

عنوان مقاله:

Comparison of Different Robust Control Methods for Trajectory Tracking of a Non-redundant Cable-based Robot

محل انتشار:

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خلاصه مقاله:

The level adjustment of cable-driven parallel mechanism is challenging due to the difficulty in obtaining an accurate mathematical model and the fact that different sources of uncertainties and disturbances exist in the adjustment process. This paper presents application of three robust control schemes for a cable suspended robot to handle disturbance and uncertainties in mass and moments of inertia of end effector. In this paper, after introducing dynamics equation of cablebased robots, robust inverse dynamics, robust passivitybased and robust adaptive-controllers are presented. Simulation results show the effectiveness of robustadaptive controller when there is no enough knowledge about system parameters and in the presence of disturbance.

کلمات کلیدی:

robust inverse dynamics, robust passivity, robust-adaptive

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