

probability is partially unknown, and the node dynamic behavior is time-delay. In addition, the synchronization trajectory is dynamic. To impel the array complex networks to achieve exponential synchronization, a new randomly occurring event-triggered control strategy is proposed with the probability p base on centralized event-triggered sample strategy. By constructing a novel stochastic Lyapunov-Krasovskii function, some exponential synchronization criteria are obtained in terms of LMIs and famous Halanay inequality. Furthermore, I obtain a positive lower bound of the event intervals which can exclude the Zeno behaviors in event-triggered sample strategy. Numerical simulation show that the event-triggered sample control strategy can achieve synchronization rapidly and there has obvious gap between two event-triggered moment.

Finally, the issue of synchronization of complex networks perturbed by stochastic noise is further researched base on partially unknown transition rates. The stochastic noise appear in the signal transmission process between the nodes rather than the node's dynamics which is produced by the Brownian movement. According to the measurement error and synchronization error, the centralized and decentralized event-triggered rules are provided. By using stability theory and inequalities of stochastic integral, some exponential synchronization criteria are obtained. A simulation example is provided to demonstrate the effectiveness of the theoretical results.

Keywords: Synchronization; Event-Triggered Strategy; Markov Chain; Partially Unknown Transition Rates; Brownian Movement