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Summary: In this paper, by combining graph theory with coincidence degree theory as well as Lyapunov functional method, sufficient conditions to guarantee the existence and global exponential stability of periodic solutions of the complex-valued neural networks of neutral type are established. In our results, the assumption on the boundedness for the activation function in [S. Guo and B. Du, Discrete Dyn. Nat. Soc. 2016, Article ID 1267954, 10 p. (2016; Zbl 1417.34173)] is removed and the other inequality conditions in [loc. cit.] are replaced with new inequalities.

MSC:
34K20 Stability theory of functional-differential equations
92B20 Neural networks for/in biological studies, artificial life and related topics
34K13 Periodic solutions to functional-differential equations
93D20 Asymptotic stability in control theory
34K40 Neutral functional-differential equations

Keywords:
periodic solutions; exponential stability; complex-valued neural networks of neutral type

Full Text: DOI

References:


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