

## Generalized Projective Synchronization Between Rössler System and New Unified Chaotic System

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(Received: 2006-9-18; Revised: )

**Abstract:** Based on symbolic computation system Maple and Lyapunov stability theory, an active control method is used to projectively synchronize two different chaotic systems — Lorenz-Chen-Lü system (LCL) and Rössler system, which belong to different dynamic systems. In this paper, we achieve generalized projective synchronization between the two different chaotic systems by directing the scaling factor onto the desired value arbitrarily. To illustrate our result, numerical simulations are used to perform the process of the synchronization and successfully put the orbits of drive system (LCL) and orbits of the response system (Rössler system) in the same plot for understanding intuitively.

PACS: 05.45.Xt

**Key words:** Rössler system, Lorenz-Chen-Lü system, generalized projective synchronization, scaling factor, active control

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