عنوان مقاله:

Nonlinear Static State Feedback Control Design for Polynomial Systems: A Sum of Squares Approach

محل انتشار:

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خلاصه مقاله:

In this paper, a sum of square approach for nonlinear static output feedback control design for polynomial systems is proposed. In this approach, the control design problem converts to the control problem with polynomial matrix inequality. Therefore, a methodology is proposed which can be solved using a sum of squares decomposition with converting the non-convex programming to the convex programming without requirung solving via itterative algorithms. Finally, to show the effectiveness of the proposed method, the approach is implemented for two different chaotic systems to control the system.

کلمات کلیدی:

Chaotic Systems, Polynomial systems, Static state feedback control, Sum of Squares (SOSs)