

عنوان مقاله:

OPTIMAL CONTROL OF AN INVERTED PENDULUM USING A DIGITAL DEADBEAT RESPONSE PREDICTION OBSERVER

محل انتشار:

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خلاصه مقاله:

This paper presents an optimal control algorithm of an inverted pendulum with Linear Quadratic Regulator in which a digital prediction observer with deadbeat response is used to estimate the unmeasured state variables. Optimal control is a powerful algorithm considers the limitations in state variables and system actuators. The main weak point of optimal control in a practical view is its complete dependence in sense or estimation of state variables. A digital prediction observer offers the fastest way of estimation of unmeasured state variables in a digitalbased control system. The successful results of implementing of the proposed algorithm in this paper show the effectiveness of the ..algorithm

کلمات کلیدی:

Deadbeat response, Digital observer, Inverted Pendulum (IP), Optimal Control

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