**عنوان مقاله:**

Linear Static Output Feedback Controller Design and Practical Implementation for Synchronization of Unified Chaotic Systems Using LMI Approach

**محل انتشار:**

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**خلاصه مقاله:**

In this paper we propose a new method for designing a linear static output feedback controller for synchronization of the chaotic systems whose dynamics are based on the unified chaotic system. The synthesis of the controller is according to the Lyapunov stability theorem and by proposing some linear matrix inequalities (LMIs) which can besolved numerically by the existing solvers. Then, the proposed output feedback controller will be practically implemented on a real-world analog circuit to synchronize the transient behavior of the master–slave unified chaoticsystems. Since the output feedback only uses the information of one of the system states, the practical implementation becomes simpler than the case that the full state information is utilized in the controller. Experimental synchronization results illustrate the effectiveness of the proposed output feedback controller in synchronization of unified chaotic systems.

**کلمات کلیدی:**

Chaotic system, Static output feedback controller, Linear Matrix Inequalities (LMIs), Analog implementation

**لینک ثابت مقاله در پایگاه سیویلیکا:**

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