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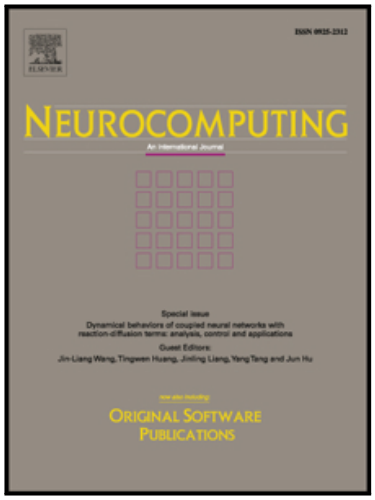

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Passivity of coupled memristive delayed neural networks with fixed and adaptive coupling weights

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Abstract

In this paper, we are concerned with two coupled memristive delayed neural networks with different dimensions of input and output. The essential difference between them is whether coupling delay is incorporated in the network model. First, we respectively analyze the passivity of the presented network models, and some passivity conditions are deduced under the help of some inequality techniques. Then, considering that the networks cannot achieve passivity by themselves in some cases, an edge-based adaptive strategy is developed for guaranteeing the passivity, input-strict passivity and output-strict passivity of the raised networks. At the end, the correctness of the acquired criteria is verified by two illustrative examples.

Keywords: Coupled memristive delayed neural networks, Adaptive control, Passivity, Coupling delay

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