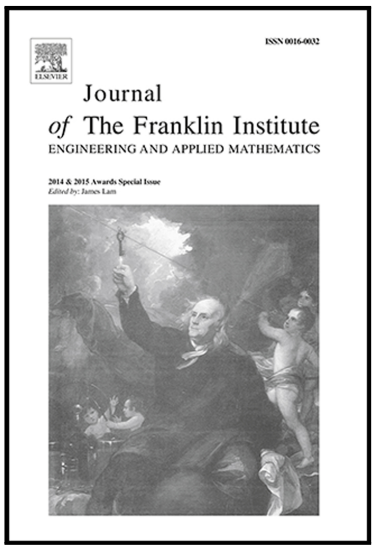

A Dynamical Controller with Fault-Tolerance: Real-Time Experiments

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PII: S0016-0032(17)30124-2
DOI: 10.1016/j.jfranklin.2017.02.038
Reference: FI 2931

To appear in: *Journal of the Franklin Institute*

Received date: 10 March 2016
Revised date: 8 December 2016
Accepted date: 27 February 2017

Please cite this article as: Rafael Martínez-Guerra, Iván Trejo-Zúñiga, Fidel Meléndez-Vázquez, A Dynamical Controller with Fault-Tolerance: Real-Time Experiments, *Journal of the Franklin Institute* (2017), doi: 10.1016/j.jfranklin.2017.02.038

Highlights

- A new fault-tolerant dynamical controller is designed from the differential algebraic approach for multi-input multi-output systems which accomplishes output tracking.
- Some observers capable of reconstructing multiple faults (additive and multiplicative) simultaneously and online are proposed.
- The closed-loop system is proven to be asymptotically stable (without noise) and ultimate uniformly bounded with measurement noise.
- A parameter identification by means of algebraic techniques is performed.
- A real-time application is performed to show the effectiveness of the proposed method.