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

Matheus Senna de Oliveira

Potential competing interests: No potential competing interests to declare.

The article presents an interesting problem, but deals with it in a very simplistic approach. There are many works in the literature that address such topic, including LQR based ones. One must clearly propose novel ideas and methods, stating what are the advantages and novelties of the paper. Besides, the paper says “PID and LQR controllers are used”, but there are no other mentions to PIDs in the work. Moreover, the paper overall presentation and notation are lacking in many aspects: many equations appear to not have the correct indexes and explanations (what is “G” after equation 9? And the letter “j”? What is the difference between L, L1 and L2?); the fonts are not consistent along the paper (tables, equations and figures), making difficult to identify variables (for example, one must always use

$$\dot{x}$$

and not “x-dot”); the “best value of K” is a copy-paste from Matlab workspace; etc. In conclusion, the authors must significantly improve the paper content and presentation in order to fully live to its potential.