

## International Journal of Control, Automation, and Systems

Volume 9 Number 6 December 2011

## REGULAR PAPERS

## Control Theory

Estimation of Nonlinear Systems via a Chebyshev Approximation Approach

M. Yahia, P. Acco, and M. Benslama 1021

Critical Stability and Stabilization of Discrete-Time Stochastic Systems and Its Applications

H. Sun, M. Li, and W. Zhang 1028

Practical Adaptive Output Tracking of High-Order Lower-Triangular Nonlinear Systems: Modular Design Using Feedback Domination Method

A. Kashaninia and S. K. Y. Nikravesh 1037

A Variable Step-Size SIG Algorithm for Realizing the Optimal Adaptive FIR Filter

B. Chen, Y. Zhu, J. Hu, and J. C. Principe 1049

Applying Output Feedback Integral Sliding Mode Controller to Uncertain Time-Delay Systems with Mismatched Disturbances

H.-C. Ting, J.-L. Chang, and Y.-P. Chen 1056

Adaptive Control of Uncertain Port-Controlled Hamiltonian Systems Subject to Actuator Saturation

A. Wei and Y. Wang 1067

Stabilization of Oscillating Neural Networks with Time-Delay by Intermittent Control

C. Liu, C. Li, and S. Duan 1074

Stabilization of Discrete-Time Networked Control Systems with Partly Known Transmission Delay: A New Augmentation Approach

S.-L. Hu, J.-L. Liu, and Z.-P. Du 1080

Robust  $H_\infty$  Consensus Control of Uncertain Multi-Agent Systems with Time Delays

Y. Liu and Y. Jia 1086

New Reduced-order  $H_\infty$  Filter Design Method for Discrete-time Singular Systems with Lossy Measurements by Strict LMI Approach

J.-H. Kim 1095

Robust Observer-based Fuzzy Control for Variable Speed Wind Power System: LMI Approach

H. C. Sung, J. B. Park, and Y. H. Joo 1103

An LMI Approach to Consensus in Second-Order Multi-Agent Systems

H. Zhao, S. Xu, and D. Yuan 1111

Fault-Tolerant Control of Nonlinear System

Y. Zhang, S. Wu, and Y. Wei 1116

## Control Applications

An Adaptive Fuzzy Sliding-Mode Controller Design for Walking Control with Functional Electrical Stimulation: A Computer Simulation Study

V. Nekoukar and A. Erfanian 1124

Command Shaping Control for Micro-milling Operations

J. Fortgang, W. Singhose, J. J. Márquez, and J. Perez 1136

Recursive Model Free Controller: Application to Friction Compensation and Trajectory Tracking

H. Wang, C. Vasseur, Y. Tian, V. Koncar, and N. Christov 1146

Modeling and Neuro-Fuzzy Adaptive Attitude Control for Eight-Rotor MAV

X. Chen, D. Li, Y. Bai, and Z. Xu 1154

Three-Dimensional Trajectory Optimization of Soft Lunar Landings from the Parking Orbit with Considerations of the Landing Site

B.-G. Park and M.-J. Tahk 1164

## Robotics and Automation

Control Design for Human-like Reaching Movements using Redundancy in Robot Arm-Trunk Systems

T. Bhattacharjee, Y. Oh, J.-H. Bae, and S.-R. Oh 1177

Grouping Contents on Korean Road Signs

J.-E. Ha 1187

## TECHNICAL NOTES AND CORRESPONDENCE

A Non-Uniform Predictor-Observer for a Networked Control System

A. Cuenca, P. García, P. Albertos, and J. Salt 1194

Development of Constrained Control Allocation for Ship Berthing by Using Autonomous Tugboats

V. P. Bui and Y. B. Kim 1203

Average Consensus Seeking of High-order Continuous-time Multi-agent Systems with Multiple Time-varying Communication Delays

Q. Zhang, Y. Niu, L. Wang, L. Shen, and H. Zhu 1209

Time Discretization of Nonlinear Time-delay System Using Matrix Exponential Method

Z. Zhang, Y. Zhang, Y. W. Chang, and K. T. Chong 1219

Adaptive Fuzzy Control for Unknown Nonlinear Time-Delay Systems with Virtual Control Functions

T. Guo and G. Liu 1227

The Open Question of the Relation Between Square Matrix's Eigenvalues and its Similarity Matrix's Singular Values in Linear Discrete System

J. Liu and J. Zhang 1235

**INDEXED IN** Science Citation Index Expanded (SciSearch), SCOPUS, INSPEC, Google Scholar, ProQuest, Current Contents/Engineering, Computing and Technology, El-Compendex, Journal Citation Reports/Science Edition, OCLC, Summon by Serial Solutions, Korea Citation Index.

A Joint Publication of Institute of Control, Robotics and Systems  
and the Korean Institute of Electrical Engineers