

CHAOS 2009

2nd Chaotic Modeling and Simulation International Conference

June 1 - 5, 2009 Chania Crete Greece

www.chaos2009.net

Hybrid projective synchronization of two-cell Quantum-CNN oscillators by adaptive method

Sebastian Sudheer

Research scholar, Department of Physics, Cochin University, Cochin, India

sudheersebastian@yahoo.com

Recently micro or nano chaotic oscillators have received great attention. A Quantum -CNN oscillator is a micro/nano oscillator which becomes chaotic for certain parameter values. In this work we investigate hybrid projective synchronization of two chaotic Quantum-CNN oscillators using adaptive control method. All the parameters of the system are assumed to be unknown. We design adaptive controllers and parameter update laws such that two pairs of states are synchronized upto a constant factor and other two pairs of states are anti-synchronized. Simulation results verify the effectiveness of the method.

Key Words: Synchronization, Adaptive control, Hybrid, Projective