Abstract

In this work, we use the approach based on observers such as the Luenberger observer and the sliding mode observer in order to introduce the diagnosis of nonlinear systems. The robustness of the proposed observers is tested through a physical example. The obtained results show that for nonlinear systems the performances of sliding mode observer is better than using a classic kind of observer. The synthesis of nonlinear observers will be used for actuator fault detection and isolation using residual generation. Finally, a comparison of observers’ performances will be interesting for judging the effectiveness of this approach.

References

Synthesis of Nonlinear Observers for Actuator Fault Detection and Isolation


Index Terms

Computer Science
Control Systems
**Keywords**

Observers  Nonlinear Systems  Luenberger Observer  Sliding Mode Observer  Fault Detection And Isolation  Residual Generation