

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.

I have had the opportunity to review your abstract on the mathematical modeling and control of a 4-DOF half-car active suspension system utilizing an LQR controller, and I am impressed with the depth and significance of your work. The incorporation of a mathematical model and simulation using MATLAB/Simulink software adds rigor to your study. The choice of parameters such as the unsprung masses of the wheels' heave displacements, the vehicle's pitching dynamics, and the sprung masses of its body's heave displacements showcases a comprehensive understanding of the factors influencing the performance of the active suspension system.

I appreciate the clarity in your comparison between the proposed active suspension system and the traditional passive suspension technology. The superior performance demonstrated by your system is a promising indication of the advancements that can be achieved in this field.

In conclusion, your abstract effectively communicates a well-executed study with valuable contributions to the field of inventive vehicle system design. I look forward to the publication of the complete study and believe it will make a significant impact in the area of active suspension systems.

Thank you for your dedication to advancing this field of research.