fresh review process.