

# **Dynamics of Continuous, Discrete & Impulsive Systems**

**Series B: Applications & Algorithms**

**Editors-in-Chief**

**Xinzhi Liu, University of Waterloo**

*Proceedings of the 2nd Asia-Pacific Workshop on  
Chaos Control and Synchronization*

*Shanghai, China, November 7-8, 2003*

---

**DCDIS 11(a) 1-185 (2004)**

**ISSN 1492-8760**

**Watam Press • Waterloo**

# DYNAMICS OF CONTINUOUS, DISCRETE AND IMPULSIVE SYSTEMS

Series B: Applications and Algorithms

Table of Contents of Volume 11a

---

## TABLE OF CONTENTS

---

On Linear Delayed Feedback Control of Chaotic Discrete-Time Systems <b>L. Chen and Z.Z. Han</b>	1
Adaptive Approach for Detection in Chaos-Based Digital Communication Systems with Transmitted Reference <b>Wai M. Tam, Francis C.M. Lau and Chi K. Tse</b>	9
The Chaotic and ASR Induced Firing Patterns in an Experimental Neural Pacemaker <b>H.G. Gu, M.H. Yang, L. Li, Z.Q. Liu, W. Ren</b>	19
A Simple Adaptive Controller for Chaotic Systems <b>C. Hua and X. Guan</b>	25
Stability of Networked Control Systems Based on Model of Discrete-Time Interval <b>J. Huang, Z. H. Guan, Z. Wang</b>	35
Chaotification of Fuzzy Hyperbolic Model: An Adaptive Inverse Optimal Control Approach <b>H.G. Zhang, Z.L. Wang and D.R. Liu</b>	45
Impulsive Global Synchronization of Discrete Chaotic Systems <b>B. Liu, X.Z. Liu, X.Z. Duan</b>	53
Performance Evaluation of Coherent Dcsk Digital Communication System in a Noisy Multiuser Environment Units <b>Y.X. Li, B.H. Wu, G.Y. Wang, H.L. Xu</b>	61
Complex Dynamical Networks: Modelling, Synchronization and Control <b>J. Lü, H. Leung, G. Chen</b>	70
Analytical Criteria for Local Activity of CNN with Five State Variables and Application <b>X. Dong and L. Min</b>	78
A Building Block Approach for Self Synchronous Chaotic System (SCS) Design <b>P. A. Ramamoorthy</b>	94
Chaos Communication Using Chaos <b>Michael Small, Chi Kong Tse, Francis C.M. Lau</b>	104

Impulsive Control of a Chemical Reactor System <b>J.T. Sun, Y.P. Zhang</b>	112
Stabilizing Unstable Periodic Orbits for Switched Arrival System <b>Y.P. Tian</b>	120
Controlling Internet Congestion with Time-Delayed State Feedback <b>K. Jiang, X. F. Wang and Y. G. Xi</b>	128
Delay Reduced Double Hopf Bifurcation in a Limit Cycle Oscillator: Extension of a Perturbation-Incremental Method <b>Jian Xu, Kwok-wai Chung</b>	136
Computation of Sinusoidal Regime in the Colpitts Oscillator <b>F. Robbio, M. Padin, J. Moiola and G. Chen</b>	144
Local Bang-Bang Control of a Chaotic System with Two 2-Scroll Attractors <b>R. Radev, E. Valcheva, and G. Chen</b>	152
A Linear-State-Feedback Based Scheme for Chaotic Synchronization and Secure Communication <b>G.P. Jiang, W.X. Zheng</b>	159
Chaos Control by Delayed Impulsive Feedback in Rotor Systems with Grazing Rub-Impact <b>Q.S. Lu, S.J. Zhang and L. Jin</b>	171
Noise-Induced Chaotic Motions in Quasi-Integrable-Hamiltonian Systems <b>C. Gan and H. Lan</b>	178