

**Jia, Qiang**

**Projective synchronization of a new hyperchaotic Lorenz system.** (English) Zbl 1209.93105

Phys. Lett., A 370, No. 1, 40-45 (2007).

Summary: This Letter mainly concerns projective synchronization (PS) of a new hyperchaotic Lorenz system. PS with both identical and different scaling factors between two hyperchaotic Lorenz systems are realized. A general sufficient condition for PS in a certain class of chaotic (hyperchaotic) system with uncertainties is obtained by using adaptive control. Numerical simulations are performed to verify and illustrate the analytical results.

**MSC:**

**93D05** Lyapunov and other classical stabilities (Lagrange, Poisson,  $L^p$ ,  $l^p$ , etc.) in control theory Cited in **35** Documents

**37D45** Strange attractors, chaotic dynamics of systems with hyperbolic behavior

**34H10** Chaos control for problems involving ordinary differential equations

**Full Text:** [DOI](#)

**References:**

- [1] Pecora, L.M.; Carroll, T.L., Phys. rev. lett., 64, 821, (1990)
- [2] Kocarev, L.; Parlitz, U., Phys. rev. lett., 76, 1816, (1996)
- [3] Rosenblum, M.G.; Pikovsky, A.S.; Kurths, J., Phys. rev. lett., 76, 1804, (1996)
- [4] Cao, L.; Lai, Y., Phys. rev. E, 58, 382, (1998)
- [5] Rosenblum, M.G.; Pikovsky, A.S.; Kurths, J., Phys. rev. lett., 78, 4193, (1997)
- [6] Mainieri, R.; Rehacek, J., Phys. rev. lett., 12, 3042, (1999)
- [7] Xu, D.; Ong, W.L.; Li, Z., Phys. lett. A, 305, 167, (2002)
- [8] Xu, D.; Chee, C.Y.; Li, C., Chaos solitons fractals, 22, 175, (2004)
- [9] Wen, G.; Xu, D., Chaos solitons fractals, 26, 71, (2005)
- [10] Li, G.-H., Chaos solitons fractals, 32, 1786, (2007)
- [11] Park, J.H., Chaos solitons fractals, 34, 1552, (2007)
- [12] Park, J.H., Chaos solitons fractals, 34, 1154, (2007)
- [13] Park, J.H., J. comput. appl. math., (2007)
- [14] Hu, M.; Yang, Y.; Xu, Z., Physica A, 381, 457, (2007)
- [15] Li, Z.; Xu, D., Chaos solitons fractals, 22, 477, (2004)
- [16] Jia, Q., Phys. lett. A, 366, 217, (2007)

This reference list is based on information provided by the publisher or from digital mathematics libraries. Its items are heuristically matched to zbMATH identifiers and may contain data conversion errors. It attempts to reflect the references listed in the original paper as accurately as possible without claiming the completeness or perfect precision of the matching.