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HYBRID PROJECTIVE SYNCHRONIZATION BETWEEN THE FRACTIONAL ORDER SYSTEMS

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Abstract. In this paper we have investigated Hybrid Projective Synchronization, between the fractional order chaotic systems of different dimensions. We have synchronized the fractional order chaotic Lü system, as a master system, with the fractional order hyperchaotic Rössler system as the slave system. Further, a fractional order hyperchaotic system is controlled by the fractional order chaotic financial system as the slave system. Numerical simulations are carried out using Matlab to show the effectiveness of the method.

Keywords: synchronization; Rössler system; Lü system; financial system.

2010 AMS Subject Classification: 34A08, 34D06, 34H10.

1. Introduction

Chaos is an interesting phenomenon of non linear systems. Since Pecora and Carroll [1] established a chaos synchronization scheme for two identical systems, with different initial conditions, chaos synchronization has attracted much attention of the researchers. Various effective

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