Abstract

The present paper deals with a decoupled multimodel predictive control based on multi-observer for the control of discrete-time nonlinear systems with time-varying delay. For each local model, a controller based on partial predictor/observer is synthesized. A switching algorithm is established to yield the adequate partial controller ensuring the closed-loop desired performances. Simulation results are given to illustrate the significance of the proposed decoupled multimodel predictive control strategy.

References


- Y. Batmani and H. Khaloozadeh. "On the design of observer for nonlinear
Supervised Model Predictive Control for Discrete-time Nonlinear Systems with Time-varying Delay

- O. Pags, C. Bernard, O. Raul, and M. Pascal. "Control system design by using..."
a multi-controller approach with a real-time experimentation for a robot wrist.

Index Terms

Computer Science Information Sciences

Keywords

Predictive Control Time-delay Systems Multi-observer Supervisor Multimodel Approach