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Global exponent
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In this paper, a class of cellular neural networks is studied. The nonlinear transmission delays and multi-proportional delays into the network are considered with varying coefficients. By applying the Lyapunov functional and delay differential inequality, the stability conditions are derived for the equilibrium of the network. And several examples and the obtained results.

Keywords: Cellular neural networks, Brouwer fixed point theorem.

Mathematics Subject Classification

1. Introduction

In recent years, delayed cellular neural networks have attracted considerable attention due to their applications in image processing, pattern recognition, signal processing, optimization, the equilibrium of the designed systems, the applications, so the stability of the network has been studied in many theoretical studies, and a lot of results have been obtained. At present, neural networks with time-varying delays [8, 10, 12] have been studied, and the stability results for neural networks