











Fig.2 the synchronized state of system (13) and the synchronous error

## V. Conclusions

In this paper, global synchronization problem is investigated for a general complex networks with coupling delays. A novel theorem is obtained about synchronization of the coupled systems by employing Lyapunov-Krasovskii functional. The condition obtained in this paper is expressed in the form of linear matrix inequalities, which has less variables and easy to be computed and checked by resorting to Matlab LMI Toolbox. The proposed network model may shed some new lights on the synchronization with one delay coupling. Furthermore, there are abundant dynamical behaviors in arrays of coupled systems with different coupling schemes and it deserves to be further studied in future. Finally, the example is utilized to illustrate the usefulness of the derived methods by simulation results.

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