

**Title: Modeling and Control of the Active Suspension System Using Proportional Integral Sliding Mode Approach**

**Asian Journal of Control**

Abstract:

The purposes of this paper are to present a new method in modeling an active suspension system for half-car model in state space form and to develop a robust strategy in controlling the active suspension system. Proportional integral sliding mode control strategy is proposed for the system. A simulation study is performed to prove the effectiveness and robustness of the control approach and performance of the controller is compared to the linear quadratic regulator and the existing passive suspension system