# Periodic solutions for feedback control coupled systems on networks

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## Abstract

In this paper, we consider the existence of periodic solutions for feedback control coupled systems on networks (FCCSNs) by a novel approach, which is made up of the continuation theorem of coincidence degree theory, Kirchhoff's matrix tree theorem in graph theory, Lyapunov method, and some analysis skills. As an application of our approach, the existence and global asymptotic stability of periodic solutions for feedback control coupled oscillators on networks are investigated. Finally, an example and its numerical simulations are given to illustrate the effectiveness and feasibility of our results.

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`manuscript.pdf` available at https://authorea.com/users/310643/articles/441471-periodic-solutions-for-feedback-control-coupled-systems-on-networks
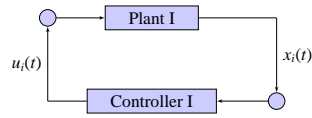
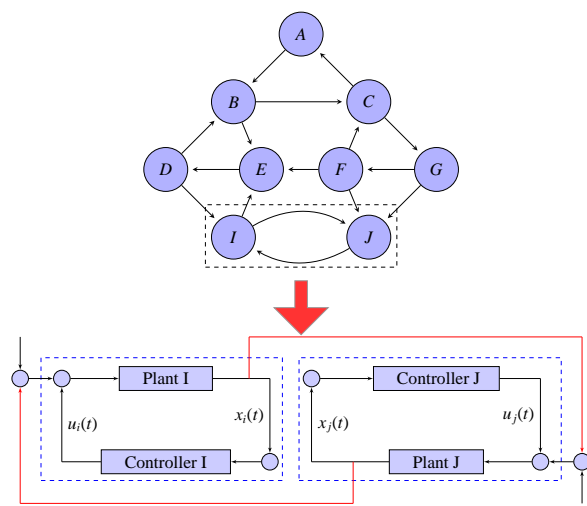Figure 1: The $i$-th dynamical node of feedback control coupled systems on networks.

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Figure 1: The schematic diagram for feedback control coupled systems on networks.

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