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

Gerasimos Rigatos[1]

1 Institute of Electrical and Electronics Engineers (IEEE)

Potential competing interests: No potential competing interests to declare.

The article is unsuitable for publication. LQR control assumes an exact model of the controlled system, and obviously, in the case of the vehicle's suspension, there are disturbances and unmodelled perturbations from the road's surface. The design and stability properties of the LQR controller, along with the solution of the associated Riccati equation, are not explained in the article. The LQR controller should be substituted by an H-infinity controller or by a disturbance observer-based flatness-based controller. Differential flatness properties should be used to confirm the system's controllability and observability.