



Synchronization Phenomena in Coupled Symmetrical Structures of Chaotic Circuits

Katsuki Nakashima, Kazuki Ueta, Yoko Uwate and Yoshifumi Nishio
Dept. of Electrical and Electronic Engineering, Tokushima University,
2-1 Minami-Josanjima, Tokushima, 770-8506, Japan
Email: {nakashima, kazuki, uwate, nishio}@ee.tokushima-u.ac.jp

SUMMARY

Synchronization phenomena have been found in various fields of natural world [1]. Especially, there are a lot of relationships of animate things. Also, synchronization phenomena have a relationship with the human body. For example, cells of the human body are synchronized. Therefore, the vibration of same timing produces big vibration. According to synchronization phenomena, small power produces very big power. Recently, complex networks have attracted attention and topology of complex networks is studied for influence on the system. Also, synchronization phenomena of chaotic circuits are studied from various viewpoints [2][3]. Synchronization phenomena of chaotic circuits are the same as the vibration of the natural world.

In this study, we investigate the synchronization phenomena of networks with symmetrical structures when we use chaotic circuits. We propose a system model that the two symmetrical structures are coupled via a resistor. One structure generates chaotic attractors and the other structure generates three-periodic attractors. We observe the synchronization phenomena when we focus on the symmetry in the system model.

REFERENCES

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