

CONTROL SYSTEMS SOCIETY



PUBLICATIONS CONTENT DIGEST

Publications Activities

Vice-President

THOMAS PARISINI *Imperial College, UK*

<http://www.ieeecss.org/publications/css-publications>

Journal Editors

IEEE Transactions on Automatic Control

PANOS J. ANTSAKLIS *University of Notre Dame*

<http://www.ieeecss.org/publications/tac>

IEEE Transactions on Control Systems Technology

ANDREA SERRANI *Ohio State University*

<http://www.ieeecss.org/publications/tcst>

IEEE Transactions on Control of Network Systems

IOANNIS PASCHALIDIS *Boston University*

JEFF SHAMMA Deputy Editor-in-Chief *King Abdullah University of Science and Technology*

<http://www.ieeecss.org/publications/transactions-control-network-systems>

IEEE Control Systems Magazine

JONATHAN HOW *Massachusetts Institute of Technology*

<http://www.ieeecss.org/publications/csm>

IEEE Control Systems Letters

MARIA ELENA VALCHER *University of Padua*

<http://iee-cssletters.dei.unipd.it/index.php>

Electronics Editor

E-letter on Systems, Control and Signal Processing

JIANGHAI HU *Purdue University*

<http://www.ieeecss.org/publications/e-letter/e-letter>

***Submission and editorial instructions can be found on each publication's homepage**

For subscription to the monthly E-Letter, please visit:

<http://www.ieeecss.org/newsletter/subscriptions>

IEEE TRANSACTIONS ON AUTOMATIC CONTROL

A PUBLICATION OF THE IEEE CONTROL SYSTEMS SOCIETY



SEPTEMBER 2017

VOLUME 63

NUMBER 9

IETAA9 (ISSN 0018-9286)

Table of Contents

Full Text: [PDF](#)

IEEE Transactions on Automatic Control Publication information

Full Text: [PDF](#)

Scanning the Issue

Full Text: [PDF](#)

Full Papers

Asynchronous Networked MPC with ISM for Uncertain Nonlinear Systems

G. P. Incremona, A. Ferrara, L. Magni

[Abstract](#) | Full Text: [PDF](#)

Optimality Conditions for Long-Run Average Rewards with Under Selectivity and Non-Smooth Features

X-R. Cao

[Abstract](#) | Full Text: [PDF](#)

Why RLC Realizations of Certain Impedances Need Many More Energy Storage Elements Than Expected

T. H. Hughes

[Abstract](#) | Full Text: [PDF](#)

On the Relation between the Minimum Principle and Dynamic Programming for Classical and Hybrid Control Systems

A. Pakniyat, P. E. Caines

[Abstract](#) | Full Text: [PDF](#)

Robust Output Regulation for Continuous-Time Periodic Systems

L. Paunonen

[Abstract](#) | Full Text: [PDF](#)

String Stability and a Delay-Based Spacing Policy for Vehicle Platoons Subject to Disturbances

B. Besselink, K. H. Johansson

[Abstract](#) | Full Text: [PDF](#)

Preserving Strong Connectivity in Directed Proximity Graphs

H. A. Poonawala, M. W. Spong

[Abstract](#) | Full Text: [PDF](#)

On the Convergence of a Distributed Augmented Lagrangian Method for Non- Convex Optimization

N. Chatzipanagiotis, M. M. Zavlanos

[Abstract](#) | Full Text: [PDF](#)

Asynchronous Multi-Agent Primal-Dual Optimization

M. T. Hale, A. Nedich, M. Egerstedt

[Abstract](#) | Full Text: [PDF](#)

Multivalued Robust Tracking Control of Lagrange Systems: Continuous and Discrete- Time Algorithms

F. A. Miranda-Villatoro, B. Brogliato, F. Castanos

[Abstract](#) | Full Text: [PDF](#)

Robust Tracking Commitment

A. Bitlislioglu, T. T. Gorecki, C. N. Jones

[Abstract](#) | Full Text: [PDF](#)

Modeling and Control of Stochastic Systems With Poorly Known Dynamics

R. F. Souto, J. B.R. do Val

[Abstract](#) | Full Text: [PDF](#)

Data Dependent Convergence For Consensus Stochastic Optimization

A. Bijral, A. D. Sarwate, N. Srebro

[Abstract](#) | Full Text: [PDF](#)

Fast Moving Horizon State Estimation for Discrete-time Systems Using Single and Multi Iteration Descent Methods

A. Alessandri, M. Gaggero

[Abstract](#) | Full Text: [PDF](#)

Strong Stationarity Conditions for Optimal Control of Hybrid Systems

A. B. Hempel, P. J. Goulart, J. Lygeros

[Abstract](#) | Full Text: [PDF](#)

Design of Integral Controllers for Nonlinear Systems Governed by Scalar Hyperbolic Partial Differential Equations

N-T. Trinh, V. Andrieu, C. Xu

[Abstract](#) | Full Text: [PDF](#)

Dynamic Control of Agents playing Aggregative Games

S. Grammatico

[Abstract](#) | Full Text: [PDF](#)

An Approximate Dynamic Programming Approach to Multi-Agent Persistent Monitoring in Stochastic Environments with Temporal Logic Constraints

K. Deng, Y. Chen, C. Belta

[Abstract](#) | Full Text: [PDF](#)

Optimal Estimation and Control for Lossy Network: Stability, Convergence, and Performance

H. Lin, H. Su, P. Shi, Z. Shu, R. Lu, Z-G. Wu

[Abstract](#) | Full Text: [PDF](#)

Likelihood Analysis of Power Spectra and Generalized Moment Problems

T. T. Georgiou, A. Lindquist

[Abstract](#) | Full Text: [PDF](#)

Technical Notes and Correspondence

On Lyapunov-Metzler Inequalities and S-Procedure Characterisations for the Stabilisation of Switched Linear Systems

W.P.M.H. Heemels, A. Kundu, J. Daafouz

[Abstract](#) | Full Text: [PDF](#)

Foundations of a Bicomprime Factorization Theory

M. Tsiakkas, A. Lanzon

[Abstract](#) | Full Text: [PDF](#)

Sliding Mode Control of Discrete-Time Switched Systems with Repeated Scalar Nonlinearities

X. Su, X. Liu, P. Shi, R. Yang

[Abstract](#) | Full Text: [PDF](#)

Optimal Sensor Data Scheduling for Remote Estimation over a Time-varying Channel

Y. Qi, P. Cheng, J. Chen

[Abstract](#) | Full Text: [PDF](#)

Dynamic Attack Detection in Cyber-Physical Systems with Side Initial State Information

Y. Chen, S. Kar, J. M. F. Moura

[Abstract](#) | Full Text: [PDF](#)

Stabilizing Quantum States and Automatic Error Correction by Dissipation Control

Y. Pan, T. Nguyen

[Abstract](#) | Full Text: [PDF](#)

Reverse and Forward Engineering of Frequency Control in Power Networks

L. Chen, S. You

[Abstract](#) | Full Text: [PDF](#)

An Auxiliary Particle Filtering Algorithm with Inequality Constraints

B. Li, C. Liu, W-H. Chen

[Abstract](#) | Full Text: [PDF](#)

Coordination Over Multi-Agent Networks with Unmeasurable States and Finite-Level Quantization

Y. Meng, T. Li, J-F. Zhang

[Abstract](#) | Full Text: [PDF](#)

Adaptive Consensus of Nonlinear Multi-Agent Systems with Non-identical Partially Unknown Control Directions and Bounded Modelling Errors

C. Chen, C. Wen, Z Liu, K. Xie, Y. Zhang, C. L. P. Chen

[Abstract](#) | Full Text: [PDF](#)

MAS Consensus and Delay Limits under Delayed Output Feedback

T. Qi, L. Qiu, J. Chen

[Abstract](#) | Full Text: [PDF](#)

Realization Theory for LPV State-Space Representations with Affine Dependence

M. Petreczky, R. Toth, G. Mercere

[Abstract](#) | Full Text: [PDF](#)

Robust Transport Over Networks

Y. Chen, T. T. Georgiou, M. Pavon, A. Tannenbaum

[Abstract](#) | Full Text: [PDF](#)

Distributed Adaptive Consensus Output Regulation of Network-Connected Heterogeneous Unknown Linear Systems on Directed Graphs

Z. Ding

[Abstract](#) | Full Text: [PDF](#)

Necessary Stability Conditions for Neutral Type Systems with a Single Delay

M. A. Gomez, A. V. Egorov, S. Mondie

[Abstract](#) | Full Text: [PDF](#)

Predictive Networked Control of Discrete Event Systems

S. Shu, F. Lin

[Abstract](#) | Full Text: [PDF](#)

Relaxed Conditions for the Input-to-State Stability of Switched Nonlinear Time-Varying Systems

G. Chen, Y. Yang

[Abstract](#) | Full Text: [PDF](#)

Estimation of Sampling Period for Stochastic Nonlinear Sampled-Data Systems with Emulated Controllers

Y-F. Gao, X-M. Sun, C. Wen, W. Wang

[Abstract](#) | Full Text: [PDF](#)

A General Dynamic Scaling Based Control Redesign to Handle Input Unmodeled Dynamics in Uncertain Nonlinear Systems

P. Krishnamurthy, F. Khorrami

[Abstract](#) | Full Text: [PDF](#)

Stabilization of Uncertain Discrete-time Linear System with Limited Communication

N. S. Tripathy, I. N. Kar, K. Paul

[Abstract](#) | Full Text: [PDF](#)

Non-Intrusive Reference Governors for Over-Actuated Linear Systems

J. Zhou, M. Canova, A. Serrani

[Abstract](#) | Full Text: [PDF](#)

Synchronization of Multi-Agent Systems Using Event-Triggered and Self-Triggered Broadcasts

J. Almeida, C. Silvestre, A. M. Pascoal

[Abstract](#) | Full Text: [PDF](#)

Global Chartwise Feedback Linearization of the Quadcopter with a Thrust Positivity Preserving Dynamic Extension

D. E. Chang, Y. Eun

[Abstract](#) | Full Text: [PDF](#)

Quantized/Saturated Control for Sampled-Data Systems under Noisy Sampling Intervals: A Confluent Vandermonde Matrix Approach

B. Shen, H. Tan, Z. Wang, T. Huang

[Abstract](#) | Full Text: [PDF](#)

Boundary Stabilization of Wave Equation with Velocity Recirculation

L. Su, W. Guo, J-M. Wang, M. Krstic

[Abstract](#) | Full Text: [PDF](#)

Event-Triggered State Estimation with an Energy Harvesting Sensor

J. Huang, D. Shi, T. Chen

[Abstract](#) | Full Text: [PDF](#)

Low-gain Integral Control for Multi-Input, Multi-Output Linear Systems with Input Nonlinearities

C. Guiver, H. Logemann, S. Townley

[Abstract](#) | Full Text: [PDF](#)

Local Condition-Based Consensus Filtering with Stochastic Nonlinearities and Multiple Missing Measurements

G. Wei, F. Han, D. Ding, Y. Song

[Abstract](#) | Full Text: [PDF](#)

Stability Analysis of Impulsive Stochastic Nonlinear Systems

W. Ren, J. Xiong

[Abstract](#) | Full Text: [PDF](#)

Parameter and Controller Dependent Lyapunov Functions for Robust D-Stability and Robust Performance Controller Design

G. Chesi

[Abstract](#) | Full Text: [PDF](#)

Inverse Feedback Shapers for Coupled Multibody Systems

M. Hromcik, T. Vyhldal

[Abstract](#) | Full Text: [PDF](#)

Distributed Nash Equilibrium Seeking by A Consensus Based Approach

M. Ye, G. Hu

[Abstract](#) | Full Text: [PDF](#)

Stability and Bifurcation of Delayed Fractional-Order Dual Congestion Control Algorithms

M. Xiao, W. X. Zheng, G-P. Jiang, J. Cao

[Abstract](#) | Full Text: [PDF](#)

On Minimizing the Maximal Characteristic Frequency of a Linear Chain

Y. Zarai, M. Margaliot

[Abstract](#) | Full Text: [PDF](#)

The Analytic Solutions of the Homogeneous Modified Algebraic Riccati Equation

L. Zhang, M. Z. Q. Chen, C. Li

[Abstract](#) | Full Text: [PDF](#)

Distributed Fault Detection Isolation and Accommodation for Homogeneous Networked Discrete-Time Linear Systems

A. Marino, F. Pierri, F. Arrichiello

[Abstract](#) | Full Text: [PDF](#)

Joint State Estimation and Delay Identification for Nonlinear Systems with Delayed Measurements

F. Cacace, F. Conte, A. Germani, G. Palombo

[Abstract](#) | Full Text: [PDF](#)

Distributed Global Output-Feedback Control for a Class of Euler-Lagrange Systems

Q. Yang, H. Fang, J. Chen, Z-P. Jiang, M. Cao

[Abstract](#) | Full Text: [PDF](#)

The Effect of Uncertainty on Production-Inventory Policies with Environmental Considerations

K. Kogan, B. Venturi, M. Shnaiderman

[Abstract](#) | Full Text: [PDF](#)

SVD-based Kalman Filter Derivative Computation

J. V. Tsyganova, M. V. Kulikova

[Abstract](#) | Full Text: [PDF](#)

Verifiable Conditions for Multi-output Observer Error Linearizability

H-G. Lee

[Abstract](#) | Full Text: [PDF](#)

On H-infinity Finite-Horizon Filtering Under Stochastic Protocol: Dealing with High-Rate Communication Networks

L. Zou, Z. Wang, J. Hu, H. Gao

[Abstract](#) | Full Text: [PDF](#)

Effect of Adding Edges to Consensus Networks with Directed Acyclic Graphs

H-T. Zhang, Z. Chen, X. Mo

[Abstract](#) | Full Text: [PDF](#)

IEEE TRANSACTIONS ON CONTROL SYSTEMS TECHNOLOGY

A PUBLICATION OF THE IEEE CONTROL SYSTEMS SOCIETY



SEPTEMBER 2017

VOLUME 25

NUMBER 5

IETTE2

(ISSN 1063-6536)

Table of Contents

Full Text: [PDF](#)

IEEE Transactions on Control Systems Technology

Publication information

Full Text: [PDF](#)

Regular Papers

Demand Response of a TCL Population Using
Switching-Rate Actuation

L. C. Totu, R. Wisniewski, and J. Leth

[Abstract](#) | Full Text: [PDF](#)

Feedback Tracking Control of Non-Markovian Quantum
Systems

S. Xue, M. R. Hush, and I. R. Petersen

[Abstract](#) | Full Text: [PDF](#)

Cooperative Optical Trapping and Manipulation of
Multiple Cells With Robot Tweezers

X. Li, C. C. Cheah, and Q. M. Ta

[Abstract](#) | Full Text: [PDF](#)

Modeling of Endpoint Feedback Learning Implemented
Through Point-to-Point Learning Control

S.-H. Zhou, Y. Tan, D. Oetomo, C. Freeman, E. Burdet, and
I. Mareels

[Abstract](#) | Full Text: [PDF](#)

Demand Response Load Following of Source and
Load Systems

J. Hu, J. Cao, T. Yong, J. M. Guerrero,
M. Z. Q. Chen, and Y. Li

[Abstract](#) | Full Text: [PDF](#)

Output Feedback Control of Multirate Sampled-
Data Systems With Frequency Specifications

H. Gao, S. Xue, S. Yin, J. Qiu, and C. Wang

[Abstract](#) | Full Text: [PDF](#)

Network-Based Heading Control and Rudder
Oscillation Reduction for Unmanned Surface
Vehicles

Y.-L. Wang and Q.-L. Han

[Abstract](#) | Full Text: [PDF](#)

Event-Based GPC for Multivariable Processes:
A Practical Approach With Sensor Deadband

A. Pawłowski, J. L. Guzmán, M. Berenguel,
J. E. Normey-Rico, and S. Dormido

[Abstract](#) | Full Text: [PDF](#)

Optimal State Estimation for Systems Driven by
Jump-Diffusion Process With Application to Road
Anomaly Detection

Z. Li, I. V. Kolmanovskiy, U. V. Kalabic,
E. M. Atkins, J. Lu, and D. P. Filev

[Abstract](#) | Full Text: [PDF](#)

Interaction Analysis of Multivariate Control Systems Under Bayesian Framework

E. Naghoosi and B. Huang
[Abstract](#) | Full Text: [PDF](#)

Systematic Transformation of Chemical Catalyst Models for Control Design

R. Stanchev, J. Rink, U. Konigorski, G. H. Vogel, and M. Votsmeier
[Abstract](#) | Full Text: [PDF](#)

Control of Thermal Power Plant Combustion Distribution Using Extremum Seeking

A. Marjanovic, M. Krstic, Ž. Durovic, and B. Kovavcevic
[Abstract](#) | Full Text: [PDF](#)

A Prediction-Error Covariance Estimator for Adaptive Kalman Filtering in Step-Varying Processes: Application to Power-System State Estimation

L. Zanni, J.-Y. Le Boudec, R. Cherkaoui, and M. Paolone
[Abstract](#) | Full Text: [PDF](#)

Inferring Intent for Novice Human-in-the-Loop Iterative Learning Control

R. B. Warriar and S. Devasia
[Abstract](#) | Full Text: [PDF](#)

Safety-Enhanced Motion Planning for Flexible Surgical Manipulator Using Neural Dynamics

Y. Chen, W. Xu, Z. Li, S. Song, C. M. Lim, Y. Wang, and H. Ren
[Abstract](#) | Full Text: [PDF](#) [2326 KB]

Accurate FRF Identification of LPV Systems: nD-LPM With Application to a Medical X-Ray System

R. van der Maas, A. van der Maas, R. Voorhoeve, and T. Oomen
[Abstract](#) | Full Text: [PDF](#)

Gust Load Alleviation: Identification, Control, and Wind Tunnel Testing of a 2-D Aeroelastic Airfoil

C. Poussot-Vassal, F. Demourant, A. Lepage, and D. Le Bihan
[Abstract](#) | Full Text: [PDF](#)

Combined Path Following and Compliance Control for Fully Actuated Rigid Body Systems in 3-D Space

B. Bischof, T. Gluck, and A. Kugi
[Abstract](#) | Full Text: [PDF](#)

Data-Driven Nonlinear Subspace Modeling for Prediction and Control of Molten Iron Quality Indices in Blast Furnace Ironmaking

P. Zhou, H. Song, H. Wang, and T. Chai
[Abstract](#) | Full Text: [PDF](#)

Identification of Discrete-Time Model With Integer Delay and Control Design for Cooling Processes With Application to Jacketed Crystallizers

T. Liu, S. Dong, S. Rong, and C. Zhong
[Abstract](#) | Full Text: [PDF](#)

Brief Papers

Adaptive Minimum-Energy Tracking Control for the Mechatronic Elevator System

K.-Y. Chen, M.-S. Huang, and R.-F. Fung
[Abstract](#) | Full Text: [PDF](#)

Optimal Control of Gains in a Linear Accelerator: A Supervisory Method for Vector-Sum Control

A. Rezaeizadeh and R. S. Smith
[Abstract](#) | Full Text: [PDF](#)

Limited-Communication Distributed Model Predictive Control for Coupled and Constrained Subsystems

R. E. Jalal and B. P. Rasmussen
[Abstract](#) | Full Text: [PDF](#)

Fast Determination of Moment of Inertia of Permanent Magnet Synchronous Machine Drives for Design of Speed Loop Regulator

K. Liu and Z. Zhu
[Abstract](#) | Full Text: [PDF](#)

Data-Driven Nonlinear Identification of Li-Ion Battery Based on a Frequency Domain Nonparametric Analysis

R. Relan, Y. Firouz, J.-M. Timmermans, and J. Schoukens
[Abstract](#) | Full Text: [PDF](#)

Nonlinear Suboptimal Tracking Controller Design Using State-Dependent Riccati Equation Technique

Y. Batmani, M. Davoodi, and N. Meskin
[Abstract](#) | Full Text: [PDF](#)

Robust Nonlinear Adaptive Relative Pose Control for Cooperative Spacecraft During Rendezvous and Proximity Operations

L. Sun, W. Huo, and Z. Jiao
[Abstract](#) | Full Text: [PDF](#)

Bilinear Approximate Model-Based Robust Lyapunov Control for Parabolic Distributed Collectors

S. Elmetennani and T. M. Laleg-Kirati

[Abstract](#) | Full Text: [PDF](#)

Torque Observer-Based Control of Self-Energizing Clutch Actuator for Dual Clutch Transmission

J. J. Oh, J. S. Eo, and S. B. Choi

[Abstract](#) | Full Text: [PDF](#)

Event-Triggered State Estimation: Experimental Performance Assessment and Comparative Study

W. Chen, D. Shi, J. Wang, and L. Shi

[Abstract](#) | Full Text: [PDF](#)

Detection and Diagnosis of Multiple Faults With Uncertain Modeling Parameters

S. Zhao, B. Huang, and F. Liu

[Abstract](#) | Full Text: [PDF](#)

An Extended Differential Flatness Approach for the Health-Conscious Nonlinear Model Predictive Control of Lithium-Ion Batteries

J. Liu, G. Li, and H. K. Fathy

[Abstract](#) | Full Text: [PDF](#)

Bias Voltage Control in Pulsed Applications for Mach-Zehnder Electrooptic Intensity Modulators

L. R. Hofer, D. B. Schaeffer, C. G. Constantin, and C. Niemann

[Abstract](#) | Full Text: [PDF](#)

Modified C/GMRES Algorithm for Fast Nonlinear Model Predictive Tracking Control of AUVs

C. Shen, B. Buckham, and Y. Shi

[Abstract](#) | Full Text: [PDF](#)

An Iterative Method for Control Gain Design of Multiagent Systems With Process Noise

Q. Ling, W. Zheng, and H. Lin

[Abstract](#) | Full Text: [PDF](#)

A Compensator for Large Antennas Based on Pointing Error Estimation Under a Wind Load

J. Zhang, J. Huang, J. Zhou, C. Wang, and Y. Zhu

[Abstract](#) | Full Text: [PDF](#)

UPCOMING IEEE CONFERENCES

2017 IEEE

December 12-15, 2017
Melbourne, Australia

Conference on Decision
and Control



Important Dates

January 4, 2017: Submission Site Opens (Passed)

March 20, 2017: Initial Paper Submissions Due (Passed)

May 1, 2017: Workshop Proposals Due (Passed)

Mid-July: Paper and Workshop Decision Notification (Passed)

August 1, 2017: Final Paper Submission and Registration Open (Passed)

September 20, 2017: Accepted Papers Due



American Control Conference

IMPORTANT DATES:

September 17, 2017: All Submissions Due

JUNE 27-29, 2018

MILWAUKEE, WISCONSIN, USA

ACC 2018

<http://acc2018.a2c2.org/>



Important Dates

Paper Submissions Open:
November 1, 2017

Invited Session Proposals Due:
January 15, 2018

Contributed and Invited Papers Due:
January 15, 2018

Acceptance Notice:
April 23, 2018

Final Submissions Due:
-May 21, 2018

CONFERENCE ON TECHNOLOGY AND APPLICATIONS

AUGUST 21-24, 2017
Copenhagen, Denmark

CCTA 2018 will be held at the Scandic Hotel Copenhagen Scandic Copenhagen is located in central Copenhagen, with views of one of the three lakes and the city, and close to the Tivoli Gardens and the pedestrian street, StrÅget. With its leafy parklands and canalside living, Copenhagen is a green and liveable city to visit. Summer jazz and street food markets fill the city during summer months, and there is never far to a sandy beach or harbour bar.

<http://ccta2018.ieeecss.org/>



Conference on Decision and Control

DECEMBER 17-19, 2018

FLORIDA, USA

CDC 2018