

ADAPTIVE SYNCHRONIZATION OF CHAOTIC SC-CNN WITH UNCERTAIN STATE TEMPLATE

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TÓM TẮT:

The problem of synchronization of chaotic State Controlled Cellular Neural Network (SC-CNN) with uncertain state template is investigated. In detail, the following three cases are solved: firstly, synchronization of two identical chaotic SC-CNNs with uncertain state template, secondly, synchronization of two nonidentical chaotic SC-CNNs with all uncertain state templates, and, thirdly, synchronization between chaotic SC-CNN with uncertain state template and different uncertain parameter chaotic systems. The controllers and update laws proposed in each case are proved closely based on Lyapunov stability theory. In addition, some illustrative corresponding examples are presented to demonstrate the effectiveness and usefulness of the proposed control laws.