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Adel Ouannas *Editors*

Fractional Order Control and Synchronization of Chaotic Systems

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 Springer

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A New Method to Synchronize Fractional Chaotic Systems with Different Dimensions

Adel Ouannas, Toufik Ziar, Ahmad Taher Azar
and Sundarapandian Vaidyanathan

Abstract By using two scaling function matrices, the synchronization problem of different dimensional fractional order chaotic systems in different dimensions is developed in this chapter. The controller is designed to assure that the synchronization of two different dimensional fractional order chaotic systems is achieved using the Lyapunov direct method. Numerical examples and computer simulations are used to validate numerically the proposed synchronization schemes.

Keywords Fractional order chaotic systems • Synchronization • Hyperchaotic systems • Different dimensional fractional chaotic

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