

## **Actuator Fault Detection and Fault Tolerant Control of a Nonlinear System Using Sliding Mode Observer**

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**Abstract :** In this work, we use the Fault detection and isolation and the Fault tolerant control based on sliding mode observer in order to introduce the well diagnosis of a nonlinear system. The robustness of the proposed observer for the two techniques is tested through a physical example. The results in this paper show the interaction between the Fault tolerant control and the Diagnosis procedure.

**Keywords :** fault detection and isolation FDI, fault tolerant control FTC, sliding mode observer, nonlinear system, robustness, stability

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