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Technical Program for Monday June 17, 2013

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Event-Based Optimization of Stochastic Systems and Its Applications to Social, Financial, and Engineering Problems (Semiplenary Session)

Chair: Lin, Zongli — Univ. of Virginia
Co-Chair: Pao, Lucy Y. — Univ. of Colorado Boulder

08:00-09:00 MoSP1.1

*Event-Based Optimization of Stochastic Systems and Its Applications to Social, Financial, and Engineering Problems**. N/A
Cao, Xi-Ren — Shanghai Jiaotong Univ.

MoSP2 Grand Ballroom South

The Key to a Successful Next Generation of Buildings: Controlling for Energy Efficiency (Semiplenary Session)

Chair: Johnson, Kathryn — Colorado School of Mines
Co-Chair: Abramovitch, Daniel Y. — Agilent Lab.

08:00-09:00 MoSP2.1

*The Key to a Successful Next Generation of Buildings: Controlling for Energy Efficiency**. N/A
Torcellini, Paul — National Renewable Energy Lab.

MoA01 Room 2

Aerospace I (Regular Session)

Chair: Ghose, Debasish — Indian Inst. of Science
Co-Chair: Tyan, Feng — Tamkang Univ.

09:30-09:50 MoA01.1

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Curry, Renwick — Univ. of California Santa Cruz
Lizarraga, Mariano Isidro — Univ. of California Santa Cruz
Mairs, Bryant — Univ. of California, Santa Cruz
Elkaim, Gabriel Hugh — UC Santa Cruz

09:50-10:10 MoA01.2

Capturability of Augmented Proportional Navigation (APN) Guidance with Nonlinear Engagement Dynamics, pp. 7-12.
Ghosh, Satadal — Indian Inst. of Science
Ghose, Debasish — Indian Inst. of Science
Raha, Soumyendu — Indian Inst. of Science

10:10-10:30 MoA01.3

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Bialy, Brendan — Univ. of Florida
Klotz, Justin — Univ. of Florida
Brink, Kevin — Air Force Res. Lab.
Dixon, Warren E. — Univ. of Florida

10:30-10:50 MoA01.4

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Tyan, Feng — Tamkang Univ.

10:50-11:10 MoA01.5

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Magee, Ceridwen — Lockheed Martin Advanced Tech. Lab.
Obradovic, Borna — Lockheed Martin Advanced Tech. Lab.
Fregene, Kingsley C. — Lockheed Martin Advanced Tech. Lab.

11:10-11:30 MoA01.6

Three Dimensional PN Based Impact Angle Control for Higher Speed Nonmaneuvering Targets, pp. 31-36.
Ghosh, Satadal — Indian Inst. of Science
Ghose, Debasish — Indian Inst. of Science
Raha, Soumyendu — Indian Inst. of Science

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Switched Systems I (Regular Session)

Chair: Rodrigues, Luis — Concordia Univ.
Co-Chair: Thistle, John G. — Univ. of Waterloo

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Kaynama, Sina — Concordia Univ.
Moarref, Miad — Concordia Univ.
Rodrigues, Luis — Concordia Univ.

09:50-10:10 MoA02.2

A-Stable Padé Approximations and Quadratic Stability, pp. 43-47.
Sajja, Surya Shravan Kumar — Univ. of Notre Dame
Corless, Martin J. — Purdue Univ.
Shorten, Robert — Nat. Univ. of Ireland

10:10-10:30 MoA02.3

Exponential Stabilization of Dual-Rate Control System: A Switched System Approach, pp. 48-53.
Jia, Xinchun — Shanxi Univ.
Li, Lei — Shanxi Univ.
Zhang, Dawei — Central Queensland Univ.
Chi, Xiaobo — Shanxi Univ.
Fan, Xing — Shanxi Univ.

10:30-10:50 MoA02.4

Stability of a Class of Switched Descriptor Systems, pp. 54-58.
Sajja, Surya Shravan Kumar — Univ. of Notre Dame
Corless, Martin J. — Purdue Univ.
Zeheb, Ezra — Tech. Inst. of Tech.
Shorten, Robert — Nat. Univ. of Ireland

10:50-11:10 MoA02.5

On Stability of Nonlinear Hyperbolic Systems with Reaction and Switching, pp. 59-64.
Yang, Hao — Nanjing Univ. of Aeronautics and Astronautics
Jiang, Bin — Nanjing Univ. of Aeronautics & Astronautics
Cocquempot, Vincent — Lille 1 Univ.
Aitouche, Abdel — LAGIS/HEI

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Chair: Spall, James C. — Johns Hopkins Univ.
Co-Chair: Cinar, Ali — Illinois Inst. of Tech.

09:30-09:50 MoA03.1

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Bako, Laurent — Ec. des Mines de Douai
Le, Van Luong — CRAN, Univ. de Lorraine
Lauer, Fabien — Univ. de Lorraine, LORIA, CNRS, Inria
Bloch, Gerard — Univ. de Lorraine

09:50-10:10 MoA03.2

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Turksoy, Kamuran — Illinois Inst. of Tech.
Bayrak, Elif — Illinois Inst. of Tech.
Quinn, Laurie — Univ. of Illinois Chicago
Littlejohn, Elizabeth — Univ. of Chicago
Cinar, Ali — Illinois Inst. of Tech.

10:10-10:30 MoA03.3

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Spall, James C. — Johns Hopkins Univ.

10:30-10:50 MoA03.4

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Zhang, Jun — Michigan State Univ.
Merced, Emmanuelle — Michigan State Univ.
Sepulveda, Nelson — Michigan State Univ.
Tan, Xiaobo — Michigan State Univ.

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Alves, Vitor Alex Oliveira — Maua Inst. of Thechnology
Juliani, Rodrigo C. G. — Univ. of Sao Paulo
Garcia, Claudio — Pol. School of The Univ. of Sao Paulo

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Chair: Finke, Jorge — Pontificia Univ. Javeriana
Co-Chair: Khoumsi, Ahmed — Univ. of Sherbrooke

09:30-09:50 MoA04.1

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Khoumsi, Ahmed — Univ. of Sherbrooke

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Xia, Li — Tsinghua Univ.
Shihada, Basem — King Abdullah Univ. of Science and Tech.

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Basile, Francesco — Univ. Degli Studi Di Salerno
Cordone, Roberto — Univ. degli Studi di Milano
Piroddi, Luigi — Pol. di Milano

10:30-10:50 MoA04.4

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Goryca, Jill — TARDEC
Hill, Rick — Univ. of Detroit Mercy

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Teixeira, Marcelo — Univ. Federal de Santa Catarina
Malik, Robi — Univ. of Waikato
Cury, Jose E. R. — Univ. Fed. S. Catarina
de Queiroz, Max H. — Univ. Fedederal de Santa Catarina

11:10-11:30 MoA04.6

Invalidation of Dynamic Network Models, pp. 138-143.

Ruiz, Diego — Univ. del Cauca
Finke, Jorge — Pontificia Univ. Javeriana

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Chair: Bresch-Pietri, Delphine — MINES ParisTech
Co-Chair: Rodrigues, Luis — Concordia Univ.

09:30-09:50 MoA05.1

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Bresch-Pietri, Delphine — MIT
Chauvin, Jonathan — IFP Energies Nouvelles
Petit, Nicolas — MINES ParisTech

09:50-10:10 MoA05.2

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Durand, Sylvain — CNRS, CINVESTAV

10:10-10:30 MoA05.3

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Moarref, Miad — Concordia Univ.
Rodrigues, Luis — Concordia Univ.

10:30-10:50 MoA05.4

On Exponential Stability of Integral Delay Systems, pp. 164-169.

Li, Zhao-Yan — Harbin Inst. of Tech.
Zhou, Bin — Harbin Inst. of Tech.
Lin, Zongli — Univ. of Virginia

10:50-11:10 MoA05.5

Stability Analysis of Multiple Time Delayed Fractional Order Systems, pp. 170-175.

Pakzad, Mohammad Ali	Department of Electrical Engineering, Science and Res.
Pakzad, Sara	Department of Electrical Engineering, South Tehran Branch, Islamic A
Nekoui, Mohammad Ali	K.N.Toosi Univ. of Tech.

11:10-11:30 MoA05.6

Stability Map of Fractional Delay Systems in the Parametric Space of Delays and Coefficient, pp. 176-181.

Pakzad, Sara	Department of Electrical Engineering, South Tehran Branch, Islamic A
Pakzad, Mohammad Ali	Department of Electrical Engineering, Science and Res.
Nekoui, Mohammad Ali	K.N.Toosi Univ. of Tech.

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Autonomous Systems I (Regular Session)

Chair: Tsiotras, Panagiotis	Georgia Inst. of Tech.
Co-Chair: Padhi, Radhakant	Indian Inst. of Science

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Wang, Yu	Yale Univ.
Zhu, Xiaoxi	Singapore Telecommunications Limited

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Jeon, Jeong hwan	Massachusetts Inst. of Tech.
Cowlagi, Raghvendra V.	Massachusetts Inst. of Tech.
Peters, Steven C.	MIT
Karaman, Sertac	Massachusetts Inst. of Tech.
Frazzoli, Emilio	Massachusetts Inst. of Tech.
Tsiotras, Panagiotis	Georgia Inst. of Tech.
Iagnemma, Karl	MIT

10:10-10:30 MoA06.3

Simultaneous Attitude Control and Trajectory Tracking of a Micro Quadrotor: A SNAC Aided Nonlinear Dynamic Inversion Approach, pp. 194-199.

Tiwari, Shivendra N	Indian Inst. of Science, Mathikere, Bangalore, 560012
Padhi, Radhakant	Indian Inst. of Science

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Tumova, Jana	Masaryk Univ.
Reyes Castro, Luis Ignacio	Massachusetts Inst. of Tech.
Karaman, Sertac	Massachusetts Inst. of Tech.
Frazzoli, Emilio	Massachusetts Inst. of Tech.
Rus, Daniela	MIT

10:50-11:10 MoA06.5

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Mohajer, Soheil	UC Berkeley
Touri, Behrouz	Georgia Tech. Univ.

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Fata, Elaheh	Univ. of Waterloo
Smith, Stephen L.	Univ. of Waterloo
Sundaram, Shreyas	Univ. of Waterloo

MoA07 Room 9

Nonlinear Control I (Regular Session)

Chair: Schuster, Eugenio	Lehigh Univ.
Co-Chair: Al Janaideh, Mohammad	The Univ. of Jordan

09:30-09:50 MoA07.1

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Ping, Zhaowu	Seoul National Univ.
Huang, Jie	The Chinese Univ. of Hong Kong

09:50-10:10 MoA07.2

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Dzaba, Anthony	Lehigh Univ.
Schuster, Eugenio	Lehigh Univ.

10:10-10:30 MoA07.3

Semistabilization, Feedback Dissipativation, System Thermodynamics, and Limits of Performance, pp. 229-234.

Haddad, Wassim M.	Georgia Inst. of Tech.
Hui, Qing	Texas Tech. Univ.
L'Afflitto, Andrea	Georgia Inst. of Tech.

10:30-10:50 MoA07.4

Contribution to the Constrained Output Feedback Control, pp. 235-240.

Bezzaoucha, Souad	Univ. de Lorraine
Marx, Benoit	Centre de Recherche en Automatique de Nancy
Maquin, Didier	Univ. de Lorraine
Ragot, Jose	CRAN-INPL

10:50-11:10 MoA07.5

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Zardo Oliveira, Maurício	Univ. Federal do Rio Grande do Sul
Gomes da Silva Jr, J.M.l	Univ. Federal do Rio Grande do Sul
Coutinho, Daniel	Univ. Federal de Santa Catarina

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Al Janaideh, Mohammad	The Univ. of Jordan

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Chair: Alessandri, Angelo	Univ. of Genoa
Co-Chair: Zak, Stanislaw H.	Purdue Univ.

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Liu, Jinfeng	Univ. of Alberta

09:50-10:10 MoA08.2

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Hui, Stefen — San Diego State Univ.
Zak, Stanislaw H. — Purdue Univ.

10:10-10:30 MoA08.3

Cascade Disturbance Rejection Control of the Uncertain Nonlinear Systems with Nonlinear Parameterization, pp. 265-271.

Wei, Wei — Beijing Tech. and Business Univ.
Li, Donghai — Tsinghua Univ.
Wang, Jing — Univ. of Science and Tech. Beijing

10:30-10:50 MoA08.4

Nonlinear Observer for GNSS-Aided Inertial Navigation with Quaternion-Based Attitude Estimation, pp. 272-279.

Grip, Håvard Fjær — Norwegian Univ. of Science and Tech.
Fossen, Thor I. — Norwegian Univ. of Science and Tech.
Johansen, Tor Arne — Norwegian Univ. of Science & Tech.
Saberi, Ali — Washington State Univ.

10:50-11:10 MoA08.5

Design of Time-Varying State Observers for Nonlinear Systems by Using Input-To-State Stability, pp. 280-285.

Alessandri, Angelo — Univ. of Genoa

11:10-11:30 MoA08.6

Finite Time Observer Design for a Class of Nonlinear Systems with Unknown Inputs, pp. 286-291.

Liu, Jianxing — Univ. de Tech. de Belfort-Montbéliard
Laghrouche, Salah — Univ. de Tech. de Belfort-Montbéliard
Wack, Maxime — Univ. de Tech. de Belfort-Montbéliard

MoA09 — Room 13

Modeling and Simulation I (Regular Session)

Chair: Lynch, Alan Francis — Univ. of Alberta
Co-Chair: Chen, Yao — Beijing Jiaotong Univ.

09:30-09:50 MoA09.1

The Research on Application of Sliding Window LS_SVM in the Batch Process, pp. 292-295.

Sun, Xin — Beijing Univ. of Tech.
Gao, Xuejin — Beijing Univ. of Tech.
Jia, Zhiyang — Beijing Univ. of Tech.

09:50-10:10 MoA09.2

Passivity Analysis of a System and Its Approximation, pp. 296-301.

Xia, Meng — Univ. of Notre Dame
Antsaklis, Panos J. — Univ. of Notre Dame
Gupta, Vijay — Univ. of Notre Dame

10:10-10:30 MoA09.3

Pedestrian Evacuation in Two-Dimension Via State Feedback Control, pp. 302-306.

Dong, Hairong — Beijing Jiaotong Univ.
Yang, Xiaoxia — Beijing Jiaotong Univ.
Chen, Yao — Beijing Jiaotong Univ.
Wang, Qianling — Beijing Jiaotong Univ.

10:30-10:50 MoA09.4

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Mir, Muhammad Sarmad Shahab — Pakistan Inst. of Engineering and Applied Sciences Islamabad, Pa
Shah, Jehan Zeb — Pakistan Inst. of Engineering and Applied Sciences Islamabad,
Majid, Abdul — Pakistan Inst. of Engineering and Applied Sciences Islamabad,

10:50-11:10 MoA09.5

Control-Oriented Modeling of a Helicopter UAV with a Bell-Hiller Stabilizer Mechanism, pp. 313-320.

Barczyk, Martin — Univ. of Alberta
Lynch, Alan Francis — Univ. of Alberta

11:10-11:30 MoA09.6

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Zheng, Qing — Gannon Univ.
Xu, Jian-Xin — National Univ. of Singapore
Panda, Sanjib Kumar — National Univ. of Singapore

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Optimization for Controller Synthesis (Regular Session)

Chair: Gutman, Per-Olof — Tech.
Co-Chair: Giselsson, Pontus — Lund Univ.

09:30-09:50 MoA10.1

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Giselsson, Pontus — Lund Univ.

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Chu, Yunfei — Northwestern Univ.
You, Fengqi — Northwestern Univ.

10:10-10:30 MoA10.3

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Al-Matouq, Ali — Colorado School of Mines
Vincent, Tyrone L. — Colorado School of Mines
Tenorio, Luis — Colorado School of Mines

10:30-10:50 MoA10.4

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Mitra, Anish — George Mason Univ.
Manitius, Andre — George Mason Univ.
Sauer, Tim — George Mason Univ.

10:50-11:10 MoA10.5

An Innovative Method for Optimization Based, High Order Controller Auto-Tuning, pp. 352-357.

Zimmerman, Yaron — Spectrum Engineering
Gutman, Per-Olof — Tech.

11:10-11:30 MoA10.6

Optimal Preconditioning and Iteration Complexity Bounds for Gradient-Based Optimization in Model Predictive Control, pp. 358-364.

Giselsson, Pontus — Lund Univ.

MoA11 Room 15

Optimal Control I (Regular Session)

Chair: Andersson, Sean — Boston Univ.

Co-Chair: Utz, Tilman — Univ. Ulm

09:30-09:50 MoA11.1

A Motion-Based Communication System, pp. 365-370.

Jones, Austin — Boston Univ.

Andersson, Sean — Boston Univ.

09:50-10:10 MoA11.2

On the Time-Optimal Trajectory Planning and Control of Robotic Manipulators Along Predefined Paths, pp. 371-377.

Reynoso-Mora, Pedro — Univ. of California at Berkeley

Chen, Wenjie — Univ. of California at Berkeley

Tomizuka, Masayoshi — Univ. of California, Berkeley

10:10-10:30 MoA11.3

Transcale LQ Tracking Control for a Class of Discrete Systems Based on Wavelet Packet Decomposition, pp. 378-383.

Zhao, Lin — Beihang Univ.

Lin, Yue — Beijing Inst. of Control Engineering

Jia, Yingmin — Beihang Univ.

Li, Yawen — Beijing Univ. of Posts and Telecommunications

Zhang, Jun — Beihang Univ. (BUAA)

10:30-10:50 MoA11.4

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Utz, Tilman — Univ. Ulm

Graichen, Knut — Univ. of Ulm

10:50-11:10 MoA11.5

Stochastic Optimal Control with Dynamic, Time-Consistent Risk Constraints, pp. 390-395.

Chow, Yin-Lam — Stanford Univ.

Pavone, Marco — Stanford Univ.

MoA12 Room 16

Control Applications I (Regular Session)

Chair: Ferrara, Antonella — Univ. of Pavia

Co-Chair: Sanfelice, Ricardo G. — Univ. of Arizona

09:30-09:50 MoA12.1

Location-Based Energy Management Optimization for Hybrid Hydraulic Vehicles, pp. 402-407.

Bender, Frank Alexander — Univ. of Stuttgart, Germany

Kaszynski, Martin — Univ. Stuttgart

Sawodny, Oliver — Univ. of Stuttgart

09:50-10:10 MoA12.2

Experimental Evaluation of Optimal Vehicle Dynamic Control Based on the State Dependent Riccati Equation Technique, pp. 408-412.

Alirezaei, Mohsen — TNO Automotive

Kanarachos, Stratis — TNO

Scheepers, Bart — TNO

Maurice, Jan Pieter — TNO

10:10-10:30 MoA12.3

Adaptive Networked Model Predictive Control of Freeway Traffic Systems, pp. 413-418.

Bianchi, Domenico — Univ. of L'Aquila

Ferrara, Antonella — Univ. of Pavia

Di Benedetto, M. Domenica — Univ. of L'Aquila

10:30-10:50 MoA12.4

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Casau, Pedro — Inst. Superior Técnico, Tech. Univ. of Lisbon

Sanfelice, Ricardo G. — Univ. of Arizona

Cunha, Rita — Inst. Superior Técnico

Cabecinhas, David — Inst. Superior Tecnico, Tech. Univ. of Lisbon

Silvestre, Carlos — Univ. of Macau

10:50-11:10 MoA12.5

On Active Disturbance Rejection Control of the Payload Position for Gantry Cranes, pp. 425-430.

Cai, Tao — Beijing Inst. of Tech.

Zhang, Han — Cleveland State Univ.

Gu, Lei — Cleveland State Univ.

Gao, Zhiqiang — Cleveland State Univ.

11:10-11:30 MoA12.6

Robust Multi-Parametric Model Predictive Control for Discrete-Time LPV Systems, pp. 431-436.

Chang, H.J. — Imperial Coll. London & Kookmin Univ.

Pistikopoulos, Efstratios N. — Imperial Coll.

Astolfi, Alessandro — Imperial Coll. & Univ. of Rome

MoA13 Mount Vernon Square A

Building and Facility Automation (Regular Session)

Chair: Alleyne, Andrew G. — Univ. of Illinois, Urbana-Champaign

Co-Chair: Baldea, Michael — The Univ. of Texas at Austin

09:30-09:50 MoA13.1

Decentralized Controller Analysis and Design for Multi-Evaporator Vapor Compression Systems, pp. 437-442.

Koeln, Justin — Univ. of Illinois Urbana-Champaign

Alleyne, Andrew G. — Univ. of Illinois, Urbana-Champaign

09:50-10:10 MoA13.2

Energy Management Via Pricing in LQ Dynamic Games, pp. 443-448.

Coogan, Samuel — Univ. of California, Berkeley

Ratliff, Lillian — Univ. of California Berkeley

Calderone, Daniel Joseph — Univ. of California, Berkeley

Tomlin, Claire J. — UC Berkeley

Sastry, Shankar — Univ. of California at Berkeley

10:10-10:30 MoA13.3

Building Energy Model Reduction for Model Predictive Control Using OpenStudio, pp. 449-454.

Cole, Wesley Joseph	Univ. of Texas - Austin
Hale, Elaine	National Renewable Energy Lab.
Edgar, Thomas F.	Univ. of Texas at Austin

10:30-10:50 MoA13.4

Event-Based Green Scheduling of Radiant Systems in Buildings, pp. 455-460.

Nghiem, Truong X.	Univ. of Pennsylvania
Pappas, George J.	Univ. of Pennsylvania
Mangharam, Rahul	Univ. of Pennsylvania

10:50-11:10 MoA13.5

Model Reduction and Nonlinear MPC for Energy Management in Buildings, pp. 461-466.

Touretzky, Cara	Univ. of Texas at Austin
Baldea, Michael	The Univ. of Texas at Austin

11:10-11:30 MoA13.6

Ancillary Service for the Grid Via Control of Commercial Building HVAC Systems, pp. 467-472.

Hao, He	Univ. of California at Berkeley
Kowli, Anupama	Univ. of Illinois
Lin, Yashen	Univ. of Florida
Barooah, Prabir	Univ. of Florida
Meyn, Sean	Univ. of Florida

MoA14 Mount Vernon Square B

Estimation and Control of Distributed Parameter Systems I (Invited Session)

Chair: Demetriou, Michael A.	Worcester Pol. Inst.
Co-Chair: Fahroo, Fariba	AFOSR
Organizer: Demetriou, Michael A.	Worcester Pol. Inst.
Organizer: Fahroo, Fariba	AFOSR

09:30-09:50 MoA14.1

Determining Blood And/or Breath Alcohol Concentration from Transdermal Alcohol Data (I), pp. 473-478.

Luczak, Susan	Univ. of Southern California
Rosen, I. Gary	Univ. of Southern California
Weiss, Jordan	Univ. of Southern California

09:50-10:10 MoA14.2

Consensus of Spatially Distributed Filters Using Mobile Sensor Networks with Limited Connectivity (I), pp. 479-484.

Demetriou, Michael A.	Worcester Pol. Inst.

10:10-10:30 MoA14.3

Model-Based Analysis of Polymer Drag Reduction in a Turbulent Channel Flow (I), pp. 485-490.

Lieu, Binh K.	Univ. of Minnesota
Jovanovic, Mihailo	Univ. of Minnesota

10:30-10:50 MoA14.4

Using Frechet Sensitivity Analysis to Interrogate Distributed Parameters in Random Systems (I), pp. 491-495.

Borggaard, Jeff	Virginia Tech.
Nunes, Vitor Leite	Virginia Tech.
van Wyk, Hans-Werner	Florida State Univ.

10:50-11:10 MoA14.5

Variation of the Balanced POD Algorithm for Model Reduction of Linear Systems (I), pp. 496-501.

Singler, John	Missouri Univ. of Science and Tech.

11:10-11:30 MoA14.6

Control of Dissipative Partial Differential Equation Systems Using APOD Based Dynamic Observer Designs (I), pp. 502-508.

Babaei Pourkargar, Davood	The Pennsylvania State Univ.
Armaou, Antonios	The Pennsylvania State Univ.

MoA15 Renaissance Ballroom East

Consensus and Cooperation in Multi-Agent Systems I (Regular Session)

Chair: Ren, Wei	Univ. of California, Riverside
Co-Chair: Morarescu, Irinel Constantin	Univ. de Lorraine

09:30-09:50 MoA15.1

A Potential Game Approach for Distributed Cooperative Sensing for Maximum Mutual Information, pp. 509-515.

Choi, Han-Lim	KAIST

09:50-10:10 MoA15.2

Output Synchronization for Heterogeneous Networks of Discrete-Time Introspective Right-Invertible Agents with Uniform Constant Communication Delay, pp. 516-521.

Yang, Tao	Royal Inst. of Tech.
Wang, Xu	New York Univ.
Saberi, Ali	Washington State Univ.
Stoorvogel, Anton A.	Univ. of Twente

10:10-10:30 MoA15.3

Containment Control for Networked Unknown Lagrangian Systems with Multiple Dynamic Leaders under a Directed Graph, pp. 522-527.

Mei, Jie	Harbin Inst. of Tech. Shenzhen Graduate School
Ren, Wei	Univ. of California, Riverside
Li, Bing	Harbin Inst. of Tech. Shenzhen Graduate School
Ma, Guangfu	Harbin Inst. of Tech.

10:30-10:50 MoA15.4

A General Approach for Consensus Using Optimistic Planning, pp. 528-533.

Busoniu, Lucian	CNRS-CRAN and Univ. of Lorraine
Morarescu, Irinel Constantin	Univ. de Lorraine

10:50-11:10 MoA15.5

Dynamic Feedback Synthesis for Finite-Time Consensus under Unknown Directed Graphs, pp. 534-539.

Ghosh, Supratim	The Pennsylvania State Univ.
Lee, Ji-Woong	Pennsylvania State Univ.

11:10-11:30 MoA15.6

Distributed Velocity-Constrained Consensus of Second-Order Multi-Agent Systems with Switching Topologies and Delays, pp. 540-545.

Lin, Peng	Univ. of Electronic Science and Tech. of China
Ren, Wei	Univ. of California, Riverside
Gao, Huijun	Harbin Inst. of Tech.

MoA16 Renaissance Ballroom West A

Underwater Vehicles (Regular Session)

Chair: Krieg, Michael — Univ. of Florida
Co-Chair: Pettersen, Kristin Y. — Norwegian Univ. of Science & Tech.

09:30-09:50 MoA16.1

Path Following of Marine Surface Vessels with Saturated Transverse Actuators, pp. 546-553.

Caharija, Walter — NTNU
Pettersen, Kristin Y. — Norwegian Univ. of Science and Tech.
Gravdahl, Jan Tommy — Norwegian Univ. of Science & Tech.

09:50-10:10 MoA16.2

Observer Based Output Feedback Tracking Control of Dynamically Positioned Surface Vessels, pp. 554-559.

Bidikli, Baris — Izmir Inst. of Tech.
Tatlicioglu, Enver — Izmir Inst. of Tech.
Zergeroglu, Erkan — Gebze Inst. of Tech.

10:10-10:30 MoA16.3

A Novel Methodology for Robust Dynamic Positioning of Marine Vessels: Theory and Experiments, pp. 560-565.

Hassani, Vahid — MARINTEK
Sorensen, Asgeir Johan — Norwegian Univ. of Sci and Tech.
Pascoal, Antonio Manuel — Inst. Superior Tecnico

10:30-10:50 MoA16.4

Dynamic Modeling and Gait Analysis of Batoid Swimming, pp. 566-571.

Liu, Xinmin — Univ. of California at Los Angeles
Iwasaki, Tetsuya — UCLA
Fish, Frank — West Chester Univ.

10:50-11:10 MoA16.5

Propulsive Efficiency of Underwater Vehicles Using Unsteady Propulsors, pp. 572-577.

Krieg, Michael — Univ. of Florida
Mohseni, Kamran — Univ. of Florida

11:10-11:30 MoA16.6

Control of an Underactuated Underwater Vehicle Manipulator System in the Presence of Parametric Uncertainty and Disturbance, pp. 578-584.

Korkmaz, Ozan — The Scientific and Tech. Res. Council of Turkey
Ider, S. Kemal — Middle East Tech. Univ.
Özgören, M. Kemal — Middle East Tech. Univ.

MoA17 Renaissance Ballroom West B

Control of Biomimetic Locomotion Systems (Invited Session)

Chair: Woolsey, Craig — Virginia Tech.
Co-Chair: Kelly, Scott — Univ. of North Carolina at Charlotte
Organizer: Woolsey, Craig — Virginia Tech.
Organizer: Kelly, Scott — Univ. of North Carolina at Charlotte

09:30-09:50 MoA17.1

Autonomous State Estimation Using Optic Flow Sensing (I), pp. 585-590.

Alaeddini, Atiye — Univ. of Washington
Morgansen, Kristi A. — Univ. of Washington

09:50-10:10 MoA17.2

Control-Oriented Averaging of Tail-Actuated Robotic Fish Dynamics (I), pp. 591-596.

Wang, Jianxun — Michigan State Univ.
Chen, Songlin — Harbin Inst. of Tech.
Tan, Xiaobo — Michigan State Univ.

10:10-10:30 MoA17.3

A Geometric Control Approach for Optimum Maneuverability of Flapping Wing MAVs Near Hover (I), pp. 597-602.

Taha, Haithem — Virginia Tech.
Woolsey, Craig — Virginia Tech.
Hajj, Muhammad — Virginia Tech.

10:30-10:50 MoA17.4

Control of Underactuated Mechanical Systems Using High Frequency Input (I), pp. 603-608.

Tahmasian, Sevak — Virginia Tech.
Taha, Haithem — Virginia Tech.
Woolsey, Craig — Virginia Tech.

10:50-11:10 MoA17.5

Adaptive Control for Bioinspired Flapping Wing Robots (I), pp. 609-614.

Murphy, Ian — Virginia Pol. Inst. and State Univ.
Dadashi, Shirin — Virginia Tech.
Kurdila, Andrew J. — Virginia Tech.
Javid, Bayandor — Virginia Tech.
Bledt, Gerardo — Virginia Tech.
Lei, Yu — Virginia Tech.

11:10-11:30 MoA17.6

Reduced-Order Modeling of Propulsive Vortex Shedding from a Free Pitching Hydrofoil with an Internal Rotor (I), pp. 615-620.

Tallapragada, Phanindra — Univ. of North Carolina, Charlotte
Kelly, Scott — Univ. of North Carolina at Charlotte

MoA18 Grand Ballroom South

Developments in Wind Power Control I (Invited Session)

Chair: Fleming, Paul — National Renewable Energy Lab.
Co-Chair: van Wingerden, J.-W. — Delft Univ. of Tech.
Organizer: Fleming, Paul — National Renewable Energy Lab.
Organizer: van Wingerden, J.-W. — Delft Univ. of Tech.

09:30-09:50 MoA18.1

Reducing LIDAR Wind Speed Measurement Error with Optimal Filtering (I), pp. 621-627.

Simley, Eric — Univ. of Colorado Boulder
Pao, Lucy Y. — Univ. of Colorado Boulder

09:50-10:10 MoA18.2

A Model-Free Distributed Approach for Wind Plant Control (I), pp. 628-633.

Gebraad, Pieter M.O. — Delft Univ. of Tech.
van Wingerden, Jan-Willem — Delft Univ. of Tech.
van Dam, Filip C. — Delft Univ. of Tech.

10:10-10:30 MoA18.3

Direct Ice Sensing and Localized Closed-Loop Heating for Active De-Icing of Wind Turbine Blades (I), pp. 634-639.

Shajiee, Shervin	Univ. of Colorado
Pao, Lucy Y.	Univ. of Colorado Boulder
Wagner, Patrick	Univ. of Colorado Boulder
Moore, Eric D.	Chiaro Tech. LLC
McLeod, Robert	Univ. of Colorado

10:30-10:50 MoA18.4

Simple Model for Describing and Estimating Wind Turbine Dynamic Inflow (I), pp. 640-646.

Knudsen, Torben	Aalborg Univ. Denmark
Bak, Thomas	Aalborg Univ.

10:50-11:10 MoA18.5

Benefit of Wind Turbine Preview Control As a Function of Measurement Coherence and Preview Time (I), pp. 647-652.

Dunne, Fiona	Univ. of Colorado Boulder
Pao, Lucy Y.	Univ. of Colorado Boulder

11:10-11:30 MoA18.6

Gain-Scheduled Model Predictive Control of Wind Turbines Using Laguerre Functions (I), pp. 653-658.

Adegas, Fabiano Daher	Aalborg Univ.
Wisniewski, Rafal	Aalborg Univ.
Larsen, Lars Finn Sloth	Vestas A/S

MoA19 Grand Ballroom Central

Airborne Experimental Test Platforms: From Theory to Flight I (Tutorial Session)

Chair: Dorobantu, Andrei	Univ. of Minnesota
Co-Chair: Balas, Gary J.	Univ. of Minnesota
Organizer: Dorobantu, Andrei	Univ. of Minnesota
Organizer: Balas, Gary J.	Univ. of Minnesota

09:30-10:10 MoA19.1

An Airborne Experimental Test Platform: From Theory to Flight (I), pp. 659-673.

Dorobantu, Andrei	Univ. of Minnesota
Johnson, Will	Univ. of Minnesota
Lie, F. Adhika Pradipta	Univ. of Minnesota
Taylor, Brian	Univ. of Minnesota
Murch, Austin	Univ. of Minnesota
Paw, Yew Chai	DSO National Lab.
Gebre-Egziabher, Demoz	Univ. of Minnesota
Balas, Gary J.	Univ. of Minnesota

10:10-10:30 MoA19.2

Design for Multi-Experiment and Expanded Range Flight Testing in the AirSTAR Facility (I), N/A

Cox, David E.	NASA LaRC
Belcastro, Christine M.	NASA Langley Res. Center

10:30-10:50 MoA19.3

Development and Testing of an Aeroservoelastic Test Bed (I), N/A

Holm-Hansen, Brian	Lockheed Martin
Burnett, Edward	Lockheed Martin
Beranek, Jeff	Lockheed Martin Aeronautics Company
Balas, Gary J.	Univ. of Minnesota

10:50-11:10 MoA19.4

SLUGS UAV: A Flexible and Versatile Hardware/Software Platform for Guidance Navigation and Control Research (I), pp. 674-679.

Lizarraga, Mariano Isidro	Univ. of California Santa Cruz
Elkaim, Gabriel Hugh	UC Santa Cruz
Curry, Renwick	Univ. of California Santa Cruz

11:10-11:30 MoA19.5

Rapid Flight Control Prototyping - Steps Toward Cooperative Mission-Oriented Capabilities (I), pp. 680-685.

Dobrokhodov, Vladimir	Naval Postgraduate School
Jones, Kevin	Naval Postgraduate School
Kaminer, Isaac	Naval Postgraduate School

MoA20 Grand Ballroom North

Modeling, Estimation and Control of Electrochemical Energy Conversion Systems (Invited Session)

Chair: Das, Tuhin	Univ. of Central Florida
Co-Chair: McKahn, Denise	Smith Coll.
Organizer: Canova, Marcello	The Ohio State Univ.
Organizer: Smith, Kandler	National Renewable Energy Lab.
Organizer: Anderson, R. Dyche	Ford Motor Company
Organizer: Das, Tuhin	Univ. of Central Florida
Organizer: Stefanopoulou, A.G.	Univ. of Michigan

09:30-09:50 MoA20.1

Robustness Evaluation for State-Of-Charge and State-Of-Health Estimation Considering Electrochemical Parameter Uncertainties (I), pp. 686-691.

Marcicki, James	The Ohio State Univ.
Bartlett, Alexander	Center for Automotive Res. The Ohio State Univ.
Conlisk, A. Terrence	Ohio State Univ.
Rizzoni, Giorgio	Ohio State Univ.
Yang, Xiao Guang	Ford Motor Company
Miller, Ted	Ford Motor Company

09:50-10:10 MoA20.2

Modeling Thermal Dynamics in Miniature PEM Fuel Cells under Dry Conditions (I), pp. 692-697.

Liu, Xinyi	Smith Coll.
McKahn, Denise	Smith Coll.

10:10-10:30 MoA20.3

A Computationally Efficient Thermal Model of Cylindrical Battery Cells for the Estimation of Radially Distributed Temperatures (I), pp. 698-703.

Kim, Youngki	Univ. of Michigan
Siegel, Jason B.	Univ. of Michigan
Stefanopoulou, Anna G.	Univ. of Michigan

10:30-10:50 MoA20.4

State of Charge Estimation of Cells in Series Connection by Using Only the Total Voltage Measurement (I), pp. 704-709.

Lin, Xinfan	Univ. of Michigan
Stefanopoulou, Anna G.	Univ. of Michigan
Li, Yonghua	Ford Motor Company
Anderson, R. Dyche	Ford Motor Company

10:50-11:10 MoA20.5

On-Line Energy and Battery Thermal Management for Hybrid Electric Heavy-Duty Truck, pp. 710-715.

Pham, T.H.	Eindhoven Univ. of Tech.
Kessels, J.T.B.A.	Tech. Univ. Eindhoven
van den Bosch, P. P. J.	Eindhoven Univ. of Tech.
Huisman, Rudolf	DAF Trucks N.V.
Nevels, R.M.P.A	DAF Trucks N.V.

11:10-11:30 MoA20.6

Optimizing Demand Response of Plug-In Hybrid Electric Vehicles Using Quadratic Programming, pp. 716-721.

Bashash, Saeid	Pennsylvania State Univ.
Fathy, Hosam K.	Penn State Univ.

MoA21 Congressional Hall A

Biomedical Systems (Regular Session)

Chair: Noble, Sarah L.	United States Naval Acad.
Co-Chair: Gans, Nicholas	Univ. of Texas at Dallas

09:30-09:50 MoA21.1

Control-Theoretic Treatment Scheduling for Posttraumatic Stress Disorder, pp. 722-727.

Noble, Sarah L.	United States Naval Acad.

09:50-10:10 MoA21.2

Modeling and Exploration of an Active Helmet Design, pp. 728-733.

Meyer, David G.	Univ. of Colorado at Boulder
Hauser, John	Univ. of Colorado at Boulder

10:10-10:30 MoA21.3

Predicting Oxygen Saturation Levels in Blood Using Autoregressive Models: A Threshold Metric for Evaluating Predictive Models, pp. 734-739.

ElMoaqet, Hisham	Univ. of Michigan-Ann Arbor
Tilbury, Dawn M.	Univ. of Michigan
Ramachandran, Satya-Krishna	Univ. of Michigan-Ann Arbor

10:30-10:50 MoA21.4

Subject-Specific Estimation of Aortic Blood Pressure Via System Identification: Preliminary In-Human Experimental Study, pp. 740-745.

Fazeli, Nima	Univ. of Maryland Coll. Park
Rashedi, Mohammad	Univ. of Alberta
Chappell, Alyssa	Univ. of Alberta
Wang, Shaohua	Univ. of Alberta
MacArthur, Roderick	Univ. of Alberta
McMurtry, M. Sean	Univ. of Alberta
Finegan, Barry	Univ. of Alberta
Hahn, Jin-Oh	Univ. of Maryland

10:50-11:10 MoA21.5

Gain-Scheduling Control of a Cable-Driven MRI-Compatible Robotic Platform for Intracardiac Interventions, pp. 746-751.

Salimi, Amirhossein	Univ. of Houston
Ramezanifar, Amin	Univ. of Houston
Mohammadpour, Javad	Univ. of Georgia
Grigoriadis, Karolos M.	Univ. of Houston

11:10-11:30 MoA21.6

An Extended Kalman Filter to Estimate Human Gait Parameters and Walking Distance, pp. 752-757.

Bennett, Terrell	Univ. of Texas at Dallas
Jafari, Roozbeh	Univ. of Texas at Dallas
Gans, Nicholas	Univ. of Texas at Dallas

MoA22 Congressional Hall B

Control of Networked Systems I (Regular Session)

Chair: Gugaliya, Jinendra	ABB Global Industries Services Ltd
Co-Chair: Chen, Xiang	Univ. of Windsor

09:30-09:50 MoA22.1

A Network Control Structure with a Switched PD Delay Compensator and a Nonlinear Network Model, pp. 758-764.

Stefan, Octavian	"Pol. Univ. of Timisoara, Faculty of Automation and
Codrean, Alexandru	"Pol. Univ. of Timisoara
Dragomir, Toma-Leonida	"Pol. Univ. of Timisoara, Faculty of Automation and

09:50-10:10 MoA22.2

Networked Feedback Stabilization Over Quantized Fading Channels, pp. 765-770.

Wan, Shuang	The Hong Kong Univ. of Science and Tech.
Gu, Guoxiang	Louisiana State Univ.
Qiu, Li	Hong Kong Univ. of Sci. & Tech.

10:10-10:30 MoA22.3

Clock Synchronization for Wireless Sensor Network with Communication Delay, pp. 771-776.

Garone, Emanuele	Univ. Libre de Bruxelles
Gasparri, Andrea	Univ. of "Roma Tre"
Lamonaca, Francesco	Univ. of Calabria

10:30-10:50 MoA22.4

Output Feedback Stabilization for Networked Control Systems with Quantized Fading Actuating Channels, pp. 777-782.

Feng, Yu	Univ. of Windsor
Chen, Xiang	Univ. of Windsor
Gu, Guoxiang	Louisiana State Univ.

10:50-11:10 MoA22.5

Adaptive LQR Controller for Networked Control Systems Subjected to Random Communication Delays, pp. 783-787.

Srinivasan, Seshadhri	Tallinn Univ. of Tech.
Vallabhan, Mishiga	ABB GISL INDIA
Ramaswamy, Srini	ABB Corp. Res. Center
Kotta, Ülle	Inst. of Cybernetics at TUT

11:10-11:30 MoA22.6

Sleep Scheduling of Wireless Sensor Networks Using Hard-Core Point Processes, pp. 788-793.

Jaleel, Hassan	Georgia Inst. of Tech.
Egerstedt, Magnus	Georgia Inst. of Tech.

MoB01 Room 2

Aerospace II (Regular Session)

Chair: Sultan, Cornel — Virginia Tech.
Co-Chair: Lynch, Alan Francis — Univ. of Alberta

13:30-13:50 MoB01.1

Robustness of Variance Constrained Controllers for Complex, Control Oriented Helicopter Models, pp. 794-799.

Oktay, Tugrul — ERCIYES Univ.
Sultan, Cornel — Virginia Tech.

13:50-14:10 MoB01.2

A Novel Cascade Controller for a Helicopter UAV with Small Body Force Compensation, pp. 800-805.

Godbolt, Bryan — Univ. of Alberta
Lynch, Alan Francis — Univ. of Alberta

14:10-14:30 MoB01.3

The Vertical Bat Tail-Sitter: Dynamic Model and Control Architecture, pp. 806-811.

Argyle, Matthew — Brigham Young Univ.
Beard, Randy — Brigham Young Univ.
Morris, Stephen — MLB Company

14:30-14:50 MoB01.4

Optimal Waypoint Guidance, Trajectory Design and Tracking, pp. 812-817.

Bauer, Peter — Computer and Automation Res. Inst.
Dorobantu, Andrei — Univ. of Minnesota

14:50-15:10 MoB01.5

Flight Test Results for an Improved Line of Sight Guidance Law for UAVs, pp. 818-823.

Lizarraga, Mariano Isidro — Univ. of California Santa Cruz
Curry, Renwick — Univ. of California Santa Cruz
Elkaim, Gabriel Hugh — UC Santa Cruz

15:10-15:30 MoB01.6

The Leader-Following Consensus of Multiple Rigid Spacecraft Systems, pp. 824-829.

Cai, He — Chinese Univ. of Hong Kong
Huang, Jie — The Chinese Univ. of Hong Kong

MoB02 Room 3

Switched Systems II (Regular Session)

Chair: Rodrigues, Luis — Concordia Univ.
Co-Chair: Chowdhary, Girish — Massachusetts Inst. of Tech.

13:30-13:50 MoB02.1

Identification of Linear Hybrid Systems: A Geometric Approach, pp. 830-835.

Le, Van Luong — CRAN, Univ. de Lorraine
Lauer, Fabien — Univ. de Lorraine, LORIA, CNRS, Inria
Bloch, Gerard — Univ. de Lorraine

13:50-14:10 MoB02.2

A Controller Switching Design Approach Via Parameterization for Control of Hard Disk Drive Dual-Stage Actuators, pp. 836-841.

Wong, Daniel — Cornell Univ.
Hencey, Brandon — Cornell Univ.

14:10-14:30 MoB02.3

Steady-State Control for Signalized Intersections Modeled As Switched Server System, pp. 842-847.

He, Zhonghe — Beijing Univ. of Tech.
Chen, Yangzhou — Beijing Univ. of Tech. Beijing, 100124, P.R.China
Shi, Jianjun — Beijing Univ. of Tech.
Han, Xingguang — Beijing Univ. of Tech.
Wu, Xu — Beijing Hongdexinzhiyuan Information Tech. Co., Ltd

14:30-14:50 MoB02.4

Dynamic Feedforward Compensation of Measurable Signals in Discrete-Time Linear Switching Systems, pp. 848-853.

Zattoni, Elena — Univ. of Bologna

14:50-15:10 MoB02.5

Concurrent Learning Adaptive Control for Linear Switched Systems, pp. 854-859.

De La Torre, Gerardo — Georgia Inst. of Tech.
Chowdhary, Girish — Massachusetts Inst. of Tech.
Johnson, Eric N. — Georgia Inst. of Tech.

MoB03 Room 4

Identification II (Regular Session)

Chair: Bohn, Christian — Tech. Univ. Clausthal
Co-Chair: Regruto, Diego — Pol. di Torino

13:30-13:50 MoB03.1

Optimization of Dynamic Battery Paramter Characterization Experiments Via Differential Evolution, pp. 867-874.

Forman, Joel — Exponent
Stein, Jeffrey L. — Univ. of Michigan
Fathy, Hosam K. — Penn State Univ.

13:50-14:10 MoB03.2

Fiber Laser Physical Parameters Estimation from Input-Output Power Measurements, pp. 875-880.

Cerone, Vito — Pol. di Torino
Razza, Valentino — Pol. di Torino
Regruto, Diego — Pol. di Torino

14:10-14:30 MoB03.3

Mixed Parametric/Non-Parametric Identification of Systems with Discontinuous Nonlinearities, pp. 881-886.

Vincent, Tyrone L. — Colorado School of Mines
Novara, Carlo — Pol. di Torino

14:30-14:50 MoB03.4

Visual Stimulus Design in Parameter Estimation of the Human Smooth Pursuit System from Eye-Tracking Data, pp. 887-892.

Jansson, Daniel — Uppsala Univ.
Medvedev, Alexander V. — Uppsala Univ.

14:50-15:10 MoB03.5

Robust Fault Detection Using Set Membership Estimation and T-S Fuzzy Neural Network Estimation, pp. 893-898.

Chai, Wei — Beijing Univ. of Tech.
Qiao, Junfei — Beijing Univ. of Tech.
Wang, Heng — Beijing Univ. of Tech.

15:10-15:30 MoB03.6

A Linearization Free Recursive Prediction Error Method for Combined State and Parameter Estimation for Nonlinear Systems, pp. 899-904.

Zhao, Qi — Clausthal Univ. of Tech.
Bohn, Christian — Tech. Univ. Clausthal

MoB04 Room 5

Discrete-Event Systems II (Regular Session)

Chair: Hashtrudi Zad, Shahin — Concordia Univ.
Co-Chair: Su, Rong — Nanyang Tech. Univ.

13:30-13:50 MoB04.1

Coordinated Distributed Time Optimal Supervisory Control, pp. 905-910.

Su, Rong — Nanyang Tech. Univ.

13:50-14:10 MoB04.2

Weak Invariant Simulation: Properties and Algorithms, pp. 911-916.

Zibaeenejad, M. Hadi — Univ. of Waterloo
Thistle, John G. — Univ. of Waterloo

14:10-14:30 MoB04.3

Ideal Free Distributions in Human Decision-Making, pp. 917-922.

Fernández, Isabel — Pontificia Univ. Javeriana
Finke, Jorge — Pontificia Univ. Javeriana
Ruiz, Diego — Univ. del Cauca

14:30-14:50 MoB04.4

On Analysis of Deadlock and Blocking Freeness in Isomorphic Module Systems, pp. 923-928.

Wang, Weilin — Nanyang Tech. Univ.
Su, Rong — Nanyang Tech. Univ.
Lin, Liyong — Nanyang Tech. Univ.

14:50-15:10 MoB04.5

Diagnosability of Intermittent Sensor Faults in Discrete Event Systems, pp. 929-934.

Carvalho, Lilian Kawakami — COPPE/UFRJ
Basilio, Joao Carlos — Univ. Federal de Rio de Janeiro
Moreira, Marcos Vicente — Univ. Federal do Rio de Janeiro
Clavijo, Leonardo — Univ. Federal do Rio de Janeiro

15:10-15:30 MoB04.6

A Limited Lookahead Policy in Robust Nonblocking Supervisory Control of Discrete Event Systems, pp. 935-939.

Boroomand, Farzam — Concordia Univ.
Hashtrudi Zad, Shahin — Concordia Univ.

MoB05 Room 6

Delay Systems II (Regular Session)

Chair: Butcher, Eric — New Mexico State Univ.
Co-Chair: Basin, Michael V. — Autonomous Univ. of Nuevo Leon

13:30-13:50 MoB05.1

Further Improvement on H∞ Filtering for Time-Delayed Systems, pp. 940-945.

You, Jia — Purdue Univ.
Gao, Huijun — Harbin Inst. of Tech.
Basin, Michael V. — Autonomous Univ. of Nuevo Leon

13:50-14:10 MoB05.2

Truncated Predictor Feedback Control for Exponentially Unstable Linear Systems with Time-Varying Input Delay, pp. 946-951.

Yoon, Se Young (Pablo) — Univ. of Virginia
Lin, Zongli — Univ. of Virginia

14:10-14:30 MoB05.3

Multi-Agent Consensus under Delayed Feedback: Fundamental Constraint on Graph and Fundamental Bound on Delay, pp. 952-957.

Qi, Tian — South China Univ. of Tech.
Qiu, Li — Hong Kong Univ. of Sci. & Tech.
Chen, Jie — City Univ. of Hong Kong

14:30-14:50 MoB05.4

Stabilization of Discrete-Time Linear Systems Subject to Input Saturation and Multiple Unknown Constant Delays, pp. 958-963.

Wang, Xu — New York Univ.
Saberi, Ali — Washington State Univ.
Stoorvogel, Anton A. — Univ. of Twente

14:50-15:10 MoB05.5

Observer-Based Delayed Feedback Attitude Control for Single and Multi-Actuator Maneuvers, pp. 964-969.

Torkamani, Shahab — New Mexico State Univ.
Nazari, Morad — New Mexico State Univ.
Samiei, Ehsan — New Mexico State Univ.
Butcher, Eric — New Mexico State Univ.

15:10-15:30 MoB05.6

Controller Synthesis for Single-Area and Multi-Area Power Systems with Communication Delays, pp. 970-975.

Gundes, A. N. — Univ. of California, Davis
Chow, Liansing — Univ. of California, Davis

MoB06 Room 8

Autonomous Systems II (Regular Session)

Chair: Marconi, Lorenzo — Univ. di Bologna
Co-Chair: Kyriakopoulos, K.J. — National Tech. Univ. of Athens

13:30-13:50 MoB06.1

Distributed Flocking of Second-Order Multi-Agent Systems with Global Connectivity Maintenance, pp. 976-981.

Mao, Yutian — Beijing Inst. of Tech.
Dou, Lihua — Beijing Inst. of Tech.
Fang, Hao — Beijing Inst. of Tech.
Chen, Jie — Beijing Inst. of Tech.
Cai, Tao — Beijing Inst. of Tech.

13:50-14:10 MoB06.2

A Smooth Hybrid Symbolic Control for the Formation of UAVs Over a Partitioned Space, pp. 982-987.

Karimoddini, Ali — NUS
Lin, Hai — Univ. of Notre Dame
Chen, Ben M. — National Univ. of Singapore
Lee, Tong Heng — National Univ. of Singapore

14:10-14:30 MoB06.3

Robust "Blind" Navigation for a Miniature Ducted-Fan Aerial Robot, pp. 988-993.

Naldi, Roberto — Univ. di Bologna
Torre, Alessio — Univ. of Bologna
Marconi, Lorenzo — Univ. di Bologna

14:30-14:50 MoB06.4

Navigation Functions for Focally Admissible Surfaces, pp. 994-999.

Filippidis, Ioannis — California Inst. of Tech.
Kyriakopoulos, Kostas J. — National Tech. Univ. of Athens

14:50-15:10 MoB06.5

Distributed Network Localization Using Angle-Of-Arrival Information Part II: Discrete-Time Algorithm and Error Analysis, pp. 1000-1005.

Zhu, Guangwei — Purdue Univ.
Hu, Jianghai — Purdue Univ.

15:10-15:30 MoB06.6

Distributed Network Localization Using Angle-Of-Arrival Information Part I: Continuous-Time Protocol, pp. 1006-1011.

Zhu, Guangwei — Purdue Univ.
Hu, Jianghai — Purdue Univ.

MoB07 Room 9

Nonlinear Control II (Regular Session)

Chair: Silvestre, Carlos — Univ. of Macau
Co-Chair: Galeazzi, Roberto — Tech. Univ. of Denmark

13:30-13:50 MoB07.1

Control of a Reaction-Diffusion PDE Cascaded with a Heat Equation, pp. 1012-1017.

Wang, Jun-Min — Beijing Inst. of Tech.
Su, Lingling — bit
Li, Hanxiong — City Univ. of Hong Kong

13:50-14:10 MoB07.2

Quaternion-Based Trajectory Tracking Control of VTOL-UAVs Using Command Filtered Backstepping, pp. 1018-1023.

Zhao, Sheng — Univ. of California, Riverside
Dong, Wenjie — The Univ. of Texas - Pan American
Farrell, Jay A. — Univ. of California Riverside

14:10-14:30 MoB07.3

Experimental Validation of a Globally Stabilizing Feedback Controller for a Quadrotor Aircraft with Wind Disturbance Rejection, pp. 1024-1029.

Cabecinhas, David — Inst. Superior Tecnico, Tech. Univ. of Lisbon
Cunha, Rita — Inst. Superior Técnico
Silvestre, Carlos — Univ. of Macau

14:30-14:50 MoB07.4

Analysis of PPN Guidance Law - a New Approach, pp. 1030-1035.

Tyan, Feng — Tamkang Univ.

14:50-15:10 MoB07.5

Observer Backstepping Control for Variable Speed Wind Turbine, pp. 1036-1043.

Galeazzi, Roberto — Tech. Univ. of Denmark
Gryning, Mikkel — Tech. Univ. of Denmark, DONG Energy
Blanke, Mogens — Tech. Univ. of Denmark

15:10-15:30 MoB07.6

Trajectory Tracking of a Class of Underactuated Systems with External Disturbances, pp. 1044-1049.

Kobilarov, Marin — Johns Hopkins Univ.

MoB08 Room 12

Observers for Nonlinear Systems II (Regular Session)

Chair: Aitouche, Abdel — LAGIS/HEI
Co-Chair: Marx, Benoit — Ctr de Recherche en Automat. de Nancy

13:30-13:50 MoB08.1

State and Parameter Estimation for Nonlinear Systems: A Takagi-Sugeno Approach, pp. 1050-1055.

Bezzaoucha, Souad — Univ. de Lorraine
Marx, Benoit — Ctr de Recherche en Automat. de Nancy
Maquin, Didier — Univ. de Lorraine
Ragot, Jose — CRAN-INPL

13:50-14:10 MoB08.2

Anti-Slug Control Experiments Using Nonlinear Observers, pp. 1056-1062.

Jahanshahi, Esmaeil — Norwegian Univ. of Science & Tech.
Skogestad, Sigurd — Norwegian Univ. of Science & Tech.
Grøtli, Esten Ingar — Norwegian Univ. of Science & Tech.

14:10-14:30 MoB08.3

A Nonlinear Switched Observer with Projected State Estimates for Diesel Engine Emissions Reduction, pp. 1063-1068.

McCarthy, Philip James — Univ. of Waterloo
Nielsen, Christopher — Univ. of Waterloo
Smith, Stephen L. — Univ. of Waterloo

14:30-14:50 MoB08.4

An Immersion and Invariance Based Speed and Rotation Angle Observer for the Ball and Beam System, pp. 1069-1075.

Rapp, Philipp — Univ. of Stuttgart
Sawodny, Oliver — Univ. of Stuttgart
Tarin, Cristina — Univ. of Stuttgart

14:50-15:10 MoB08.5

Nonlinear Unknown Input Observer Design for Diesel Engines, pp. 1076-1081.

Boulkroune, Boulaid — High Studies in Engineering - HEI
Djemili, Issam — LAGIS, Hautes Etudes d'Ingénieur, Lille
Aitouche, Abdel — LAGIS/HEI
Cocquempot, Vincent — Lille 1 Univ.

15:10-15:30 MoB08.6

Robust Tracking Performance and Disturbance Rejection for a Class of Nonlinear Systems Using Disturbance Observers, pp. 1082-1087.

El-Shaer, Ahmed H. — LineStream Tech.
Tomizuka, Masayoshi — Univ. of California, Berkeley

MoB09 Room 13

Modeling and Simulation II (Regular Session)

Chair: Finke, Jorge — Pontificia Univ. Javeriana
Co-Chair: Najafi, Mahmoud — Kent State Univ.

13:30-13:50 MoB09.1

Structure of Growing Networks with No Preferential Attachment, pp. 1088-1093.

Moriano, Pablo — Pontificia Univ. Javeriana
Finke, Jorge — Pontificia Univ. Javeriana

13:50-14:10 MoB09.2

Approximate Analytical Solution of the Dynamical System Via Decomposition Method, pp. 1094-1099.

Najafi, Mahmoud — Kent State Univ.
Daemi, Mehdi — Sharif Univ.

14:10-14:30 MoB09.3

State-Of-Charge (SOC) Estimation Based on a Reduced Order Electrochemical Thermal Model and Extended Kalman Filter, pp. 1100-1105.

Li, Xueyan — Auburn Univ.
Choe, Song-Yul (Ben) — Auburn Univ.

14:30-14:50 MoB09.4

A Simplified Skid-Steering Model for Torque and Power Analysis of Tracked Small Unmanned Ground Vehicles, pp. 1106-1111.

Guo, Tianyou — Univ. of Michigan
Peng, Huei — Univ. of Michigan

14:50-15:10 MoB09.5

Adaptive Robust Control of Variable Displacement Pumps, pp. 1112-1117.

Guo, Kai — Zhejiang Univ.
Wei, Jianhua — Zhejiang Univ.

15:10-15:30 MoB09.6

Heat Diffusion Modelling with Random Walks on Triangular Lattices, pp. 1118-1123.

Frannek, Lukas — Tokyo Inst. of Tech.
Hayakawa, Tomohisa — Tokyo Inst. of Tech.
Cetinkaya, Ahmet — Tokyo Inst. of Tech.

MoB10 Room 14

Optimization for Energy Applications (Regular Session)

Chair: Topcu, Ufuk — Univ. of Pennsylvania
Co-Chair: Raghunathan, Arvind — Mitsubishi Electric Res. Lab.

13:30-13:50 MoB10.1

PEV Charging Control for a Parking Lot Based on Queuing Theory, pp. 1124-1129.

Gong, Qiuming — The Ohio State Univ.
Midlam-Mohler, Shawn — Ohio State Univ.
Serra, Emmanuele — Univ. of L'Aquila
Marano, Vincenzo — The Ohio State Univ.
Rizzoni, Giorgio — Ohio State Univ.

13:50-14:10 MoB10.2

Convex Optimal Uncertainty Quantification: Algorithms and a Case Study in Energy Storage Placement for Power Grids, pp. 1130-1137.

Han, Shuo — California Inst. of Tech.
Topcu, Ufuk — Univ. of Pennsylvania
Tao, Molei — NYU
Owhadi, Houman — Caltech
Murray, Richard M. — California Inst. of Tech.

14:10-14:30 MoB10.3

Topology Identification for Dynamic Equivalent Models of Large Power System Networks, pp. 1138-1143.

Nabavi, Seyedbehzad — North Carolina State Univ.
Chakrabortty, Aranya — North Carolina State Univ.

14:30-14:50 MoB10.4

Extremum Seeking Algorithms for Minimal Hydrogen Consumption in PEM Fuel Cells, pp. 1144-1149.

Kunusch, Cristian — Inst. de Robòtica i Informàtica Industrial (CSIC-UPC)
Castaños, Fernando — CINVESTAV

14:50-15:10 MoB10.5

A Taxonomy for Modeling Flexibility and a Computationally Efficient Algorithm for Dispatch in Smart Grids, pp. 1150-1156.

Petersen, Mette — Aalborg Univ. and DONG Energy
Edlund, Kristian — DONG Energy
Hansen, Lars Henrik — Dong Energy
Bendtsen, Jan Dimon — Aalborg Univ.
Stoustrup, Jakob — Aalborg Univ.

15:10-15:30 MoB10.6

Global Optimization of Multi-Period Optimal Power Flow, pp. 1157-1164.

Gopalakrishnan, Ajit — Carnegie Mellon Univ.
Raghunathan, Arvind — Mitsubishi Electric Res. Lab.
Nikovski, Daniel — Mitsubishi Electric Res. Lab.
Biegler, Lorenz T. — Carnegie Mellon Univ.

MoB11 Room 15

Optimal Control II (Regular Session)

Chair: Wang, Yebin — Mitsubishi Electric Res. Lab.
Co-Chair: Malikopoulos, Andreas — Oak Ridge National Lab.

13:30-13:50 MoB11.1

Real-Time Energy-Optimal Trajectory Generation for a Servo Motor, pp. 1165-1170.

Zhao, Yiming — Mitsubishi Electric Res. Lab.
Wang, Yebin — Mitsubishi Electric Res. Lab.
Bortoff, Scott A. — Mitsubishi Electric Res. Lab.
Ueda, Koichiro — Mitsubishi Electric Corp.

13:50-14:10 MoB11.2

Speed Profile Optimization for Optimal Path Tracking, pp. 1171-1176.

Zhao, Yiming — Mitsubishi Electric Res. Lab.
Tsiotras, Panagiotis — Georgia Inst. of Tech.

14:10-14:30 MoB11.3

Energy-Based Nonlinear Control for a Quadrotor Rotorcraft, pp. 1177-1182.

Muñoz Hernandez, L.E. — Univ. de Tech. de Compiègne
Santos, Omar — Univ. Autonoma del Estado de Hidalgo
Castillo, Pedro — Univ. de Tech. de Compiegne
Fantoni, Isabelle — Univ. de Tech. de Compiegne

14:30-14:50 MoB11.4

Discrete-Time Decentralized Inverse Optimal Neural Control for a Shrimp Robot, pp. 1183-1188.

Lopez-Franco, Michel — CINVESTAV, Unidad Guadalajara
Sanchez, Edgar N. — CINVESTAV
Alanis, Alma Y. — Univ. de Guadalajara
Arana, Nancy — CUCEI

14:50-15:10 MoB11.5

Stochastic Optimal Control for Series Hybrid Electric Vehicles, pp. 1189-1194.

Malikopoulos, Andreas — Oak Ridge National Lab.

15:10-15:30 MoB11.6

Infinite-Horizon Linear Quadratic Optimal Control for Discrete-Time LTI Systems with Random Input Gains, pp. 1195-1200.

Zheng, Jianying — Hong Kong Univ. of Science and Tech.
Qiu, Li — Hong Kong Univ. of Sci. & Tech.

MoB12 — Room 16

Control Applications II (Regular Session)

Chair: Schuster, Eugenio — Lehigh Univ.
Co-Chair: Gayadeen, Sandira — Univ. of Oxford

13:30-13:50 MoB12.1

Design of Multi-Array Controllers for Electron Beam Stabilisation on Synchrotrons, pp. 1201-1206.

Gayadeen, Sandira — Univ. of Oxford
Duncan, Stephen — Univ. of Oxford
Heath, William Paul — Univ. of Manchester

13:50-14:10 MoB12.2

Nonlinear Control and Optimization of the Burn Condition in Tokamak Nuclear Fusion Reactors, pp. 1207-1212.

Boyer, Mark D. — Lehigh Univ.
Schuster, Eugenio — Lehigh Univ.

14:10-14:30 MoB12.3

Sparse Approximation Based Gaussian Mixture Model Approach for Uncertainty Propagation for Nonlinear System, pp. 1213-1218.

Vishwajeet, Kumar — Univ. at Buffalo
Singla, Puneet — Univ. at Buffalo

14:30-14:50 MoB12.4

Identification and Control of Magneto-Kinetic Response During Advanced Tokamak Scenarios in DIII-D, pp. 1219-1224.

Wehner, William — Lehigh Univ.
Shi, Wenyu — Lehigh Univ.
Schuster, Eugenio — Lehigh Univ.
Moreau, Didier — CEA
Walker, Michael L. — General Atomics
Ferron, J. R. — General Atomics
Luce, Timothy — General Atomics
Humphreys, D.A. — General Atomics
Penaflor, Benjamin P. — General Atomics
Johnson, Robert D. — General Atomics

14:50-15:10 MoB12.5

PTRANSP Simulation and Experimental Test of a Robust Current Profile and Beta_n Controller for Off-Axis Current Drive Scenarios in the DIII-D Tokamak, pp. 1225-1230.

Shi, Wenyu — Lehigh Univ.
Wehner, William — Lehigh Univ.
Barton, Justin — Lehigh Univ.
Boyer, Mark D. — Lehigh Univ.
Schuster, Eugenio — Lehigh Univ.
Kritz, Arnold — Lehigh Univ.
Moreau, Didier — CEA
Luce, Timothy — General Atomics
Ferron, J. R. — General Atomics
Walker, Michael L. — General Atomics
Humphreys, D.A. — General Atomics
Penaflor, Benjamin P. — General Atomics
Johnson, Robert D. — General Atomics

15:10-15:30 MoB12.6

Synchronizing Coupled Semiconductor Lasers under General Coupling Topologies, pp. 1231-1236.

Li, Shuai — Stevens Inst. of Tech.
Guo, Yi — Stevens Inst. of Tech.
Braiman, Yehuda — Oak Ridge National Lab.

MoB13 — Mount Vernon Square A

Multi-Agent Systems I (Regular Session)

Chair: Jia, Peng — Univ. California at Santa Barbara
Co-Chair: Bullo, Francesco — Univ. California at Santa Barbara

13:30-13:50 MoB13.1

Resilient Continuous-Time Consensus in Fractional Robust Networks, pp. 1237-1242.

LeBlanc, Heath — Ohio Northern Univ.
Zhang, Haotian — Univ. of Waterloo
Sundaram, Shreyas — Univ. of Waterloo
Koutsoukos, Xenofon — Vanderbilt Univ.

13:50-14:10 MoB13.2

Adaptive Estimation Using Multiagent Network Identifiers with Undirected and Directed Graph Topologies, pp. 1243-1248.

Sadikhov, Teymur — Georgia Inst. of Tech.
Demetriou, Michael A. — Worcester Pol. Inst.
Haddad, Wassim M. — Georgia Inst. of Tech.
Yucelen, Tansel — Georgia Inst. of Tech.

14:10-14:30 MoB13.3

On the Dynamics of Influence Networks Via Reflected Appraisal, pp. 1249-1254.

Jia, Peng	Univ. of California at Santa Barbara
Mirtabatabaei, Anahita	Univ. of California, Santa Barbara
Friedkin, Noah E.	Univ. of California at Santa Barbara
Bullo, Francesco	Univ. California at Santa Barbara

14:30-14:50 MoB13.4

Termination Time of Multidimensional Hegselmann-Krause Opinion Dynamics, pp. 1255-1260.

Etesami, Seyed Rasoul	Univ. of Illinois at Urbana-Champaign
Basar, Tamer	Univ. of Illinois, Urbana-Champaign
Nedich, Angelia	Univ. of Illinois, Urbana-Champaign
Touri, Behrouz	Georgia Tech. Univ.

14:50-15:10 MoB13.5

Towards Optimal Convex Combination Rules for Gossiping, pp. 1261-1265.

Mangoubi, Oren	Massachusetts Inst. of Tech.
Mou, Shaoshuai	Yale Univ.
Liu, Ji	Yale Univ.
Morse, A. Stephen	Yale Univ.

15:10-15:30 MoB13.6

Region Tracking Control for Multi-Agent Systems with High-Order Dynamics, pp. 1266-1271.

Ren, Beibei	Texas Tech. Univ.
Ge, Shuzhi Sam	Univ. of Electronic Science & Tech. of China
Lee, Tong Heng	National Univ. of Singapore
Krstic, Miroslav	Univ. of California, San Diego

MoB14 Mount Vernon Square B

Estimation and Control of Distributed Parameter Systems II (Invited Session)

Chair: Demetriou, Michael A.	Worcester Pol. Inst.
Co-Chair: Fahroo, Fariba	AFOSR
Organizer: Demetriou, Michael A.	Worcester Pol. Inst.
Organizer: Fahroo, Fariba	AFOSR

13:30-13:50 MoB14.1

Reduced Order Controllers for an Anisotropic Composite Plate with Smart Actuation and Sensing (I), pp. 1272-1277.

Singler, John	Missouri Univ. of Science and Tech.
Merritt, Joshua	Oregon State Univ.
Ray, Cody W.	Oregon State Univ.
Batten, Belinda A.	Oregon State Univ.

13:50-14:10 MoB14.2

Optimal Control of PDE-Based Systems by Using a Finite-Dimensional Approximation Scheme (I), pp. 1278-1283.

Alessandri, Angelo	Univ. of Genoa
Gaggero, Mauro	National Res. Council of Italy
Bagnerini, Patrizia	Univ. of Genoa

14:10-14:30 MoB14.3

Reduced Order Modeling for Fluid Flows Based on Nonlinear Balanced Truncation (I), pp. 1284-1289.

Sahyoun, Samir	Univ. of Tennessee
Dong, Jin	Univ. of Tennessee, Knoxville
Djouadi, Seddik, M.	Univ. of Tennessee

14:30-14:50 MoB14.4

Regulation of a Controlled Burgers' Equation: Tracking and Disturbance Rejection for General Time Dependent Signals (I), pp. 1290-1295.

Gilliam, David S.	Texas Tech. Univ.
Aulisa, Eugenio	Texas Tech. Univ.

14:50-15:10 MoB14.5

Two Approach to the Stabilization of Euler-Bernoulli Beam Equation with Control Matched Disturbance (I), pp. 1296-1301.

Guo, Bao-Zhu	Acad. Sinica
Jin, Feng-Fei	Qingdao Univ.

15:10-15:30 MoB14.6

Disturbance-Decoupling Observers for a Class of Second Order Distributed Parameter Systems (I), pp. 1302-1307.

Demetriou, Michael A.	Worcester Pol. Inst.

MoB15 Renaissance Ballroom East

Consensus and Cooperation in Multi-Agent Systems II (Regular Session)

Chair: Ren, Wei	Univ. of California, Riverside
Co-Chair: Belabbas, M.A.	Univ. of Illinois at Urbana-Champaign

13:30-13:50 MoB15.1

Decentralized Design with Localized Objective in Formation Control, pp. 1308-1313.

Belabbas, Mohamed Ali	Univ. of Illinois at Urbana-Champaign

13:50-14:10 MoB15.2

Real-Time Game Theoretic Coordination of Competitive Mobility-On-Demand Systems, pp. 1314-1319.

Zhu, Minghui	Massachusetts Inst. of Tech.
Frazzoli, Emilio	Massachusetts Inst. of Tech.

14:10-14:30 MoB15.3

Approximate Optimal Cooperative Decentralized Control for Consensus in a Topological Network of Agents with Uncertain Nonlinear Dynamics, pp. 1320-1325.

Kamalapurkar, Rushikesh	Univ. of Florida
Dinh, Huyen T.	Univ. of Transport & Communications
Walters, Patrick	Univ. of Florida
Dixon, Warren E.	Univ. of Florida

14:30-14:50 MoB15.4

Finite-Time Consensus of Networked Lipschitz Nonlinear Agents under Communication Constraints, pp. 1326-1331.

Cao, Yongcan	Air Force Res. Lab.
Ren, Wei	Univ. of California, Riverside
Casbeer, David W.	Air Force Res. Lab.
Schumacher, Corey	Air Force Res. Lab.

14:50-15:10 MoB15.5

Distributed Parameterized Model Predictive Control of Networked Multi-Agent Systems, pp. 1332-1337.

Droge, Greg Nathanael	Georgia Inst. of Tech.
Egerstedt, Magnus	Georgia Inst. of Tech.

15:10-15:30 MoB15.6

Disturbance Propagation Analysis in Vehicle Formations: An Information Theoretic Approach, pp. 1338-1343.

Zhao, Yingbo — Univ. of Notre Dame
Minero, Paolo — Univ. of Notre Dame
Gupta, Vijay — Univ. of Notre Dame

MoB16 — Renaissance Ballroom West A

Vehicle Dynamics and Control (Regular Session)

Chair: Del Re, Luigi — Johannes Kepler Univ. Linz
Co-Chair: Berkemeier, Matthew D. — Autonomous Solutions, Inc.

13:30-13:50 MoB16.1

Design Method of Robust Kalman FIlter for Multi Output Systems Based on Statistics, pp. 1344-1349.

Kaneda, Yasuaki — Tokyo Inst. of Tech.
Irizuki, Yasuharu — Tokyo Metropolitan Industrial Tech. Res. Inst.
Yamakita, Masaki — Tokyo Inst. of Tech.

13:50-14:10 MoB16.2

Stochastic Dynamic Programming Control Policies for Fuel Efficient Vehicle Following, pp. 1350-1355.

McDonough, Kevin — Univ. of Michigan
Kolmanovsky, Ilya V. — The Univ. of Michigan
Filev, Dimitre P. — Ford Motor Company
Yanakiev, Diana — Ford Motor Company
Szwabowski, Steve — Ford Motor Company
Michelini, John — Ford Motor Company

14:10-14:30 MoB16.3

Adaptive Model-Based Velocity Control by a Robotic Driver for Vehicles on Roller Dynamometers, pp. 1356-1361.

Sailer, Stefan — Univ. Ulm
Buchholz, Michael — Univ. Ulm
Dietmayer, Klaus Christian Jürgen — Univ. of Ulm

14:30-14:50 MoB16.4

Optimal, Stable Switching between Arcs During Low-Speed Ackerman Path Tracking, pp. 1362-1367.

Berkemeier, Matthew D. — Autonomous Solutions, Inc.

14:50-15:10 MoB16.5

Process Model Parameterisation in Posegraphs, pp. 1368-1373.

Julier, Simon — UCL
Ju, Zhaojie — Univ. of Portsmouth

15:10-15:30 MoB16.6

A Model Predictive Cooperative Adaptive Cruise Control Approach, pp. 1374-1379.

Stanger, Thomas — Johannes Kepler Univ. Linz
Del Re, Luigi — Johannes Kepler Univ. Linz

MoB17 — Renaissance Ballroom West B

Vehicle Control and Estimation in the Undersea Environment (Invited Session)

Chair: Woolsey, Craig — Virginia Tech.
Co-Chair: Piccoli, Benedetto — Rutgers Univ. - Camden
Organizer: Woolsey, Craig — Virginia Tech.
Organizer: Chyba, Monique — Univ. of Hawaii

13:30-13:50 MoB17.1

Robust Geometric Formation Control of Multiple Autonomous Underwater Vehicles with Time Delays (I), pp. 1380-1385.

Yang, Huizhen — Northwestern Pol. Univ.
Wang, Chuanfeng — Georgia Inst. of Tech.
Zhang, Fumin — Georgia Inst. of Tech.

13:50-14:10 MoB17.2

Observability-Based Optimization for Flow Sensing and Control of an Underwater Vehicle in a Uniform Flowfield (I), pp. 1386-1391.

DeVries, Levi — Univ. of Maryland at Coll. Park
Paley, Derek A. — Univ. of Maryland

14:10-14:30 MoB17.3

Path Planning to Optimize Observability in a Planar Uniform Flow Field (I), pp. 1392-1399.

Hinson, Brian — Univ. of Washington
Binder, Michael — Univ. of Washington
Morgansen, Kristi A. — Univ. of Washington

14:30-14:50 MoB17.4

Underwater Vehicle Control and Estimation in Nonuniform Currents (I), pp. 1400-1405.

Fan, Shuangshuang — Zhejiang Univ.
Woolsey, Craig — Virginia Tech.

14:50-15:10 MoB17.5

Reducing Actuator Switchings for Motion Control of Autonomous Underwater Vehicles (I), pp. 1406-1411.

Chyba, Monique — Univ. of Hawaii
Grammatico, Sergio — Univ. of Pisa
Huynh, Van Thanh — Queensland Univ. of Tech.
Marriott, John — Univ. of Hawaii
Piccoli, Benedetto — Rutgers Univ. - Camden
Smith, Ryan — Queensland Univ. of Tech.

15:10-15:30 MoB17.6

Low Cost Underwater Gliders for Littoral Marine Research (I), pp. 1412-1417.

Mitchell, Byrel — Michigan Tech. Univ.
Wilkening, Eric — Michigan Tech. Univ.
Mahmoudian, Nina — Michigan Tech. Univ.

MoB18 Grand Ballroom South

Developments in Wind Power Control II (Invited Session)

Chair: Wright, Alan — National Renewable Energy Lab.
Co-Chair: van Wingerden, J.-W. — Delft Univ. of Tech.
Organizer: Fleming, Paul — National Renewable Energy Lab.
Organizer: van Wingerden, J.-W. — Delft Univ. of Tech.

13:30-13:50 MoB18.1

Stability Analysis of a Wind Turbine Active Power Control System (I), pp. 1418-1423.

Buckspan, Andrew — Univ. of Colorado at Boulder
Pao, Lucy Y. — Univ. of Colorado Boulder
Aho, Jacob — Univ. of Colorado Boulder
Fleming, Paul — National Renewable Energy Lab.

13:50-14:10 MoB18.2

Optimal Trajectory Tracking Control for Wind Turbines During Operating Region Transitions (I), pp. 1424-1429.

Aho, Jacob — Univ. of Colorado Boulder
Pao, Lucy Y. — Univ. of Colorado Boulder
Hauser, John — Univ. of Colorado at Boulder

14:10-14:30 MoB18.3

On Control of Tethered Wings for Airborne Wind Energy (I), pp. 1430-1435.

Fagiano, Lorenzo — ETH Zurich
Zgraggen, Aldo Urban — ETH Zurich
Khammash, Mustafa H. — ETH Zurich
Morari, Manfred — ETH Zurich

14:30-14:50 MoB18.4

On the Feasibility and Limits of Extrem Load Reduction for Wind Tubines Via Advanced Sensing: A Lidar Case Study (I), pp. 1436-1441.

Elorza, Iker — CENER
Iribas, MIkel — CENER
Miranda, Edurne — CENER

14:50-15:10 MoB18.5

An Optimal Time-Invariant Approximation for Wind Turbine Dynamics Using the Multi-Blade Coordinate Transformation (I), pp. 1442-1447.

Seiler, Peter — Univ. of Minnesota
Ozdemir, Ahmet Arda — Univ. of Minnesota

15:10-15:30 MoB18.6

Fault-Tolerant Control Design for a Large Off-Shore Wind Turbine Using Fuzzy Gain-Scheduling and Signal Correction (I), pp. 1448-1453.

Badihi, Hamed — Concordia Univ.
Zhang, Youmin — Concordia Univ.
Hong, Henry — Concordia Univ.

MoB19 Grand Ballroom Central

Airborne Experimental Test Platforms: From Theory to Flight II (Invited Session)

Chair: Balas, Gary J. — Univ. of Minnesota
Co-Chair: Dorobantu, Andrei — Univ. of Minnesota
Organizer: Dorobantu, Andrei — Univ. of Minnesota
Organizer: Balas, Gary J. — Univ. of Minnesota

13:30-13:50 MoB19.1

Building Better Tools: Experimental UAV Research at West Virginia University (I), pp. 1454-1459.

Gu, Yu — West Virginia Univ.
Gururajan, Srikanth — West Virginia Univ.
Seanor, Brad — West Virginia Univ.
Chao, Haiyang — West Virginia University
Napolitano, M.R. — West Virginia Univ.

13:50-14:10 MoB19.2

Modular Scalable System for Operation and Testing of UAVs (I), pp. 1460-1465.

Laiacker, Maximilian — DLR
Klöckner, Andreas — DLR
Kondak, Konstantin — German Aerospace Center (DLR)
Schwarzbach, Marc — DLR
Looye, Gertjan — Dlr-oberpfaffenhofen
Sommer, Dominik — DLR
Kossyk, Ingo — DLR

14:10-14:30 MoB19.3

The C3UV Testbed for Collaborative Control and Information Acquisition Using UAVs (I), pp. 1466-1471.

Pereira, Eloi — UC Berkeley
Hedrick, Karl — Univ. of California at Berkeley
Sengupta, Raja — Univ. of California at Berkeley

14:30-14:50 MoB19.4

ULTRA - Unmanned Low-Cost Testing Research Aircraft (I), pp. 1472-1477.

Krings, Matthias — Hamburg Univ. of Tech.
Annighoefer, Bjoern — Hamburg Univ. of Tech.
Thielecke, Frank — Hamburg Univ. of Tech.

14:50-15:10 MoB19.5

Open Source Autopilot for Academic Research – the Paparazzi System (I), pp. 1478-1481.

Gati, Balazs — Budapest Univ. of Tech. and Ec.

15:10-15:30 MoB19.6

Unmanned Aircraft Systems for Communication and Atmospheric Sensing Missions (I), pp. 1482-1487.

Frew, Eric W. — Univ. of Colorado, Boulder
Argrow, Brian — Univ. of Colorado
Lawrence, Dale A. — Univ. of Colorado
Elston, Jack — Univ. of Colorado
Stachura, Maciej — Univ. of Colorado

MoB20 Grand Ballroom North

Optical Frequency Stabilization and Optical Phase Locked Loops (Tutorial Session)

Chair: Leibrandt, David — NIST
Co-Chair: Taubman, Matthew — Pacific Northwest National Lab.
Organizer: Zhu, Miao — Agilent Tech.

13:30-14:30 MoB20.1

Optical Frequency Stabilization and Optical Phase Locked Loops: Golden Threads of Precision Measurement (I), pp. 1488-1505.

Taubman, Matthew — Pacific Northwest National Lab.

14:30-14:50 MoB20.2

*Crystalline Coatings for Thermal Noise Reduction in Optical Interferometers (I)**. N/A

Zhang, Wei — JILA Univ. of Colorado at Boulder

14:50-15:10 MoB20.3

Ultra-Stable Laser Local Oscillators (I), N/A

Leibrandt, David — NIST

15:10-15:30 MoB20.4

*Applications of Stabilized Optical Frequency Combs (I)**. pp. 1506

Holzwarth, Ronald — Menlo Sytems GmbH

MoB21 Congressional Hall A

Biological Systems I (Regular Session)

Chair: Salapaka, Murti V. — Univ. of Minnesota, Minneapolis
Co-Chair: Armaou, Antonios — The Pennsylvania State Univ.

13:30-13:50 MoB21.1

Hybrid Time-Data-Driven Control for Biological Cellular Systems, pp. 1507-1512.

Li, Xiaobo — Univ. of Toronto
Zhang, Mingjun — The Univ. of Tennessee

13:50-14:10 MoB21.2

Optogenetic Control of Live Skeletal Muscles: Non-Invasive, Wireless, and Precise Activation of Muscle Tissues, pp. 1513-1518.

Neal, Devin — MIT
Sakar, Mahmut Selman — ETH Zurich
Asada, H. Harry — Massachusetts Inst. of Tech.

14:10-14:30 MoB21.3

A Hybrid Stochastic/deterministic Model of Intracellular HIV Infection Dynamics and Estimation of Viral Production Parameters, pp. 1519-1524.

Khalili, Samira — Penn State Univ.
Armaou, Antonios — The Pennsylvania State Univ.

14:30-14:50 MoB21.4

Design of a Constant Force Clamp and Estimation of Molecular Motor Motion Using Modern Control Approach, pp. 1525-1530.

Roychowdhury, Subhrajit — Univ. of Minnesota
Bhaban, Shreyas — Univ. of Minnesota
Salapaka, Srinivasa — Univ. of Illinois
Salapaka, Murti V. — Univ. of Minnesota, Minneapolis

14:50-15:10 MoB21.5

Biomolecular Resource Utilization in Elementary Cell-Free Gene Circuits, pp. 1531-1536.

Siegal-Gaskins, Dan — California Inst. of Tech.
Noireaux, Vincent — Univ. of Minnesota
Murray, Richard M. — California Inst. of Tech.

MoB22 Congressional Hall B

Control of Networked Systems II (Regular Session)

Chair: Hanebeck, Uwe D. — Karlsruhe Inst. of Tech. (KIT)
Co-Chair: Pappas, George J. — Univ. of Pennsylvania

13:30-13:50 MoB22.1

Optimal Sequence-Based LQG Control Over TCP-Like Networks Subject to Random Transmission Delays and Packet Losses, pp. 1543-1549.

Fischer, Jörg — Karlsruhe Inst. of Tech.
Hekler, Achim — Karlsruhe Inst. of Tech.
Dolgov, Maxim — Karlsruhe Inst. of Tech.
Hanebeck, Uwe D. — Karlsruhe Inst. of Tech. (KIT)

13:50-14:10 MoB22.2

Robust Stabilization of Uncertain Process Networks with Scheduled Communication, pp. 1550-1555.

Sun, Yulei — Univ. of California, Davis
El-Farra, Nael H. — Univ. of California, Davis

14:10-14:30 MoB22.3

On Stabilizability of LTI Systems across a Gaussian MAC Channel, pp. 1556-1561.

Liu, Jie — Univ. of Notre Dame
Gupta, Vijay — Univ. of Notre Dame

14:30-14:50 MoB22.4

Optimal Power Management in Wireless Control Systems, pp. 1562-1569.

Gatsis, Konstantinos — Univ. of Pennsylvania
Ribeiro, Alejandro — Univ. of Pennsylvania
Pappas, George J. — Univ. of Pennsylvania

14:50-15:10 MoB22.5

Stabilizing a Nonlinear Model-Based Networked Control System with Communication Constraints, pp. 1570-1577.

Mehta, Siddhartha — Univ. of Florida - REEF
MacKunis, William — Embry-Riddle Aeronautical Univ.
Subramanian, Sankrith — Univ. of Florida
Pasiliao, Eduardo — US Air Force
Curtis, J. Willard — Air Force Res. Lab.

15:10-15:30 MoB22.6

Control Over TCP-Like Lossy Networks: A Dynamic Game Approach, pp. 1578-1583.

Moon, Jun — Univ. of Illinois, Urbana-Champaign
Basar, Tamer — Univ. of Illinois, Urbana-Champaign

MoC01 Room 2

Aerospace III (Regular Session)

Chair: Padhi, Radhakant — Indian Inst. of Science
Co-Chair: Kolmanovsky, Ilya V. — The Univ. of Michigan

16:00-16:20 MoC01.1

Formation Flying of Small Satellites Using Suboptimal MPSP Guidance, pp. 1584-1589.

Joshi, Girish — Indian Inst. of Science, Bangalore
Padhi, Radhakant — Indian Inst. of Science

16:20-16:40 MoC01.2

Self-Scheduled and Structured H∞ Synthesis : A Launch Vehicle Application, pp. 1590-1595.

Saussie, David — Ec. Pol. de Montreal
BarbÈs, Quentin — ISAE SUPAERO
Berard, Caroline — ISAE

16:40-17:00 MoC01.3

Lyapunov-Based Controller Using Singular Perturbation Theory: An Application on a Mini-UAV, pp. 1596-1601.

Flores, Gerardo — Univ. of Tech. of Compiègne
Lozano, Rogelio — Univ. de Tech.

17:00-17:20 MoC01.4

Modeling Earth's Gravitational Gradients for GPS-Free Navigation, pp. 1602-1607.

Welker, Troy — OUSD(AT&L)
Huffman, Richard — United States Air Force
Pachter, Meir — AFIT/ENG

17:20-17:40 MoC01.5

Constrained Control of Very Flexible Aircraft Using Reference and Extended Command Governors, pp. 1608-1613.

Dillsaver, Matthew — Univ. of Michigan
Kalabic, Uros V. — Univ. of Michigan
Kolmanovsky, Ilya V. — The Univ. of Michigan
Cesnik, Carlos — Univ. of Michigan

17:40-18:00 MoC01.6

Formation Flight of Multiple Fixed-Wing Unmanned Aerial Vehicles, pp. 1614-1619.

Zhang, Mingfeng — Univ. of Toronto
Liu, Hugh Hong-Tao — Univ. of Toronto

MoC02 Room 3

Process Control (Regular Session)

Chair: Christofides, P.D. — Univ. of California at Los Angeles
Co-Chair: Dubljevic, Stevan — Univ. of Alberta

16:00-16:20 MoC02.1

Porosity Control in Thin Film Solar Cells: Two-Dimensional Case, pp. 1620-1625.

Huang, Jianqiao — UCLA
Orkoulas, Gerassimos — UCLA
Christofides, Panagiotis D. — Univ. of California at Los Angeles

16:20-16:40 MoC02.2

Crystal Radius and Temperature Regulation in Czochralski Crystallization Process, pp. 1626-1632.

Abdollahi, Javad — Univ. of Alberta
Dubljevic, Stevan — Univ. of Alberta

16:40-17:00 MoC02.3

Model Predictive Control of Dimethyl Ether Combustion in a Jet Stirred Reactor under Low Temperature Conditions, pp. 1633-1638.

Lammersen, Thomas — Inst. of Automatic Control of RWTH Aachen Univ.
Abel, Dirk — RWTH Aachen Univ.

17:00-17:20 MoC02.4

On the Passivity of Inventory Control in the Port Hamiltonian Framework, pp. 1639-1644.

Hoang, Ngoc Ha — Univ. of Tech. (VNU-HCM, Vietnam) and Université Claude Bernar
Du, Juan — Carnegie Mellon Univ.
Ydstie, B. Erik — Carnegie Mellon

17:20-17:40 MoC02.5

Modeling and Control of Single and Multiple Evaporator Vapor Compression Cycles for Electronics Cooling, pp. 1645-1650.

Pollock, Daniel — Rensselaer Pol. Inst.
Yang, Zehao — Rensselaer Pol. Inst.
Wen, John T. — Rensselaer Pol. Inst.
Peles, Yoav — Rensselaer Pol. Inst.
Jensen, Michael K. — Rensselaer Pol. Inst.

MoC03 Room 4

Identification III (Regular Session)

Chair: Bernstein, Dennis S. — Univ. of Michigan
Co-Chair: Gilson, Marion — Univ. de Lorraine

16:00-16:20 MoC03.1

Parameter Estimation for Spatially Interconnected Descriptor Systems Using Sequentially Semi-Separable Matrices, pp. 1657-1662.

van Solingen, Edwin — TU Delft
van Wingerden, Jan-Willem — Delft Univ. of Tech.
Torres, Patricio — Delft Univ. of Tech.
Rice, Justin — TU Delft
de Breuker, Roeland — TU Delft
Verhaegen, Michel — Delft Univ. of Tech.

16:20-16:40 MoC03.2

Frequency-Domain Instrumental Variable Based Method for Wide Band System Identification, pp. 1663-1668.

Gilson, Marion — Univ. of Lorraine
Welsh, James S. — Univ. of Newcastle
Garnier, Hugues — Univ. of Lorraine

16:40-17:00 MoC03.3

Closed-Loop Identification of Unstable Systems Using Noncausal FIR Models, pp. 1669-1674.

Aljanaideh, Khaled — The Univ. of Michigan, Ann Arbor
Coffer, Benjamin James — Univ. of Michigan
Bernstein, Dennis S. — Univ. of Michigan

17:00-17:20 MoC03.4

Recursive Subspace Identification Algorithm for Closed-Loop Systems, pp. 1675-1678.

Wang, Jia — Dalian Univ. of Tech.
Gu, Hong — Dalian Univ. of Tech.
Wang, Hongwei — Dalian Univ. of Tech. China

17:20-17:40 MoC03.5

Identification of Fractional Order Systems Using Modulating Functions Method, pp. 1679-1684.

Liu, Da-Yan	King Abdullah Univ. of Science and Tech. (KAUST)
Laleg Kirati, Taous Meriem	King Abdullah Univ. of Science and Tech. (KAUST)
Gibaru, Olivier	ARTS ET METIERS PARISTECH
Perruquetti, Wilfrid	Ec. Centrale de Lille

17:40-18:00 MoC03.6

Reconstruction of Directed Networks from Consensus Dynamics, pp. 1685-1690.

Shahrampour, Shahin	Univ. of Pennsylvania
Preciado, Victor M.	Univ. of Pennsylvania

MoC04 Room 5

Linear Model Predictive Control (Regular Session)

Chair: Olaru, Sorin	Supelec
Co-Chair: Shi, Yang	Univ. of Victoria

16:00-16:20 MoC04.1

Output Feedback Distributed Model Predictive Control with Inherent Robustness Properties, pp. 1691-1696.

Giselsson, Pontus	Lund Univ.

16:20-16:40 MoC04.2

Distributed Model Predictive Control of Leader-Follower Systems Using an Interior Point Method with Efficient Computations, pp. 1697-1702.

Necoara, Ion	Univ. Pol. Bucharest
Clipici, Dragos Nicolae	Univ. Pol. of Bucharest
Olaru, Sorin	Supelec

16:40-17:00 MoC04.3

Distributed Receding Horizon Control of Constrained Linear Systems with Communication Delays, pp. 1703-1708.

Li, Huiping	Univ. of Victoria
Shi, Yang	Univ. of Victoria

17:00-17:20 MoC04.4

Model Predictive Control Suitable for Closed-Loop Re-Identification, pp. 1709-1714.

González, Alejandro H.	CONICET-Univ. Nacional del Litoral
Ferramosca, Antonio	CONICET - UNL
Bustos, Germán A.	INTEC (UNL-CONICET)
Marchetti, Jacinto L.	INTEC (UNL-CONICET)
Odloak, Darci	Univ. of São Paulo - Brazil

17:20-17:40 MoC04.5

Parallelized Model Predictive Control, pp. 1715-1720.

Soudbakhsh, Damoon	MIT
Annaswamy, Anuradha	Massachusetts Inst. of Tech.

17:40-18:00 MoC04.6

A Tuning Procedure for ARX-Based MPC of Multivariate Processes, pp. 1721-1726.

Olesen, Daniel Haugaard	Tech. Univ. of Denmark
Huusom, Jakob Kjøbsted	Tech. Univ. of Denmark
Jorgensen, John Bagterp	Tech. Univ. of Denmark

MoC05 Room 6

Delay Systems III (Regular Session)

Chair: Han, Qing-Long	Central Queensland Univ.
Co-Chair: Palumbo, Pasquale	IASI-CNR

16:00-16:20 MoC05.1

Output-Based Event-Triggered $mathcal{H}_{infty }$ Control for Sampled-Data Control Systems with Nonuniform Sampling, pp. 1727-1732.

Peng, Chen	Nanjing Normal Univ.
Han, Qing-Long	Central Queensland Univ.

16:20-16:40 MoC05.2

Delay Distribution Dependent Stability Criteria for Discrete-Time Systems with Interval Time-Varying Delay, pp. 1733-1738.

Xiao, Nan	Beihang Univ.
Jia, Yingmin	Beihang Univ.
Matsuno, Fumitoshi	Kyoto Univ.

16:40-17:00 MoC05.3

Novel Stabilization Technique for the H∞ Control of Systems with Time-Varying Input Delay, pp. 1739-1744.

Figueredo, Luis Felipe da Cruz	Univ. of Brasília
Brandao Cavalcanti, Felipe	Univ. of Brasilia
Ishihara, Joao Yoshiyuki	Univ. of Brasília
Borges, Geovany A.	Univ. de Brasilia
Bauchspiess, Adolfo	Univ. of Brasília

17:00-17:20 MoC05.4

Output Feedback Control for Uncertain Nonlinear Systems with Slowly Varying Input Delay, pp. 1745-1750.

Dinh, Huyen T.	Univ. of Transport & Communications
Fischer, Nicholas	Univ. of Florida
Kamalapurkar, Rushikesh	Univ. of Florida
Dixon, Warren E.	Univ. of Florida

17:20-17:40 MoC05.5

Observer-Based Closed-Loop Control for the Glucose-Insulin System: Local Input-To-State Stability with Respect to Unknown Meal Disturbances, pp. 1751-1756.

Palumbo, Pasquale	IASI-CNR
Pepe, Pierdomenico	Univ. of L' Aquila
Panunzi, Simona	Consiglio Nazionale delle Ricerche
De Gaetano, Andrea	CNR

17:40-18:00 MoC05.6

Small-Gain Stability Conditions for Linear Systems with Time-Varying Delays, pp. 1757-1762.

Zhu, Jing	City Univ. of Hong Kong
Chen, Jie	City Univ. of Hong Kong
Qi, Tian	South China Univ. of Tech.

MoC06 Room 8

PID Control (Regular Session)

Chair: Lee, Yung K — Wichita State Univ.
Co-Chair: Emami, Tooran — U.S. Coast Guard Acad.

16:00-16:20 MoC06.1

Noise Filtering in PI and PID Control, pp. 1763-1770.
Romero Segovia, Vanessa — Lund Univ.
Hagglund, Tore — Lund Univ.
Astrom, Karl J. — Lund Inst. of Tech.

16:20-16:40 MoC06.2

Stability Analysis of Symmetric Send-On-Delta Event-Based Control Systems, pp. 1771-1776.
Beschi, Manuel — Univ. of Brescia
Dormido, Sebastián — UNED
Sánchez Moreno, José — UNED
Visioli, Antonio — Univ. of Brescia

16:40-17:00 MoC06.3

Design and Implementation of Fractional-Order PID Controllers for a Fluid Tank System, pp. 1777-1782.
Tepljakov, Aleksei — Tallinn Univ. of Tech.
Petlenkov, Eduard — Tallinn Univ. of Tech.
Belikov, Juri — Tallinn Univ. of Tech.
Halas, Miroslav — Slovak Univ. of Tech.

17:00-17:20 MoC06.4

PI Auto-Tuning and Performance Assessment in HVAC Systems, pp. 1783-1788.
Zhao, Futao — United Tech. Res. Center
Fan, Junqiang — United Tech. Res. Center
Mijanovic, Stevo — United Tech. Res. Center

17:20-17:40 MoC06.5

Determination of All Stabilizing Fractional-Order PID Controllers That Satisfy a Robust Performance Constraint, pp. 1789-1794.
Lee, Yung K — Wichita State Univ.
Watkins, John — Wichita State Univ.

17:40-18:00 MoC06.6

Estimate of Discrete-Time PID Controller Parameters for H-Infinity Complementary Sensitivity Design: Autonomous Sailboat Application, pp. 1795-1801.
Emami, Tooran — U.S. Coast Guard Acad.
Hartnett, Richard — U.S. Coast Guard Acad.
Watkins, John — Wichita State Univ.

MoC07 Room 9

Nonlinear Control III (Regular Session)

Chair: Ariyur, Kartik B. — Purdue Univ.
Co-Chair: Tanner, Herbert — Univ. of Delaware

16:00-16:20 MoC07.1

Multi-Step Procedure for Orbital Feedback Linearization of Multi-Input Control Affine Systems, pp. 1802-1809.
Sekiguchi, Kazuma — Tokyo Inst. of Tech.
Sampei, Mitsuji — Tokyo Inst. of Tech.

16:20-16:40 MoC07.2

Constructive Interconnection and Damping Assignment for Port-Controlled Hamiltonian, pp. 1810-1815.
Nunna, Kameswarie — Imperial Coll. London
Sassano, Mario — Univ. of Rome, Tor Vergata
Astolfi, Alessandro — Imperial Coll. & Univ. of Rome

16:40-17:00 MoC07.3

Hierarchical Control Via Approximate Simulation and Feedback Linearization, pp. 1816-1821.
Fu, Jie — Univ. of Delaware
Shah, Shridhar — Univ. of Delaware
Tanner, Herbert — Univ. of Delaware

17:00-17:20 MoC07.4

Flatness-Based Deadbeat Control Revisited: Robust and High-Performance Design for Electrical Drives, pp. 1822-1827.
Stumper, Jean-François — Tech. Univ. München
Hagenmeyer, Veit — BASF SE
Kuehl, Sascha — Tech. Univ. Munich
Kennel, Ralph — Tech. Univ. München

17:20-17:40 MoC07.5

Adaptive Feedback Linearization of Nonlinear MIMO Systems Using ES-MRAC, pp. 1828-1833.
Haghi, Poorya — Purdue Univ.
Ariyur, Kartik B. — Purdue Univ.

17:40-18:00 MoC07.6

Controlled Zero Dynamics Feedback Linearization with Application to Free-Floating Redundant Orbital Manipulator, pp. 1834-1839.
Barcinski, Tomasz — Westpomeranian Univ. of Tech.
Lisowski, Jakub — Space Res. Center at Pol. Acad. of Science
Rybus, Tomasz — Space Res. Center @ Pol. Acad. of Science
Seweryn, Karol — Space Res. Centre of the Pol. Acad. of Sciences

MoC08 Room 12

Stability of Linear Systems (Regular Session)

Chair: Yamada, Kou — Gunma Univ.
Co-Chair: Najson, Federico — Univ. de la República

16:00-16:20 MoC08.1

Low-Order Simultaneous Stabilization of Linear Bicycle Models at Different Forward Speeds, pp. 1840-1845.
Gundes, A. N. — Univ. of California, Davis
Nanjangud, Akshay — Univ. of California, Davis

16:20-16:40 MoC08.2

Root Locus for a Controller Class That Yields Cubic Gain Parameterization, pp. 1846-1851.
Wellman, Brandon — Univ. of Kentucky
Hoagg, Jesse B. — Univ. of Kentucky

16:40-17:00 MoC08.3

Remarks on the Feedback Interconnection of Positive Linear Systems, pp. 1852-1858.
Najson, Federico — Univ. de la República

17:00-17:20 MoC08.4

Static Output Feedback Passivation of a SISO System Characterized by State Matrices, pp. 1859-1863.

Zeheb, Ezra	Tech. Inst. of Tech.
Shorten, Robert	Nat. Univ. of Ireland
Davison, Edward J.	Univ. of Toronto

17:20-17:40 MoC08.5

Routh, Hurwitz, Bieler and Kharitonov: A Unified Approach Using the Schwarz Form, pp. 1864-1869.

Shorten, Robert	Nat. Univ. of Ireland
Narendra, Kumpati S.	Yale Univ.

17:40-18:00 MoC08.6

The Parameterization of All Robust Stabilizing Simple Multi-Period Repetitive Controllers for Multiple-Input/Multiple-Output Plants with Specified Input-Output Frequency Characteristic, pp. 1870-1875.

Sakanushi, Tatsuya	Gunma Univ.
Yamada, Kou	Gunma Univ.
Hu, Jie	Gunma Univ.

MoC09 Room 13

Modeling and Simulation III (Regular Session)

Chair: Leva, Alberto	Pol. di Milano
Co-Chair: Grossi, Federica	DIEF, Univ. of Modena and Reggio Emilia, ViaVignolese905, Modena

16:00-16:20 MoC09.1

Dynamic Modeling and Simulation of a Drying System with Recuperation of the Condensate, pp. 1876-1881.

Grossi, Federica	Univ. of Modena and Reggio Emilia
Zanasi, Roberto	Univ. of Modena and Reggio Emilia

16:20-16:40 MoC09.2

Object-Oriented Modelling for Control Synthesis and Commissioning in Power Plants: A Case Study on Flue Gas Path Control, pp. 1882-1887.

Bartolini, Andrea	Dynamica S.r.l.
Casella, Francesco	Pol. di Milano
Leva, Alberto	Pol. di Milano
Calderara, Erika	Alstom Power Italia

16:40-17:00 MoC09.3

Modelling and L1 Adaptive Control of Ph in Bioethanol Enzymatic Process, pp. 1888-1895.

Prunescu, Remus Mihail	Tech. Univ. of Denmark
Blanke, Mogens	Tech. Univ. of Denmark
Sin, Gürkan	Tech. Univ. of Denmark

17:00-17:20 MoC09.4

Modeling and Control of Protein Crystal Shape Distribution, pp. 1896-1901.

Nayhouse, Michael	UCLA
Kwon, Joseph	UCLA
Orkoulas, Gerassimos	UCLA
Christofides, Panagiotis D.	Univ. of California at Los Angeles

17:20-17:40 MoC09.5

A Novel Attempt to Reduce Engineering Effort in Modeling Non-Linear Chemical Systems for Operator Training Simulators, pp. 1902-1907.

Mukhopadhyay, Saswata	IIT Madras
Gundappa, Madhukar	Honeywell Tech. Solutions Lab. Pvt
Srinivasan, Ranganathan	Honeywell Tech. Solutions
Narasimhan, Sridharakumar	IIT Madras

17:40-18:00 MoC09.6

Data-Based Modeling of a Lithium Iron Phosphate Battery As an Energy Storage and Delivery System, pp. 1908-1913.

Zhao, Xin	Univ. of California, San Diego
de Callafon, Raymond A.	Univ. of California, San Diego

MoC10 Room 14

Machine Learning (Regular Session)

Chair: Benosman, Mouhacine	National Univ. of Singapore
Co-Chair: Srikant, R	Univ. of Illinois, Urbana-Champaign

16:00-16:20 MoC10.1

Multi-Parametric Extremum Seeking-Based Learning Control for Electromagnetic Actuators, pp. 1914-1919.

Benosman, Mouhacine	Mitsubishi Electric Res. Lab.
Atinc, Gokhan M.	Univ. of Illinois at Urbana Champaign

16:20-16:40 MoC10.2

Average Strategy Fictitious Play with Application to Road Pricing, pp. 1920-1925.

Xiao, Nan	Singapore MIT Alliance for Res. and Tech. Centre
Wang, Xuehe	Nanyang Tech. Univ.
Wongpiromsarn, Tichakorn	Ministry of Science and Tech.
You, Keyou	Tsinghua Univ.
Xie, Lihua	Nanyang Tech. Univ.
Frazzoli, Emilio	Massachusetts Inst. of Tech.
Rus, Daniela	MIT

16:40-17:00 MoC10.3

Improved Upper Bounds on the Expected Error in Constant Step-Size Q-Learning, pp. 1926-1931.

Beck, Carolyn L.	Univ. of Illinois, Urbana-Champaign
Srikant, R	Univ. of Illinois, Urbana-Champaign

17:00-17:20 MoC10.4

Convergence Guarantees for a Decentralized Algorithm Achieving Pareto Optimality, pp. 1932-1937.

Menon, Anup	Univ. of Maryland Coll. Park
Baras, John S.	Univ. of Maryland

17:20-17:40 MoC10.5

Language Evolution in a Noisy Environment, pp. 1938-1943.

Touri, Behrouz	Georgia Tech. Univ.
Langbort, Cedric	Univ. of Illinois, Urbana-Champaign

17:40-18:00 MoC10.6

Robust Smoothing for Continuous Time Uncertain Nonlinear Systems, pp. 1944-1949.

Kallapur, Abhijit	Univ. of New South Wales at the Australian Defence Force Academ
Petersen, Ian R.	Univ. of New South Wales at the Australian Defence Force Acad.

MoC11 Room 15

Modern Control Approaches in Human Behavior, Social Networks, and Behavioral Health (Invited Session)

Chair: Rivera, Daniel E.	Arizona State Univ.
Co-Chair: Davison, Daniel E.	Univ. of Waterloo
Organizer: Rivera, Daniel E.	Arizona State Univ.
Organizer: Davison, Daniel E.	Univ. of Waterloo
Organizer: Chowdhury, F.N.	National Science Foundation

16:00-16:20 MoC11.1

Containment Control for a Directed Social Network with State-Dependent Connectivity (I), pp. 1950-1955.

Kan, Zhen	Univ. of Florida
Klotz, Justin	Univ. of Florida
Pasiliao, Eduardo	US Air Force
Dixon, Warren E.	Univ. of Florida

16:20-16:40 MoC11.2

A Model-Based Feedback-Control Approach to Behavior Modification through Reward-Induced Attitude Change (I), pp. 1956-1963.

Ni, Jie	Univ. of Waterloo
Kulic, Dana	Univ. of Waterloo
Davison, Daniel E.	Univ. of Waterloo

16:40-17:00 MoC11.3

Control Systems Engineering for Understanding and Optimizing Smoking Cessation Interventions (I), pp. 1964-1969.

Timms, Kevin P.	Arizona State Univ.
Rivera, Daniel E.	Arizona State Univ.
Collins, Linda M	Penn State
Piper, Megan	Univ. of Wisconsin, Center for Tobacco Res. & Intervention

17:00-17:20 MoC11.4

Hybrid Model Predictive Control for Optimizing Gestational Weight Gain Behavioral Interventions (I), pp. 1970-1975.

Dong, Yuwen	Arizona State Univ.
Rivera, Daniel E.	Arizona State Univ.
Downs, Danielle	Penn State Univ.
Savage, Jennifer	Penn State Univ.
Thomas, Diana	Montclair State Univ.
Collins, Linda M	Penn State

17:20-17:40 MoC11.5

Identification of Affine Linear Parameter Varying Models for Adaptive Interventions in Fibromyalgia Treatment (I), pp. 1976-1981.

Lopes dos Santos, P.	Univ. do Porto
Deshpande, Sunil	Arizona State Univ.
Rivera, Daniel E.	Arizona State Univ.
Azevedo Perdicoulis, T-P	ISR-Coimbra & UTAD
Ramos, Jose A.	Nova Southeastern Univ.
Younger, Jarred	Stanford Univ. School of Medicine

17:40-18:00 MoC11.6

Opinion Dynamics in Social Networks: A Local Interaction Game with Stubborn Agents, pp. 1982-1987.

Ghaderi, Javad	Univ. of Illinois at Urbana-Champaign
Srikant, R	Univ. of Illinois, Urbana-Champaign

MoC12 Room 16

Control Applications III (Regular Session)

Chair: Chung, Chung Choo	Hanyang Univ.
Co-Chair: Yucelen, Tansel	Georgia Inst. of Tech.

16:00-16:20 MoC12.1

Robust Nonlinear Position Control with Conditional Reset Integrator for Permanent Magnet Stepper Motors, pp. 1988-1993.

Shin, Donghoon	Hanyang Univ. Seoul, Korea
Kim, Wonhee	Hanyang Univ.
Lee, Youngwoo	Hanyang Univ.
Chung, Chung Choo	Hanyang Univ.

16:20-16:40 MoC12.2

Hybrid Observer Design for Online Battery State-Of-Charge Estimation, pp. 1994-1999.

LeSage, Jonathan	Univ. of Texas at Austin
Longoria, Raul	Univ. of Texas at Austin

16:40-17:00 MoC12.3

A Trajectory Tracking Algorithm for a Hopping Rotochute Using Surrogate Models, pp. 2000-2005.

Aksaray, Derya	Georgia Inst. of Tech.
Mavris, Dimitri	Georgia Inst. of Tech.

17:00-17:20 MoC12.4

Minimum Perturbation Coordinates on SO(3), pp. 2006-2012.

Travers, Matthew	Carnegie Mellon
Hatton, Ross	Carnegie Mellon Univ.
Choset, Howie	Carnegie Mellon Univ.

17:20-17:40 MoC12.5

Model Predictive Control of Domestic Heat Pump, pp. 2013-2018.

Wittendorff, Anders	Aalborg Univ.
Kajgaard, Mikkel Urban	Aalborg Univ.
Biegel, Benjamin	Aalborg Univ.
Mogensen, Jesper	Aalborg Univ.
Veress, Attila Todor	Aalborg Univ.

17:40-18:00 MoC12.6

Consensus Protocols for Networked Multiagent Systems with a Uniformly Continuous Quasi-Resetting Architecture, pp. 2019-2024.

Yucelen, Tansel	Georgia Inst. of Tech.
Haddad, Wassim M.	Georgia Inst. of Tech.
Johnson, Eric N.	Georgia Inst. of Tech.

MoC13 Mount Vernon Square A

Multi-Agent Systems II (Regular Session)

Chair: Nersesov, Sergey G.	Villanova Univ.
Co-Chair: Hespanha, Joao P.	Univ. of California, Santa Barbara

16:00-16:20 MoC13.1

Flocking with Fixed-Wing UAVs for Distributed Sensing: A Stochastic Optimal Control Approach, pp. 2025-2031.

Quintero, Steven	Univ. of California, Santa Barbara
Collins, Gaemus	Toyon Res. Corp.
Hespanha, Joao P.	Univ. of California, Santa Barbara

16:20-16:40 MoC13.2

Tracking the Average of Time-Varying Nonsmooth Signals for Double-Integrator Agents with a Fixed Topology, pp. 2032-2037.

Chen, Fei	Xiamen Univ.
Ren, Wei	Univ. of California, Riverside
Lan, Weiyao	Xiamen Univ.
Chen, Guanrong	City Univ. of Hong Kong

16:40-17:00 MoC13.3

Cooperative Semi-Global Robust Output Regulation of Nonlinear Uncertain Multi-Agent Systems, pp. 2038-2043.

Su, Youfeng	The Chinese Univ. of Hong Kong
Huang, Jie	The Chinese Univ. of Hong Kong

17:00-17:20 MoC13.4

Distributed Control of Multi-Agent Systems with Rotating Fields of View, pp. 2044-2049.

Asadi, Mohammad Mehdi	Concordia Univ.
Ajorlou, Amir	Concordia Univ.
Aghdam, Amir G.	Concordia Univ.

17:20-17:40 MoC13.5

Finite-Time Coordination in Multiagent Systems Using Sliding Mode Control Approach, pp. 2050-2055.

Ghasemi, Masood	Villanova Univ.
Nersesov, Sergey G.	Villanova Univ.

17:40-18:00 MoC13.6

Flocking Control for Multi-Agent Systems with Communication Optimization, pp. 2056-2061.

Li, Heng	Central South Univ.
Peng, Jun	Central South Univ.
Liu, Weirong	Central South Univ.
Wang, Jing	Bethune-Cookman Univ.
Liu, Jiangang	Central South Univ.
Huang, Zhiwu	Central South Univ.

MoC14 Mount Vernon Square B

Estimation and Control of Distributed Parameter Systems III (Invited Session)

Chair: Demetriou, Michael A.	Worcester Pol. Inst.
Co-Chair: Fahroo, Fariba	AFOSR
Organizer: Demetriou, Michael A.	Worcester Pol. Inst.
Organizer: Fahroo, Fariba	AFOSR

16:00-16:20 MoC14.1

Networked Model Predictive Control of Spatially Distributed Processes (I), pp. 2062-2067.

Yao, Zhiyuan	Univ. of California, Davis
Hu, Ye	Univ. of California, Davis
El-Farra, Nael H.	Univ. of California, Davis

16:20-16:40 MoC14.2

LQR Tracking of a Delay Differential Equation Model for the Study of Nanoparticle Dosing Strategies for Cancer Therapy (I), pp. 2068-2073.

Adhikari, Pratik	Louisiana Tech. Univ.
Bracey, Scarlett Savannah	Louisiana Tech. Univ.
Evans, Katie	Louisiana Tech. Univ.
Magana, Isidro B.	Louisiana Tech. Univ.
O'Neal, Dennis	Louisiana Tech. Univ.

16:40-17:00 MoC14.3

Robustness to Time and State-Dependent Delay Perturbations in Networked Nonlinear Control Systems (I), pp. 2074-2079.

Bekiaris-Liberis, Nikolaos	Univ. of California, San Diego
Krstic, Miroslav	Univ. of California, San Diego

17:00-17:20 MoC14.4

Approximating Parabolic Boundary Control Problems with Delayed Actuator Dynamics (I), pp. 2080-2085.

Burns, John A	Virginia Tech.
Zietsman, Lizette	Virginia Tech.
Herdman, Terry L	Virginia Pol. Inst. & State Univ.

17:20-17:40 MoC14.5

Calculation of H-Infinity Optimal Actuator Location for Distributed Parameter Systems (I), pp. 2086-2091.

Kasinathan, Dhanaraja	Univ. of Waterloo
Morris, Kirsten	Univ. of Waterloo
Yang, Steven	Univ. of Waterloo

17:40-18:00 MoC14.6

Feedback Compensation of the In-Domain Attenuation of Inputs in Diffusion Processes (I), pp. 2092-2097.

Yebi, Adamu	Clemson Univ.
Ayalew, Beshah	Clemson Univ.

MoC15 Renaissance Ballroom East

Algebraic/geometric Methods (Regular Session)

Chair: Guay, Martin	Queen's Univ.
Co-Chair: Lee, Taeyoung	George Washington Univ.

16:00-16:20 MoC15.1

Coherence Preservation of Markovian Open Quantum Systems in N-Level Ladder Configuration, pp. 2098-2102.

Yang, Fei	Department of Automation, Univ. Chi
Cong, Shuang	Univ. of Science and Tech. of China
Shuang, Feng	Inst. of Intelligent Machines, Chinese Acad. of Sciences,

16:20-16:40 MoC15.2

Robust Global Exponential Attitude Tracking Controls on SO(3), pp. 2103-2108.

Lee, Taeyoung	George Washington Univ.

16:40-17:00 MoC15.3

Bessel-Fourier Theory for Acoustic Propagation in Inviscid Fluid Flow Confined by Rigid Cylindrical Waveguide, pp. 2109-2114.

Chen, Yong — National Univ. of Defense Tech.
Huang, Yiyong — Department of Aerospace and Material Eng.
Zhao, Yong — Coll. of Aerospace and Materials Engi.
Cao, Lu — Coll. of Aerospace Science and Engineering
Chen, Xiaoqian — National Univ. of Defense Tech.

17:00-17:20 MoC15.4

Formulas for Derivatives of Global Flows and Pullbacks, pp. 2115-2120.

Amiss, Scott — Queen's Univ.
Guay, Martin — Queen's Univ.

17:20-17:40 MoC15.5

Geometric Decomposition and Potential-Based Representation of Nonlinear Systems, pp. 2121-2126.

Guay, Martin — Queen's Univ.
Hudon, Nicolas — Univ. Catholique de Louvain
Hoeffner, Kai — Massachusetts Inst. of Tech.

17:40-18:00 MoC15.6

A Numerical Algebraic Geometry Approach to Regional Stability Analysis of Polynomial Systems, pp. 2127-2132.

Permenter, Frank — MIT
Wampler, Charles — General Motors
Tedrake, Russ — MIT

MoC16 — Renaissance Ballroom West A

Control of Vehicle Dynamics I (Regular Session)

Chair: Pasillas-Lepine, William — CNRS, SUPELEC
Co-Chair: Werner, Herbert — Hamburg Univ. of Tech.

16:00-16:20 MoC16.1

Closed-Loop Wheel-Acceleration Control Based on an Extended Braking Stiffness Observer, pp. 2133-2138.

Hoang, Trong Bien — Univ. Paris Sud
Pasillas-Lepine, William — CNRS, SUPELEC
Netto, Mariana — IFSTTAR

16:20-16:40 MoC16.2

Models and Methodology for Optimal Vehicle Maneuvers Applied to a Hairpin Turn, pp. 2139-2146.

Berntorp, Karl — Lund Univ.
Olofsson, Bjorn — Lund Univ.
Lundahl, Kristoffer — Linkoping Univ.
Bernhardsson, Bo M. — Lund Inst. of Tech.
Nielsen, Lars — Linkoping Univ.

16:40-17:00 MoC16.3

Direct Longitudinal Tire Force Control under Simultaneous Acceleration/Deceleration and Turning, pp. 2147-2152.

Hsiao, Tesheng — National Chiao Tung Univ.

17:00-17:20 MoC16.4

LPV Torque Vectoring for an Electric Vehicle Using Parameter-Dependent Lyapunov Functions, pp. 2153-2158.

Bartels, Marcus — Hamburg Univ. of Tech. (TUHH)
Liu, Qin — Hamburg Univ. of Tech.
Kaiser, Gerd — Intedis
Werner, Herbert — Hamburg Univ. of Tech.

17:20-17:40 MoC16.5

Closed-Loop Control with Optimal Tire-Force Distribution for the Horizontal Dynamics of an Electric Vehicle with Single-Wheel Chassis Actuators, pp. 2159-2164.

Reinold, Peter — Univ. of Paderborn
Trächtler, Ansgar — Univ. of Paderborn

17:40-18:00 MoC16.6

Time-Optimal Vehicle Posture Control to Mitigate Unavoidable Collisions Using Conventional Control Inputs, pp. 2165-2170.

Chakraborty, Imon — Georgia Inst. of Tech.
Tsiotras, Panagiotis — Georgia Inst. of Tech.
Sanz Diaz, Ricardo — Univ. Pol. de Valencia

MoC17 — Renaissance Ballroom West B

Engine/Powertrain Control I (Regular Session)

Chair: Chen, Hong — Jilin Univ. Campus NanLing
Co-Chair: Santillo, Mario — Ford Motor Company

16:00-16:20 MoC17.1

Adaptive Control Approach for Cylinder Balancing in a Hydraulic Linear Engine, pp. 2171-2176.

Zaseck, Kevin — Univ. of Michigan
Kolmanovsky, Ilya V. — The Univ. of Michigan
Brusstar, Matthew — The United States Environmental Protection Agency

16:20-16:40 MoC17.2

Robust Mixed H2/H∞ Gain-Scheduling Observer Design for Removal of NOx Sensor Ammonia Cross-Sensitivity in Selective Catalytic Reduction Systems, pp. 2177-2182.

Zhang, Hui — The Ohio State Univ.
Wang, Junmin — The Ohio State Univ.
Wang, Yue-Yun — General Motors Company

16:40-17:00 MoC17.3

Model Predictive Controller Design for Throttle and Wastegate Control of a Turbocharged Engine, pp. 2183-2188.

Santillo, Mario — Ford Motor Company
Karnik, Amey — IIT Gandhinagar

17:00-17:20 MoC17.4

Control-Oriented Time-Varying Input-Delayed Temperature Model for SI Engine Exhaust Catalyst, pp. 2189-2195.

Bresch-Pietri, Delphine — MIT
Leroy, Thomas — IFPEN
Petit, Nicolas — MINES ParisTech

17:20-17:40 MoC17.5

Integrated Diesel Engine and Selective Catalytic Reduction System Active NOx Control for Fuel Economy Improvement, pp. 2196-2201.

Chen, Pingen — Ohio State Univ.
Wang, Junmin — The Ohio State Univ.

17:40-18:00 MoC17.6

Active Disturbance Rejection Control of Common Rail Pressure for Gasoline Direct Injection Engine, pp. 2202-2207.

Liu, Qifang	Jilin Univ. PR China
Gong, Xun	Jilin Univ.
Hu, Yunfeng	Jilin Univ.
Chen, Hong	Jilin Univ. Campus NanLing

MoC18 Grand Ballroom South

Developments in Wind Power Control III (Invited Session)

Chair: Fleming, Paul	National Renewable Energy Lab.
Co-Chair: Laks, Jason	Univ. of Colorado at Boulder
Organizer: Fleming, Paul	National Renewable Energy Lab.
Organizer: van Wingerden, J.-W.	Delft Univ. of Tech.

16:00-16:20 MoC18.1

Direct Speed Control Using LIDAR and Turbine Data (I), pp. 2208-2213.

Schlipf, David	Stuttgart Wind Energy, Univ. of Stuttgart
Fleming, Paul	National Renewable Energy Lab.
Kapp, Stefan	Robert Bosch GmbH
Scholbrock, Andrew	National Renewable Energy Lab.
Haizmann, Florian	Univ. of Stuttgart
Belen, Fred	Blue Scout Tech.
Wright, Alan	National Renewable Energy Lab.
Cheng, Po Wen	Stuttgart Wind Energy, Univ. of Stuttgart

16:20-16:40 MoC18.2

Wave Disturbance Reduction of a Floating Wind Turbine Using a Reference Model–based Predictive Control (I), pp. 2214-2219.

Christiansen, Søren	Aalborg Univ.
Tabatabaeipour, Seyed Mojtaba	Aalborg Univ.
Bak, Thomas	Aalborg Univ.
Knudsen, Torben	Aalborg Univ. Denmark

16:40-17:00 MoC18.3

Adaptive Disturbance Tracking Theory with State Estimation and State Feedback for Region II Control of Large Wind Turbine (I), pp. 2220-2226.

Balas, Mark	Univ. of Wyoming
Magar, Kaman	Univ. of Wyoming
Frost, Susan	NASA Ames Res. Center

17:00-17:20 MoC18.4

Field Testing of a Wind Turbine Active Drivetrain/Tower Damper Using Advanced Design and Validation Techniques (I), pp. 2227-2234.

Fleming, Paul	National Renewable Energy Lab.
van Wingerden, Jan-Willem	Delft Univ. of Tech.
Scholbrock, Andrew	National Renewable Energy Lab.
van der Veen, Gijs	Delft Univ. of Tech.
Wright, Alan	National Renewable Energy Lab.

17:20-17:40 MoC18.5

Model Predictive Control of Wind Turbines Using Uncertain LIDAR Measurements, pp. 2235-2240.

Mirzaei, Mahmood	Tech. Univ. of Denmark
Soltani, Mohsen	Aalborg Univ.
Poulsen, Niels Kjølstad	Tech. Univ. of Denmark
Niemann, Henrik	Tech. Univ. of Denmark

17:40-18:00 MoC18.6

Power Optimization and Control in Wind Energy Conversion Systems Using Extremum Seeking, pp. 2241-2246.

Ghaffari, Azad	San Diego State Univ. and Univ. of California at San Diego
Krstic, Miroslav	Univ. of California, San Diego
Seshagiri, Sridhar	San Diego State Univ.

MoC19 Grand Ballroom Central

Identification of Nonlinear Parameter-Varying Systems: Theory and Applications (Tutorial Session)

Chair: Larimore, Wallace E.	Adaptics, Inc.
Co-Chair: Buchholz, Michael	Univ. Ulm
Organizer: Larimore, Wallace E.	Adaptics, Inc.
Organizer: Buchholz, Michael	Univ. Ulm

16:00-17:00 MoC19.1

Identification of Nonlinear Parameter-Varying Systems Via Canonical Variate Analysis (I), pp. 2247-2262.

Larimore, Wallace E.	Adaptics, Inc.

17:00-17:20 MoC19.2

Subspace Identification of an Aircraft Linear Parameter-Varying Flutter Model (I), pp. 2263-2267.

Buchholz, Michael	Univ. Ulm
Larimore, Wallace E.	Adaptics, Inc.

17:20-17:40 MoC19.3

Identification of a Bilinear and Parameter-Varying Model for Lithium-Ion Batteries by Subspace Methods (I), pp. 2268-2273.

Remmlinger, Jürgen	Univ. of Ulm
Buchholz, Michael	Univ. Ulm
Dietmayer, Klaus Christian Jürgen	Univ. of Ulm

17:40-18:00 MoC19.4

Identification of Linear Parameter-Varying Engine Models (I), pp. 2274-2279.

Larimore, Wallace E.	Adaptics, Inc.
Javaherian, Hossein	GM R&D

MoC20 Grand Ballroom North

Discriminative Sparse Representations with Applications (Tutorial Session)

Chair: Monga, Vishal	Pennsylvania State Univ.
Co-Chair: Tran, Trac	Johns Hopkins Univ.
Organizer: Monga, Vishal	Pennsylvania State Univ.
Organizer: Tran, Trac	Johns Hopkins Univ.

16:00-17:00 MoC20.1

Structured Sparsity for Detection and Classification (I), N/A

Monga, Vishal	Pennsylvania State Univ.
Tran, Trac	Johns Hopkins Univ.

17:00-17:20 MoC20.2

Simultaneous Sparsity for Histopathological Image Representation and Classfication (I), N/A

Monga, Vishal	Pennsylvania State Univ.

17:20-17:40 MoC20.3

*Low-Rank Approximation and Sparse Recovery for Visual Data Reconstruction (I)**. N/A

Tran, Trac — Johns Hopkins Univ.

17:40-18:00 MoC20.4

*Sparse Representation for Target Detection and Classification in Hyperspectral Imagery (I)**. pp. 2280-2282

Tran, Trac — Johns Hopkins Univ.

MoC21 Congressional Hall A

Biological Systems II (Regular Session)

Chair: Ghosh, Bijoy — Texas Tech. Univ.

Co-Chair: Burg, Timothy C. — Clemson Univ.

16:00-16:20 MoC21.1

Tracking and Optimal Control Problems in Human Head/Eye Coordination, pp. 2283-2289.

Ghosh, Bijoy — Texas Tech. Univ.

Wijayasinghe, Indika — Texas Tech. Univ.

Glasauer, Stefan — Ludwig-Maximilians Univ. Munich

Aulisa, Eugenio — Texas Tech. Univ.

Kremmyda, Olympia — Ludwig-Maximilians Univ. Munich

16:20-16:40 MoC21.2

Design and Implementation of a Biomolecular Circuit for Tracking Protein Concentration, pp. 2290-2294.

de los Santos, Emmanuel L.C. — California Inst. of Tech.

Hsiao, Victoria — California Inst. of Tech.

Murray, Richard M. — California Inst. of Tech.

16:40-17:00 MoC21.3

Adaptive Circadian Rhythm Estimator and Its Application to Circadian Rhythm Control, pp. 2295-2300.

Zhang, Jiaxiang — Rensselaer Pol. Inst.

Wen, John T. — Rensselaer Pol. Inst.

Julius, Agung — Rensselaer Pol. Inst.

17:00-17:20 MoC21.4

Closed-Loop Nonlinear Smooth Robust Control of Anti-Angiogenic Tumor Therapy, pp. 2301-2306.

Hasirci, Ugur — DUZCE Univ.

Burg, Timothy C. — Clemson Univ.

Groff, Richard E. — Clemson Univ.

17:20-17:40 MoC21.5

Effect of Coupling on the Epidemic Threshold in Interconnected Complex Networks: A Spectral Analysis, pp. 2307-2312.

Darabi Sahneh, Faryad — Kansas State Univ.

Scoglio, Caterina — Kansas State Univ.

Chowdhury, Fahmida N. — National Science Foundation

17:40-18:00 MoC21.6

Characterization of Hard Limits on Performance of Autocatalytic Pathways, pp. 2313-2318.

Siami, Milad — Lehigh Univ.

Motee, Nader — Lehigh Univ.

Buzi, Gentian — Univ. of California Santa Barbara

MoC22 Congressional Hall B

Control of Networked Systems III (Regular Session)

Chair: Tsumura, Koji — The Univ. of Tokyo

Co-Chair: El-Farra, Nael H. — Univ. of California, Davis

16:00-16:20 MoC22.1

Stabilizability of LTI MIMO Systems with Uncertain Parameters under Communication Constraints, pp. 2319-2324.

Iranoppaiboon, Matee — The Univ. of Tokyo

Tsumura, Koji — The Univ. of Tokyo

16:20-16:40 MoC22.2

Stochastic Sensor Scheduling with Application to Networked Control, pp. 2325-2332.

Farokhi, Farhad — KTH - Royal Inst. of Tech.

Johansson, Karl H. — Royal Inst. of Tech.

16:40-17:00 MoC22.3

Stabilization by Controller Networks, pp. 2333-2338.

Izumi, Shinsaku — Kyoto Univ.

Azuma, Shun-ichi — Kyoto Univ.

Sugie, Toshiharu — Kyoto Univ.

17:00-17:20 MoC22.4

On the Compensation of LQG Over a Lossy Network Utilizing Previous Control Signals, pp. 2339-2343.

Yu, Jen-te — National Taiwan Univ.

Fu, Li-Chen — National Taiwan Univ.

17:20-17:40 MoC22.5

Hierarchical Modeling and Speed Control of Networked Induction Motor Systems, pp. 2344-2349.

Zhao, Dezong — Loughborough Univ.

Li, Chunwen — Professor

Stobart, Richard — Loughborough Univ.

17:40-18:00 MoC22.6

Model-Based Scheduling for Networked Control Systems, pp. 2350-2355.

Yu, Han — Univ. of Notre Dame

Antsaklis, Panos J. — Univ. of Notre Dame

Garcia, Eloy — Infoscitex Corp.

MoPL1 Grand Ballroom

How We Interact with Robots, Feedback Loops, and Autonomous Systems: Historical Perspectives and a Look Forward (Public Lecture)

Chair: Abramovitch, Daniel Y. — Agilent Lab.

Co-Chair: Pao, Lucy Y. — Univ. of Colorado Boulder

18:30-19:30 MoPL1.1

*How We Interact with Robots, Feedback Loops, and Autonomous Systems: Historical Perspectives and a Look Forward**. N/A

Mindell, David — MIT

TuSP1	Grand Ballroom North
Intelligent Surveillance and Decision Support in Healthcare Systems (Semiplenary Session)	
Chair: Mestha, Lalit K.	Xerox Corp.
Co-Chair: Abramovitch, Daniel Y.	Agilent Lab.

08:00-09:00	TuSP1.1
*Intelligent Surveillance and Decision Support in Healthcare Systems**.	
N/A Fromherz, Markus	Xerox

TuSP2	Grand Ballroom South
Game Theoretic Learning with Applications to Networked Control Systems (Semiplenary Session)	
Chair: Frew, Eric W.	Univ. of Colorado, Boulder
Co-Chair: Pao, Lucy Y.	Univ. of Colorado Boulder

08:00-09:00	TuSP2.1
*Game Theoretic Learning with Applications to Networked Control Systems**. N/A	
Marden, Jason	Univ. of Colorado at Boulder

TuA01	Room 2
Multi-Vehicle Control (Regular Session)	
Chair: Farhood, Mazen	Virginia Tech.
Co-Chair: Werner, Herbert	Hamburg Univ. of Tech.

09:30-09:50	TuA01.1
Multiagent Allocation of Markov Decision Process Tasks, pp. 2356-2361.	
Campbell, Trevor	MIT
Johnson, Luke	MIT
How, Jonathan P.	MIT

09:50-10:10	TuA01.2
Rebalancing the Rebalancers: Optimally Routing Vehicles and Drivers in Mobility-On-Demand Systems, pp. 2362-2367.	
Smith, Stephen L.	Univ. of Waterloo
Pavone, Marco	Stanford Univ.
Schwager, Mac	Boston Univ.
Frazzoli, Emilio	Massachusetts Inst. of Tech.
Rus, Daniela	MIT

10:10-10:30	TuA01.3
Control of Spatially Distributed Nonstationary Systems Over Arbitrary Graph Structures with Communication Latency, pp. 2368-2373.	
Farhood, Mazen	Virginia Tech.
Dullerud, Geir E.	Univ. of Illinois, Urbana-Champaign

10:30-10:50	TuA01.4
Maximum-Likelihood Localization of a Camera Network from Heterogeneous Relative Measurements, pp. 2374-2379.	
Knuth, Joseph	Univ. of Florida
Barooah, Prabir	Univ. of Florida

10:50-11:10	TuA01.5
Distributed Control of Linear Parameter-Varying Decomposable Systems, pp. 2380-2385.	
Hoffmann, Christian	Hamburg Univ. of Tech.
Eichler, Annika	Hamburg Univ. of Tech. (TUHH)
Werner, Herbert	Hamburg Univ. of Tech.

TuA02	Room 3
LMIs (Regular Session)	
Chair: Schoenwald, David A.	Sandia National Lab.
Co-Chair: George, Jemin	U.S. Army Res. Lab.

09:30-09:50	TuA02.1
Controller Synthesis of Multi Dimensional, Discrete LTI Systems Based on Numerical Solutions of Linear Matrix Inequalities, pp. 2386-2391.	
Mayer, Sascha	Univ. of Wuppertal
Dehnert, Robert	Univ. of Wuppertal
Tibken, Bernd	Univ. of Wuppertal

09:50-10:10	TuA02.2
An LMI Approach for Reduced-Order H_2 LTI Controller Synthesis, pp. 2392-2396.	
Hilhorst, Gijs	KU Leuven
Pipeleers, Goele	Katholieke Univ. Leuven
Swevers, Jan	K. U. Leuven

10:10-10:30	TuA02.3
Minimal State Measurements for Regional Pole Placement, pp. 2397-2402.	
Datta, Subashish	Indian Inst. of Tech. Bombay
Chakraborty, Debraj	Indian Inst. of Tech. Bombay

10:30-10:50	TuA02.4
Stabilization of Nonlinear Systems Subject to Uncertainties and Actuator Saturation, pp. 2403-2408.	
Bezzaoucha, Souad	Univ. de Lorraine
Marx, Benoit	Centre de Recherche en Automatique de Nancy
Maquin, Didier	Univ. de Lorraine
Ragot, Jose	CRAN-INPL

10:50-11:10	TuA02.5
Internal Model Control Design for Linear Parameter Varying Systems, pp. 2409-2414.	
Mohammadpour, Javad	Univ. of Georgia
Sun, Jing	Univ. of Michigan
Karnik, Amey	IIT Gandhinagar
Jankovic, Mrdjan	Ford Res. & Advanced Engineering

TuA03 Room 4

Estimation I (Regular Session)

Chair: Chong, Edwin K. P. — Colorado State Univ.
Co-Chair: Mehta, Prashant G. — Univ. of Illinois, Urbana-Champaign

09:30-09:50 TuA03.1

Multi-Dimensional Feedback Particle Filter for Coupled Oscillators, pp. 2415-2421.

Tilton, Adam — Univ. of Illinois, Urbana-Champaign
Mehta, Prashant G. — Univ. of Illinois, Urbana-Champaign
Meyn, Sean — Univ. of Florida

09:50-10:10 TuA03.2

Efficient Deterministic Dirac Mixture Approximation of Gaussian Distributions, pp. 2422-2427.

Gilitschenski, Igor — Karlsruhe Inst. of Tech. (KIT)
Hanebeck, Uwe D. — Karlsruhe Inst. of Tech. (KIT)

10:10-10:30 TuA03.3

State Estimation for the Discretized LWR PDE Using Explicit Polyhedral Representations of the Godunov Scheme, pp. 2428-2435.

Thai, Jerome — Univ. of California, Berkeley
Bayen, Alexandre M. — Univ. of California at Berkeley

10:30-10:50 TuA03.4

Decomposition Based Recursive Least Squares Parameter Estimation for Hammerstein Nonlinear Controlled Autoregressive Systems, pp. 2436-2441.

Chen, Huibo — Jiangnan Univ.
Ding, Feng — Jiangnan Univ.

10:50-11:10 TuA03.5

Adaptive Compressive Measurement Design Using Approximate Dynamic Programming, pp. 2442-2447.

Zahedi, Ramin — Colorado State Univ.
Krakow, Lucas W. — Colorado State Univ.
Chong, Edwin K. P. — Colorado State Univ.
Pezeshki, Ali — Colorado State Univ.

TuA04 Room 5

Robust Kalman and Unscented Filtering (Regular Session)

Chair: Thai, Jerome — Univ. of California, Berkeley
Co-Chair: Singla, Puneet — Univ. at Buffalo

09:30-09:50 TuA04.1

Application of Conjugate Unscented Transform in Source Parameters Estimation, pp. 2448-2453.

Madankan, Reza — State Univ. of New York at Buffalo
Singla, Puneet — Univ. at Buffalo
Singh, Tarunraj — State Univ. of New York at Buffalo

09:50-10:10 TuA04.2

Conjugate Unscented Transform Rules for Uniform Probability Density Functions, pp. 2454-2459.

Adurthi, Nagavenkat — Univ. at Buffalo
Singla, Puneet — Univ. at Buffalo
Singh, Tarunraj — State Univ. of New York at Buffalo

10:10-10:30 TuA04.3

Scaled Minimum Unscented Multiple Hypotheses Mixing Filter, pp. 2460-2465.

Menegaz, Henrique Marra — Univ. of Brasília
Santana, Pedro Henrique de Rodrigues Quemel e Assis — Univ. of Brasília
Ishihara, Joao Yoshiyuki — Univ. of Brasília
Borges, Geovany A. — Univ. de Brasilia

10:30-10:50 TuA04.4

Robust Kalman Filtering for Discrete-Time Uncertain Stochastic Systems, pp. 2466-2471.

George, Jemin — U.S. Army Res. Lab.

10:50-11:10 TuA04.5

Rauch-Tung-Striebel High-Degree Cubature Kalman Smoother, pp. 2472-2477.

Jia, Bin — Columbia Univ.
Xin, Ming — Mississippi State Univ.

TuA05 Room 6

Observers for Linear Systems (Regular Session)

Chair: Mazenc, Frederic — EPI INRIA DISCO
Co-Chair: Sanfelice, Ricardo G. — Univ. of Arizona

09:30-09:50 TuA05.1

Constructions of Interval Observers for Discrete-Time Systems of Luenberger Type, pp. 2478-2483.

Mazenc, Frederic — EPI INRIA DISCO
Dinh, Thach N. — LSS, Supelec
Niculescu, Silviu-Iulian — CNRS-Supelec

09:50-10:10 TuA05.2

A Decentralized Moving Horizon Observer for Distributed Implementation of Centralized Controllers, pp. 2484-2490.

Philipp, Peter — Tech. Univ. München
Schneider, Michael — Tech. Univ. of Munich

10:10-10:30 TuA05.3

Extended-AUDI Method for Simultaneous Determination of Causality and Models from Process Data, pp. 2491-2496.

Jiang, Benben — Tsinghua Univ.
Yang, Fan — Tsinghua Univ.
Huang, Dexian — Tsinghua Univ.
Wang, Wei — Tsinghua Univ.

10:30-10:50 TuA05.4

A Coupled Pair of Luenberger Observers for Linear Systems to Improve Rate of Convergence and Robustness to Measurement Noise, pp. 2497-2502.

Li, Yuchun — The Univ. of Arizona
Sanfelice, Ricardo G. — Univ. of Arizona

10:50-11:10 TuA05.5

Further Results on the Observability in Magneto-Inertial Navigation, pp. 2503-2508.

Batista, Pedro — Inst. Superior Técnico, Univ. Técnica de Lisboa
Petit, Nicolas — MINES ParisTech
Silvestre, Carlos — Univ. of Macau
Oliveira, P.J. — Inst. Superior Técnico

TuA06 Room 8

Control of Agent-Based Systems I (Regular Session)

Chair: de Queiroz, Marcio — Louisiana State Univ.
Co-Chair: Franco, Elisa — Univ. of California at Riverside

09:30-09:50 TuA06.1

Spatial Partitioning for Distributed Agents Driven by a Line-Of-Sight Navigation Law in a Spatiotemporal Drift Field, pp. 2509-2514.

Bakolas, Efstathios — The Univ. of Texas at Austin

09:50-10:10 TuA06.2

Formation Control of a Team of Single-Integrator Agents with Measurement Error, pp. 2515-2520.

Salehisadaghiani, Farzad — Univ. of Toronto
Asadi, Mohammad Mehdi — Concordia Univ.
Aghdam, Amir G. — Concordia Univ.

10:10-10:30 TuA06.3

Multi-Agent Formation Maintenance and Target Tracking, pp. 2521-2526.

Cai, Xiaoyu — Louisiana State Univ.
de Queiroz, Marcio — Louisiana State Univ.

10:30-10:50 TuA06.4

On Efficiency in Mean Field Differential Games, pp. 2527-2532.

Balandat, Maximilian — Univ. of California, Berkeley
Tomlin, Claire J. — UC Berkeley

10:50-11:10 TuA06.5

Receding Horizon Control of a Two-Agent System with Competitive Objectives, pp. 2533-2538.

Carron, Andrea — Univ. of Padova
Franco, Elisa — Univ. of California at Riverside

TuA07 Room 9

Quantum Control (Regular Session)

Chair: Petersen, Ian R. — Univ. of New South Wales at the Australian Defence Force Acad.
Co-Chair: Ganesan, Narayan — Stevens Inst. of Tech.

09:30-09:50 TuA07.1

On the Preservation of Commutation and Anticommutation Relations of N-Level Quantum Systems, pp. 2539-2543.

Duffaut Espinosa, L.A. — Univ. of New South Wales at ADFA
Miao, Zibo — The Australian National Univ.
Petersen, Ian R. — Univ. of New South Wales at the Australian Defence Force Acad.
Ugrinovskii, Valery — Univ. of New South Wales
James, Matthew R. — Australian National Univ.

09:50-10:10 TuA07.2

On Balanced Realization of Linear Quantum Stochastic Systems and Model Reduction by Quasi-Balanced Truncation, pp. 2544-2550.

Nurdin, Hendra Ishwara — The Univ. of New South Wales

10:10-10:30 TuA07.3

A Popov Stability Condition for Uncertain Linear Quantum Systems, pp. 2551-2555.

James, Matthew R. — Australian National Univ.
Petersen, Ian R. — Univ. of New South Wales at the Australian Defence Force Acad.
Ugrinovskii, Valery — Univ. of New South Wales

10:30-10:50 TuA07.4

Realtime Generation of the Bell States by Linear-Nonlocal Measurements and Bang-Bang Control, pp. 2556-2561.

Vu, Thanh Long — National Univ. of Singapore
Dhupia, Jaspreet Singh — Nanyang Tech. Univ.

10:50-11:10 TuA07.5

Achieving Decoherence Suppression in Open Quantum Systems by Utilizing the Model of Environmental Interactions, pp. 2562-2567.

Ganesan, Narayan — Stevens Inst. of Tech.
Tarn, Tzyh-Jong — Washington Univ.

TuA08 Room 12

Path Planning and Navigation (Regular Session)

Chair: Zhang, Fumin — Georgia Inst. of Tech.
Co-Chair: Dai, Ran — Iowa State Univ.

09:30-09:50 TuA08.1

UAV Flight Path Planning in Time Varying Complex Wind-Fields, pp. 2568-2574.

Chakrabarty, Anjan — The Pennsylvania State Univ.
Langelaan, Jack W. — Penn State Univ.

09:50-10:10 TuA08.2

Controlled Lagrangian Particle Tracking Error under Biased Flow Prediction, pp. 2575-2580.

Szwaykowska, Klementyna — Georgia Inst. of Tech.
Zhang, Fumin — Georgia Inst. of Tech.

10:10-10:30 TuA08.3

RF Source-Seeking by a Micro Aerial Vehicle Using Rotation-Based Angle of Arrival Estimates, pp. 2581-2587.

Venkateswaran, Sriram — Univ. of California Santa Barbara
Isaacs, Jason T. — Univ. of California, Santa Barbara
Fregene, Kingsley C. — Lockheed Martin Advanced Tech. Lab.
Ratmansky, Richard — Lockheed Martin
Sadler, Brian — ARL
Hespanha, Joao P. — Univ. of California, Santa Barbara
Madhow, Upamanyu — Univ. of California Santa Barbara

10:30-10:50 TuA08.4

Optimal Path Planning and Power Allocation for a Long Endurance Solar-Powered UAV, pp. 2588-2593.

Hosseini, Saghar — Univ. of Washington
Dai, Ran — Iowa State Univ.
Mesbahi, Mehran — Univ. of Washington

10:50-11:10 TuA08.5

Coverage Control of Autonomous Vehicles for Oil Spill Cleaning in Dynamic and Uncertain Environments, pp. 2594-2599.

Jin, Xin — National Renewable Energy Lab.
Ray, Asok — Pennsylvania State Univ.

TuA09 Room 13

Large-Scale Systems (Regular Session)

Chair: El-Farra, Nael H. — Univ. of California, Davis
Co-Chair: Sandberg, Henrik — KTH Royal Inst. of Tech.

09:30-09:50 TuA09.1

A Computational Method for Boundary Estimation and Control Via the Sequentially Semi Separable Approach, pp. 2600-2605.

Rice, Justin — TU Delft
van Wingerden, Jan-Willem — Delft Univ. of Tech.

09:50-10:10 TuA09.2

On the Residual of Large-Scale Lyapunov Equations for Krylov-Based Approximate Solutions, pp. 2606-2611.

Wolf, Thomas — Tech. Univ. München
Panzer, Heiko K. F. — Tech. Univ. München
Lohmann, Boris — Tech. Univ. München

10:10-10:30 TuA09.3

Quasi-Decentralized Output Feedback Model Predictive Control of Networked Process Systems with Forecast-Triggered Communication, pp. 2612-2617.

Hu, Ye — Univ. of California, Davis
El-Farra, Nael H. — Univ. of California, Davis

10:30-10:50 TuA09.4

Complexity Reduction for Parameter-Dependent Linear Systems, pp. 2618-2624.

Farokhi, Farhad — KTH - Royal Inst. of Tech.
Sandberg, Henrik — KTH Royal Inst. of Tech.
Johansson, Karl H. — Royal Inst. of Tech.

10:50-11:10 TuA09.5

Guaranteed Performance Leader-Follower Control for Multi-Agent Systems with Linear IQC-Constrained Coupling, pp. 2625-2630.

Cheng, Yi — Univ. of New South Wales
Ugrinovskii, Valery — Univ. of New South Wales

TuA10 Room 14

Adaptive Control I (Regular Session)

Chair: Xu, Weihua — Zhejiang Univ.
Co-Chair: Chowdhary, Girish — Massachusetts Inst. of Tech.

09:30-09:50 TuA10.1

Adaptive Modular Control for a Class of Nonlinear Systems with Unknown Time-Varying Parameters, pp. 2631-2636.

Zhu, Yang — State Key Lab. of Industrial Control Tech. Inst.
Wen, Changyun — Nanyang Tech. Univ.
Su, Hongye — Zhejiang Univ.
Xu, Weihua — Zhejiang Univ.
Wang, Lei — State Key Lab. of Industrial Control Tech. Inst.

09:50-10:10 TuA10.2

Simultaneous Stabilization and Optimization of Unknown, Time-Varying Systems, pp. 2637-2642.

Scheinker, Alexander — Univ. of California San Diego, Los Alamos National Lab.

10:10-10:30 TuA10.3

A Time-Varying Extremum-Seeking Control Approach, pp. 2643-2648.

Guay, Martin — Queen's Univ.
Dhaliwal, Samandeep — Hatch and associates
Dochain, Denis — Univ. Catholique de Louvain

10:30-10:50 TuA10.4

Contraction Based Adaptive Control for a Class of Nonlinearly Parameterized Systems, pp. 2649-2654.

Flores Perez, Anahí — Facultad de Ingeniería, UNAM
Grave, Ileana — UNAM
Tang, Yu — National Univ. of Mexico

10:50-11:10 TuA10.5

Bayesian Nonparametric Adaptive Control of Time-Varying Systems Using Gaussian Processes, pp. 2655-2661.

Chowdhary, Girish — Massachusetts Inst. of Tech.
Kingravi, Hassan — Georgia Inst. of Tech.
How, Jonathan P. — MIT
Vela, Patricio — Georgia Inst. of Tech.

TuA11 Room 15

Pattern Recognition and Classification (Regular Session)

Chair: Ray, Asok — Pennsylvania State Univ.
Co-Chair: Mettler, Berenice — Univ. of Minnesota

09:30-09:50 TuA11.1

Pattern Matching Using Correspondence Analysis, pp. 2662-2667.

Katariya, Ashish — Dharmsinh Desai Univ.
Detroja, Ketan P. — Indian Inst. of Tech. Hyderabad

09:50-10:10 TuA11.2

Anomaly Detection in Flight Recorder Data: A Dynamic Data-Driven Approach, pp. 2668-2673.

Das, Santanu — Nasa Ames Res. Center, Moffett Field
Sarkar, Soumalya — Pennsylvania State Univ.
Ray, Asok — Pennsylvania State Univ.
Srivastava, Ashok — Nasa Ames Res. Center, Moffett Field
Simon, Donald L. — US Army Res. Lab.

10:10-10:30 TuA11.3

Maximally Bijective Discretization for Data-Driven Modeling of Complex Systems, pp. 2674-2679.

Sarkar, Soumik — United Tech. Res. Center
Srivastav, Abhishek — United Tech. Res. Center
Shashanka, Madhusudana — United Tech. Res. Center

10:30-10:50 TuA11.4

Application of Trajectory Segmentation Techniques for Operator Skill Evaluation, pp. 2680-2686.

Li, Bin — Univ. of Minnesota
Mettler, Berenice — Univ. of Minnesota

10:50-11:10 TuA11.5

Simultaneous Detection of Multiple Environmental Contaminants through Advanced Signal Processing of Electrochemical Sensor Signals, pp. 2687-2692.

Chakraborty, Subhadeep — Univ. of Tennessee, Knoxville
Manahan, Michael — Pennsylvania State Univ.
Mench, Matthew — Univ. of Tennessee and Oak Ridge National Lab.

TuA12 Room 16

Computational Methods (Regular Session)

Chair: Simaan, Marwan A. — Univ. of Central Florida
Co-Chair: Singla, Puneet — Univ. at Buffalo

09:30-09:50 TuA12.1

Fixed Point Implementation of Active Disturbance Rejection Control for Superconducting Radio Frequency Cavities, pp. 2693-2698.

Zhao, Shen — Michigan State Univ.
Usher, Nathan — Michigan State Univ.
Morris, Dan — Michigan State Univ. / NSCL / FRIB
Vincent, John — Michigan State Univ.

09:50-10:10 TuA12.2

Polynomial Approximation of Optimal Event Triggers for State Estimation Problems Using SOSTOOLS, pp. 2699-2704.

Li, Lichun — U. of Notre Dame
Lemmon, Michael — Univ. of Notre Dame
Wang, Zhao — Univ. of Notre Dame

10:10-10:30 TuA12.3

Sequential Randomized Matrix Factorization, pp. 2705-2710.

Bopardikar, Shaunak D. — United Tech. Res. Center, Inc.
Nair, Sujit — United Tech. Res. Center
Rai, Rahul — Univ. at Buffalo, SUNY

10:30-10:50 TuA12.4

Multi-Pursuer Single-Evader Differential Games with Limited Observations, pp. 2711-2716.

Lin, Wei — Univ. of Central Florida
Qu, Zhihua — Univ. of Central Florida
Simaan, Marwan A. — Univ. of Central Florida

10:50-11:10 TuA12.5

Adaptive Kalman Filter for Estimation of Environmental Performance Variables in an Acid Gas Removal Process, pp. 2717-2721.

Paul, Prokash — West Virginia Univ.
Bhattacharyya, Debangsu — West Virginia Univ.
Turton, Richard — West Virginia Univ.
Zitney, Stephen — National Energy Tech. Lab.

TuA13 Mount Vernon Square A

Control of Communication Networks (Regular Session)

Chair: Hsu, Shun-Pin — National Chung-Hsing Univ.
Co-Chair: Campos-Delgado, D.U. — UASLP

09:30-09:50 TuA13.1

Optimal Bandwidth Control Subject to the User-Grouping Constraint, pp. 2722-2727.

Hsu, Shun-Pin — National Chung-Hsing Univ.
Hsu, Shun-Liang — National Chung-Hsing Univ.
Tsai, Sheng-han — National Chung-Hsing Univ.

09:50-10:10 TuA13.2

Design of State Feedback Controller Based on State-Dependent Delay Modeling for Congestion Control in Internet, pp. 2728-2732.

Azadegan, Masoumeh — Tarbiat Modares Univ.
Beheshti, Mohammad T. H. — Univ. of Tarbiat Modares
Tavassoli, Babak — K.N. Toosi Univ. of Tech.

10:10-10:30 TuA13.3

Power Control in the Uplink of a Wireless Multi-Carrier CDMA System, pp. 2733-2738.

Campos-Delgado, Daniel U. — UASLP
Luna-Rivera, Martin — Univ. Autónoma de San Luis Potosi

10:30-10:50 TuA13.4

Feedback Pre-Equalization in the Downlink for a Wireless MC-CDMA System, pp. 2739-2744.

Campos-Delgado, Daniel U. — UASLP
Luna-Rivera, Martin — Univ. Autónoma de San Luis Potosi

10:50-11:10 TuA13.5

Retaining Connectivity in Multi-Task Communications Network with Multiple Agents: Connectability Theory Approach, pp. 2745-2750.

Cosby, J. Alan — Univ. of Alabama in Huntsville
Shtessel, Yuri B. — Univ. of Alabama at Huntsville
Bordetsky, Alexander — Naval Postgraduate School

TuA14 Mount Vernon Square B

Optimization Applications I (Regular Session)

Chair: Tan, Ying — The Univ. of Melbourne
Co-Chair: Gans, Nicholas — Univ. of Texas at Dallas

09:30-09:50 TuA14.1

Trajectory-Based Proofs for Sampled-Data Extremum Seeking Control, pp. 2751-2756.

Khong, Sei Zhen — Univ. of Melbourne
Nesic, Dragan — Univ. of Melbourne
Tan, Ying — The Univ. of Melbourne
Manzie, Chris — The Univ. of Melbourne

09:50-10:10 TuA14.2

Multi-Robot Active SLAM with Relative Entropy Optimization, pp. 2757-2764.

Kontitsis, Michail — Univ. of Denver
Theodorou, Evangelos — Univ. of Washington
Todorov, Emanuel — Univ. of Washington

10:10-10:30 TuA14.3

Extremum Seeking Control of a Nonholonomic Mobile Robot with Limited Field of View, pp. 2765-2771.

Zhang, Yinghua — The Univ. of Texas at Dallas
Gans, Nicholas — Univ. of Texas at Dallas

10:30-10:50 TuA14.4

Distributed Extremum Seeking for Real-Time Resource Allocation, pp. 2772-2777.

Poveda, Jorge — Univ. de los Andes
Quijano, Nicanor — Univ. de los Andes

10:50-11:10 TuA14.5

Practical Smooth Minimum Time Trajectory Planning for Path Following Robotic Manipulators, pp. 2778-2783.

Zhang, Qiang — China Univ. of petroleum (East China)
Li, Shurong — China Univ. of Petroleum (East China)
Gao, Xiao-Shan — Chinese Acad. of Sciences

TuA15 Renaissance Ballroom East

Fault Detection/Accommodation I (Regular Session)

Chair: Hu, Gangshi — Praxair, Inc.
Co-Chair: Chakrabortty, Aranya — North Carolina State Univ.

09:30-09:50 TuA15.1

An LMI Based Robust Fault Detection and Isolation Scheme, pp. 2784-2789.

George, Jemin — U.S. Army Res. Lab.

09:50-10:10 TuA15.2

Robust Partial Fault Isolation for Linear Systems Using Observers, pp. 2790-2796.

Wahrburg, Arne — Tech. Univ. Darmstadt
Adamy, Jürgen — Tech. Univ. Darmstadt

10:10-10:30 TuA15.3

An Independent Component Analysis and Mutual Information Based Non-Gaussian Pattern Matching Method for Fault Detection and Diagnosis of Complex Cryogenic Air Separation Process, pp. 2797-2802.

Chen, Jingyan — McMaster Univ.
Yu, Jie — McMaster Univ.
Mori, Junichi — McMaster Univ.
Rashid, Mudassir — McMaster Univ.
Hu, Gangshi — Praxair, Inc.
Yu, Honglu — Praxair
Flores-Cerrillo, Jesus — Praxair
Megan, Lawrence — Praxair

10:30-10:50 TuA15.4

Average Run Length Function of CUSUM Test with Independent but Non-Stationary Log-Likelihood Ratios, pp. 2803-2808.

Liu, Yu — Univ. of New Orleans
Li, X. Rong — Univ. of New Orleans

10:50-11:10 TuA15.5

A Relaxed LMI Approach to Actuator Fault Detection and Isolation, pp. 2809-2814.

Sofrony, Jorge Ivan — Univ. Nacional de Colombia
Turner, Matthew C. — Univ. of Leicester
Cortés-Romero, John — Univ. Nacional de Colombia

TuA16 Renaissance Ballroom West A

Control of Vehicle Dynamics II (Regular Session)

Chair: Wang, Junmin — The Ohio State Univ.
Co-Chair: Yi, Jingang — Rutgers Univ.

09:30-09:50 TuA16.1

Wheel Slip Estimation Based on Real-Time Identification of Tire-Road Friction Conditions, pp. 2815-2820.

Chen, Changfang — Beihang Univ. (BUAA)
Jia, Yingmin — Beihang Univ.
Matsuno, Fumitoshi — Kyoto Univ.

09:50-10:10 TuA16.2

Lean and Steering Motorcycle Dynamics Reconstruction : An Unknown-Input HOSMO Approach, pp. 2821-2826.

Nehaoua, Lamri — Evry Univ.
Ichalal, Dalil — Univ. d'Evry Val d'Essonne, IBISC Lab.
Arioui, Hichem — Evry Val d'Essonne Univ.
Mammar, Said — Univ. d'Evry IBISC
Fridman, Leonid M. — National Autonomous Univ. of Mexico

10:10-10:30 TuA16.3

Robust Weighted Gain-Scheduling H∞ Vehicle Lateral Dynamics Control in the Presence of Steering System Backlash-Type Hysteresis, pp. 2827-2832.

Huang, Xiaoyu — Ohio State Univ.
Zhang, Hui — The Ohio State Univ.
Wang, Junmin — The Ohio State Univ.

10:30-10:50 TuA16.4

Nonlinear Control of a Semi-Active Suspension System Considering Actuator and State Constraints Using Methods of Optimal Control, pp. 2833-2839.

Pellegrini, Enrico — Tech. Univ. München
Spirk, Sebastian — Tech. Univ. München
Diepold, Klaus Jürgen — Tech. Univ. München
Dessort, Ronnie — Tech. Univ. München
Lohmann, Boris — Tech. Univ. München

10:50-11:10 TuA16.5

Dynamic Rider/Bicycle Pose Estimation with Force/IMU Measurements, pp. 2840-2845.

Zhang, Yizhai — Rutgers Univ.
Chen, Kuo — Rutgers Univ.
Yi, Jingang — Rutgers Univ.

TuA17 Renaissance Ballroom West B

Engine/Powertrain Control II (Regular Session)

Chair: Wang, Junmin — The Ohio State Univ.
Co-Chair: Steinbuch, Maarten — Eindhoven Univ. of Tech.

09:30-09:50 TuA17.1

Towards Combining Nonlinear and Predictive Control of Diesel Engines, pp. 2846-2853.

Huang, Mike — Univ. of Michigan
Nakada, Hayato — Toyota Motor Corp.
Polavarapu, Srinivas — Belcan Corp.
Choroszucha, Richard — Univ. of Michigan, Ann Arbor
Butts, Kenneth R. — Toyota Tech. Center
Kolmanovsky, Ilya V. — The Univ. of Michigan

09:50-10:10 TuA17.2

Incorporation of Implementation Imprecision in Automotive Control Design, pp. 2854-2859.

Edelberg, Kyle	Univ. of California, Berkeley
Shahbakhti, Mahdi	Michigan Tech. Univ.
Hedrick, Karl	Univ. of California at Berkeley

10:10-10:30 TuA17.3

Heat Exchanger Modeling and Identification for Control of Waste Heat Recovery Systems in Diesel Engines, pp. 2860-2865.

Feru, Emanuel	Eindhoven Univ. of Tech.
Willems, Frank	Eindhoven Univ. of Tech.
Rojer, Chepa	TNO Automotive Helmond
de Jager, Bram	Tech. Univ. Eindhoven
Steinbuch, Maarten	Eindhoven Univ. of Tech.

10:30-10:50 TuA17.4

Multi-Objective Control Design for Turbocharged Spark Ignited Air System: A Switching Takagi-Sugeno Model Approach, pp. 2866-2871.

Nguyen, AnhTu	Univ. of Valenciennes
Lauber, Jimmy	Univ. of Valenciennes and Hainaut Cambresis
Dambrine, Michel	Univ. de Valenciennes et du Hainaut-Cambrésis

TuA18 Grand Ballroom South

Challenges in Modeling and Control of Wind Energy Systems (Invited Session)

Chair: Bitar, Eilyan	Cornell Univ.
Co-Chair: Seiler, Peter	Univ. of Minnesota
Organizer: Bitar, Eilyan	Cornell Univ.
Organizer: Seiler, Peter	Univ. of Minnesota

09:30-09:50 TuA18.1

On the Predictive Capabilities of LES-Actuator Disk Model in Simulating Turbulence past Wind Turbines and Farms (I), pp. 2878-2883.

Yang, Xiaolei	Univ. of Minnesota
Sotiropoulos, Fotis	Univ. of Minnesota

09:50-10:10 TuA18.2

Sensor Fusion for Tethered Wings in Airborne Wind Energy (I), pp. 2884-2889.

Fagiano, Lorenzo	ETH Zurich
Huynh, Khanh	Univ. of California at Santa Barbara
Bamieh, Bassam	Univ. of California at Santa Barbara
Khammash, Mustafa H.	ETH Zurich

10:10-10:30 TuA18.3

Model Predictive and Adaptive Wind Farm Power Control (I), pp. 2890-2897.

Guo, Yi	Univ. of Oklahoma
Wang, Wei	Univ. of Oklahoma
Tang, Choon Yik	Univ. of Oklahoma
Jiang, John	Univ. of Oklahoma
Ramakumar, Rama	Oklahoma State Univ.

10:30-10:50 TuA18.4

Coordinated Control of a Wind Turbine Array for Power Maximization (I), pp. 2898-2904.

Bitar, Eilyan	Cornell Univ.
Seiler, Peter	Univ. of Minnesota

TuA19 Grand Ballroom Central

Systems and Control Applications in Diabetes (Invited Session)

Chair: Bequette, B. Wayne	Rensselaer Pol. Inst.
Co-Chair: Cinar, Ali	Illinois Inst. of Tech.
Organizer: Bequette, B. Wayne	Rensselaer Pol. Inst.

09:30-09:50 TuA19.1

Adaptive Closed-Loop Control of Blood Glucose Concentration in Patients with Type 1 Diabetes (I), pp. 2905-2910.

Turksoy, Kamuran	Illinois Inst. of Tech.
Bayrak, Elif	Illinois Inst. of Tech.
Quinn, Laurie	Univ. of Illinois Chicago
Littlejohn, Elizabeth	Univ. of Chicago
Cinar, Ali	Illinois Inst. of Tech.

09:50-10:10 TuA19.2

Model-Based Personalization Scheme of an Artificial Pancreas for Type 1 Diabetes Applications (I), pp. 2911-2916.

Lee, Joon Bok	Univ. of California at Santa Barbara
Dassau, Eyal	Univ. of California at Santa Barbara
Seborg, Dale E.	UC Santa Barbara
Doyle, Francis	Univ. of California at Santa Barbara

10:10-10:30 TuA19.3

Mealtime Correction Insulin Advisor for CGM-Informed Insulin Pen Therapy (I), pp. 2917-2922.

Vereshchetin, Paul	Univ. of Virginia
Breton, Marc	Univ. of Virginia
Patek, Stephen D.	Univ. of Virginia

10:30-10:50 TuA19.4

Developing Personalized Empirical Models for Type-I Diabetes: An Extended Kalman Filter Approach, pp. 2923-2928.

Wang, Qian	Penn State Univ.
Harsh, Saurabh	The Pennsylvania State Univ.
Freeman, Kenneth	Pennsylvania State Univ.

10:50-11:10 TuA19.5

Detecting Sensor and Insulin Infusion Set Anomalies in an Artificial Pancreas (I), pp. 2929-2933.

Baysal, Nihat	Rensselaer Pol. Inst.
Cameron, Fraser	Rensselaer Pol. Inst.
Buckingham, Bruce	Stanford Univ.
Wilson, Darrell M.	Stanford
Bequette, B. Wayne	Rensselaer Pol. Inst.

TuA20 Grand Ballroom North

Advanced Process Control Applications to Novel Power Systems (Invited Session)

Chair: Dunia, Ricardo	The Univ. of Texas at Austin
Co-Chair: Edgar, Thomas F.	Univ. of Texas at Austin
Organizer: Dunia, Ricardo	The Univ. of Texas at Austin
Organizer: Edgar, Thomas F.	Univ. of Texas at Austin
Organizer: Qin, S. Joe	Univ. of Southern California

09:30-09:50 TuA20.1

Iterative Optimal and Adaptive Control of a Near Isothermal Liquid Piston Air Compressor in a Compressed Air Energy Storage System (I), pp. 2934-2939.

Shirazi, Farzad	Univ. of Minnesota
Saadat, Mohsen	Univ. of Minnesota
Yan, Bo	Univ. of Minnesota
Li, Perry Y.	Univ. of Minnesota
Simon, Terrence W.	Univ. of Minnesota

09:50-10:10 TuA20.2

Operational Planning in Energy Networks Based on Microgeneration (I), pp. 2940-2945.

Kopanos, Georgios M.	Imperial Coll. London, Centre for Process Systems Engineering
Georgiadis, Michael C.	Aristotle Univ. of Thessaloniki
Pistikopoulos, Efstratios N.	Imperial Coll.

10:10-10:30 TuA20.3

Dynamic Optimization of a Solar Thermal Energy Storage System Over a 24 Hour Period Using Weather Forecasts (I), pp. 2946-2951.

Powell, Kody	Univ. of Texas at Austin
Hedengren, John	Brigham Young Univ.
Edgar, Thomas F.	Univ. of Texas at Austin

10:30-10:50 TuA20.4

Nonlinear Model Predictive Control for a Heavy-Duty Gas Turbine Power Plant (I), pp. 2952-2957.

Kim, Jong Suk	Univ. of Texas at Austin
Powell, Kody	Univ. of Texas at Austin
Edgar, Thomas F.	Univ. of Texas at Austin

10:50-11:10 TuA20.5

Optimal Scheduling of Chiller Plant with Thermal Energy Storage Using Mixed Integer Linear Programming, pp. 2958-2963.

Deng, Kun	Univ. of Illinois, Urbana-Champaign
Sun, Yu	Univ. of Illinois, Urbana-Champaign
Chakraborty, Amit	Siemens Corp. Res.
Lu, Yan	Siemens
Brouwer, Jack	National Fuel Cell Res. Center, Univ. of California at
Mehta, Prashant G.	Univ. of Illinois, Urbana-Champaign

TuA21 Congressional Hall A

Biologically-Inspired Methods and Models (Regular Session)

Chair: Ghose, Debasish	Indian Inst. of Science
Co-Chair: Iwasaki, Tetsuya	UCLA

09:30-09:50 TuA21.1

Collision Avoidance in Biological Systems Using Collision Cones, pp. 2964-2971.

Boardman, Beth L.	Univ. of California, San Diego
Hedrick, Tyson L.	Univ. of North Carolina, Chapel Hill
Theriault, Diane H.	Boston Univ.
Fuller, Nathan W.	Boston Univ.
Betke, Margrit	Boston Univ.
Morgansen, Kristi A.	Univ. of Washington

09:50-10:10 TuA21.2

Control Design for Coordinated Oscillations with Central Pattern Generator, pp. 2972-2977.

Iwasaki, Tetsuya	UCLA
Wen, Min	Zhejiang Univ.

10:10-10:30 TuA21.3

Pursuit, Herding and Evasion: A Three-Agent Model of Caribou Predation, pp. 2978-2983.

Scott, William	Princeton Univ.
Leonard, Naomi Ehrich	Princeton Univ.

10:30-10:50 TuA21.4

Boundary Mapping of 3-Dimensional Regions, pp. 2984-2989.

Menon, Prathyush P	Univ. of Exeter
Ghose, Debasish	Indian Inst. of Science

10:50-11:10 TuA21.5

State-Estimation and Cooperative Control with Uncertain Time, pp. 2990-2995.

Carver, Sean	Johns Hopkins Univ.
Fortune, Eric	New Jersey Inst. of Tech.
Cowan, Noah	Johns Hopkins Univ.

TuA22 Congressional Hall B

Control of Networked Systems IV (Regular Session)

Chair: Chen, Tongwen	Univ. of Alberta
Co-Chair: Daafouz, Jamal	CRAN, UMR CNRS - Nancy Univ.

09:30-09:50 TuA22.1

Networked Realization of Discrete-Time Controllers, pp. 2996-3001.

Miao, Fei	Univ. of Pennsylvania
Pajic, Miroslav	Univ. of Pennsylvania
Mangharam, Rahul	Univ. of Pennsylvania
Pappas, George J.	Univ. of Pennsylvania

09:50-10:10 TuA22.2

Event-Driven Communication for Sampled-Data Control Systems, pp. 3002-3007.

Meng, Xiangyu	Univ. of Alberta
Chen, Tongwen	Univ. of Alberta

10:10-10:30 TuA22.3

Event-Based Dynamic Output Feedback Control for Networked Control Systems, pp. 3008-3013.

Zhang, Xianming — Central Queensland Univ.
Han, Qing-Long — Central Queensland Univ.

10:30-10:50 TuA22.4

Modelling and Dynamic Output Feedback Controller Design for Networked Control Systems, pp. 3014-3019.

Wang, Yu-Long — Central Queensland Univ.
Han, Qing-Long — Central Queensland Univ.
Liu, Wei-Ting — Jiangsu Univ. of Science and Tech.

10:50-11:10 TuA22.5

Near-Optimal Strategies for Nonlinear Networked Control Systems Using Optimistic Planning, pp. 3020-3025.

Busoniu, Lucian — CNRS-CRAN and Univ. of Lorraine
Postoyan, Romain — CNRS-CRAN
Daafouz, Jamal — Univ. de Loraine, CRAN, CNRS

TuB01 Room 2

Formation Flying (Regular Session)

Chair: Gaspar, Peter — MTA SZTAKI
Co-Chair: Pagilla, Prabhakar R. — Oklahoma State Univ.

13:30-13:50 TuB01.1

Exact Formation Control with Very Coarse Information, pp. 3026-3031.

Jafarian, Matin — Univ. of Groningen
De Persis, Claudio — Univ. of Groningen

13:50-14:10 TuB01.2

Readiness in Formation Control of Multi-Robot System, pp. 3032-3038.

Xu, Zhihao — Univ. of Wuerzburg
Kawashima, Hiroaki — Kyoto Univ.
Schilling, Klaus — Univ. Würzburg

14:10-14:30 TuB01.3

Formation Control of Dynamic Nonholonomic Mobile Robots with Curvature Constraints Via Potential Functions, pp. 3039-3044.

Gouvea, Josiel — CEFET/RJ
Lizarralde, Fernando — Federal Univ. of Rio de Janeiro
Hsu, Liu — COPPE/UFRJ

14:30-14:50 TuB01.4

Vehicle Formations Using Directed Information Flow Graphs, pp. 3045-3050.

Konduri, Shyamprasad — Oklahoma State Univ.
Pagilla, Prabhakar R. — Oklahoma State Univ.
Darbha, Swaroop — Texas A & M Univ.

14:50-15:10 TuB01.5

A Nonlinear Small-Gain Approach to Distributed Formation Control of Nonholonomic Mobile Robots, pp. 3051-3056.

Liu, Tengfei — Pol. Inst. of New York Univ.
Jiang, Zhong-Ping — Pol. Inst. NYU

15:10-15:30 TuB01.6

Unfalsified Uncertainty Modeling for Computing Tight Bounds on Peak Spacing Errors in Vehicle Platoons, pp. 3057-3062.

Rödönyi, Gábor — Comp. and Automation Res. Inst.
Gaspar, Peter — MTA SZTAKI
Bokor, Jozsef — MTA SZTAKI Hungarian Acad. of Sciences

TuB02 Room 3

Filtering (Regular Session)

Chair: Simandl, Miroslav — Univ. of West Bohemia in Pilsen
Co-Chair: Bhattacharya, R. — Texas A&M

13:30-13:50 TuB02.1

H Infinity Filtering for Polynomial Systems Over Switching Delayed Observations, pp. 3063-3068.

Hernandez-Gonzalez, Miguel — Autonomous Univ. of Nuevo Leon
Basin, Michael V. — Autonomous Univ. of Nuevo Leon
Loukianov, Alexander G. — CINVESTAV IPN GDl

13:50-14:10 TuB02.2

Nonlinear Filtering with Transfer Operator, pp. 3069-3074.

Dutta, Parikshit — INRIA Rhone Alpes
Halder, Abhishek — Texas A&M Univ.
Bhattacharya, Raktim — Texas A&M

14:10-14:30 TuB02.3

Aspects and Comparison of Matrix Decompositions in Unscented Kalman Filter, pp. 3075-3080.

Straka, Ondrej — Univ. of West Bohemia
Dunik, Jindrich — Univ. of West Bohemia
Simandl, Miroslav — Univ. of West Bohemia in Pilsen
Havlík, Jindřich — Univ. of West Bohemia

14:30-14:50 TuB02.4

Marginal Marginalised Particle Filter, pp. 3081-3086.

Ajgl, Jiří — Univ. of West Bohemia
Simandl, Miroslav — Univ. of West Bohemia in Pilsen

14:50-15:10 TuB02.5

Preliminary Results on Globally Asymptotically Stable Simultaneous Localization and Mapping in 3-D, pp. 3087-3092.

Lourenço, Pedro — Inst. Superior Técnico / Univ. Técnica de Lisboa
Guerreiro, Bruno J. N. — Inst. Superior Tecnico
Batista, Pedro — Inst. Superior Técnico, Univ. Técnica de Lisboa
Oliveira, Paulo Jorge — Inst. Superior Técnico
Silvestre, Carlos — Univ. of Macau

15:10-15:30 TuB02.6

Constrained Dual Ensemble Kalman Filter for State and Parameter Estimation, pp. 3093-3098.

Bavdekar, Vinay — Univ. of Alberta
Prakash, Jagadeesan — MIT campus
Shah, Sirish L. — Univ. of Alberta
Gopaluni, Bhushan — Univ. of British Columbia

TuB03 Room 4

Estimation II (Regular Session)

Chair: Petersen, Ian R. — Univ. of New South Wales at the Australian Defence Force Acad.

Co-Chair: D'Amato, Anthony — Univ. of Michigan

13:30-13:50 TuB03.1

Direct Data-Driven Design of Sparse Controllers, pp. 3099-3104.

Formentin, Simone — Pol. di Milano

Karimi, Alireza — EPFL

13:50-14:10 TuB03.2

On L2-Regularization for Virtual Reference Feedback Tuning, pp. 3105-3110.

Formentin, Simone — Pol. di Milano

Karimi, Alireza — EPFL

14:10-14:30 TuB03.3

Minimum-Norm Input Reconstruction for Nonminimum-Phase Systems, pp. 3111-3116.

D'Amato, Anthony — Ford Motor Company

14:30-14:50 TuB03.4

Performance Analysis of Linear Estimators with Unknown Changes in Sensors Characteristics, pp. 3117-3122.

Bopardikar, Shaunak D. — United Tech. Res. Center, Inc.

Speranzon, Alberto — United Tech. Res. Center

Zhang, Shuo — United Tech. Res. Center

Sinopoli, Bruno — Carnegie Mellon Univ.

14:50-15:10 TuB03.5

Kernel-Based Non-Asymptotic State Estimation for Linear Continuous-Time Systems, pp. 3123-3128.

Pin, Gilberto — Electrolux Professional S.p.A. (Italy)

Lovera, Marco — Pol. di Milano

Assalone, Andrea — Univ. of Trieste

Parisini, Thomas — Imperial Coll. & Univ. of Trieste

15:10-15:30 TuB03.6

Adaptive Continuous Homodyne Phase Estimation Using Robust Fixed-Interval Smoothing, pp. 3129-3134.

Roy, Shibdas — Univ. of New South Wales, Canberra

Petersen, Ian R. — Univ. of New South Wales at the Australian Defence Force Acad.

Huntington, Elanor — Univ. of New South Wales

TuB04 Room 5

Nonlinear Model Predictive Control (Regular Session)

Chair: Allgower, Frank — Univ. of Stuttgart

Co-Chair: Christofides, P.D. — Univ. of California at Los Angeles

13:30-13:50 TuB04.1

Unifying Dynamic Economic Optimization and Model Predictive Control for Optimal Process Operation, pp. 3135-3140.

Ellis, Matthew — Univ. of California, Los Angeles

Christofides, Panagiotis D. — Univ. of California at Los Angeles

13:50-14:10 TuB04.2

On Convergence of Averagely Constrained Economic MPC and Necessity of Dissipativity for Optimal Steady-State Operation, pp. 3141-3146.

Muller, Matthias A. — Univ. of Stuttgart

Angeli, David — Imperial Coll.

Allgower, Frank — Univ. of Stuttgart

14:10-14:30 TuB04.3

Encirclement of Multiple Targets Using Model Predictive Control, pp. 3147-3152.

Hafez, Ahmed Taimour K. — Queen's Univ.

Marasco, Anthony — Royal Military Coll. of Canada

Givigi, Sidney — Royal Military Coll. of Canada

Beaulieu, Alain — Royal Military Coll. of Canada

Rabbath, Camille Alain — Defence R&D Canada

14:30-14:50 TuB04.4

Coordinated-Distributed MPC of Nonlinear Systems Based on Price-Driven Coordination, pp. 3153-3158.

Hassanzadeh, Bardia — Univ. of Alberta

Pakravesh, Hallas — Univ. of Alberta

Liu, Jinfeng — Univ. of Alberta

Forbes, J. Fraser — Univ. of Alberta

14:50-15:10 TuB04.5

NMPC Based on Huber Penalty Functions to Handle Large Tracking Errors of Quadrature States, pp. 3159-3164.

Gros, Sebastien — KU Leuven

Diehl, Moritz — Katholieke Univ. Leuven

15:10-15:30 TuB04.6

On Fixed-Time Performance of Lyapunov-Based Economic Model Predictive Control of Nonlinear Systems, pp. 3165-3170.

Heidarinejad, Mohsen — UCLA

Liu, Jinfeng — Univ. of Alberta

Christofides, Panagiotis D. — Univ. of California at Los Angeles

TuB05 Room 6

Linear Systems (Regular Session)

Chair: Bazaei, Ali — Univ. of Newcastle, Australia

Co-Chair: Rojas, Alejandro J. — Univ. de Concepción

13:30-13:50 TuB05.1

A Note on the Input-Output Structure of Linear Periodic Continuous-Time Systems with Real-Valued Coefficients, pp. 3171-3176.

Jikuya, Ichiro — Nagoya Univ.

Hodaka, Ichijo — Univ. of Miyazaki

13:50-14:10 TuB05.2

Control Over Direct and Feedback Path Signal-To-Noise Ratio Constrained Channels, pp. 3177-3182.

Rojas, Alejandro J. — Univ. de Concepción

14:10-14:30 TuB05.3

Finite Frequency Domain Design of Dynamic Controllers for Differential Linear Repetitive Processes, pp. 3183-3188.

Paszke, Wojciech — Univ. of Zielona Gora

Rogers, Eric — Univ. of Southampton

Galkowski, Krzysztof — Univ. of Zielona Gora

14:30-14:50 TuB05.4

Harmonic Control: A Natural Way to Bridge Resonant Control and Repetitive Control, pp. 3189-3193.

Zhou, Keliang — Univ. of Canterbury
Lu, Wenzhou — Southeast Univ.
Yang, Yongheng — Aalborg Univ.
Blaabjerg, Frede — Aalborg Univ.

14:50-15:10 TuB05.5

Realization of a Class of Compensators by Modulated-Demodulated Structures with Application in Tracking of Biased Sinusoids, pp. 3194-3199.

Bazaei, Ali — Univ. of Newcastle, Australia
Moheimani, S.O. Reza — Univ. of Newcastle

15:10-15:30 TuB05.6

A Method for Designing Step-Tracking Controllers for Systems with Saturating Actuators, pp. 3200-3205.

Kabamba, Pierre T. — Univ. of Michigan
Meerkov, Semyon M. — Univ. of Michigan
Ossareh, Hamid R. — Univ. of Michigan

TuB06 Room 8

Control of Agent-Based Systems II (Regular Session)

Chair: How, Jonathan P. — MIT
Co-Chair: Bakolas, Efstathios — The Univ. of Texas at Austin

13:30-13:50 TuB06.1

Optimal Partitioning for Task Assignment of Spatially Distributed Vehicles Based on Quadratic Performance Criteria, pp. 3206-3211.

Bakolas, Efstathios — The Univ. of Texas at Austin

13:50-14:10 TuB06.2

Optimal Distribution of Heterogeneous Agents under Delays, pp. 3212-3217.

Nogales, Juan M. — Pontificia Univ. Javeriana
Finke, Jorge — Pontificia Univ. Javeriana

14:10-14:30 TuB06.3

Multiattribute Utility Copulas for Multiobjective Control, pp. 3218-3223.

Valicka, Christopher G. — Univ. of Illinois at Urbana-Champaign
Stipanovic, Dusan M. — Univ. of Illinois at Urbana-Champaign
Abbas, Ali E. — Univ. of Illinois at Urbana-Champaign

14:30-14:50 TuB06.4

Performance Bounds on Decomposable Systems, pp. 3224-3229.

Eichler, Annika — Hamburg Univ. of Tech. (TUHH)
Werner, Herbert — Hamburg Univ. of Tech.

14:50-15:10 TuB06.5

Risk Allocation Strategies for Distributed Chance-Constrained Task Allocation, pp. 3230-3236.

Ponda, Sameera — MIT
Johnson, Luke — MIT
How, Jonathan P. — MIT

15:10-15:30 TuB06.6

Indoor Navigation for Mobile Robots Using Predictive Fields, pp. 3237-3241.

Pradhan, Ninad — Clemson Univ.
Burg, Timothy C. — Clemson Univ.
Birchfield, Stan — Clemson Univ.
Hasirci, Ugur — DUZCE Univ.

TuB07 Room 9

Stability of Hybrid Systems (Regular Session)

Chair: Lawrence, Douglas A. — Ohio Univ.
Co-Chair: Hayakawa, Tomohisa — Tokyo Inst. of Tech.

13:30-13:50 TuB07.1

Matrix Approach to Stabilizability of Deterministic Finite Automata, pp. 3242-3247.

Xu, Xiangru — Acad. of Mathematics and Systems Science, Chinese Acad. of S
Zhang, Yanqiong — Acad. of Mathematics and Systems Science, Chinese Academy of Sci
Hong, Yiguang — Chinese Acad. of Sciences

13:50-14:10 TuB07.2

Lie-Algebraic Conditions for Stability of Linear Impulsive Systems, pp. 3248-3253.

Lawrence, Douglas A. — Ohio Univ.

14:10-14:30 TuB07.3

On the Stability of Predictive Controllers for Linear Systems with Variable Time Delays, pp. 3254-3259.

Ladino, Andres A — Pontificia Univ. Javeriana
Patino, Diego — Pontificia Univ. Javeriana

14:30-14:50 TuB07.4

Consensus in Multi-Agent Systems with Non-Uniform Sampling, pp. 3260-3265.

Wu, Jian — Univ. of Victoria
Shi, Yang — Univ. of Victoria
Li, Huxiong — Wenzhou Univ.

14:50-15:10 TuB07.5

Stabilizing Discrete-Time Switched Linear Stochastic Systems Using Periodically Available Imprecise Mode Information, pp. 3266-3271.

Cetinkaya, Ahmet — Tokyo Inst. of Tech.
Hayakawa, Tomohisa — Tokyo Inst. of Tech.

15:10-15:30 TuB07.6

Results on the Asymptotic Stability Properties of Desynchronization in Impulse-Coupled Oscillators, pp. 3272-3277.

Phillips, Sean — Univ. of Arizona
Sanfelice, Ricardo G. — Univ. of Arizona

TuB08 Room 12

Control of Distributed Parameter Systems (Regular Session)

Chair: Werner, Herbert — Hamburg Univ. of Tech.
Co-Chair: Ishihara, Abraham K. — Carnegie-Mellon Univ.

13:30-13:50 TuB08.1

Distributed Control of Parameter-Varying Spatially Interconnected Systems Using Parameter-Dependent Lyapunov Functions, pp. 3278-3283.

Liu, Qin — Hamburg Univ. of Tech.
Hoffmann, Christian — Hamburg Univ. of Tech.
Werner, Herbert — Hamburg Univ. of Tech.

13:50-14:10 TuB08.2

Identification of Surface Tension in Mean Curvature Flow, pp. 3284-3289.

Yang, Insoon — Univ. of California, Berkeley
Tomlin, Claire J. — UC Berkeley

14:10-14:30 TuB08.3

Exponential Stability of a Class of PDE's with Dynamic Boundary Control, pp. 3290-3295.

Ramirez, Hector — FEMTO-ST / ENSMM
Le Gorrec, Yann — ENSMM, FEMTO-ST / AS2M

14:30-14:50 TuB08.4

Inversion Based Tracking Control for a Distributed Parameter System with Spatially Distributed Control Input, pp. 3296-3301.

Malchow, Florian — Robert Bosch GmbH
Alt, Simon — Univ. of Stuttgart
Sawodny, Oliver — Univ. of Stuttgart

14:50-15:10 TuB08.5

Stabilization of Linearized Korteweg-De Vries Systems with Anti-Diffusion, pp. 3302-3307.

Tang, Shuxia — Univ. of California, San Diego
Krstic, Miroslav — Univ. of California, San Diego

15:10-15:30 TuB08.6

A Stability Result for Distributed Control of the Beam, pp. 3308-3313.

Ishihara, Abraham K. — Carnegie-Mellon Univ.
Nguyen, Nhan — NASA Ames Res. Center
Balas, Mark — Univ. of Wyoming

TuB09 Room 13

Estimation in Networked Systems I (Regular Session)

Chair: Liu, Weiyi — Purdue Univ.
Co-Chair: Roy, Sandip — Washington State Univ.

13:30-13:50 TuB09.1

An Event-Based Scheduling Solution for Remote State Estimation of Two LTI Systems under Bandwidth Constraint, pp. 3314-3319.

Han, Duo — Hong Kong Univ. of Science and Tech.
Zhang, Huanshui — Shandong Univ.
Shi, Ling — Hong Kong Univ. of Science and Tech.

13:50-14:10 TuB09.2

On the Use of a Relay for Kalman Filtering Over Packet Dropping Links, pp. 3320-3325.

Leong, Alex — Univ. of Melbourne
Quevedo, Daniel E. — The Univ. of Newcastle

14:10-14:30 TuB09.3

State Detection from Local Measurements in Network Synchronization Processes, pp. 3326-3331.

Chen, Chih-wei — Washington State Univ.
Roy, Sandip — Washington State Univ.

14:30-14:50 TuB09.4

DiSync: Accurate Distributed Clock Synchronization in Mobile Ad-Hoc Networks from Noisy Difference Measurements, pp. 3332-3337.

Liao, Chenda — Univ. of Florida
Barooah, Prabir — Univ. of Florida

14:50-15:10 TuB09.5

A New Distributed State Estimation Technique for Power Networks, pp. 3338-3343.

Tai, Xin — Univ. of Newcastle, Australia
Lin, Zhiyun — Zhejiang Univ.
Fu, Minyue — Univ. of Newcastle
Sun, Yuanzhang — Tsinghua Univ.

15:10-15:30 TuB09.6

Security Analysis for Cyber-Physical Systems against Stealthy Deception Attacks, pp. 3344-3349.

Kwon, Cheolhyeon — Purdue Univ.
Liu, Weiyi — Purdue Univ.
Hwang, Inseok — Purdue Univ.

TuB10 Room 14

Adaptive Control II (Regular Session)

Chair: Boskovic, Jovan D. — Scientific Systems Co. Inc.
Co-Chair: Annaswamy, Anuradha — Massachusetts Inst. of Tech.

13:30-13:50 TuB10.1

On the Effect of Input Filtering and Fast Adaptation in Model Reference Adaptive Control, pp. 3350-3355.

Ortega, Romeo — LSS-SUPELEC

13:50-14:10 TuB10.2

Adaptive Output Feedback Actuator Nonlinearity Compensation for Multivariable Systems, pp. 3356-3361.

Tao, Gang — Univ. of Virginia
Burkholder, Jason — Barron Associates, Inc.
Guo, Jiaxing — Univ. of Virginia

14:10-14:30 TuB10.3

Guaranteed Delay Margins for Adaptive Systems with State Variables Accessible, pp. 3362-3369.

Matsutani, Megumi — Massachusetts Inst. of Tech.
Annaswamy, Anuradha — Massachusetts Inst. of Tech.
Lavretsky, Eugene — The Boeing Co.

14:30-14:50 TuB10.4

Performance Analysis of a Simple L1-Adaptive Controller, pp. 3370-3375.

Boskovic, Jovan D. — Scientific Systems Co. Inc.
Mehra, Raman K. — Scientific Systems Co. Inc.

14:50-15:10 TuB10.5

Adaptive Systems with Closed−loop Reference Models, Part I: Transient Performance, pp. 3376-3383.

Gibson, Travis — Massachusetts Inst. of Tech.
Annaswamy, Anuradha — Massachusetts Inst. of Tech.
Lavretsky, Eugene — The Boeing Co.

15:10-15:30 TuB10.6

Adaptive Control Via Embedding in Reproducing Kernel Hilbert Spaces, pp. 3384-3389.

Kurdila, Andrew J. — Virginia Tech.
Lei, Yu — Virginia Tech.

TuB11 — Room 15

Optimal Control III (Regular Session)

Chair: Hindi, Haitham — Walmart Lab.
Co-Chair: Acikmese, Behcet — The Univ. of Texas at Austin

13:30-13:50 TuB11.1

Waffle Mode Mitigation in Adaptive Optics Systems: A Constrained Receding Horizon Control Approach, pp. 3390-3396.

Konnik, Mikhail — The Univ. of Newcastle
De Dona, Jose Adrian — The Univ. of Newcastle

13:50-14:10 TuB11.2

MDP Based Optimal Control for a Colloidal Self-Assembly System, pp. 3397-3402.

Xue, Yuzhen — Georgia Inst. of Tech.
Beltran-Villegas, Daniel — Johns Hopkins Univ.
Bevan, Michael — Johns Hopkins Univ.
Grover, Martha — Georgia Inst. of Tech.

14:10-14:30 TuB11.3

Discrete Objective-Based Control for Self-Optimizing Systems, pp. 3403-3408.

Krüger, Martin — Univ. of Paderborn
Remirez, Andria — Rice Univ.
Keßler, Jan Henning — Univ. of Paderborn, Heinz Nixdorf Inst.
Trächtler, Ansgar — Univ. of Paderborn

14:30-14:50 TuB11.4

Optimal Trajectory Profile Generation of Continuous Processes Using Multimodel Framework, pp. 3409-3414.

Jain, Rajni — Honeywell Tech. Solutions
Gugaliya, Jinendra — ABB Global Industries Services Ltd
Srinivasan, Ranganathan — Honeywell Tech. Solutions

14:50-15:10 TuB11.5

Lossless Convexification for a Class of Optimal Control Problems with Quadratic State Constraints, pp. 3415-3420.

Harris, Matthew — Univ. of Texas at Austin
Acikmese, Behcet — The Univ. of Texas at Austin

15:10-15:30 TuB11.6

Optimal Minimax Pursuit Evasion on a Manhattan Grid, pp. 3421-3428.

Kalyanam, Krishnamoorthy — Infoscitex Corp.
Darbha, Swaroop — Texas A & M Univ.
Khargonekar, Pramod P. — Univ. of Florida
Casbeer, David W. — Air Force Res. Lab.
Chandler, Phillip R. — USAF
Pachter, Meir — AFIT/ENG

TuB12 — Room 16

Control Applications IV (Regular Session)

Chair: Stotsky, Alexander A. — Chalmers Univ. of Tech.
Co-Chair: Espinosa-Perez, Gerardo — Univ. Nacional Autonoma de Mexico

13:30-13:50 TuB12.1

Control of Wind Turbines: A Tutorial on Proactive Perspectives, pp. 3429-3436.

Stotsky, Alexander A. — Chalmers Univ. of Tech.
Egardt, Bo — Chalmers Univ. of Tech.
Carlson, Ola — Chalmers Univ. of Tech.

13:50-14:10 TuB12.2

Speed-Sensorless Control of Switched-Reluctance Motors with Uncertain Payload, pp. 3437-3442.

Loria, Antonio — CNRS
Espinosa-Perez, Gerardo — Univ. Nacional Autonoma de Mexico
Chumacero-Polanco, Erik Alfredo — L2S supelec
Aguado-Rojas, Missie — UNAM

14:10-14:30 TuB12.3

Inversion-Based Output Regulation of Chemotaxis Using a Constrained Influx of Chemical Signaling Molecules, pp. 3443-3448.

Kishida, Masako — Univ. of Canterbury
Braatz, Richard D. — Massachusetts Inst. of Tech.

14:30-14:50 TuB12.4

Multi-Input Shaping Control for Multi-Hoist Cranes, pp. 3449-3454.

Vaughan, Joshua — Univ. of Louisiana at Lafayette
Yoo, Jieun — Texas A&M Univ.
Knight, Nathan — Georgia Inst. of Tech.
Singhose, William — Georgia Inst. of Tech.

14:50-15:10 TuB12.5

Comparative Evaluation of Model Predictive Control Strategies for a Building HVAC System, pp. 3455-3460.

Putta, Vamsi — Purdue Univ.
Zhu, Guangwei — Purdue Univ.
Kim, Donghun — Purdue Univ.
Hu, Jianghai — Purdue Univ.
Braun, James E. — Purdue Univ.

15:10-15:30 TuB12.6

Mathematical Description of AC Resistance Spot Welding Control Problem and Limits of Its Controller Design, pp. 3461-3466.

Yue, Zuogong — The Hong Kong Univ. of Science and Tech.
Zhou, Kang — Hong Kong Univ. of Science and Tech.
Cai, Lilong — Hong Kong Univ. of Science & Tech.

TuB13 — Mount Vernon Square A

Power Systems I (Regular Session)

Chair: Biegel, Benjamin — Aalborg Univ.
Co-Chair: Chakrabortty, Aranya — North Carolina State Univ.

13:30-13:50 TuB13.1

A Graph-Theoretic Algorithm for Disturbance Localization in Large Power Grids Using Residue Estimation, pp. 3467-3472.

Nudell, Tom — North Carolina State Univ.
Chakrabortty, Aranya — North Carolina State Univ.

13:50-14:10 TuB13.2

Observer-Based Control of a Tethered Wing Wind Power System: Indoor Real-Time Experiment, pp. 3473-3478.

Hably, Ahmad — GÏPSA-Lab.
Lozano Rogelio Jr, Rogelio — gipsa-Lab.
Alamir, Mazen — CNRS / Univ. of Grenoble
Dumon, Jonathan — CNRS, Gipsa-Lab.

14:10-14:30 TuB13.3

Self-Sustaining Strategy for a Hybrid Electric Bike, pp. 3479-3484.

Spagnol, Pierfrancesco — Pol. di Milano
Corno, Matteo — Pol. di Milano
Mura, Roberto — Pol. di Milano
Savaresi, Sergio M. — Pol. Di Milano

14:30-14:50 TuB13.4

Adaptive Estimation of State of Charge for Lithium-Ion Batteries, pp. 3485-3491.

Fang, Huazhen — Univ. of California, San Diego
Wang, Yebin — Mitsubishi Electric Res. Lab.
Sahinoglu, Zafer — MERL
Wada, Toshihiro — Mitsubishi Electric Corp.
Hara, Satoshi — Mitsubishi Electric Corp.

14:50-15:10 TuB13.5

A Distributed Command Governor Approach for Voltage Regulation in Medium Voltage Power Grids with Distributed Generation, pp. 3492-3497.

Tedesco, Francesco — Univ. della Calabria
Casavola, Alessandro — Univ. della Calabria

15:10-15:30 TuB13.6

Information Modeling for Direct Control of Distributed Energy Resources, pp. 3498-3504.

Biegel, Benjamin — Aalborg Univ.
Andersen, Palle — Aalborg Univ.
Stoustrup, Jakob — Aalborg Univ.
Hansen, Lars Henrik — Dong Energy
Tackie, David Victor — Danish Energy Association

TuB14 — Mount Vernon Square B

Optimization Applications II (Regular Session)

Chair: Fullmer, Daniel — Brigham Young Univ.
Co-Chair: Kumar, Manish — Univ. of Toledo

13:30-13:50 TuB14.1

Integration of Planning, Scheduling and Stochastic Inventory under Uncertainty for Flexible Process Networks, pp. 3505-3510.

Yue, Dajun — Northwestern Univ.
You, Fengqi — Northwestern Univ.

13:50-14:10 TuB14.2

Integration of Scheduling and Dynamic Optimization for Sequential Batch Processes, pp. 3511-3516.

Chu, Yunfei — Northwestern Univ.
You, Fengqi — Northwestern Univ.

14:10-14:30 TuB14.3

Press Sheet Optimization for Open Loop Control of Industrial Scale Gang-Run Printing, pp. 3517-3522.

Fullmer, Daniel — Brigham Young Univ.
Warnick, Sean — Brigham Young Univ.

14:30-14:50 TuB14.4

Efficient OOK/DS-CDMA Detection Threshold Selection, pp. 3523-3528.

Katselis, Dimitrios — ACCESS Linnaeus Center, KTH
Fischione, Carlo — Royal Inst. of Tech.
Hjalmarsson, Håkan — KTH Royal Inst. of Tech.

14:50-15:10 TuB14.5

A Proper Orthogonal Decomposition Based Algorithm for Smoke Filtering in Videos, pp. 3529-3534.

Garg, Sushil — Univ. of Cincinnati
Sharma, Balaji — Univ. of Cincinnati
Cohen, Kelly — Univ. of Cincinnati
Kumar, Manish — Univ. of Toledo

TuB15 — Renaissance Ballroom East

Fault Detection/Accommodation II (Regular Session)

Chair: Mhaskar, Prashant — McMaster Univ.
Co-Chair: Chen, Tongwen — Univ. of Alberta

13:30-13:50 TuB15.1

Application of Principal Component Pursuit to Process Fault Detection and Diagnosis, pp. 3535-3540.

Cheng, Yue — Univ. of Alberta
Chen, Tongwen — Univ. of Alberta

13:50-14:10 TuB15.2

Geometric Fault Detection and Isolation of Two-Dimensional (2D) Systems, pp. 3541-3548.

Baniamerian, Amir — Concordia Univ.
Meskin, Nader — Qatar Univ.
Khorasani, Khashayar — Concordia Univ.

14:10-14:30 TuB15.3

Distributed Fault Detection for Uncertain Nonlinear Systems: A Network Delay Compensation Strategy, pp. 3549-3554.

Boem, Francesca	Univ. of Trieste, Trieste, Italy
Ferrari, Riccardo M.G.	Danieli Automation S.p.A.
Parisini, Thomas	Imperial Coll. & Univ. of Trieste
Polycarpou, Marios M.	Univ. of Cyprus

14:30-14:50 TuB15.4

Distributed Fault Detection for Sensor Networks with Markovian Sensing Topology, pp. 3555-3560.

Ge, Xiaohua	Central Queensland Univ.
Han, Qing-Long	Central Queensland Univ.
Jiang, Xiefu	Hangzhou Dianzi Univ.

14:50-15:10 TuB15.5

Design of Active Inputs for Set-Based Fault Diagnosis, pp. 3561-3566.

Scott, Joseph	Massachusetts Inst. of Tech.
Findeisen, Rolf	OVG Univ. Magdeburg
Braatz, Richard D.	Massachusetts Inst. of Tech.
Raimondo, Davide Martino	Univ. degli Studi di Pavia

15:10-15:30 TuB15.6

Actuator and Sensor Fault Isolation of Nonlinear Systems, pp. 3567-3572.

Du, Miao	McMaster Univ.
Scott, James	McMaster Univ.
Mhaskar, Prashant	McMaster Univ.

TuB16 Renaissance Ballroom West A

Modeling, Analysis, and Control of Systems with Hysteresis (Invited Session)

Chair: Tan, Xiaobo	Michigan State Univ.
Co-Chair: Iyer, Ram Venkataraman	Texas Tech. Univ.
Organizer: Tan, Xiaobo	Michigan State Univ.
Organizer: Iyer, Ram Venkataraman	Texas Tech. Univ.

13:30-13:50 TuB16.1

Closed-Loop Analysis for Systems with Fast Linear Dynamics Preceded by Hysteresis (I), pp. 3573-3578.

Edardar, Mohamed	Michigan State Univ.
Tan, Xiaobo	Michigan State Univ.
Khalil, Hassan K.	Michigan State Univ.

13:50-14:10 TuB16.2

Inversion-Free Adaptive Control of Uncertain Systems with Shape-Memory-Alloy Actuation (I), pp. 3579-3584.

Al Janaideh, Mohammad	The Univ. of Jordan
Bernstein, Dennis S.	Univ. of Michigan

14:10-14:30 TuB16.3

Robust Constrained Trajectory Tracking for Magnetically Controlled Linear Actuators with Hysteresis (I), pp. 3585-3590.

Ekanayake, Dinesh Bandara	Western Illinois Univ.

14:30-14:50 TuB16.4

Cascading Effects in the Moving Preisach Model (I), pp. 3591-3598.

Rachinskii, Dmitrii	Univ. of Texas at Dallas
Amann, Andreas	Univ. Coll. Cork
McCarthy, Stephen	Univ. Coll. Cork
Brokate, Martin	TU Munich

14:50-15:10 TuB16.5

Handling Memory Properties of Smart Materials: A Review on Modeling, Compensation and Control (I), pp. 3599-3604.

Davino, Daniele	Univ. of Sannio, Benevento
Krejci, Pavel	Acad. of Sciences of the Czech Republic
Visone, Ciro	Univ. of Sannio, Benevento

15:10-15:30 TuB16.6

Model of a Contact Lens and Tear Layer at Static Equilibrium (I), pp. 3605-3612.

Athukorallage, Bhagya	Texas Tech. Univ.
Iyer, Ram Venkataraman	Texas Tech. Univ.

TuB17 Renaissance Ballroom West B

Modeling, Estimation and Control of Advanced Engine Sensing and Actuation (Invited Session)

Chair: Shahbakhti, Mahdi	Michigan Tech. Univ.
Co-Chair: Shim, Taehyun	Univ. of Michigan-Dearborn
Organizer: Shahbakhti, Mahdi	Michigan Tech. Univ.
Organizer: Shim, Taehyun	Univ. of Michigan-Dearborn
Organizer: Canova, Marcello	The Ohio State Univ.
Organizer: Scacchioli, Annalisa	New York Univ.

13:30-13:50 TuB17.1

Twin-Model Method for Ethanol Detection in Flex Fuel Vehicles (I), pp. 3613-3618.

Jankovic, Mrdjan	Ford Res. & Advanced Engineering
Hagner, David	Ford Motor Company

13:50-14:10 TuB17.2

Dynamic, Output-Feedback, Gain-Scheduling Control of an Electric Variable Valve Timing System (I), pp. 3619-3624.

White, Andrew	Michigan State Univ.
Choi, Jongeun	Michigan State Univ.
Zhu, Guoming	Michigan State Univ.

14:10-14:30 TuB17.3

Model-Based Within-A-Cycle Estimation of Rate Shaping for a Piezoelectric Fuel Injector (I), pp. 3625-3630.

Shen, Jin	Purdue Univ.
Ruikar, Neha	Purdue Univ.
Le, Dat	Purdue Univ.
Shaver, Gregory M.	Purdue Univ.

14:30-14:50 TuB17.4

Novel Non-Intrusive Sensor for Piston Position Measurement (I), pp. 3631-3636.

Taghvaeeyan, Saber	Univ. of Minnesota
Rajamani, Rajesh	Univ. of Minnesota
Sun, Zongxuan	Univ. of Minnesota

14:50-15:10 TuB17.5

Design and Control of a Direct Fuel Injector with Rate Shaping Capability (I), pp. 3637-3642.

Wu, Chienshin	Univ. of Minnesota, Twin Cities
Sun, Zongxuan	Univ. of Minnesota

15:10-15:30 TuB17.6

Dynamic Modeling of Piezoelectric Injector-Enabled Rate Shaping (I), pp. 3643-3648.

Le, Dat	Purdue Univ.
Shen, Jin	Purdue Univ.
Ruikar, Neha	Purdue Univ.
Shaver, Gregory M.	Purdue Univ.

TuB18 Grand Ballroom South

Wind Energy Systems and Control (Invited Session)

Chair: Chen, Dongmei	The Univ. of Texas at Austin
Co-Chair: Laks, Jason	Univ. of Colorado at Boulder
Organizer: Chen, Dongmei	The Univ. of Texas at Austin
Organizer: Vermillion, Christopher	Altaeros Energies

13:30-13:50 TuB18.1

Effect of Storage Characteristics on Wind Intermittency Mitigation Effectiveness (I), pp. 3649-3654.

Jaworsky, Christina	Massachusetts Inst. of Tech.
Turitsyn, Konstantin	Massachusetts Inst. of Tech.

13:50-14:10 TuB18.2

MIMO Control of Wind Turbine Using Direct Shooting Method (I), pp. 3655-3660.

Yan, Zeyu	Univ. of Texas at Austin
Hall, John	Univ. of Texas - Austin, Dept of Mechanical Eng.
Chen, Dongmei	The Univ. of Texas at Austin

14:10-14:30 TuB18.3

Wind Turbine Fault Detection and Isolation Using Support Vector Machines and a Residual-Based Method (I), pp. 3661-3666.

Zeng, Jianwu	Univ. of Nebraska-Lincoln
Lu, Dingguo	Univ. of Nebraska-Lincoln
Zhao, Yue	Univ. of Nebraska-Lincoln
Zhang, Zhe	Univ. of Nebraska-Lincoln
Qiao, Wei	Univ. of Nebraska-Lincoln
Gong, Xiang	Univ. of Nebraska-Lincoln

14:30-14:50 TuB18.4

Certificate for Safe Emergency Shutdown of Wind Turbines (I), pp. 3667-3672.

Wisniewski, Rafal	Aalborg Univ.
Svenstrup, Mikael	Aalborg Univ.
Pedersen, Andreas, Søndergaard	Aalborg Univ.
Steiniche, Christian, Sigge	Aalborg Univ.

14:50-15:10 TuB18.5

Spectral Models for Evaluating the Effect of Wind Evolution on Wind Turbine Preview Control (I), pp. 3673-3679.

Laks, Jason	Univ. of Colorado at Boulder
Simley, Eric	Univ. of Colorado Boulder
Pao, Lucy Y.	Univ. of Colorado Boulder

15:10-15:30 TuB18.6

Fuzzy Scheduler Fault Tolerant Control Method for WES Subject to Instrument Faults, pp. 3680-3685.

Ibrahim, Elkhatib	LAGIS FRE CNRS 3033, Lille, France
Aitouche, Abdel	LAGIS/HEI
Ghorbani, Reza	Univ. of Hawaii
Bayart, Mireille	Pol.

TuB19 Grand Ballroom Central

Laser Interferometry for Precision Measurements (Tutorial Session)

Chair: Abramovitch, Daniel Y.	Agilent Lab.
Co-Chair: Johnstone, Eric	Agilent Tech.
Organizer: Abramovitch, Daniel Y.	Agilent Lab.
Organizer: Johnstone, Eric	Agilent Tech.

13:30-14:30 TuB19.1

A Tutorial on Laser Interferometry for Precision Measurements (I), pp. 3686-3703.

Loughridge, Russell	Agilent Tech. Inc.
Abramovitch, Daniel Y.	Agilent Lab.

14:30-14:50 TuB19.2

Control Methodologies for Precision Positioning Systems (I), pp. 3704-3711.

Chen, Xu	Univ. of California at Berkeley
Tomizuka, Masayoshi	Univ. of California, Berkeley

14:50-15:10 TuB19.3

Periodic Error Correction in Heterodyne Interferometry (I), pp. 3712-3716.

Ganguly, Vasishta	Univ. of North Carolina at Charlotte
Schmitz, Tony	Univ. of North Carolina at Charlotte
Yun, Janet	Agilent Tech.
Loughridge, Russell	Agilent Tech. Inc.

15:10-15:30 TuB19.4

Quintessential Phase: A Method of Mitigating Turbulence Effects in Interferometer Measurements of Precision Motion (I), pp. 3717-3722.

Johnstone, Eric	Agilent Tech.
Abramovitch, Daniel Y.	Agilent Lab.

TuB20 Grand Ballroom North

Process Control for Novel Power Generation Systems and Regulations (Invited Session)

Chair: Dunia, Ricardo	The Univ. of Texas at Austin
Co-Chair: Edgar, Thomas F.	Univ. of Texas at Austin
Organizer: Dunia, Ricardo	The Univ. of Texas at Austin
Organizer: Edgar, Thomas F.	Univ. of Texas at Austin
Organizer: Qin, S. Joe	Univ. of Southern California

13:30-13:50 TuB20.1

Monitoring of Carbon Dioxide Capture Processes (I), pp. 3723-3728.

Dunia, Ricardo	The Univ. of Texas at Austin
Edgar, Thomas F.	Univ. of Texas at Austin
Rochelle, Gary	Univ. of Texas at Austin
Nixon, Mark	Emerson Process Management

13:50-14:10 TuB20.2

An Effective Multi-Loop Control System to Improve Control Performance of CO2 Capture (I), pp. 3729-3734.

Ziaiifashami, Sepideh	Univ. of Texas
Rochelle, Gary	Univ. of Texas at Austin
Edgar, Thomas F.	Univ. of Texas at Austin

14:10-14:30 TuB20.3

Latent Storage-Enhanced Distributed Temperature Control in Hydrogen Microreactors (I), pp. 3735-3740.

Pattison, Richard	Univ. of Texas at Austin
Baldea, Michael	The Univ. of Texas at Austin

14:30-14:50 TuB20.4

Model Predictive Control with a Rigorous Model of a Solid Oxide Fuel Cell (I), pp. 3741-3746.

Jacobsen, Lee Thomas	Brigham Young Univ.
Hedengren, John	Brigham Young Univ.
Spivey, Benjamin	ExxonMobil

14:50-15:10 TuB20.5

Nonlinear Model Predictive Control of IGCC Plants with Membrane Reactors for Carbon Capture (I), pp. 3747-3752.

Lima, Fernando V.	West Virginia Univ.
Amrit, Rishi	Shell Projects and Tech.
Tsapatsis, Michael	Univ. of Minnesota
Daoutidis, Prodromos	Univ. of Minnesota

15:10-15:30 TuB20.6

Experimental Study of Economic Model Predictive Control in Building Energy Systems (I), pp. 3753-3758.

Ma, Jingran	Univ. of Southern California
Qin, S. Joe	Univ. of Southern California
Salsbury, Timothy	Johnson Controls, Inc.

TuB21 Congressional Hall A

Systems Biology (Regular Session)

Chair: Kashima, Kenji	Osaka Univ.
Co-Chair: Palumbo, Pasquale	IASI-CNR

13:30-13:50 TuB21.1

Feedback Stabilization of Non-Uniform Spatial Pattern in Reaction-Diffusion Systems, pp. 3759-3764.

Kashima, Kenji	Osaka Univ.
Ogawa, Toshiyuki	Meiji Univ.
Sakurai, Tatsunari	Chiba Univ.

13:50-14:10 TuB21.2

Gene Target Identification for Biofilm-Associated Pathogens: An Application to Pseudomonas Aeruginosa, pp. 3765-3770.

Xu, Zhaobin	Chemical Engineering, Villanova Univ. Villanova, PA
Fang, Xin	The Henry M. Jackson Foundation for the Advancement of Military M
Wood, Thomas	Depts of Chemical Engineering and Biochemistry and Molecul
Huang, Zuyi (Jacky)	Villanova Univ.

14:10-14:30 TuB21.3

Some Results on the Structural Properties and the Solution of the Chemical Master Equation, pp. 3771-3776.

Borri, Alessandro	Istituto di Analisi dei Sistemi ed Informatica "A. Ruberti" (IAS
Carravetta, Francesco	IASI-CNR
Mavelli, Gabriella	Consiglio Nazionale Delle Ricerche
Palumbo, Pasquale	IASI-CNR

14:30-14:50 TuB21.4

Elucidating Xylose Metabolism of Scheffersomyces Stipitis by Integrating Principal Component Analysis with Flux Balance Analysis, pp. 3777-3782.

Liang, Meng	Auburn Univ.
He, Qinghua	Tuskegee Univ.
Jeffries, Thomas W.	Univ. of Wisconsin-Madison
Wang, Jin	Auburn Univ.

14:50-15:10 TuB21.5

Optimal Design of Phosphorylation-Based Insulation Devices, pp. 3783-3789.

Rivera, Phillip	Massachusetts Inst. of Tech.
Del Vecchio, Domitilla	Massachusetts Insitute of Tech.

15:10-15:30 TuB21.6

Treating Acute Myeloid Leukemia Via HSC Transplantation: Preliminary Study of Multi-Objective Personalization Strategies, pp. 3790-3795.

Chakrabarty, Ankush	Purdue Univ.
Pearce, Serena	Purdue Univ.
Nelson, Robert	Indiana School of Medicine
Rundell, Ann E.	Purdue Univ.

TuB22 Congressional Hall B

Cooperative Networked Control Systems (Regular Session)

Chair: Zavlanos, Michael M.	Duke Univ.
Co-Chair: Bushnell, Linda	Univ. of Washington

13:30-13:50 TuB22.1

A Distributed Algorithm for Cooperative Relay Beamforming, pp. 3796-3801.

Chatzipanagiotis, Nikolaos	Duke Univ.
Petropulu, Athina	Rutgers, State Univ. of New Jersey
Zavlanos, Michael M.	Duke Univ.

13:50-14:10 TuB22.2

Leader Selection and Network Assembly for Controllability of Leader-Follower Networks, pp. 3802-3807.

Yazicioglu, Ahmet Yasin	Georgia Inst. of Tech.
Egerstedt, Magnus	Georgia Inst. of Tech.

14:10-14:30 TuB22.3

H Infinity Almost Synchronization for Non-Identical Introspective Multi-Agent Systems under External Disturbances, pp. 3808-3813.

Peymani Foroushani, Ehsan	Norwegian Univ. of Science & Tech.
Grip, Håvard Fjær	Washington State Univ.
Saberi, Ali	Washington State Univ.
Wang, Xu	New York Univ.
Fossen, Thor I.	Norwegian Univ. of Science & Tech.

14:30-14:50 TuB22.4

Joint Leader and Link Weight Selection for Fast Convergence in Multi-Agent Systems, pp. 3814-3820.

Clark, Andrew	Univ. of Washington
Bushnell, Linda	Univ. of Washington
Poovendran, Radha	Univ. of Washington, Seattle

14:50-15:10 TuB22.5

Team-Triggered Coordination of Networked Systems, pp. 3821-3826.

Nowzari, Cameron	Univ. of California, San Diego
Cortes, Jorge	Univ. of California, San Diego

15:10-15:30 TuB22.6

A General Framework for Distributed Vote Aggregation, pp. 3827-3832.

Touri, Behrouz	Georgia Tech. Univ.
Farnoud, Farzad	Univ. of Illinois at Urbana-Champaign
Nedich, Angelia	Univ. of Illinois, Urbana-Champaign
Milenkovic, Olgica	UIUC

TuC01 Room 2

Sensor Fusion (Regular Session)

Chair: Kalandros, M.K.	Johns Hopkins Applied Physics Lab.
Co-Chair: Ray, Asok	Pennsylvania State Univ.

16:00-16:20 TuC01.1

A Method of Camera Selection Based on Partially Observable Markov Decision Process Model in Camera Networks, pp. 3833-3839.

Qian, Li	Nanjing Univ. China
Zhengxing, Sun	Nanjing Univ.
Songle, Chen	Nanjing Univ.
Yudi, Liu	Nanjing Univ.

16:20-16:40 TuC01.2

Optimal Fusion Rules in Team Classification under Three Decision Structures, pp. 3840-3845.

Pan, Songya	Univ. of Michigan
Hyun, Baro	Univ. of Michigan
Kabamba, Pierre T.	Univ. of Michigan
Girard, Anouck	Univ. of Michigan, Ann Arbor

16:40-17:00 TuC01.3

Spatiotemporal Information Fusion for Fault Detection in Shipboard Auxiliary Systems, pp. 3846-3851.

Sarkar, Soumalya	Pennsylvania State Univ.
Virani, Nurali	Pennsylvania State Univ. Univ. Park, PA
Yasar, Murat	Tech. Inc.
Ray, Asok	Pennsylvania State Univ.
Sarkar, Soumik	United Tech. Res. Center

17:00-17:20 TuC01.4

Distributed Fusion Kalman Filtering with Communication Constraints, pp. 3852-3857.

Chen, Bo	Zhejiang Univ. of Tech.
Yu, Li	Zhejiang Univ. of Tech.
Zhang, Wenan	Zhejiang Univ. of Tech.
Song, Haiyu	Zhejiang Univ. of Tech.

17:20-17:40 TuC01.5

A Comparative Study of Optical Flow and Traditional Sensors in UAV Navigation, pp. 3858-3863.

Chao, Haiyang	West Virginia Unviersity
Gu, Yu	West Virginia Univ.
Gross, Jason	West Virgnia Univ.
Guo, Guodong	West Virgnia Univ.
Fravolini, Mario Luca	Univ. Di Perugia
Napolitano, M.R.	West Virginia Univ.

17:40-18:00 TuC01.6

Optimal Information Collection for Nonlinear Systems an Application to Multiple Target Tracking and Localization, pp. 3864-3869.

Adurthi, Nagavenkat	Univ. at Buffalo
Singla, Puneet	Univ. at Buffalo
Singh, Tarunraj	State Univ. of New York at Buffalo

TuC02 Room 3

Robust Control (Regular Session)

Chair: Yaz, Edwin	Marquette Univ.
Co-Chair: Apkarian, Pierre	ONERA & Mathematics Inst. Univ. Paul Sabatier

16:00-16:20 TuC02.1

Robust State Feedback Control for Discrete-Time Linear Systems Via LMIs with a Scalar Parameter, pp. 3870-3875.

Morais, Cecília	State Univ. of Campinas (Unicamp)
Braga, Marcio	Univ. of Campinas (UNICAMP)
Oliveira, Ricardo C. L. F.	Univ. of Campinas - UNICAMP
Peres, Pedro L. D.	Univ. of Campinas

16:20-16:40 TuC02.2

A Measurement-Based Approach for Tuning Reduced-Order Controllers, pp. 3876-3881.

Khadraoui, Sofiane	Texas A&M Univ. at Qatar
Nounou, Hazem	Texas A&M Univ. at Qatar
Nounou, Mohamed	Texas A&M Univ. at Qatar
Datta, Aniruddha	Texas A&M Univ.
Bhattacharyya, Shankar P.	Texas A & M Univ.

16:40-17:00 TuC02.3

Finite-Time Bounded State-Dependent Control of a Class of Discrete-Time Nonlinear Systems, pp. 3882-3887.

ElBsat, Mohammad	Marquette Univ.
Yaz, Edwin	Marquette Univ.

17:00-17:20 TuC02.4

Tuning Controllers against Multiple Design Requirements, pp. 3888-3893.

Apkarian, Pierre	ONERA & Mathematics Inst. Univ. Paul Sabatier

17:20-17:40 TuC02.5

Nonsmooth H-Infinity Output Regulation with Application to a Coal-Fired Boiler/Turbine Unit with Actuator Deadzone, pp. 3894-3899.

Bentsman, Joseph	Univ. of Illinois at Urbana-Champaign
Orlov, Yury	CICESE
Aguilar, Luis T.	Inst. Pol. Nacional

17:40-18:00 TuC02.6

Robust Mu-Synthesis Control of a Four-Wire Autonomous Electronically-Interfaced Distributed Generation Unit for Mitigation of Harmonic Voltage Disturbance, pp. 3900-3905.

Haddadi, Aboutaleb — McGill Univ.
Modirnia, Rahi — McGill Univ.
Boulet, Benoit — McGill Univ.

TuC03 Room 4

Identification: Optimal Input Design and Convex Methods (Regular Session)

Chair: Braatz, Richard D. — Massachusetts Inst. of Tech.
Co-Chair: Van den Hof, Paul M.J. — Eindhoven Univ. of Tech.

16:00-16:20 TuC03.1

Convex Relaxation of Sequential Optimal Input Design for a Class of Structured Large-Scale Systems: Process Gain Estimation, pp. 3906-3911.

Kim, Kwang-Ki — UIUC/MIT
Braatz, Richard D. — Massachusetts Inst. of Tech.

16:20-16:40 TuC03.2

Experiment Design for Batch-To-Batch Model-Based Learning Control, pp. 3912-3917.

Forgione, Marco — Delft Univ. of Tech.
Bombois, Xavier — Delft Univ. of Tech.
Van den Hof, Paul M.J. — Eindhoven Univ. of Tech.

16:40-17:00 TuC03.3

Generation of Excitation Signals with Prescribed Autocorrelation for Input and Output Constrained Systems, pp. 3918-3923.

Larsson, Christian A. — KTH Royal Inst. of Tech.
Hägg, Per — KTH Royal Inst. of Tech.
Hjalmarsson, Håkan — KTH Royal Inst. of Tech.

17:00-17:20 TuC03.4

Optimal Input Signal Design for Data-Centric Estimation Methods, pp. 3924-3929.

Deshpande, Sunil — Arizona State Univ.
Rivera, Daniel E. — Arizona State Univ.

17:20-17:40 TuC03.5

Identification of Hammerstein Systems Using Input Amplitude Multiplexing, pp. 3930-3935.

Coffer, Benjamin James — Univ. of Michigan
Aljanaideh, Khaled — The Univ. of Michigan, Ann Arbor
Bernstein, Dennis S. — Univ. of Michigan

17:40-18:00 TuC03.6

Stable Nonlinear Identification from Noisy Repeated Experiments Via Convex Optimization, pp. 3936-3941.

Tobenkin, Mark M. — Massachusetts Inst. of Tech.
Manchester, Ian R. — Univ. of Sydney
Megretski, Alexandre — Massachusetts Inst. of Tech.

TuC04 Room 5

Model Predictive Control Applications (Regular Session)

Chair: Franze', Giuseppe — Univ. Degli Studi della Calabria
Co-Chair: Kyriakopoulos, K.J. — National Tech. Univ. of Athens

16:00-16:20 TuC04.1

Model Predictive Quality Control of Polymethyl Methacrylate, pp. 3942-3947.

Corbett, Brandon — McMaster Univ.
Macdonald, Brian — McMaster Univ.
Mhaskar, Prashant — McMaster Univ.

16:20-16:40 TuC04.2

An Obstacle Avoidance Receding Horizon Control Scheme for Autonomous Vehicles, pp. 3948-3953.

Franze', Giuseppe — Univ. Degli Studi della Calabria
Lucia, Walter — Univ. of Calabria (UNICAL)
Muraca, Pietro Maria — Univ. Della Calabria

16:40-17:00 TuC04.3

Direct Control Implementation of a Refrigeration System in Smart Grid, pp. 3954-3959.

Pedersen, Rasmus — Aalborg Univ.
Schwensen, John — Aalborg Univ.
Sivabalan, Senthuran — Aalborg Univ.
Corazzol, Chiara — Aalborg Univ.
Shafiei, Seyed Ehsan — Aalborg Univ.
Vinther, Kasper — Aalborg Univ.
Stoustrup, Jakob — Aalborg Univ.

17:00-17:20 TuC04.4

Dynamic Encirclement of a Moving Target Using Decentralized Model Predictive Control, pp. 3960-3966.

Marasco, Anthony — Royal Military Coll. of Canada
Givigi, Sidney — Royal Military Coll. of Canada
Rabbath, Camille Alain — Defence R&D Canada
Beaulieu, Alain — Royal Military Coll. of Canada

17:20-17:40 TuC04.5

Model Predictive Control for the Navigation of a Nonholonomic Vehicle with Field-Of-View Constraints, pp. 3967-3972.

Maniatopoulos, Spyros — Cornell Univ.
Panagou, Dimitra — Univ. of Illinois at Urbana-Champaign
Kyriakopoulos, Kostas J. — National Tech. Univ. of Athens

17:40-18:00 TuC04.6

Model Predictive Control of an Overhead Crane Using Constraint Substitution, pp. 3973-3978.

Käpernick, Bartosz — Univ. of Ulm
Graichen, Knut — Univ. of Ulm

TuC05 Room 6

Optimization I (Regular Session)

Chair: Smith, Stephen L. — Univ. of Waterloo
Co-Chair: Cao, Xumeng — Johns Hopkins Univ.

16:00-16:20 TuC05.1

Jacobian Matrix Singularity Based Pareto Front Identification for Multi-Objective Problems, pp. 3979-3984.

Brown, Brandon — Univ. at Buffalo
Singh, Tarunraj — State Univ. of New York at Buffalo
Rai, Rahul — Univ. at Buffalo, SUNY

16:20-16:40 TuC05.2

A Reformulation-Linearization Method for the Global Optimization of Large-Scale Mixed-Integer Linear Fractional Programming Problems and Cyclic Scheduling Application, pp. 3985-3990.

Yue, Dajun — Northwestern Univ.
You, Fengqi — Northwestern Univ.

16:40-17:00 TuC05.3

A New Strategy for Worst-Case Design from Costly Numerical Simulations, pp. 3991-3996.

Marzat, Julien — ONERA - The French Aerospace Lab.
Walter, Eric — CNRS-Supelec-Univ. Paris-Sud
Piet-Lahanier, Helene — ONERA

17:00-17:20 TuC05.4

The Maximum Traveling Salesman Problem with Submodular Rewards, pp. 3997-4002.

Jawaid, Syed Talha — Univ. of Waterloo
Smith, Stephen L. — Univ. of Waterloo

17:20-17:40 TuC05.5

Demonstration of Enhanced Monte Carlo Computation of the Fisher Information for Complex Problems, pp. 4003-4008.

Cao, Xumeng — IBM/JHU

17:40-18:00 TuC05.6

Fuel Minimization of a Moving Vehicle in Suburban Traffic, pp. 4009-4014.

Galpin, Thomas — Univ. of Illinois at Urbana Champaign
Voulgaris, Petros G. — Univ. of Illinois, Urbana-Champaign

TuC06 Room 8

Consensus Control (Regular Session)

Chair: Lin, Zongli — Univ. of Virginia
Co-Chair: Zhai, Guisheng — Shibaura Inst. of Tech.

16:00-16:20 TuC06.1

Non-Smooth Lyapunov Function for Nonlinear Consensus Problem, pp. 4015-4020.

Chen, Yao — Beijing Jiaotong Univ.
Dong, Hairong — Beijing Jiaotong Univ.
Lu, Jinhu — Chinese Acad. of Sciences
Sun, Xubin — School of Electronic and Information Engineering

16:20-16:40 TuC06.2

Consensus Algorithms for Linear Multi-Agent Systems with Switching Topologies by Internal Mode Control, pp. 4021-4026.

Wang, Yinqiu — Beijing Inst. of Tech.
Wu, Qinghe — Beijing Inst. of Tech.
Wang, Yao — Beijing Inst. of Tech.

16:40-17:00 TuC06.3

Consensus of High-Order Multi-Agent Systems with Input and Communication Delays--State Feedback Case, pp. 4027-4032.

Zhou, Bin — Harbin Inst. of Tech.
Lin, Zongli — Univ. of Virginia

17:00-17:20 TuC06.4

Position Tracking of Multi Double-Integrator Dynamics by Bounded Distributed Control without Velocity Measurements, pp. 4033-4038.

Zhu, Bo — Univ. of Electronic Science and Tech. of China
Sun, Wei — Information Education Tech. Center, Southwest Univ. of
Meng, Chang — Univ. of Electronic Science and Tech. of China

17:20-17:40 TuC06.5

A Consensus Control Strategy for Unicycles in the Presence of Disturbances, pp. 4039-4043.

Ajorlou, Amir — Concordia Univ.
Asadi, Mohammad Mehdi — Concordia Univ.
Aghdam, Amir G. — Concordia Univ.
Blouin, Stephane — DRDC Atlantic

TuC07 Room 9

Stability of Nonlinear Systems I (Regular Session)

Chair: Jiang, Zhong-Ping — Pol. Inst. NYU
Co-Chair: Hudon, Nicolas — Univ. Catholique de Louvain

16:00-16:20 TuC07.1

Global Lyapunov Functions and a Hierarchical Control Scheme for Networks of Robotic Agents, pp. 4050-4055.

Maidens, John — Univ. of California, Berkeley
Li, Michael Y. — Univ. of Alberta

16:20-16:40 TuC07.2

Robust Stability of a Dynamic Traffic Assignment Model with Uncertainties, pp. 4056-4061.

Liu, Tengfei — Pol. Inst. of New York Univ.
Jiang, Zhong-Ping — Pol. Inst. NYU
Xin, Wuping — KLD Engineering, P.C. & KLD Assoc., Inc.
McShane, William R. — KLD Engineering, P.C. & KLD Assoc., Inc.

16:40-17:00 TuC07.3

Obstacle Avoidance for an Extremum Seeking System Using a Navigation Function, pp. 4062-4067.

Dürr, Hans-Bernd — Univ. of Stuttgart
Stankovic, Milos S. — KTH Royal Inst. of Tech.
Dimarogonas, Dimos V. — Royal Inst. of Tech.
Ebenbauer, Christian — Univ. of Stuttgart
Johansson, Karl H. — Royal Inst. of Tech.

17:00-17:20 TuC07.4

Dissipative-Based Dynamic State Feedback Design Using a Geometric Decomposition, pp. 4068-4073.

Hudon, Nicolas — Univ. Catholique de Louvain
Bao, Jie — The Univ. of New South Wales

17:20-17:40 TuC07.5

Nonlinear Static State Feedback Controller Design to Enlarge the Domain of Attraction for a Class of Nonlinear Systems, pp. 4074-4079.

Saleme, Ahmed — Univ. of Wuppertal
Tibken, Bernd — Univ. of Wuppertal

17:40-18:00 TuC07.6

Instability Criteria for Lur'e Systems Toward Oscillation Analysis of Uncertain Gene Networks, pp. 4080-4085.

Inoue, Masaki — Tokyo Inst. of Tech.
Imura, Jun-ichi — Tokyo Inst. of Tech.
Kashima, Kenji — Osaka Univ.
Aihara, Kazuyuki — Univ. of Tokyo

TuC08 Room 12

Flexible Structures and Mechatronics (Regular Session)

Chair: Alleyne, Andrew G. — Univ. of Illinois, Urbana-Champaign
Co-Chair: Krauss, Ryan — Southern Illinois Univ. Edwardsville

16:00-16:20 TuC08.1

A Robust Two Degree-Of-Freedom Controller a Robust Two Degree-Of-Freedom Controller for Systems with Delay, pp. 4086-4091.

Xie, Yangmin — Univ. of Illinois, Urbana-Champaign
Alleyne, Andrew G. — Univ. of Illinois, Urbana-Champaign

16:20-16:40 TuC08.2

An LPV Discrete-Time Controller for the Rejection of Harmonic Time-Varying Disturbances in a Lightweight Flexible Structure, pp. 4092-4097.

Duarte, Franklyn — Clausthal Univ. of Tech.
Ballesteros, Pablo — Clausthal Univ. of Tech.
Shu, Xinyu — Clausthal Univ. of Tech.
Bohn, Christian — Tech. Univ. Clausthal

16:40-17:00 TuC08.3

Modeling of Coupled Bending and Torsional Oscillations of an Inclined Aerial Ladder, pp. 4098-4103.

Pertsch, Alexander — Univ. Stuttgart
Sawodny, Oliver — Univ. of Stuttgart

17:00-17:20 TuC08.4

Discrete-Time Transfer Matrix Modeling of Flexible Robots under Feedback Control, pp. 4104-4109.

Krauss, Ryan — Southern Illinois Univ. Edwardsville
Okasha, Mohamed — Southern Illinois Univ. Edwardsville

17:20-17:40 TuC08.5

Sub-Optimal Control Design of a Semi-Active Vibration Reduction System, pp. 4110-4115.

Wang, Yebin — Mitsubishi Electric Res. Lab.
Utsunomiya, Kenji — Mitsubishi Electric Corp.

17:40-18:00 TuC08.6

Intersample Ripple Resulting from Discrete-Time Feedforward Control, pp. 4116-4121.

Chen, Hua — Univ. of Colorado Boulder
Li, Yang — Univ. of Colorado, Boulder
Pao, Lucy Y. — Univ. of Colorado Boulder

TuC09 Room 13

Estimation in Networked Systems II (Regular Session)

Chair: Allgower, Frank — Univ. of Stuttgart
Co-Chair: Zhu, Quanyan — Univ. of Illinois, Urbana-Champaign

16:00-16:20 TuC09.1

L1 Adaptive Control of Uncertain Networked Control Systems, pp. 4122-4127.

Wang, Xiaofeng — Univ. of South Carolina
Kharisov, Evgeny — Univ. of Illinois at Urbana-Champaign (UIUC)
Hovakimyan, Naira — Univ. of Illinois, Urbana-Champaign

16:20-16:40 TuC09.2

Networked State Estimation Over a Shared Communication Medium, pp. 4128-4133.

Xia, Meng — Univ. of Notre Dame
Gupta, Vijay — Univ. of Notre Dame
Antsaklis, Panos J. — Univ. of Notre Dame

16:40-17:00 TuC09.3

Topology Design in Networked Estimation: A Generic Approach, pp. 4134-4139.

Doostmohammadian, Mohammadreza — Tufts Univ.
Khan, Usman — Tufts Univ.

17:00-17:20 TuC09.4

An Impact-Aware Defense against Stuxnet, pp. 4140-4147.

Clark, Andrew — Univ. of Washington
Zhu, Quanyan — Univ. of Illinois, Urbana-Champaign
Poovendran, Radha — Univ. of Washington, Seattle
Basar, Tamer — Univ. of Illinois, Urbana-Champaign

17:20-17:40 TuC09.5

Retransmitting Lost Measurements to Improve Remote Estimation, pp. 4148-4152.

Blind, Rainer — Univ. of Stuttgart
Allgower, Frank — Univ. of Stuttgart

17:40-18:00 TuC09.6

Efficient Distributed Sensing Using Adaptive Censoring Based Inference, pp. 4153-4158.

Mu, Beipeng — MIT
Chowdhary, Girish — Massachusetts Inst. of Tech.
How, Jonathan P. — MIT

TuC10 Room 14

Adaptive Control Applications (Regular Session)

Chair: Lynch, Alan Francis — Univ. of Alberta
Co-Chair: Batista, Pedro — Inst. Superior Técnico, Univ. Técnica de Lisboa

16:00-16:20 TuC10.1

Experimental Validation of an Adaptive Control for a Voltage Source Converter, pp. 4159-4164.

M. Milasi, Rasoul — Univ. of Alberta
Lynch, Alan Francis — Univ. of Alberta
Li, Yun Wei — Univ. of Alberta

16:20-16:40 TuC10.2

Active Noise Control of Impulsive Noise with Selective Outlier Elimination, pp. 4165-4170.

Bergamasco, Marco — Pol. di Milano
Della Rossa, Fabio — Pol. di Milano
Piroddi, Luigi — Pol. di Milano

16:40-17:00 TuC10.3

An Empirical Weight Update Approach for Nonlinear Active Noise Control, pp. 4171-4176.

Morici, Simone — Pol. diMilano
Spiriti, Emanuele — Dipart. di Elettronica e Informazione, Pol.
Piroddi, Luigi — Pol. di Milano

17:00-17:20 TuC10.4

LMI-Based H2 Adaptive Filtering for 3D Positioning and Tracking Systems, pp. 4177-4182.

Gaspar, Tiago — Inst. Superior Técnico, Tech. Univ. of Lisbon
Oliveira, Paulo Jorge — Inst. Superior Técnico

TuC11 Room 15

Optimal Control IV (Regular Session)

Chair: Vamvoudakis, Kyriakos — Univ. of California, Santa Barbara
Co-Chair: Murphey, Todd — Northwestern Univ.

16:00-16:20 TuC11.1

Multi-Agent Discrete-Time Graphical Games: Interactive Nash Equilibrium and Value Iteration Solution, pp. 4189-4195.

Abouheaf, Mohammed — Univ. of Texas at Arlington Res. Inst. The Univ.
Lewis, Frank L. — Univ. of Texas at Arlington
Haesaert, Sofie — Delft Univ. of Tech.
Babuska, R. — Delft Univ. of Tech.
Vamvoudakis, Kyriakos — Univ. of California, Santa Barbara

16:20-16:40 TuC11.2

Trajectory Optimization for Continuous Ergodic Exploration, pp. 4196-4201.

Miller, Lauren — Northwestern Univ.
Murphey, Todd — Northwestern Univ.

16:40-17:00 TuC11.3

Storage in Risk Limiting Dispatch: Control and Approximation, pp. 4202-4208.

Qin, Junjie — Stanford Univ.
Su, Han-I — Stanford Univ.
Rajagopal, Ram — Stanford Univ.

17:00-17:20 TuC11.4

The Delta-Sensitivity and Its Application to Stochastic Optimal Control of Nonlinear Diffusions, pp. 4209-4214.

Theodorou, Evangelos — Univ. of Washington
Todorov, Emanuel — Univ. of Washington

17:20-17:40 TuC11.5

On Integral Value Iteration for Continuous-Time Linear Systems, pp. 4215-4220.

Lee, Jae Young — Yonsei Univ.
Park, Jin Bae — Yonsei Univ.
Choi, Yoon Ho — Kyonggi Univ.

17:40-18:00 TuC11.6

An Active Set Solver for Min-Max Robust Control, pp. 4221-4227.

Buerger, Johannes — Univ. of Oxford
Cannon, Mark — Univ. of Oxford
Kouvaritakis, Basil — Oxford Univ.

TuC12 Room 16

Control Applications V (Regular Session)

Chair: Grover, Martha — Georgia Inst. of Tech.
Co-Chair: Kishida, Masako — Univ. of Tokyo

16:00-16:20 TuC12.1

Colloidal Self-Assembly with Model Predictive Control, pp. 4228-4233.

Tang, Xun — Georgia Inst. of Tech.
Xue, Yuzhen — Georgia Inst. of Tech.
Grover, Martha — Georgia Inst. of Tech.

16:20-16:40 TuC12.2

Application of Dynamic Inversion with Extended High-Gain Observers to Inverted Pendulum on a Cart, pp. 4234-4238.

Lee, Joonho — Michigan State Univ.
Mukherjee, Ranjan — Michigan State Univ.
Khalil, Hassan K. — Michigan State Univ.

16:40-17:00 TuC12.3

Encoder, Controller and Decoder Design of Jump Linear Systems Over Jump Communication Channels, pp. 4239-4244.

Ma, Xiao — Univ. of Tennessee
Djouadi, Seddik, M. — Univ. of Tennessee
Charalambous, Charalambos D. — Univ. of Cyprus
Denic, Stojan — Univ. of Arizona

17:00-17:20 TuC12.4

Design of a Fractional-Order Controller for the Setpoint Ramp Tracking Problem, pp. 4245-4250.

Morell, Antonio — Univ. de La Laguna
Trujillo, Juan J. — Univ. de La Laguna
Acosta, L. — Univ. of La Laguna
Rivero, Margarita — Univ. de La Laguna

17:20-17:40 TuC12.5

Interaction Analysis of Control Systems Employed in Roll-To-Roll Printing, pp. 4251-4256.

Seshadri, Aravind — Oklahoma State Univ.
Pagilla, Prabhakar R. — Oklahoma State Univ.

17:40-18:00 TuC12.6

Observability Optimization for the Nonholonomic Integrator, pp. 4257-4262.

Hinson, Brian — Univ. of Washington
Morgansen, Kristi A. — Univ. of Washington

TuC13 Mount Vernon Square A

Power Systems II (Regular Session)

Chair: Alamir, Mazen — CNRS / Univ. of Grenoble
Co-Chair: Bullo, Francesco — Univ. California at Santa Barbara

16:00-16:20 TuC13.1

Predictive Control of Demand Side Units Participating in the Primary Frequency Reserve Market, pp. 4263-4270.

Biegel, Benjamin — Aalborg Univ.
Andersen, Palle — Aalborg Univ.
Stoustrup, Jakob — Aalborg Univ.
Hansen, Lars Henrik — Dong Energy

16:20-16:40 TuC13.2

Adaptive Power Acquisition Control of Variable-Speed Wind Energy Conversion Systems under Inaccurate Wind Speed Measurement, pp. 4271-4276.

Meng, Wenchao — Zhejiang Univ.
Yang, Qinmin — Zhejiang Univ.
Ying, You — Zhejiang Windey Col, Ltd and the State Key Lab. of Industr
Sun, Yong — Zhejiang Windey Co.,Ltd and the State Key Lab. of Industri
Sun, Youxian — Zhejiang Univ.

16:40-17:00 TuC13.3

Control Strategy for an Off-Grid Hybrid Stirling Engine/ Supercapacitor Power Generation System, pp. 4277-4282.

Rahmani, Mustapha Amine — Univ. de Grenoble, GIPSA-Lab.
Alamir, Mazen — CNRS / Univ. of Grenoble
Gualino, David — Schneider Electric Industries

17:00-17:20 TuC13.4

Modeling and Control Design for Power Systems Driven by Battery/supercapacitor Hybrid Energy Storage Devices, pp. 4283-4288.

Jung, Hoeguk — Univ. of Massachusetts, Lowell
Conficoni, Christian — Alma Mater Studiorum, Univ. of Bologna
Tilli, Andrea — Univ. of Bologna
Hu, Tingshu — Univ. of Massachusetts, Lowell

17:20-17:40 TuC13.5

Sparse and Optimal Wide-Area Damping Control in Power Networks, pp. 4289-4294.

Dörfler, Florian — Univ. of California at Santa Barbara
Jovanovic, Mihailo — Univ. of Minnesota
Chertkov, Michael — Los Alamos National Lab.
Bullo, Francesco — Univ. California at Santa Barbara

17:40-18:00 TuC13.6

Asynchronous Thermal-Aware DVFS Control, pp. 4295-4300.

Durand, Sylvain — CNRS, CINVESTAV
Lesecq, Suzanne — CEA

TuC14 Mount Vernon Square B

Uncertain Systems I (Regular Session)

Chair: Nounou, Hazem — Texas A&M Univ. at Qatar
Co-Chair: Canuto, Enrico S. — Pol. di Torino

16:00-16:20 TuC14.1

Robust Output Tracking Control of a Laboratory Helicopter for Automatic Landing, pp. 4301-4306.

Liu, Hao — Tsinghua Univ.
Lu, Geng — Tsinghua Univ.
Zhong, Yisheng — Tsinghua Univ.

16:20-16:40 TuC14.2

Disturbance Rejection Control of a Morphing UAV, pp. 4307-4312.

Wang, Lu — Shanghai Jiao Tong Univ.
Su, Jianbo — Shanghai Jiaotong Univ.

16:40-17:00 TuC14.3

Orbit and Attitude Control for Gravimetry Drag-Free Satellites: When Disturbance Rejection Becomes Mandatory, pp. 4313-4318.

Canuto, Enrico S. — Pol. di Torino

17:00-17:20 TuC14.4

Command Governor-Based Model Reference Control, pp. 4319-4324.

De La Torre, Gerardo — Georgia Inst. of Tech.
Yucelen, Tansel — Georgia Inst. of Tech.
Johnson, Eric N. — Georgia Inst. of Tech.

17:20-17:40 TuC14.5

Robust Control Design Method for Uncertain System Using a Set of Measurements, pp. 4325-4330.

Khadraoui, Sofiane — Texas A&M Univ. at Qatar
Nounou, Hazem — Texas A&M Univ. at Qatar
Nounou, Mohamed — Texas A&M Univ. at Qatar
Datta, Aniruddha — Texas A&M Univ.
Bhattacharyya, Shankar P. — Texas A & M Univ.

17:40-18:00 TuC14.6

Design of Reduced-Order Controllers Using a Set of Measurements: Application to a DC Servomotor, pp. 4331-4336.

Khadraoui, Sofiane — Texas A&M Univ. at Qatar
Nounou, Hazem — Texas A&M Univ. at Qatar
Nounou, Mohamed — Texas A&M Univ. at Qatar
Datta, Aniruddha — Texas A&M Univ.
Bhattacharyya, Shankar P. — Texas A & M Univ.

TuC15 Renaissance Ballroom East

Applications of Fault Detection/Accommodation (Regular Session)

Chair: Khorasani, Khashayar — Concordia Univ.
Co-Chair: Wang, Jin — Auburn Univ.

16:00-16:20 TuC15.1

Fault Diagnosis for Satellite's Attitude Determination System Based on Model Error Prediction and EMD, pp. 4337-4342.

Wang, Jiongqi — National Univ. of Defense Tech.
He, Zhangming — National Univ. of Defense Tech.
Pan, XiaoGang — NUDT
Zhou, Haiyin — National Univ. of Defense Tech.

16:20-16:40 TuC15.2

Particle Filtering for State and Parameter Estimation in Gas Turbine Engine Fault Diagnostics, pp. 4343-4349.

Daroogheh, Najmeh — Concordia Univ.
Meskin, Nader — Qatar Univ.
Khorasani, Khashayar — Concordia Univ.

16:40-17:00 TuC15.3

Supervisory Traction Control for a Slipping UGV, pp. 4350-4355.

Broderick, John — Univ. of Michigan
Tilbury, Dawn M. — Univ. of Michigan
Atkins, Ella — Univ. of Michigan

17:00-17:20 TuC15.4

Plating Mechanism Detection in Lithium-Ion Batteries, by Using a Particle-Filtering Based Estimation Technique, pp. 4356-4361.

Alavi, S.M. Mahdi — Univ. of Windsor
Saif, Mehrdad — Univ. of Windsor
Samadi, Mohammad Foad — Simon Fraser Univ.

17:20-17:40 TuC15.5

Quantification of Valve Stiction Based on a Semi-Physical Model, pp. 4362-4367.

He, Qinghua — Tuskegee Univ.
Wang, Jin — Auburn Univ.

17:40-18:00 TuC15.6

Design and Experimental Verification of Power Packet Generation System for Power Packet Dispatching System, pp. 4368-4373.

Takahashi, Ryo — Kyoto Univ.
Azuma, Shun-ichi — Kyoto Univ.
Tashiro, Keiji — Kyoto Univ.
Hikihara, Takashi — Kyoto Univ.

TuC16 Renaissance Ballroom West A

Formal Methods in Systems and Control (Invited Session)

Chair: Abate, Alessandro — TU Delft
Co-Chair: Julius, Agung — Rensselaer Pol. Inst.
Organizer: Abate, Alessandro — TU Delft
Organizer: Julius, Agung — Rensselaer Pol. Inst.

16:00-16:20 TuC16.1

Optimization of Human Generated Trajectories for Safety Controller Synthesis (I), pp. 4374-4379.

Winn, Andrew — Rensselaer Pol. Inst.
Julius, Agung — Rensselaer Pol. Inst.

16:20-16:40 TuC16.2

Supervisory Control for Collision Avoidance in Vehicular Networks Using Discrete Event Abstractions (I), pp. 4380-4386.

Dallal, Eric — Univ. of Michigan
Colombo, Alessandro — Pol. di Milano
Del Vecchio, Domitilla — Massachusetts Insitute of Tech.
Lafortune, Stephane — Univ. of Michigan

16:40-17:00 TuC16.3

Finite Abstractions of Nonautonomous Max-Plus-Linear Systems (I), pp. 4387-4392.

Adzkiya, Dieky — TU Delft
De Schutter, Bart — Delft Univ. of Tech.
Abate, Alessandro — TU Delft

17:00-17:20 TuC16.4

Design of Reward Structures for Sequential Decision-Making Processes Using Symbolic Analysis (I), pp. 4393-4398.

Mazo Jr., Manuel — Delft Univ. of Tech.
Cao, Ming — Univ. of Groningen

17:20-17:40 TuC16.5

Optimal Receding Horizon Control for Finite Deterministic Systems with Temporal Logic Constraints (I), pp. 4399-4404.

Svorenova, Maria — Masaryk Univ.
Cerna, Ivana — Masaryk Univ.
Belta, Calin — Boston Univ.

17:40-18:00 TuC16.6

Computing Descent Direction of MTL Robustness for Non-Linear Systems (I), pp. 4405-4410.

Abbas, Houssam — Arizona State Univ.
Fainekos, Georgios — Arizona State Univ.

TuC17 Renaissance Ballroom West B

Modeling and Control of Advanced Combustion Systems (Invited Session)

Chair: Shahbakhti, Mahdi — Michigan Tech. Univ.
Co-Chair: Canova, Marcello — The Ohio State Univ.
Organizer: Shahbakhti, Mahdi — Michigan Tech. Univ.
Organizer: Canova, Marcello — The Ohio State Univ.
Organizer: Scacchioli, Annalisa — New York Univ.
Organizer: Shim, Taehyun — Univ. of Michigan-Dearborn

16:00-16:20 TuC17.1

A Nonlinear Model-Based Controller for Premixed Charge Compression Ignition Combustion Timing in Diesel Engines (I), pp. 4411-4416.

Kocher, Lyle — Purdue Univ.
Magee, Mark — Purdue Univ.
Van Alstine, Dan — Purdue Univ. School of Mechanical Eng
Shaver, Gregory M. — Purdue Univ.

16:20-16:40 TuC17.2

Hybrid Switching Control of Automotive Cold Start Hydrocarbon Emission (I), pp. 4417-4422.

Salehi, Rasoul — Sharif Univ. of Tech.
Shahbakhti, Mahdi — Michigan Tech. Univ.
Hedrick, Karl — Univ. of California at Berkeley

16:40-17:00 TuC17.3

Enabling Large Load Transitions on Multicylinder Recompression HCCI Engines Using Fuel Governors (I), pp. 4423-4428.

Jade, Shyam — Univ. of Michigan
Larimore, Jacob — Univ. of Michigan
Hellström, Erik — Univ. of Michigan
Jiang, Li — Robert Bosch LLC
Stefanopoulou, Anna G. — Univ. of Michigan

17:00-17:20 TuC17.4

HCCI Combustion Timing Control with Variable Valve Timing (I), pp. 4429-4434.

Ebrahimi, Khashayar — Univ. of Alberta
Koch, Charles Robert — Univ. of Alberta

17:20-17:40 TuC17.5

Controlling Combustion Phasing Variability with Fuel Injection Timing in a Multicylinder HCCI Engine (I), pp. 4435-4440.

Larimore, Jacob — Univ. of Michigan
Hellström, Erik — Univ. of Michigan
Jade, Shyam — Univ. of Michigan
Jiang, Li — Robert Bosch LLC
Stefanopoulou, Anna G. — Univ. of Michigan

17:40-18:00 TuC17.6

Development of Control-Oriented Charge Mixing Model and Experimental Validation Using Graphical Analysis (I), pp. 4441-4446.

Yoon, Yongsoon — Univ. of Minnesota, twin-cities
Sun, Zongxuan — Univ. of Minnesota
Zhang, Shupeng — Michigan State Univ.
Zhu, Guoming — Michigan State Univ.

TuC18 — Grand Ballroom South

Wind Turbine Fault Detection and Fault Tolerant Control - an Enhanced Benchmark Challenge (Invited Session)

Chair: Odgaard, Peter Fogh — KK electronic a/s
Co-Chair: Johnson, Kathryn — Colorado School of Mines
Organizer: Odgaard, Peter Fogh — KK electronic a/s
Organizer: Johnson, Kathryn — Colorado School of Mines

16:00-16:20 TuC18.1

Wind Turbine Fault Diagnosis and Fault Tolerant Control - An Enhanced Benchmark Challenge (I), pp. 4447-4452.

Odgaard, Peter Fogh — KK electronic a/s
Johnson, Kathryn — Colorado School of Mines

16:20-16:40 TuC18.2

A Robust Fault Detection and Isolation Filter for a Horizontal Axis Variable Speed Wind Turbine (I), pp. 4453-4458.

Svetozarevic, Bratislav — ETH Zurich
Mohajerin Esfahani, Peyman — ETH Zurich
Kamgarpour, Maryam — Swiss Federal Inst. of Tech.
Lygeros, John — ETH Zurich

16:40-17:00 TuC18.3

Fault Detection and Isolation in Wind Turbines Using Support Vector Machines and Observers (I), pp. 4459-4464.

Othman, Nida — Univ. Claude Bernard Lyon 1
Othman, Sami — Univ. Claude Bernard Lyon 1
Benlahrache, Mohamed — Univ. of Lyon
Odgaard, Peter Fogh — KK electronic a/s

17:00-17:20 TuC18.4

Data-Driven Design of KPI-Related Fault-Tolerant Control System for Wind Turbines (I), pp. 4465-4470.

Luo, Hao — Univ. of Duisburg-Essen
Ding, Steven X. — Univ. of Duisburg-Essen
Haghani Abandan Sari, Adel — Univ. of Duisburg-Essen
Hao, Haiyang — Univ. of Duisburg-Essen
Yin, Shen — Univ. of Duisburg-Essen
Jeinsch, Torsten — IAV GmbH

17:20-17:40 TuC18.5

A Real-Time Projection-Based Approach for Fault Accommodation in NREL's 5MW Wind Turbine Systems, pp. 4471-4476.

Jain, Tushar — Aalto Univ.
Yame, Joseph Julien — Univ. de Lorraine
Sauter, Dominique D.J. — Lorraine Univ.

TuC19 — Grand Ballroom Central

Automated Steady and Transient State Identification in Noisy Processes (Tutorial Session)

Chair: Rhinehart, R. Russell — Oklahoma State Univ.
Co-Chair: Vennavelli, Anand — Fractionation Res. Inc.
Organizer: Rhinehart, R. Russell — Oklahoma State Univ.

16:00-17:00 TuC19.1

Automated Steady and Transient State Identification in Noisy Processes (I), pp. 4477-4493.

Rhinehart, R. Russell — Oklahoma State Univ.

17:00-17:20 TuC19.2

Demonstration of the SS and TS Identifier at the Fractionation Research, Inc. (FRI) Distillation Unit (I), pp. 4494-4497.

Vennavelli, Anand — Fractionation Res. Inc.
Resetarits, Michael — Fractionation Res. Inc.

17:20-17:40 TuC19.3

Steady State and Transient State Identification for Flow Rate on a Pilot-Scale Absorption Column (I), pp. 4498-4503.

Huang, Ting — Oklahoma State Univ.
Rhinehart, R. Russell — Oklahoma State Univ.

17:40-18:00 TuC19.4

*Steady State Identification As a Convergence Criterion in Nonlinear Regression (I)**. N/A

Rhinehart, R. Russell — Oklahoma State Univ.

TuC20 — Grand Ballroom North

Mechatronics (Regular Session)

Chair: Ulsoy, A. Galip — Univ. of Michigan
Co-Chair: Scruggs, Jeff — Univ. of Michigan

16:00-16:20 TuC20.1

H2 Model Matching Feedforward Control for Tape Head Positioning Servo Systems, pp. 4504-4509.

Zhong, Hua — Univ. of Colorado at Boulder
Pao, Lucy Y. — Univ. of Colorado Boulder

16:20-16:40 TuC20.2

A Real-Time Control System Architecture for Industrial Power Amplifiers, pp. 4510-4515.

Qureshi, Faran Ahmed — EPFL
Spinu, Veaceslav — Eindhoven Univ. of Tech.
Wijnands, Korneel — Eindhoven Univ. of Tech.
Lazar, Mircea — Eindhoven Univ. of Tech.

16:40-17:00 TuC20.3

Combining Self-Sensing with an Unkown-Input-Observer to Estimate the Displacement, the Force and the State in Piezoelectric Cantilevered Actuators, pp. 4516-4523.

Rakotondrabe, Micky — FEMTO-ST Inst.

17:00-17:20 TuC20.4

Numerical Solutions to Optimal Power-Flow-Constrained Vibratory Energy Harvesting Problems, pp. 4524-4529.

Cassidy, Ian — Duke Univ.
Song, Wei — Univ. of Alabama
Scruggs, Jeff — Univ. of Michigan

17:20-17:40 TuC20.5

Maneuver Based Design of a Passive-Assist Device for Augmenting Linear Motion Drives, pp. 4530-4537.

Brown, W. Robert — Univ. of Michigan
Ulsoy, A. Galip — Univ. of Michigan

17:40-18:00 TuC20.6

Stabilization of Asymmetric Bilateral Teleoperation Systems for Haptic Devices with Time-Varying Delays, pp. 4538-4543.

Hilliard, Trent — Dalhousie Univ.
Pan, Ya-Jun — Dalhousie Univ.

TuC21 — Congressional Hall A

Modeling Biological Systems (Regular Session)

Chair: Hespanha, Joao P. — Univ. of California, Santa Barbara
Co-Chair: Hashtrudi Zad, S. — Concordia Univ.

16:00-16:20 TuC21.1

Layering in Networks: The Case of Biochemical Systems, pp. 4544-4549.

Prescott, Thomas Paul — Univ. of Oxford
Papachristodoulou, Antonis — Univ. of Oxford

16:20-16:40 TuC21.2

Towards Modularity in Biological Networks While Avoiding Retroactivity, pp. 4550-4556.

Sivakumar, Hari — Univ. of California Santa Barbara
Hespanha, Joao P. — Univ. of California, Santa Barbara

16:40-17:00 TuC21.3

Response Time Re-Scaling and Weber's Law in Adapting Biological Systems, pp. 4557-4562.

Hamadeh, Abdullah Omar — Rutgers, State Univ. of New Jersey
Sontag, Eduardo D. — Rutgers Univ.
Ingalls, Brian P. — Univ. of Waterloo

17:00-17:20 TuC21.4

Stochastic Analysis and Inference of a Two-State Genetic Promoter Model, pp. 4563-4568.

Singh, Abhyudai — Univ. of Delaware
Vargas-Garcia, Cesar A. — Univ. of Delaware
Karmakar, Rajesh — AKPC Mahavidyalaya, Physics Dept

17:20-17:40 TuC21.5

Sensitivity Analysis in Petri Net Representation of Biological Systems, pp. 4569-4574.

Zahirazami, Shauheen — Concordia Univ.
Dadar, Mahsa — Concordia Univ.
Hashtrudi Zad, Shahin — Concordia Univ.

17:40-18:00 TuC21.6

A Population Dynamics Model for Opinion Dynamics with Prominent Agents and Incentives, pp. 4575-4580.

Barreto, Carlos — Univ. de los Andes
Mojica-Nava, Eduardo — Univ. de Los Andes
Quijano, Nicanor — Univ. de los Andes

TuC22 — Congressional Hall B

Stochastic Models, Control and Algorithms in Robotics (Invited Session)

Chair: Choi, Jongeun — Michigan State Univ.
Co-Chair: Milutinovic, Dejan — Univ. of California at Santa Cruz
Organizer: Choi, Jongeun — Michigan State Univ.
Organizer: Milutinovic, Dejan — Univ. of California at Santa Cruz

16:00-16:20 TuC22.1

Graph-Based Stochastic Control with Constraints: A Unified Approach with Perfect and Imperfect Measurements (I), pp. 4581-4586.

Agha-mohammadi, Ali-akbar — Texas A&M Univ.
Chakravorty, Suman — Texas A&M Univ.
Amato, Nancy — Texas A&M Univ.

16:20-16:40 TuC22.2

Noise Induced Pattern Switching in Randomly Distributed Delayed Swarms (I), pp. 4587-4591.

Lindley, Brandon — Naval Res. Lab.
Mier-y-Teran-Romero, Luis — Nonlinear Dynamics Section, Plasma Physics Div. Naval Res.
Schwartz, Ira — US Naval Res. Lab.

16:40-17:00 TuC22.3

Fully Bayesian Simultaneous Localization and Spatial Prediction Using Gaussian Markov Random Fields (GMRFs) (I), pp. 4592-4597.

Jadaliha, Mahdi — Michigan State Univ.
Choi, Jongeun — Michigan State Univ.

17:00-17:20 TuC22.4

Sensing Strategies to Reduce Power Consumption of Recursive-Least-Squares Parameter Identification of Autonomous Microsystems (I), pp. 4598-4603.

Hahn, Bongsu — Agency for Defense Development
Oldham, Kenn — Univ. of Michigan, Ann Arbor

17:20-17:40 TuC22.5

Sampling-Based Algorithms for Continuous-Time POMDPs (I), pp. 4604-4610.

Chaudhari, Pratik — Massachusetts Inst. of Tech.
Karaman, Sertac — Massachusetts Inst. of Tech.
Hsu, David — National Univ. of Singapore
Frazzoli, Emilio — Massachusetts Inst. of Tech.

17:40-18:00 TuC22.6

Distributed Path Integral Feedback Control Based on Kalman Smoothing for Unicycle Formations (I), pp. 4611-4616.

Anderson, Ross — Univ. of California, Santa Cruz
Milutinovic, Dejan — Univ. of California at Santa Cruz

WeP1 Grand Ballroom

Advanced Motion Control for High Tech Systems (Plenary Session)

Chair: Pao, Lucy Y. Univ. of Colorado Boulder
Co-Chair: Abramovitch, Daniel Y. Agilent Lab.

08:00-09:00 WeP1.1

*Advanced Motion Control for High Tech Systems**. N/A
Steinbuch, Maarten Eindhoven Univ. of Tech.

WeA01 Room 2

Cooperative Control I (Regular Session)

Chair: Ghose, Debasish Indian Inst. of Science
Co-Chair: Fierro, Rafael Univ. of New Mexico

09:30-09:50 WeA01.1

Distributed Linear Programming and Bargaining in Exchange Networks, pp. 4617-4622.
Richert, Dean Univ. of California, San Diego
Cortes, Jorge Univ. of California, San Diego

09:50-10:10 WeA01.2

Optimal Trajectory for Network Establishment of Remote UAVs, pp. 4623-4628.
Panyakeow, Prachya Univ. of Washington
Dai, Ran Iowa State Univ.
Mesbahi, Mehran Univ. of Washington

10:10-10:30 WeA01.3

Collective Behavior with Heterogeneous Controllers, pp. 4629-4634.
Jain, Anoop Indian Inst. of Science, Bangalore
Ghose, Debasish Indian Inst. of Science

10:30-10:50 WeA01.4

A Convergent Solution to the Multi-Vehicle Coverage Problem, pp. 4635-4641.
Tahirovic, Adnan Univ. of Sarajevo
Astolfi, Alessandro Imperial Coll. & Univ. of Rome

10:50-11:10 WeA01.5

Realistic Coherent Phantom Track Generation by a Group of Electronic Combat Aerial Vehicles, pp. 4642-4647.
Narayanachar, Dhananjay Indian Inst. of Science, Bangalore, India
Kuduvalli, Akhil Cogo Lab. Inc
Ghose, Debasish Indian Inst. of Science

11:10-11:30 WeA01.6

Decentralized Output Synchronization of Heterogeneous Linear Systems with Fixed and Switching Topology Via Self-Triggered Communication, pp. 4648-4653.
Tolic, Domagoj Univ. of Zagreb
Fierro, Rafael Univ. of New Mexico

WeA02 Room 3

Stochastic Systems I (Regular Session)

Chair: Salapaka, Murti V. Univ. of Minnesota, Minneapolis
Co-Chair: Xu, Hua Univ. of Tsukuba

09:30-09:50 WeA02.1

Soft-Constrained Robust Equilibria in Stochastic Differential Games, pp. 4654-4659.
Mukaidani, Hiroaki Hiroshima Univ.
Unno, Masaru NTT FINANCE Corp.
Xu, Hua Univ. of Tsukuba
Dragan, Vasile Romanian Acad.

09:50-10:10 WeA02.2

Pareto-Optimal Solutions for Markov Jump Stochastic Systems with Delay, pp. 4660-4665.
Mukaidani, Hiroaki Hiroshima Univ.
Unno, Masaru NTT Finance Corp.
Xu, Hua Univ. of Tsukuba
Dragan, Vasile Romanian Acad.

10:10-10:30 WeA02.3

Mixed-Strategy Chance Constrained Optimal Control, pp. 4666-4673.
Ono, Masahiro Keio Univ.
Kuwata, Yoshiaki Jet Propulsion Lab.
Balaram, J Jet Proplusion Lab.

10:30-10:50 WeA02.4

Adaptively Constrained Stochastic Model Predictive Control for Closed-Loop Constraint Satisfaction, pp. 4674-4681.
Oldewurtel, Frauke ETH Zurich
Sturzenegger, David ETH Zurich
Mohajerin Esfahani, Peyman ETH Zurich
Andersson, Goran Swiss Federal Inst. of Tech.
Morari, Manfred ETH Zurich
Lygeros, John ETH Zurich

10:50-11:10 WeA02.5

Inverse Optimal Control for Discrete-Time Stochastic Nonlinear Systems Stabilization, pp. 4682-4686.
Elvira Ceja, Jose Santiago CINVESTAV-IPN, Campus Guadalajara
Sanchez, Edgar N. CINVESTAV

11:10-11:30 WeA02.6

Reconstruction of Directed Acyclic Networks of Dynamical Systems, pp. 4687-4692.
Materassi, Donatello Massachusetts Inst. of Tech.
Salapaka, Murti V. Univ. of Minnesota, Minneapolis

WeA03 Room 4

Application of Estimation Methods (Regular Session)

Chair: Saif, Mehrdad Univ. of Windsor
Co-Chair: Khorasani, Khashayar Concordia Univ.

09:30-09:50 WeA03.1

Online State and Parameter Estimation of the Li-Ion Battery in a Bayesian Framework, pp. 4693-4698.
Samadi, Mohammad Foad Simon Fraser Univ.
Alavi, S.M. Mahdi Univ. of Windsor
Saif, Mehrdad Univ. of Windsor

09:50-10:10 WeA03.2

Nonlinear Estimation of Stator Winding Resistance in a Brushless DC Motor, pp. 4699-4704.

Zhang, Wanlin — McMaster Univ.
Gadsden, Andrew — McMaster Univ.
Habibi, Saeid — McMaster Univ.

10:10-10:30 WeA03.3

Simultaneous Input and State Smoothing and Its Application to Oceanographic Flow Field Reconstruction, pp. 4705-4710.

Fang, Huazhen — Univ. of California, San Diego
de Callafon, Raymond A. — Univ. of California, San Diego

10:30-10:50 WeA03.4

Joint Diffusivity and Source Estimation in Tokamak Plasma Heat Transport, pp. 4711-4716.

Mechhoud, Sarah — Univ. de Grenoble1, Gipsa-Lab.
Witrant, Emmanuel — Univ. Joseph Fourier
Dugard, Luc — CNRS-Grenoble INP
Moreau, Didier — CEA

10:50-11:10 WeA03.5

Multiple-Model Based Sensor Fault Diagnosis Using Hybrid Kalman Filter Approach for Nonlinear Gas Turbine Engines, pp. 4717-4723.

Pourbabaee, Bahareh — Concordia Univ.
Meskin, Nader — Qatar Univ.
Khorasani, Khashayar — Concordia Univ.

11:10-11:30 WeA03.6

Adaptive Kalman Filtering for Multi-Step Ahead Traffic Flow Prediction, pp. 4724-4729.

Leon Ojeda, Luis Ramon — INRIA, Grenoble. Univ. de Grenoble
Kibangou, Alain — Univ. Joseph Fourier-CNRS
Canudas de Wit, Carlos — CNRS, GIPSA-Lab.

WeA04 — Room 5

Smart Structures and Nano Systems (Regular Session)

Chair: Franco, Elisa — Univ. of California at Riverside
Co-Chair: Su, Chun-Yi — Concordia Univ.

09:30-09:50 WeA04.1

A Control-Based Approach to Quantification of Rate-Dependent Elastic Modulus of Living Cell Using Atomic Force Microscope, pp. 4730-4735.

Ren, Juan — Rutgers Univ.
Yu, Shiyan — Rutgers, the State Univ. of New Jersey
Gao, Nan — Rutgers, the State Univ. of New Jersey
Zou, Qingze — Rutgers, the State Univ. of New Jersey

09:50-10:10 WeA04.2

Self-Excited Limit Cycles in an Integral-Controlled System with Backlash, pp. 4736-4741.

Esbrook, Alex — Michigan State Univ.
Tan, Xiaobo — Michigan State Univ.
Khalil, Hassan K. — Michigan State Univ.

10:10-10:30 WeA04.3

Double Skin Façades As Mass Dampers, pp. 4742-4746.

Fu, Tat S — Univ. of New Hampshire

10:30-10:50 WeA04.4

Feedback Architectures to Regulate Flux of Components in Artificial Gene Networks, pp. 4747-4752.

Giordano, Giulia — Univ. of Udine
Franco, Elisa — Univ. of California at Riverside
Murray, Richard M. — California Inst. of Tech.

10:50-11:10 WeA04.5

A Self-Powered Piezoelectric Vibration Control System with Switch Pre-Charged Inductor (SPCI) Method, pp. 4753-4758.

Zhou, Wanlu — State Univ. of New York at Stony Brook
Zuo, Lei — State Univ. of New York at Stony Brook

11:10-11:30 WeA04.6

A Modified Generalized Prandtl-Ishlinskii Model and Its Inverse for Hysteresis Compensation, pp. 4759-4764.

Liu, Sining — Concordia Univ.
Su, Chun-Yi — Concordia Univ.

WeA05 — Room 6

Optimization II (Regular Session)

Chair: Spall, James C. — Johns Hopkins Univ.
Co-Chair: Jovanovic, Mihailo — Univ. of Minnesota

09:30-09:50 WeA05.1

A Distributed Adaptive Steplength Stochastic Approximation Method for Monotone Stochastic Nash Games, pp. 4765-4770.

Yousefian, Farzad — Univ. of Illinois at Urbana-Champaign
Nedich, Angelia — Univ. of Illinois, Urbana-Champaign
Shanbhag, Uday V. — Univ. of Illinois, Urbana-Champaign

09:50-10:10 WeA05.2

Rate of Convergence Analysis of Discrete Simultaneous Perturbation Stochastic Approximation Algorithm, pp. 4771-4776.

Wang, Qi — The Johns Hopkins Univ.
Spall, James C. — Johns Hopkins Univ.

10:10-10:30 WeA05.3

On New Characterizations of Social Influence in Social Networks, pp. 4777-4782.

Fardad, Makan — Syracuse Univ.
Lin, Fu — Univ. of Minnesota
Zhang, Xi — Syracuse Univ.
Jovanovic, Mihailo — Univ. of Minnesota

10:30-10:50 WeA05.4

A Numerical Gradient Based Technique and Directed Neighborhood Structure for Constrained Particle Swarm Optimization, pp. 4783-4788.

Liu, Zhenyi — Texas Tech. Univ.
Hui, Qing — Texas Tech. Univ.

10:50-11:10 WeA05.5

Epoch Gradient Descent for Smoothed Hinge-Loss Linear SVMs, pp. 4789-4794.

Lee, Soomin — Univ. of Illinois at Urbana-Champaign
Nedich, Angelia — Univ. of Illinois, Urbana-Champaign

11:10-11:30 WeA05.6

Semismooth Equation Approach to Network Utility Maximization (NUM), pp. 4795-4801.

Bai, Lijie — Rensselaer Pol. Inst.
Raghunathan, Arvind — Mitsubishi Electric Res. Lab.

WeA06 Room 8

Spacecraft Control (Regular Session)

Chair: Holzinger, Marcus — Georgia Inst. of Tech.
Co-Chair: Butcher, Eric — Univ. of Alaska, Fairbanks

09:30-09:50 WeA06.1

Spacecraft Constrained Maneuver Planning for Moving Debris Avoidance Using Positively Invariant Constraint Admissible Sets, pp. 4802-4807.

Weiss, Avishai — Univ. of Michigan
Baldwin, Morgan — Air Force Res. Lab.
Peterson, Christopher — Univ. of Michigan
Erwin, Richard Scott — Air Force Res. Lab.
Kolmanovsky, Ilya V. — The Univ. of Michigan

09:50-10:10 WeA06.2

Simultaneous Position and Attitude Control without Linear and Angular Velocity Feedback Using Dual Quaternions, pp. 4808-4813.

Filipe, Nuno — Georgia Inst. of Tech.
Tsiotras, Panagiotis — Georgia Inst. of Tech.

10:10-10:30 WeA06.3

Decentralized Mean Orbit Element Formation Stability for Uncoordinated Maneuvers, pp. 4814-4819.

Holzinger, Marcus — Georgia Inst. of Tech.
McMahon, Jay — Univ. of Colorado

10:30-10:50 WeA06.4

Spacecraft Relative Attitude Formation Tracking on SO(3) Based on Line-Of-Sight Measurements, pp. 4820-4825.

Wu, Tse-Huai — George Washington Univ.
Flewelling, Brien — Air Force Res. Lab.
Leve, Frederick — Air Force Res. Lab.
Lee, Taeyoung — George Washington Univ.

10:50-11:10 WeA06.5

Decentralized Guidance and Control for Spacecraft Formation Flying Using Virtual Target Configuration, pp. 4826-4831.

Lee, Daero — New Mexico State Univ. Dept of Mechanical and Aerospa
Viswanathan, Sasi Prabhakaran — New Mexico State Univ.
Holguin, Lee — New Mexico State Univ.
Sanyal, Amit — New Mexico State Univ.
Butcher, Eric — New Mexico State Univ.

11:10-11:30 WeA06.6

Adaptive Spacecraft Attitude Control with Reaction Wheel Actuation, pp. 4832-4837.

Cruz, Gerardo — Univ. of Michigan
Bernstein, Dennis S. — Univ. of Michigan

WeA07 Room 9

Stability of Nonlinear Systems II (Regular Session)

Chair: Ito, Hiroshi — Kyushu Inst. of Tech.
Co-Chair: Freeman, Randy — Northwestern Univ.

09:30-09:50 WeA07.1

A Two-Phase Approach to Stability of Networks Given in Iiss Framework: Utilization of a Matrix-Like Criterion, pp. 4838-4843.

Ito, Hiroshi — Kyushu Inst. of Tech.
Rüffer, Björn S. — Univ. of Paderborn

09:50-10:10 WeA07.2

Admissible Thrust Control Laws for Quadrotor Position Tracking, pp. 4844-4849.

Falconí, Guillermo P. — Tech. Univ. München
Fritsch, Oliver — Tech. Univ. München
Lohmann, Boris — Tech. Univ. München
Holzapfel, Florian — Tech. Univ. München

10:10-10:30 WeA07.3

Uniform Global Asymptotic Stability for Nonlinear Systems under Input Delays and Sampling of the Controls, pp. 4850-4854.

Mazenc, Frederic — EPI INRIA DISCO
Malisoff, Michael — Louisiana State Univ.
Dinh, Thach N. — LSS, Supelec

10:30-10:50 WeA07.4

A Global Attractor Consisting of Exponentially Unstable Equilibria, pp. 4855-4860.

Freeman, Randy — Northwestern Univ.

10:50-11:10 WeA07.5

Full and Reduced Order IMC Anti-Windup Compensators for a Class of Nonlinear Systems with Application to Wave Energy Converter Control, pp. 4861-4866.

Turner, Matthew C. — Univ. of Leicester
Lekka, Angeliki — Univ. of Leicester
Menon, Prathyush P — Univ. of Exeter

11:10-11:30 WeA07.6

Synchronization of Limit Cycle Oscillations in Diffusively-Coupled Systems, pp. 4867-4872.

Shafi, S. Yusef — UC Berkeley
Arcak, Murat — Univ. of California, Berkeley
Jovanovic, Mihailo — Univ. of Minnesota

WeA08 Room 12

Markov and Fuzzy Systems (Regular Session)

Chair: Wu, Ligang — Harbin Inst. of Tech.
Co-Chair: Chowdhury, Fahmida N. — National Science Foundation

09:30-09:50 WeA08.1

Fuzzy Filter Design for Discrete-Time Delayed Systems with Distributed Probabilistic Sensor Faults, pp. 4873-4878.

Su, Xiaojie — Harbin Insitute of Tech.
Shi, Peng — Univ. of Glamorgan
Wu, Ligang — Harbin Inst. of Tech.
Karimi, Hamid Reza — Univ. of Agder

09:50-10:10 WeA08.2

Stochastic Passivity of Discrete-Time Markovian Jump Nonlinear Systems, pp. 4879-4884.

Wang, Yue — Clemson Univ.
Gupta, Vijay — Univ. of Notre Dame
Antsaklis, Panos J. — Univ. of Notre Dame

10:10-10:30 WeA08.3

Finite-Time Stabilization for Discrete Fuzzy Jump Nonlinear Systems with Time Delays, pp. 4885-4890.

Zhang, Yingqi — Henan Univ. of Tech.
Shi, Peng — Univ. of Glamorgan
Nguang, Sing Kiong — The Univ. of Auckland
Karimi, Hamid Reza — Univ. of Agder

10:30-10:50 WeA08.4

Hinf Gearshift Control of a Dual Clutch Based on Uncertain TS Models, pp. 4891-4896.

Tran, Van-Nhu — Univ. of Valenciennes and Hainaut Cambresis
Lauber, Jimmy — Univ. of Valenciennes and Hainaut Cambresis
Dambrine, Michel — Univ. de Valenciennes et du Hainaut-Cambrésis

10:50-11:10 WeA08.5

Fault-Tolerant Control Strategy of Nonlinear System Based on State Feedback, pp. 4897-4902.

He, Qingnan — Jiangnan Univ.
Shen, Yanxia — Jiangnan Univ.
Ji, Lingyan — Jiangnan Univ.
Ji, Zhicheng — Jiangnan Univ.

11:10-11:30 WeA08.6

State Estimation for Jump Markov Linear Systems with Uncompensated Biases, pp. 4903-4908.

Li, Wenling — Beihang Univ.
Jia, Yingmin — Beihang Univ.
Du, Junping — Beijing Univ. of Posts and Telecommunications
Zhang, Jun — Beihang Univ. (BUAA)
Meng, Deyuan — Beihang Univ. (BUAA)

WeA09 Room 13

Direct Adaptive Control (Regular Session)

Chair: Mizumoto, Ikuro — Kumamoto Univ.
Co-Chair: Nunes, Eduardo Vieira Leao — COPPE - Federal Univ. of Rio de Janeiro

09:30-09:50 WeA09.1

Parallel Feedforward Compensator Design and ASPR Based Adaptive Output Feedback Control for a Time-Delay System, pp. 4909-4914.

Mizumoto, Ikuro — Kumamoto Univ.
Takagi, Taro — Kumamoto Univ.
Yamanaka, Kenshi — Kumamoto Univ.

09:50-10:10 WeA09.2

Adaptive Control of Uncertain Hammerstein Systems with Non-Monotonic Input Nonlinearities Using Auxiliary Blocking Nonlinearities, pp. 4915-4920.

Yan, Jin — The Univ. of Michigan
Bernstein, Dennis S. — Univ. of Michigan

10:10-10:30 WeA09.3

Hierarchical Decomposition Based Distributed Adaptive Control for Output Consensus Tracking of Uncertain Nonlinear Systems, pp. 4921-4926.

Wang, Wei — Tsinghua Univ.
Wen, Changyun — Nanyang Tech. Univ.
Li, Zhengguo — Institute fro nfocomm Res.
Huang, Jiangshuai — Nanyang Tech. Univ.

10:30-10:50 WeA09.4

Aliasing Effects in Direct Digital Adaptive Control of Plants with High-Frequency Dynamics and Disturbances, pp. 4927-4932.

Sumer, Dogan — Univ. of Michigan - Ann Arbor
Bernstein, Dennis S. — Univ. of Michigan

10:50-11:10 WeA09.5

Direct Adaptive Multiple-Model Control Schemes, pp. 4933-4938.

Tan, Chang — Nanjing Univ. of Aeronautics and Astronautics
Tao, Gang — Univ. of Virginia
Qi, Ruiyun — Nanjing Univ. of Aeronautics and Astronautics

11:10-11:30 WeA09.6

Direct Multivariable MRAC Design without Gain Symmetry Conditions, pp. 4939-4944.

Hsu, Liu — COPPE/UFRJ
Battistel, Andrei — Federal Univ. of Rio de Janeiro
Nunes, Eduardo V.L. — COPPE - Federal Univ. of Rio de Janeiro

WeA10 Room 14

Mechanical Systems/Robotics I (Regular Session)

Chair: Sawodny, Oliver — Univ. of Stuttgart
Co-Chair: Yu, Wen — CINVESTAV-IPN

09:30-09:50 WeA10.1

A Variable Curvature Modeling Approach for Kinematic Control of Continuum Manipulators, pp. 4945-4950.

Mahl, Tobias — Univ. Stuttgart
Mayer, Annika — Univ. of Stuttgart
Hildebrandt, Alexander — Res. Mechatronic Systems
Sawodny, Oliver — Univ. of Stuttgart

09:50-10:10 WeA10.2

Trajectory Tracking in the Sagittal Plane: Decoupled Lift/Thrust Control Via Tunable Impedance Approach in Flapping-Wing MAVs, pp. 4951-4956.

Mahjoubi, Hosein — Univ. of California at Santa Barbara
Byl, Katie — Univ. of California at Santa Barbara

10:10-10:30 WeA10.3

PID Motion Control Tuning Rules in a Damping Injection Framework, pp. 4957-4962.

Tadele, Tadele Shiferaw — Univ. of Twente
de Vries, T.J.A. — Univ. of Twente
Stramigioli, Stefano — Univ. of Twente

10:30-10:50 WeA10.4

Neural PID Admittance Control of a Robot, pp. 4963-4968.

Yu, Wen — CINVESTAV-IPN
Carmona Rodriguez, Roberto — CINVESTAV-IPN
Li, Xiaoou — CINVESTAV-IPN

10:50-11:10 WeA10.5

A Globally Exponentially Stable Tracking Controller for Mechanical Systems Using Position Feedback, pp. 4969-4974.

Romero Velazquez, Jose Guadalupe — Lab. des Signaux et Systèmes, CNRS–SUPELEC
Sarras, Ioannis — -
Ortega, Romeo — LSS-SUPELEC

11:10-11:30 WeA10.6

Tuning the S-Curve Motion Profile in Short Distance Case, pp. 4975-4980.

Ha, Chang-Wan — Korea Advanced Inst. of Science and Tech. (KAIST)
Rew, Keun-Ho — Hoseo Univ.
Kim, Kyung-Soo — KAIST (Korea Adv. Inst. of Sci. & Tech.
Kim, Soohyun — KAIST

WeA11 Room 15

Optimal Control for Nonlinear Systems (Regular Session)

Chair: Celikovsky, Sergej — Inst. of Information Theory and Automation
Co-Chair: Padhi, Radhakant — Indian Inst. of Science

09:30-09:50 WeA11.1

Open-Loop Nash Equilibrium in Polynomial Differential Games Via State-Dependent Riccati Equation, pp. 4981-4986.

Jimenez-Lizarraga, Manuel A. — Autonomous Univ. of Nuevo Leon
Basin, Michael V. — Autonomous Univ. of Nuevo Leon
Rodriguez, Celeste — Univ. Autonoma de Nuevo Leon
Rodriguez-Ramirez, Pablo C. — Autonomous Univ. of Nuevo Leon

09:50-10:10 WeA11.2

Optimal Control for a Polynomial System with a Quadratic Criterion Over Infinite Horizon, pp. 4987-4992.

Basin, Michael V. — Autonomous Univ. of Nuevo Leon
Jimenez-Lizarraga, Manuel A. — Autonomous Univ. of Nuevo Leon
Rodriguez-Ramirez, Pablo C. — Autonomous Univ. of Nuevo Leon
Rodriguez, Celeste — Univ. Autonoma de Nuevo Leon

10:10-10:30 WeA11.3

Enhancement of Practical Applicability of Optimal Control of a Nonlinear Process, pp. 4993-4998.

Pcolka, Matej — Czech Tech. Univ. in Prague
Celikovsky, Sergej — Inst. of Information Theory and Automation

10:30-10:50 WeA11.4

Generalized Model Predictive Static Programming and Its Application to 3D Impact Angle Constrained Guidance of Air-To-Surface Missiles, pp. 4999-5004.

Maity, Arnab — Indian Inst. of Science
Oza, Harshal — Univ. of Kent
Padhi, Radhakant — Indian Inst. of Science

10:50-11:10 WeA11.5

Optimal Trajectories for the Preview Control of Dual-Stage Actuators, pp. 5005-5010.

Salton, Aurelio Tergolina — Poontifícia Univ. Católica do Rio Grande do Sul
Chen, Zhiyong — The Univ. of Newcastle
Zheng, Jinchuan — Swinburne Univ. of Tech.
Fu, Minyue — Univ. of Newcastle

11:10-11:30 WeA11.6

Minimal Parametric Sensitivity Trajectories for Nonlinear Systems, pp. 5011-5016.

Ansari, Alexander — Northwestern Univ.
Murphey, Todd — Northwestern Univ.

WeA12 Room 16

Emerging Control Applications (Regular Session)

Chair: Leva, Alberto — Pol. di Milano
Co-Chair: Wisniewski, Rafal — Aalborg Univ.

09:30-09:50 WeA12.1

Low Power Synchronisation in Wireless Sensor Networks Via Simple Feedback Controllers: The FLOPSYNC Scheme, pp. 5017-5022.

Leva, Alberto — Pol. di Milano
Terraneo, Federico — Pol. di Milano

09:50-10:10 WeA12.2

Control for Large Scale Demand Response of Thermostatic Loads, pp. 5023-5028.

Totu, Luminita C. — Aalborg Univ.
Leth, John — Aalborg Univ.
Wisniewski, Rafal — Aalborg Univ.

10:10-10:30 WeA12.3

Designing Closed-Loop Brain-Machine Interfaces Using Optimal Receding Horizon Control, pp. 5029-5034.

Kumar, Gautam — Lehigh Univ.
Schieber, Marc H. — Univ. of Rochester Medical Center
Thakor, Nitish — Johns Hopkins Univ.
Kothare, Mayuresh V. — Lehigh Univ.

10:30-10:50 WeA12.4

Optimal Selection of Primary Controlled Variables for an Acid Gas Removal Unit As Part of an IGCC Plant with CO2 Capture, pp. 5035-5040.

Jones, Dustin — West Virginia Univ.
Bhattacharyya, Debangsu — West Virginia Univ.
Turton, Richard — West Virginia Univ.
Zitney, Stephen — National Energy Tech. Lab.

10:50-11:10 WeA12.5

Probabilistic Management of Slope Disaster Detection Systems for Reduced Energy Consumption, pp. 5041-5048.

Hirata, Kenji — Nagaoka Univ. of Tech.
Koizumi, Keigo — Osaka Univ.
Yoshitake, Masahiro — Nagaoka Univ. of Tech.

11:10-11:30 WeA12.6

Stochastic Optimal Control of Jump Diffusion Excited Energy Harvesters, pp. 5049-5055.

Kolmanovsky, Ilya V. — The Univ. of Michigan
Maizenberg, Tatiana — Moscow State Mining Univ.

WeA13 Mount Vernon S

Power Systems III (Regular Session)

Chair: Wu, Neng Eva — Binghamton Univ.
Co-Chair: Gharesifard, B. — Univ. of Illinois, Urbana-Champaign

09:30-09:50 WeA13.1

Control Reconfigurability-Based Placement Strategy for FACTS Devices, pp. 5056-5061.

Qin, Qiu — Binghamton Univ.
Wu, Neng Eva — Binghamton Univ.

09:50-10:10 WeA13.2

A Real-Time Control Framework for Smart Power Networks with Star Topology, pp. 5062-5067.

Zhang, Xuan — Univ. of Oxford
Papachristodoulou, Antonis — Univ. of Oxford

10:10-10:30 WeA13.3

A New Scalable Solution to Optimal PMU Placement under a Long-Run Data Availability Criterion, pp. 5068-5073.

Huang, Jianzhuang — Binghamton Univ.
Wu, Neng Eva — Binghamton Univ.

10:30-10:50 WeA13.4

Event-Based DVFS Control in GALS-ANoC MPSoCs, pp. 5074-5079.

Durand, Sylvain — CNRS, CINVESTAV
Lesecq, Suzanne — CEA
Beigné, Edith — CEA
Puschini, Diego — CEA-Leti

10:50-11:10 WeA13.5

A Method for Automatically Scheduling Notified Deferrable Loads, pp. 5080-5085.

O'Brien, Gearoid — Stanford
Rajagopal, Ram — Stanford Univ.

11:10-11:30 WeA13.6

Price-Based Distributed Control for Networked Plug-In Electric Vehicles, pp. 5086-5091.

Gharesifard, Bahman — Univ. of Illinois, Urbana-Champaign
Basar, Tamer — Univ. of Illinois, Urbana-Champaign
Dominguez-Garcia, A. — Univ. of Illinois at Urbana-Champaign

WeA14 Mount Vernon Square B

Uncertain Systems II (Regular Session)

Chair: Chesi, Graziano — Univ. of Hong Kong
Co-Chair: Yucelen, Tansel — Georgia Inst. of Tech.

09:30-09:50 WeA14.1

Understanding Disturbance Attenuation Problems with Unknown Input Time-Delays: A Game-Theoretic Approach with Performance Risk Aversion, pp. 5092-5097.

Pham, Khanh D. — AIR FORCE Res. Lab.
Xu, Yunjun — Univ. of Central Florida

09:50-10:10 WeA14.2

On the Mahler Measure of Matrix Pencils, pp. 5098-5103.

Chesi, Graziano — Univ. of Hong Kong

10:10-10:30 WeA14.3

Random Matrix Based Approach to Quantify the Effect of Measurement Noise on Hankel Matrix, pp. 5104-5109.

Vishwajeet, Kumar — Univ. at Buffalo
Majji, Manoranjan — Univ. at Buffalo
Singla, Puneet — Univ. at Buffalo

10:30-10:50 WeA14.4

Language Measure-Theoretic Path Planning in the Presence of Dynamic Obstacles, pp. 5110-5115.

Sonti, Siddharth — Pennsylvania State Univ. Univ. Park, PA
Virani, Nurali — Pennsylvania State Univ. Univ. Park, PA
Jha, Devesh — Pennsylvania State Univ.
Mukherjee, Kushal — Pennsylvania State Univ.
Ray, Asok — Pennsylvania State Univ.

10:50-11:10 WeA14.5

Low-Frequency Learning and Fast Adaptation in Model Reference Adaptive Control for Safety-Critical Systems, pp. 5116-5121.

Yucelen, Tansel — Georgia Inst. of Tech.
Haddad, Wassim M. — Georgia Inst. of Tech.

11:10-11:30 WeA14.6

Unfalsified Adaptive Control for Resettable Systems, pp. 5122-5127.

Cheong, Seunggyun — UCSD

WeA15 Renaissance Ballroom East

Fault-Tolerant Systems (Regular Session)

Chair: Keel, L. H. — Tennessee State Univ.
Co-Chair: Fekih, Afef — Univ. of Louisiana at Lafayette

09:30-09:50 WeA15.1

Reconfigurable Fault Tolerant Flight Control Based on Nonlinear Model Predictive Control, pp. 5128-5133.

Kufoalor, Dzordzoenyenye K. — Norwegian Univ. of Science & Tech.
Johansen, Tor Arne — Norwegian Univ. of Science & Tech.

09:50-10:10 WeA15.2

Adaptive Fault-Tolerant Control with Control Allocation for Flight Systems with Severe Actuator Failures and Input Saturation, pp. 5134-5139.

Wang, Man — Peking Univ.
Yang, Jianying — Peking Univ.
Qin, Guozheng — Peking Univ.
Yan, Yingxin — BeiJing Inst. of Nearspace Vehicle's System engineering

10:10-10:30 WeA15.3

Proactive Fault-Tolerant Model Predictive Control: Concept and Application, pp. 5140-5145.

Lao, Liangfeng — Univ. of California, Los Angeles
Ellis, Matthew — Univ. of California, Los Angeles
Christofides, Panagiotis D. — Univ. of California at Los Angeles

10:30-10:50 WeA15.4

A Fault-Tolerant Steering Control Design for Automatic Path Tracking in Autonomous Vehicles, pp. 5146-5151.

Fekih, Afef — Univ. of Louisiana at Lafayette
Devariste, Darlene — Univ. of Lousiana at Lafayette

10:50-11:10 WeA15.5

Extended Hybrid Technique for Control Redesign with Stabilization and Correction, pp. 5152-5158.

Ciubotaru, Bogdan D.	Pol. Univ. of Bucharest
Staroswiecki, Marcel	Univ. des Sciences et Tech. de Lille
Christov, Nicolai	Univ. Lille 1 Sciences et Tech.

11:10-11:30 WeA15.6

Multivariable Controller Design with Integrity, pp. 5159-5164.

Kallakuri, Sirisha	Tennessee state Univ.
Keel, L. H.	Tennessee State Univ.
Bhattacharyya, Shankar P.	Texas A & M Univ.

WeA16 Renaissance Ballroom West A

Iterative Learning Control (Regular Session)

Chair: Cai, Zhonglun	Univ. of Southampton
Co-Chair: Barton, Kira	Univ. of Michigan, Ann Arbor

09:30-09:50 WeA16.1

Formation Learning Algorithms for Mobile Agents Subject to 2-D Dynamically Changing Topologies, pp. 5165-5170.

Meng, Deyuan	Beihang Univ. (BUAA)
Jia, Yingmin	Beihang Univ.
Du, Junping	Beijing Univ. of Posts and Telecommunications
Zhang, Jun	Beihang Univ. (BUAA)
Li, Wenling	Beihang Univ.

09:50-10:10 WeA16.2

Pareto Optimization-Based Iterative Learning Control, pp. 5171-5176.

Lim, Ingyu	Univ. of Michigan
Barton, Kira	Univ. of Michigan, Ann Arbor

10:10-10:30 WeA16.3

A Position Based Iterative Learning Control Applied to Active Flow Control, pp. 5177-5182.

Cai, Zhonglun	Univ. of Southampton
Chen, Peng	Univ. of Southampton
Angland, David	Univ. of Southampton
Zhang, Xin	Univ. of Southampton

10:30-10:50 WeA16.4

Control-Based High-Speed Direct Mask Fabrication for Lithography Via Mechanical Plowing, pp. 5183-5188.

Wang, Zhihua	Rutgers, the State Univ. of New Jersey
Tan, Jun	Rutgers, the State Univ. of New Jersey
Zou, Qingze	Rutgers, the State Univ. of New Jersey
Jiang, Wei	Rutgers, the State Univ. of New Jersey

10:50-11:10 WeA16.5

Iterative Learning Control of Wind Turbine Smart Rotors with Pressure Sensors, pp. 5189-5194.

Blackwell, Mark William	Univ. of Southampton
Tutty, Owen	Univ. of Southampton
Rogers, Eric	Univ. of Southampton
Sandberg, Richard David	Univ. of Southampton

11:10-11:30 WeA16.6

Iterative Learning Control for Vibration Reduction in Industrial Robots with Link Flexibility, pp. 5195-5200.

Tsai, Chi-Shen	Univ. of California at Berkeley
Chen, Wenjie	Univ. of California at Berkeley
Yun, Daekyu	Hyundai Heavy Industries
Tomizuka, Masayoshi	Univ. of California, Berkeley

WeA17 Renaissance Ballroom West B

Modeling, Estimation and Control of Advanced Engine Air Path Systems (Invited Session)

Chair: Canova, Marcello	The Ohio State Univ.
Co-Chair: Scacchioli, Annalisa	New York Univ.
Organizer: Canova, Marcello	The Ohio State Univ.
Organizer: Shim, Taehyun	Univ. of Michigan-Dearborn
Organizer: Scacchioli, Annalisa	New York Univ.
Organizer: Shahbakhti, Mahdi	Michigan Tech. Univ.

09:30-09:50 WeA17.1

Model-Order Reduction for Prediction of Pressure Wave Propagation Dynamics in the IC Engine Air Path System (I), pp. 5201-5206.

Stockar, Stephanie	The Ohio State Univ.
Canova, Marcello	The Ohio State Univ.
Guezennec, Yann	Ohio State Univ.

09:50-10:10 WeA17.2

Control Oriented Modeling of a Radial Turbine for a Turbocharged Gasoline Engine (I), pp. 5207-5212.

Salehi, Rasoul	Sharif Univ. of Tech.
Shahbakhti, Mahdi	Michigan Tech. Univ.
Alasty, Aria	Sharif Univ. of Tech.
Vossoughi, Gholamreza	Sharif Univ. of Tech.

10:10-10:30 WeA17.3

An Explicit Model Predictive Control Framework for Turbocharged Diesel Engines (I), pp. 5213-5218.

Zhao, Dezong	Loughborough Univ.
Liu, Cunjia	Loughborough Univ.
Stobart, Richard	Loughborough Univ.
Deng, Jiamei	Kingston Univ. London
Winward, Edward	Loughborough Univ.

10:30-10:50 WeA17.4

System Analysis and Optimization of Variable Geometry Compressor for Turbocharged Diesel Engines (I), pp. 5219-5224.

Zhou, Junqiang	OSU
Fiorentini, Lisa	The Ohio State Univ.
Chiara, Fabio	The Ohio State Univ.
Canova, Marcello	The Ohio State Univ.

10:50-11:10 WeA17.5

Surge Index and Compressor Efficiency Estimation for Diesel Engines with Variable Geometry Compressor System (I), pp. 5225-5230.

Zhou, Junqiang	OSU
Fiorentini, Lisa	The Ohio State Univ.
Chiara, Fabio	The Ohio State Univ.
Canova, Marcello	The Ohio State Univ.

11:10-11:30 WeA17.6

Nonlinear Observer Design for Turbocharger in a SI Engine (I), pp. 5231-5236.

Salehi, Rasoul	Sharif Univ. of Tech.
Shahbakhti, Mahdi	Michigan Tech. Univ.
Alasty, Aria	Sharif Univ. of Tech.
Vossoughi, Gholamreza	Sharif Univ. of Tech.

WeA18 Grand Ballroom South

Pathways Toward Smart, Flexible and Efficient Power Systems (Tutorial Session)

Chair: Gayme, Dennice	The Johns Hopkins Univ.
Co-Chair: Topcu, Ufuk	Univ. of Pennsylvania
Organizer: Gayme, Dennice	The Johns Hopkins Univ.
Organizer: Topcu, Ufuk	Univ. of Pennsylvania

09:30-10:10 WeA18.1

Towards Smart, Flexible and Efficient Power Systems: Vision and Research Challenges (I), pp. 5237-5244.

Topcu, Ufuk	Univ. of Pennsylvania
Gayme, Dennice	The Johns Hopkins Univ.
Low, Steven	California Inst. of Tech.
Khargonekar, Pramod P.	Univ. of Florida

10:10-10:50 WeA18.2

*Convexifying Optimal Power Flow: Recent Advances in OPF Solution Methods (I)**. pp. 5245

Low, Steven	California Inst. of Tech.
Gayme, Dennice	The Johns Hopkins Univ.
Topcu, Ufuk	Univ. of Pennsylvania

10:50-11:10 WeA18.3

*Management of Energy Resources for Grid Integration of Renewables (I)**. N/A

Gayme, Dennice	The Johns Hopkins Univ.

11:10-11:30 WeA18.4

*Engaging Consumers to Increase Grid Flexibility (I)**. N/A

Topcu, Ufuk	Univ. of Pennsylvania

WeA19 Grand Ballroom Central

Output Feedback (Regular Session)

Chair: Khalil, Hassan K.	Michigan State Univ.
Co-Chair: Allgower, Frank	Univ. of Stuttgart

09:30-09:50 WeA19.1

Finite-Time Dynamic Output Feedback Stabilization of Delayed Stochastic Systems, pp. 5246-5250.

Chen, Yun	Hangzhou Dianzi Univ.
Xue, Anke	Hangzhou Dianzi Univ.
Ge, Ming	National Univ. of Singapore
Wang, JunHong	Hangzhou Dianzi Univ.

09:50-10:10 WeA19.2

Output Regulation for Attitude Control: A Global Approach, pp. 5251-5256.

Schmidt, Gerd Simon	Univ. of Stuttgart
Ebenbauer, Christian	Univ. of Stuttgart
Allgower, Frank	Univ. of Stuttgart

10:10-10:30 WeA19.3

Analytic Parameterization of Stabilizing Controllers for the Surge Subsystem of the Moore-Greitzer Compressor Model, pp. 5257-5262.

Rubanova, Alina Alexandrovna	Lund Univ. LTH
Robertsson, Anders	LTH, Lund Univ.
Shiriaev, Anton	NTNU/Umea Univ.
Freidovich, Leonid	Umeå Univ.
Johansson, Rolf	Lund Univ.

10:30-10:50 WeA19.4

Adaptive Output Feedback Control Using Optimal Control Modification, pp. 5263-5269.

Cho, Dongsoo	Seoul National Univ.
Kim, H. Jin	Seoul National Univ.

10:50-11:10 WeA19.5

Semi-Global Output Feedback Stabilization of a Class of Non-Minimum Phase Nonlinear Systems, pp. 5270-5275.

Boker, Al-Muatazbellah M	Michigan State Univ.
Khalil, Hassan K.	Michigan State Univ.

11:10-11:30 WeA19.6

A New Stabilizer for LTV Internal Model Based System and Its Application to Camless Engine Valve Actuation, pp. 5276-5281.

Song, Xingyong	General Motors Res. Center
Gillella, Pradeep Kumar	Univ. of Minnesota, Twin Cities
Sun, Zongxuan	Univ. of Minnesota

WeA20 Grand Ballroom North

Controls Applications in the Semiconductor Equipment Industry (Tutorial Session)

Chair: Ummethala, Upendra	KLA-Tencor Corp.
Co-Chair: van Lievenoogen, Anne	Philips Innovation Services
Organizer: Ummethala, Upendra	KLA-Tencor Corp.
Organizer: Subrahmanyan, P.	KLA-Tencor Corp.
Organizer: Hench, John	KLA-Tencor Corp.
Organizer: van Lievenoogen, Anne	Philips Innovation Services

09:30-10:10 WeA20.1

Semiconductor Capiral Equipment Design (I), pp. 5282-5285

Ummethala, Upendra	KLA-Tencor Corp.
Subrahmanyan, Pradeep	KLA-Tencor Corp.
Hench, John	KLA-Tencor Corp.
van Lievenoogen, Anne	Philips Innovation Services

10:10-10:50 WeA20.2

*Precision Motion Control in Semiconductor Processing Equipment (I)**. N/A

Subrahmanyan, Pradeep	KLA-Tencor Corp.

10:50-11:10 WeA20.3

*Challenges in the Application of Hybrid Reluctance Actuators in Scanning Positioning Stages in Vacuum with Nanometer Accuracy and Mgauss Magnetic Stray Field (I)**. pp. 5286-5289

van Lievenoogen, Anne	Philips Innovation Services

11:10-11:30 WeA20.4

*Shape Recovery for Rotating Surfaces: A Tutorial (I)**. pp. 5290-5292

Hench, John	KLA-Tencor Corp.

WeA21	Congressional Hall A
Embedded Systems (Regular Session)	
Chair: Liu, Steven	Univ. of Kaiserslautern
Co-Chair: Stilwell, Daniel J.	Virginia Pol. Inst. & State Univ.

09:30-09:50 WeA21.1

Embedded Control Synthesis Using One-Step Methods in Discrete Mechanics, pp. 5293-5298.

Schultz, Jarvis — Northwestern Univ.
Murphey, Todd — Northwestern Univ.

09:50-10:10 WeA21.2

Event-Based Control and Scheduling Codesign of Networked Embedded Control Systems, pp. 5299-5304.

Al-Areqi, Sanad — Univ. of Kaiserslautern
Görges, Daniel — Univ. of Kaiserslautern
Reimann, Sven — Univ. of Kaiserslautern
Liu, Steven — Univ. of Kaiserslautern

10:10-10:30 WeA21.3

Distributed Management of CPU Resources for Time-Sensitive Applications, pp. 5305-5312.

Chasparis, Georgios C. — Lund Univ.
Maggio, Martina — Lund Univ.
Arzen, Karl-Erik — Lund Inst. of Tech.
Bini, Enrico — Lund Univ.

10:30-10:50 WeA21.4

Energy-Aware Control: L2 Gain for Closed-Loop Systems Implemented with Stochastic Schedulers, pp. 5313-5319.

Lutz, Collin C. — Virginia Tech.
Stilwell, Daniel J. — Virginia Tech.

10:50-11:10 WeA21.5

Muao-MPC: A Free Code Generation Tool for Embedded Real-Time Linear Model Predictive Control, pp. 5320-5325.

Zometa, Pablo — OvG Univ. Magdeburg
Koegel, Markus — OVG Univ. Magdeburg
Findeisen, Rolf — OVG Univ. Magdeburg

11:10-11:30 WeA21.6

An Event-Based Online Scheduling Approach for Networked Embedded Control Systems, pp. 5326-5331.

Reimann, Sven — Univ. of Kaiserslautern
Al-Areqi, Sanad — Univ. of Kaiserslautern
Liu, Steven — Univ. of Kaiserslautern

WeA22	Congressional Hall B
Control and Analysis of Energy Generation and Storage Systems (Invited Session)	
Chair: Soroush, Masoud	Drexel Univ.
Co-Chair: Chmielewski, Donald J.	Illinois Inst. of Tech.
Organizer: Soroush, Masoud	Drexel Univ.
Organizer: Chmielewski, Donald J.	Illinois Inst. of Tech.
Organizer: McKahn, Denise	Smith Coll.

09:30-09:50 WeA22.1

Constraint Management in Li-Ion Batteries: A Modified Reference Governor Approach (I), pp. 5332-5337.

Moura, Scott — Univ. of California, San Diego
Chaturvedi, Nalin A. — Robert Bosch LLC
Krstic, Miroslav — Univ. of California, San Diego

09:50-10:10 WeA22.2

Application of Infinite-Horizon EMPC to IGCC Dispatch (I), pp. 5338-5343.

Omell, Benjamin — Illinois Inst. of Tech.
Chmielewski, Donald J. — Illinois Inst. of Tech.

10:10-10:30 WeA22.3

Storage-Enhanced Thermal Management for Mobile Devices (I), pp. 5344-5349.

Wang, Siyun — Univ. of Texas at Austin
Baldea, Michael — The Univ. of Texas at Austin

10:30-10:50 WeA22.4

Optimal Control and State Estimation of Lithium-Ion Batteries Using Reformulated Models (I), pp. 5350-5355.

Suthar, Bharatkumar — Washingtion Univ. in St. Louis
Ramadesigan, V. — Washington Univ. in St. Louis
Northrop, Paul W.C. — Washington Univ. in St. Louis
Gopaluni, Bhushan — Univ. of British Columbia
Santhanagopalan, Shriram — Celgard LLC
Braatz, Richard D. — Massachusetts Inst. of Tech.
Subramanian, Venkat R. — Washington Univ. in St. Louis

10:50-11:10 WeA22.5

Control of a Heat-Integrated Co-Ionic-Conducting Solid Oxide Fuel Cell System (I), pp. 5356-5361.

Bavarian, Mona — Drexel Univ.
Soroush, Masoud — Drexel Univ.

11:10-11:30 WeA22.6

Decentralized Control of a Fuel Cell Ultra-Capacitor Hybrid Network (I), pp. 5362-5367.

Madani, Omid — Univ. of Central Florida
Das, Tuhin — Univ. of Central Florida

WeB01	Room 2
Cooperative Control II (Regular Session)	
Chair: Jia, Yingmin	Beihang Univ.
Co-Chair: Zhang, Youmin	Concordia Univ.

13:30-13:50 WeB01.1

Evasion As a Team against a Faster Pursuer, pp. 5368-5373.

Liu, Shih-Yuan — Univ. of California, Berkeley
Zhou, Zhengyuan — UC Berkeley
Tomlin, Claire J. — UC Berkeley
Hedrick, Karl — Univ. of California at Berkeley

13:50-14:10 WeB01.2

Cooperative Control of Linear Systems with Choice Actions, pp. 5374-5379.

Liu, Zhongchang — The Chinese Univ. of Hong Kong
Wong, Wing Shing — Chinese Univ. of Hong Kong
Guo, Ge — Dalian Univ. of Tech.

14:10-14:30 WeB01.3

Finite-Time Consensus Control for Multiple Manipulators with Unmodeled Dynamics, pp. 5380-5385.

Zhang, Bin — Beihang Univ.
Jia, Yingmin — Beihang Univ.
Du, Junping — Beijing Univ. of Posts and Telecommunications
Zhang, Jun — Beihang Univ. (BUAA)

14:30-14:50 WeB01.4

Cooperative Target Tracking in Balanced Circular Formation: Multiple UAVs Tracking a Ground Vehicle, pp. 5386-5391.

Ma, Lili — Wentworth Inst. of Tech.
Hovakimyan, Naira — Univ. of Illinois, Urbana-Champaign

14:50-15:10 WeB01.5

Collision-Free Trajectory Tracking While Preserving Connectivity in Unicycle Multi-Agent Systems, pp. 5392-5397.

Atinc, Gokhan M. — Univ. of Illinois at Urbana Champaign
Stipanovic, Dusan M. — Univ. of Illinois, Urbana-Champaign
Voulgaris, Petros G. — Univ. of Illinois, Urbana-Champaign
Karkoub, Mansour — Texas A&M Univ.

15:10-15:30 WeB01.6

Distributed Coordination of a Network of Nonidentical Agents with Limited Communication Capabilities in the Presence of Fixed Obstacles, pp. 5398-5403.

Mahboubi, Hamid — Concordia Univ.
Sharifi, Farid — Concordia Univ.
Aghdam, Amir G. — Concordia Univ.
Zhang, Youmin — Concordia Univ.

WeB02 Room 3

Stochastic Systems II (Regular Session)

Chair: Souley Ali, Harouna — CRAN UMR 7039 CNRS
Co-Chair: Casbeer, David W. — Air Force Res. Lab.

13:30-13:50 WeB02.1

Exponential Disturbance Rejection with Decay Rate for Stochastic Systems, pp. 5404-5408.

Barbata, Asma — Univ. de Lorraine
Zasadzinski, Michel — CRAN
Souley Ali, Harouna — CRAN UMR 7039 CNRS
Messaoud, Hassani — Ec. Nationale d'Ingénieurs de Monastir

13:50-14:10 WeB02.2

Fault Diagnosis and Fault Tolerant Control for the Non-Gaussian Time-Delayed Stochastic Distribution Control System, pp. 5409-5414.

Yao, Lina — Zhengzhou Univ.

14:10-14:30 WeB02.3

Reaching Consensus in the Sense of Probability, pp. 5415-5420.

Cao, Yongcan — Air Force Res. Lab.
Casbeer, David W. — Air Force Res. Lab.
Schumacher, Corey — Air Force Res. Lab.

14:30-14:50 WeB02.4

A Class of Random Control Systems: Monotonicity and the Convergent-Input Convergent-State Property, pp. 5421-5426.

Marcondes de Freitas, Michael — Rutgers Univ.
Sontag, Eduardo D. — Rutgers Univ.

14:50-15:10 WeB02.5

Stability of Stochastic Differential Equations with Additive Persistent Noise, pp. 5427-5432.

Mateos, David — UC San Diego
Cortes, Jorge — Univ. of California, San Diego

15:10-15:30 WeB02.6

The N Finite Steps Linear Quadratic Gaussian Control Algorithm, pp. 5433-5438.

Vu, Ky — AuLac Tech. Inc.

WeB03 Room 4

Nonlinear Estimation (Regular Session)

Chair: Lindquist, Anders G. — Shanghai Jiao Tong Univ.
Co-Chair: Hanebeck, Uwe D. — Karlsruhe Inst. of Tech. (KIT)

13:30-13:50 WeB03.1

Recursive Nonlinear Filtering for Angular Data Based on Circular Distributions, pp. 5439-5445.

Kurz, Gerhard — Karlsruhe Inst. for Tech. (KIT)
Gilitschenski, Igor — Karlsruhe Inst. of Tech. (KIT)
Hanebeck, Uwe D. — Karlsruhe Inst. of Tech. (KIT)

13:50-14:10 WeB03.2

A Two-Stage Least Squares Based Iterative Parameter Estimation Algorithm for Feedback Nonlinear Systems Based on the Model Decomposition, pp. 5446-5450.

Hu, Peipei — Jiangnan Univ.
Ding, Rui — Jiangnan Univ.
Xiao, Yongsong — Jiangnan Univ.

14:10-14:30 WeB03.3

Multi-Kernel Gaussian Process Regression and Bayesian Model Averaging Based Nonlinear State Estimation and Quality Prediction of Multiphase Batch Processes, pp. 5451-5456.

Yu, Jie — McMaster Univ.
Chen, Kuilin — McMaster Univ.
Mori, Junichi — McMaster Univ.
Rashid, Mudassir — McMaster Univ.

14:30-14:50 WeB03.4

Estimation of the Neuronal Activation Using Fmri Data: An Observer-Based Approach, pp. 5457-5461.

Laleg Kirati, Taous Meriem — King Abdullah Univ. of Science and Tech. (KAUST)
Arabi Hakim, Arabi — ISAE Inst. supérieur de l'aeronautique et de l'espace
Tadjine, Mohamed — Ec. Nationale Pol.
Zayane, Chadia — KAUST

14:50-15:10 WeB03.5

Normalized Unscented Kalman Filter and Normalized Unscented RTS Smoother for Nonlinear State-Space Model Identification, pp. 5462-5467.

Murata, Masaya — NTT Corp.
Kashino, Kunio — NTT Communication Science Lab. NTT Corp.

15:10-15:30 WeB03.6

On Filter Consistency of Discrete-Time Nonlinear Systems with Partial-State Measurements, pp. 5468-5475.

Huang, Guoquan — MIT
Roumeliotis, Stergios — Univ. of Minnesota

WeB04 Room 5

Atomic Force Microscopy (Regular Session)

Chair: Zou, Qingze — Rutgers, State Univ. of New Jersey
Co-Chair: Herrmann, Guido — Univ. of Bristol

13:30-13:50 WeB04.1

Resonant Control of Atomic Force Microscope Scanner: A "Mixed" Negative-Imaginary and Small-Gain Approach, pp. 5476-5481.

Das, Sajal — The Univ. of New South Wales
Pota, Hemanshu R. — The Univ. of New South Wales
Petersen, Ian R. — Univ. of New South Wales at the Australian Defence Force Acad.

13:50-14:10 WeB04.2

B-Spline-Decomposition-Based Approach to Multi-Axis Trajectory Tracking: Nanomanipulation Example, pp. 5482-5487.

Wang, Haiming — Rutgers, the State Univ. of New Jersey
Zou, Qingze — Rutgers, the State Univ. of New Jersey
Xu, Hongbing — Univ. of Electronic Science and Tech. of China

14:10-14:30 WeB04.3

Design and Control of Phase-Detection Mode Atomic Force Microscopy for Cells Precision Contour Reconstruction under Different Environments, pp. 5488-5493.

Wu, Jim-Wei — National Taiwan Univ.
Chen, Jyun-Jhih — National Taiwan Univ.
Huang, Kuan-Chia — National Taiwan Univ.
Chen, Chih Lieh — NTU
Lin, Yi-Ting — National Taiwan Univ.
Chen, Mei-Yung — National Taiwan Normal Univ.
Fu, Li-Chen — National Taiwan Univ.

14:30-14:50 WeB04.4

Estimation of the Shear Force in Transverse Dynamic Force Microscopy Using a Sliding Mode Observer, pp. 5494-5499.

Nguyen, Thang — Univ. of Exeter
Khan, Said Ghani — Univ. of Bristol
Edwards, Christopher — Univ. of Exeter
Herrmann, Guido — Univ. of Bristol
Picco, Loren — Univ. of Bristol
Harniman, Robert — Univ. of Bristol
Burgess, Stuart C. — Univ. of Bristol
Antognozzi, Massimo — Univ. of Bristol
Miles, Mervyn J. — Univ. of Bristol

14:50-15:10 WeB04.5

Topography Detection Using Innovations Mismatch Method for High Speed and High Density Dynamic Mode AFM, pp. 5500-5505.

Ghosal, Sayan — Univ. of Minnesota
Saraswat, Govind — Univ. of Minnesota, Minneapolis
Ramamoorthy, Aditya — Iowa State Univ.
Salapaka, Murti V. — Univ. of Minnesota, Minneapolis

15:10-15:30 WeB04.6

Multimode and Multitone Analysis of the Dynamic Mode Operation of the Atomic Force Microscope, pp. 5506-5511.

Saraswat, Govind — Univ. of Minnesota, Minneapolis
Agarwal, Pranav — GE Global Res.
Salapaka, Murti V. — Univ. of Minnesota, Minneapolis

WeB05 Room 6

Reduced-Order Modeling (Regular Session)

Chair: Weiland, Siep — Eindhoven Univ. of Tech.
Co-Chair: Lin, Xinfan — Univ. of Michigan

13:30-13:50 WeB05.1

A Greedy Rational Krylov Method for H2-Pseudooptimal Model Order Reduction with Preservation of Stability, pp. 5512-5517.

Panzer, Heiko K. F. — Tech. Univ. München
Jaensch, Stefan — Tech. Univ. München
Wolf, Thomas — Tech. Univ. München
Lohmann, Boris — Tech. Univ. München

13:50-14:10 WeB05.2

Families of Reduced Order Models That Achieve Nonlinear Moment Matching, pp. 5518-5523.

Ionescu, Tudor C. — Imperial Coll. London
Astolfi, Alessandro — Imperial Coll. & Univ. of Rome

14:10-14:30 WeB05.3

Structured Model Reduction of Interconnected Linear Systems Based on Singular Perturbation, pp. 5524-5529.

Ishizaki, Takayuki — Tokyo Inst. of Tech.
Sandberg, Henrik — KTH Royal Inst. of Tech.
Johansson, Karl H. — Royal Inst. of Tech.
Kashima, Kenji — Osaka Univ.
Imura, Jun-ichi — Tokyo Inst. of Tech.
Aihara, Kazuyuki — Univ. of Tokyo

14:30-14:50 WeB05.4

Generalized Time-Limited Balanced Reduction Method, pp. 5530-5535.

Shaker, Hamidreza — Department of Energy Tech. Aalborg University, Denmark
Shaker, Fatemeh — AAU

14:50-15:10 WeB05.5

Model Development for Real Time Optimal Control in Pipe Lines, pp. 5536-5541.

Wang, Boyun — Univ. of Michigan - Ann Arbor
Warnock, April — Univ. of Michigan - Ann Arbor
Stefanopoulou, Anna G. — Univ. of Michigan
Nikolaos, Katopodes — Univ. of Michigan - Ann Arbor

15:10-15:30 WeB05.6

Reduced-Order Modeling of Thermally Induced Deformations on Reticles for Extreme Ultraviolet Lithography, pp. 5542-5549.

Bikcora, Can — Eindhoven Univ. of Tech.
Weiland, Siep — Eindhoven Univ. of Tech.
Coene, Wim M. J. — Eindhoven Univ. of Tech.

WeB06 Room 8

Flight Control (Regular Session)

Chair: Kolmanovsky, Ilya V. — The Univ. of Michigan
Co-Chair: Kim, H. Jin — Seoul National Univ.

13:30-13:50 WeB06.1

Hypersonic Glider Guidance Using Model Predictive Control, pp. 5550-5555.

Baldwin, Morgan — Air Force Res. Lab.
Kolmanovsky, Ilya V. — The Univ. of Michigan

13:50-14:10 WeB06.2

Constrained Inner-Loop Control of a Hypersonic Glider Using Extended Command Governor, pp. 5556-5561.

Baldwin, Morgan — Air Force Res. Lab.
Kolmanovsky, Ilya V. — The Univ. of Michigan

14:10-14:30 WeB06.3

Probabilistic Robustness Analysis of F-16 Controller Performance: An Optimal Transport Approach, pp. 5562-5567.

Halder, Abhishek — Texas A&M Univ.
Lee, Kooktae — Texas A&M Univ.
Bhattacharya, Raktim — Texas A&M

14:30-14:50 WeB06.4

Hardware Design and Validation of Pitching Control for Micro Air Vehicles Using Only Pressure Information, pp. 5568-5573.

Shen, He — Univ. of Central Florida
Xu, Yunjun — Univ. of Central Florida
Remeikas, Charles — Univ. of Central Florida

14:50-15:10 WeB06.5

Force and Moment Blending Control for Agile Dual Missiles, pp. 5574-5580.

Kim, Seunghyun — Seoul National Univ.
Cho, Dongsoo — Seoul National Univ.
Kim, H. Jin — Seoul National Univ.

15:10-15:30 WeB06.6

Stability Control in Aerial Manipulation, pp. 5581-5586.

Orsag, Matko — Univ. of Zagreb, Faculty ofElectricalEngineeringandComput in
Korpela, Christopher — Drexel Univ.
Pekala, Miles C. D. — Motile Robotics
Oh, Paul — Drexel Univ.

WeB07 — Room 9

Stability of Nonlinear Systems III (Regular Session)

Chair: Okuyama, Yoshifumi — Humanitech Lab.
Co-Chair: Das, Tuhin — Univ. of Central Florida

13:30-13:50 WeB07.1

Predicting Patterns in Lateral Inhibition Systems Via Graph Partitioning, pp. 5587-5592.

Rufino Ferreira, Ana Sofia — Univ. of California, Berkeley
Arcak, Murat — Univ. of California, Berkeley

13:50-14:10 WeB07.2

Robust Stabilization of Discrete Model-Reference Control Systems on Integer Grid Coordinates, pp. 5593-5600.

Okuyama, Yoshifumi — Humanitech Lab.

14:10-14:30 WeB07.3

Stability Analysis of a Tethered Airfoil, pp. 5601-5606.

Rimkus, Sigitas — Univ. of Central Florida
Das, Tuhin — Univ. of Central Florida
Mukherjee, Ranjan — Michigan State Univ.

14:30-14:50 WeB07.4

Global Boundary Feedback Stabilization for a Class of Pseudo-Parabolic Partial Differential Equations, pp. 5607-5612.

Hasan, Agus — Norwegian Univ. of Science and Tech.
Aamo, Ole Morten — NTNU
Foss, Bjarne A. — Norwegian Univ. of Science & Tech.

14:50-15:10 WeB07.5

Enlarging the Region of Attraction for Underactuated Systems Using Impulsive Inputs, pp. 5613-5618.

Jafari, Rouhollah — Michigan State Univ.
Mukherjee, Ranjan — Michigan State Univ.

15:10-15:30 WeB07.6

Spatial Uniformity in Diffusively-Coupled Systems Using Weighted L2 Norm Contractions, pp. 5619-5624.

Shafi, S. Yusef — UC Berkeley
Aminzare, Zahra — Rutgers Univ.
Arcak, Murat — Univ. of California, Berkeley
Sontag, Eduardo D. — Rutgers Univ.

WeB08 — Room 12

Fuzzy Systems (Regular Session)

Chair: George, Jemin — U.S. Army Res. Lab.
Co-Chair: Mammar, Said — Univ. d'Evry IBISC

13:30-13:50 WeB08.1

Local Stability Analysis of Continuous-Time Takagi-Sugeno Fuzzy Systems: An LMI Approach, pp. 5625-5630.

Lee, DongHwan — Yonsei Univ.

13:50-14:10 WeB08.2

Neuro-Fuzzy Based Human Intelligence Modeling and Robust Control in Gas Tungsten Arc Welding Process, pp. 5631-5636.

Liu, YuKang — Univ. of Kentucky
Zhang, WeiJie — Univ. of Kentucky
Zhang, Y. M. — Univ. of Kentucky

14:10-14:30 WeB08.3

Stability and Stabilization Conditions for Takagi-Sugeno Fuzzy Model Via Polyhedral Lyapunov Functions, pp. 5637-5642.

Esterhuizen, Willem Daniël — Boston Univ.
Wang, Hua O. — Boston Univ.
Tanaka, Kazuo — Univ. of Electro-Communications
Wang, Xiangzhou — Beijing Insititute of Tech.

14:30-14:50 WeB08.4

Stabilization Conditions of Takagi-Sugeno Fuzzy Systems Based on the Fuzzy Lyapunov Functions under the Imperfect Premise Matching, pp. 5643-5647.

Kim, Ho Jun — Yonsei Univ.
Park, Jin Bae — Yonsei Univ.
Joo, YoungHoon — Kunsan National Univ.

14:50-15:10 WeB08.5

Finsler's Relaxation for Local H-Infinity Controller Design of Continuous-Time Takagi-Sugeno Models Via Non-Quadratic Lyapunov Functions, pp. 5648-5653.

Jaadari, Abdelhafidh — Univ. Valenciennes Hainaut Cambresis
Guerra, Thierry Marie — Univ. of Valenciennes & Hainaut Cambresis
Sala, Antonio — Univ. Pol. de Valencia
Bernal, Miguel — Sonora Inst. of Tech.

15:10-15:30 WeB08.6

Observer Design for Motorcycle Lean and Steering Dynamics Estimation: A Takagi-Sugeno Approach, pp. 5654-5659.

Ichalal, Dalil — Univ. d'Evry Val d'Essonne, IBISC Lab.
Dabladji, Habib — Lab. Evry Val d'Essonne Univ.
Arioui, Hichem — Evry Val d'Essonne Univ.
Mammar, Said — Univ. d'Evry IBISC
Nehaoua, Lamri — Evry Univ.

WeB09 — Room 13

Supervisory Control and Emerging Control Theory (Regular Session)

Chair: Valasek, John — Texas A&M Univ.
Co-Chair: Zhang, Fumin — Georgia Inst. of Tech.

13:30-13:50 WeB09.1

Modeling Supermarket Refrigeration Systems for Supervisory Control in Smart Grid, pp. 5660-5665.

Shafiei, Seyed Ehsan — Aalborg Univ.
Rasmussen, Henrik — Aalborg Univ.
Stoustrup, Jakob — Aalborg Univ.

13:50-14:10 WeB09.2

Supervision Localization of Timed Discrete-Event Systems, pp. 5666-5671.

Cai, Kai — Univ. of Toronto
Zhang, Renyuan — Xi'an Jiaotong Univ. China
Wonham, W. Murray — Univ. of Toronto

14:10-14:30 WeB09.3

Adaptive Event-Triggered Control of a Uncertain Linear Discrete Time System Using Measured Input and Output Data, pp. 5672-5677.

Sahoo, Avimanyu — Missouri Univ. of Science and Tech. Rolla, MO
Xu, Hao — Missouri Univ. of Science and Tech.
Jagannathan, Sarangapani — Missouri Univ. of Science & Tech.

14:30-14:50 WeB09.4

A Parity-Based Architecture for Decentralized Discrete-Event Control, pp. 5678-5684.

Ricker, S. Laurie — Mount Allison Univ.
Marchand, Herve — INRIA Rennes - Bretagne Atlantique

14:50-15:10 WeB09.5

A Constructive Stabilization Approach for Open-Loop Unstable Non-Affine Systems, pp. 5685-5689.

Narang-Siddarth, Anshu — Texas A&M Univ.
Valasek, John — Texas A&M Univ.

15:10-15:30 WeB09.6

Robustness of a Class of Three-Dimensional Curve Tracking Control Laws under Time Delays and Polygonal State Constraints, pp. 5690-5695.

Malisoff, Michael — Louisiana State Univ.
Zhang, Fumin — Georgia Inst. of Tech.

WeB10 — Room 14

Mechanical Systems/Robotics II (Regular Session)

Chair: Loria, Antonio — CNRS
Co-Chair: Gregg, Robert D. — Northwestern Univ.

13:30-13:50 WeB10.1

Stability Analysis of Teleoperation System by State Convergence with Variable Time Delay, pp. 5696-5701.

Tafur, Julio Cesar — Pontificia Univ. Catolica del Peru
Garcia, Cecilia — Univ. Pol. de Madrid
Aracil, Rafael — Univ. Pol. de Madrid
Saltaren, Roque — Univ. Pol. de Madrid

13:50-14:10 WeB10.2

Biomimetic Virtual Constraint Control of a Transfemoral Powered Prosthetic Leg, pp. 5702-5708.

Gregg, Robert D. — Univ. of Texas at Dallas
Sensinger, Jonathon — Rehabilitation Inst. of Chicago

14:10-14:30 WeB10.3

Globally Converging MIMO Optimal Controller for Adaptive Manipulation of Mobile Robots with Redundant Arms, pp. 5709-5714.

Moubarak, Paul — The George Washington Univ.
Ben-Tzvi, Pinhas — George Washington Univ.

14:30-14:50 WeB10.4

Orbital Stabilization of Mechanical Systems through Semidefinite Lyapunov Functions, pp. 5715-5721.

Garofalo, Gianluca — German Aerospace Center (DLR)
Ott, Christian — German Aerospace Center (DLR)
Albu-Schaeffer, Alin — German Aerospace Center (DLR)

14:50-15:10 WeB10.5

Uniform Global Position Feedback Tracking Control of Mechanical Systems, pp. 5722-5727.

Loria, Antonio — CNRS

15:10-15:30 WeB10.6

Passive Force/Velocity Field Control for Contour Tracking of Constrained Robots, pp. 5728-5734.

Munoz-Vazquez, Aldo-Jonathan — CINVESTAV
Parra-Vega, Vicente — CINVESTAV
Sanchez, Anand — CINVESTAV
Rosales, Sergio — Cinvestav
Garcia, Octavio — CINVESTAV Monterrey
Ruiz-Sanchez, Francisco — Cinvestav

WeB11 — Room 15

Sliding Mode Control I (Regular Session)

Chair: Toda, Masayoshi — Tokyo Univ. of Marine Science and Tech.
Co-Chair: Salamci, Metin U. — Gazi Univ.

13:30-13:50 WeB11.1

Hidden Mode Tracking Control for a Class of Hybrid Systems, pp. 5735-5741.

Yong, Sze Zheng — Massachusetts Inst. of Tech.
Frazzoli, Emilio — Massachusetts Inst. of Tech.

13:50-14:10 WeB11.2

Motion Control of an Oscillatory-Base Manipulator Using Sliding Mode Control Via Rotating Sliding Surface with Variable-Gain Integral Control, pp. 5742-5747.

Iwamura, Takuya — Tokyo Univ. of Marine Science and Tech.
Toda, Masayoshi — Tokyo Univ. of Marine Science and Tech.

14:10-14:30 WeB11.3

Sliding Mode Control of an Automotive Air Conditioning System, pp. 5748-5753.

Zhang, Quansheng — The Ohio State Univ.
Canova, Marcello — The Ohio State Univ.
Rizzoni, Giorgio — Ohio State Univ.

14:30-14:50 WeB11.4

State Dependent Sliding Sectors for Nonlinear Systems with Nonlinear Sliding Surfaces, pp. 5754-5759.

Ozcan, Sinan — Turkish Aerospace Industries, Kazan, Ankara
Salamci, Metin U. — Gazi Univ.
Birinci, Burak Eren — Mechanical Engineering Dept, Gazi Univ. Ankara

14:50-15:10 WeB11.5

Sliding Mode Control Based Guidance Law with Impact Time Constraints, pp. 5760-5765.

Kumar, Shashi Ranjan — Indian Inst. of Science, Bangalore
Ghose, Debasish — Indian Inst. of Science

15:10-15:30 WeB11.6

Sliding Mode Control of Electric Power System Comprised of Fuel Cells, DC-DC Boost Converters and Ultracapacitors, pp. 5766-5771.

Ashok, Roshini S. — Univ. of Alabama in Huntsville
Shtessel, Yuri B. — Univ. of Alabama at Huntsville
Smith, James E — Univ. of Alabama in Huntsville

WeB12 Room 16

Decentralized Control I (Regular Session)

Chair: Lessard, Laurent — Lund Univ.
Co-Chair: Lamperski, Andrew — Univ. of Cambridge

13:30-13:50 WeB12.1

A Dual Problem in H2 Decentralized Control Subject to Delays, pp. 5772-5777.

Matni, Nikolai — California Inst. of Tech.
Doyle, John C. — California Inst. of Tech.

13:50-14:10 WeB12.2

Output Feedback H_2 Model Matching for Decentralized Systems with Delays, pp. 5778-5783.

Lamperski, Andrew — Univ. of Cambridge
Doyle, John C. — California Inst. of Tech.

14:10-14:30 WeB12.3

On Structured Realizability and Stabilizability of Linear Systems, pp. 5784-5790.

Lessard, Laurent — Univ. of California, Berkeley
Kristalny, Maxim — Tech.
Rantzer, Anders — Lund Univ.

14:30-14:50 WeB12.4

Output Synchronization for Heterogeneous Networks of Non-Introspective, Non-Right-Invertible Agents, pp. 5791-5796.

Grip, Håvard Fjær — Norwegian Univ. of Science and Tech.
Saberi, Ali — Washington State Univ.
Yang, Tao — Royal Inst. of Tech.
Stoorvogel, Anton A. — Univ. of Twente

14:50-15:10 WeB12.5

Achievable Performance of Decentralized Control Systems, pp. 5797-5802.

Liu, Su — Zhejiang Univ.
Liu, Jinfeng — Univ. of Alberta
Feng, Yiping — Zhejiang Univ.
Rong, Gang — Zhejiang Univ.

15:10-15:30 WeB12.6

A Heuristic for Sub-Optimal H2 Decentralized Control Subject to Delay in Non-Quadratically-Invariant Systems, pp. 5803-5808.

Matni, Nikolai — California Inst. of Tech.
Doyle, John C. — California Inst. of Tech.

WeB13 Mount Vernon Square A

Power Systems IV (Regular Session)

Chair: Bamieh, Bassam — Univ. of California at Santa Barbara
Co-Chair: Mohammadpour, J. — Univ. of Georgia

13:30-13:50 WeB13.1

Using Battery Management Systems to Augment Inter-Area Oscillation Control in Wind-Integrated Power Systems, pp. 5809-5814.

Chandra, Souvik — North Carolina State Univ.
Gayme, Dennice — The Johns Hopkins Univ.
Chakrabortty, Aranya — North Carolina State Univ.

13:50-14:10 WeB13.2

The Price of Synchrony: Resistive Losses Due to Phase Synchronization in Power Networks, pp. 5815-5820.

Bamieh, Bassam — Univ. of California at Santa Barbara
Gayme, Dennice — The Johns Hopkins Univ.

14:10-14:30 WeB13.3

Demand Management of Electric Vehicle Loads, pp. 5821-5826.

Geng, Xiaojun — Univ. of West Florida
Khargonekar, Pramod P. — Univ. of Florida

14:30-14:50 WeB13.4

Power System Dynamic Scheduling with High Penetration of Renewable Sources, pp. 5827-5832.

Hooshmand, Ali — Univ. of Houston
Mohammadpour, Javad — Univ. of Georgia
Malki, Heidar — Univ. of Houston
Daneshi, Hossein — Southern California Edison

14:50-15:10 WeB13.5

Nonlinear Observer and Lyapunov-Based Control for SEPIC Converter: Design and Experimental Results, pp. 5833-5838.

Meghnous, Ahmed-Redha — INSA de LYON, Lab. Ampère
Pham, Minh Tu — INSA de Lyon
Lin Shi, Xuefang — INSA Lyon

15:10-15:30 WeB13.6

Control of Electric Power Transmission Networks with Massive Energy Storage Using Economic MPC, pp. 5839-5844.

Adeodu, Oluwasanmi — Illinois Inst. of Tech.
Chmielewski, Donald J. — Illinois Inst. of Tech.

WeB14 Mount Vernon Square B

Uncertain Systems III (Regular Session)

Chair: Bhattacharya, Raktim — Texas A&M
Co-Chair: Chesi, Graziano — Univ. of Hong Kong

13:30-13:50 WeB14.1

Frequency Domain Model Validation in Wasserstein Metric, pp. 5845-5850.

Halder, Abhishek — Texas A&M Univ.
Bhattacharya, Raktim — Texas A&M

13:50-14:10 WeB14.2

Uncertainty Propagation Via Multi-Element Grid, pp. 5851-5856.

Jia, Bin — Columbia Univ.
Xin, Ming — Mississippi State Univ.
Cheng, Yang — Mississippi State Univ.

14:10-14:30 WeB14.3

Robustness Analysis of Uncertain Linear Descriptor Systems: Unified Approaches Using GIfts, LMIs, and SSV, pp. 5857-5862.

Kim, Kwang-Ki — Univ. of Illinois at Urbana-Champaign
Braatz, Richard D. — Massachusetts Inst. of Tech.

14:30-14:50 WeB14.4

A Gram-SOS Approach for Robust Stability Analysis of Discrete-Time Systems with Time-Varying Uncertainty, pp. 5863-5868.

Chesi, Graziano — Univ. of Hong Kong

14:50-15:10 WeB14.5

Robust Controller Design with General Criteria for Uncertain Conic Nonlinear Systems with Disturbances, pp. 5869-5874.

Feng, Fan — Marqutte Univ.
Jeong, Chung Seop — Marquette Univ.
Yaz, Edwin — Marquette Univ.
Schneider, Susan — Marquette Univ.
Yaz, Yvonne — Milwaukee School of Engineering

15:10-15:30 WeB14.6

Sufficient Conditions for Strong Structural Controllability of Uncertain Linear Time-Varying Systems, pp. 5875-5880.

Hartung, Christoph — Univ. of the German Armed Forces Munich
Reissig, Gunther — Univ. of the Federal Armed Forces Munich
Svaricek, Ferdinand — Univ. of German Armed Forces Munich

WeB15 Renaissance Ballroom East

Wireless Sensor Networks (Regular Session)

Chair: Aghdam, Amir G. — Concordia Univ.
Co-Chair: Shtessel, Yuri B. — Univ. of Alabama at Huntsville

13:30-13:50 WeB15.1

On Connectivity Preservation in Mobile Wireless Multi-Agent/Node Mesh Networks, pp. 5881-5886.

Edwards, Christopher — Univ. of Exeter
Menon, Prathyush P — Univ. of Exeter
Shtessel, Yuri B. — Univ. of Alabama at Huntsville
Bordetsky, Alexander — Naval Postgraduate School

13:50-14:10 WeB15.2

Distributed Deployment Strategies to Increase Coverage in a Network of Wireless Mobile Sensors, pp. 5887-5892.

Mahboubi, Hamid — Concordia Univ.
Aghdam, Amir G. — Concordia Univ.

14:10-14:30 WeB15.3

Design, Build, and Test of an Autonomous Inverted Pendulum Cart, pp. 5893-5898.

White, Warren N. — Kansas State Univ.
Wagner, Jacob — Kansas State Univ.
Blankenau, Brian — Kansas State Univ.
Wang, Ziming — Kansas State Univ.
Salazar, Victor — Kansas State Univ.

14:30-14:50 WeB15.4

Decentralized Estimation of Topology Changes in Wireless Robotic Networks, pp. 5899-5904.

Bezzo, Nicola — Univ. of Pennsylvania
Sorrentino, Francesco — Univ. of New Mexico
Fierro, Rafael — Univ. of New Mexico

14:50-15:10 WeB15.5

Relay Node Placement in Wireless Sensor Networks for Pipeline Inspection, pp. 5905-5910.

Wu, Dalei — Massachusetts Inst. of Tech.
Youcef-Toumi, Kamal — Massachusetts Inst. of Tech.
Mekid, Samir — King Fahd Univ. of Petroleum & Minerals
Ben-Mansour, Rached — King Fahd Univ. of Petroleum & Minerals

15:10-15:30 WeB15.6

Wireless Sensor Network Data Collection by Connected Cooperative UAVs, pp. 5911-5916.

Wei, Peng — Purdue Univ.
Gu, Quanquan — Univ. of Illinois at Urbana-Champaign
Sun, Dengfeng — Purdue Univ.

WeB16	Renaissance Ballroom West A
Emerging Applications of Iterative Learning Control (Invited Session)	
Chair: Bristow, Douglas A.	Missouri Univ. of Science & Tech.
Co-Chair: Barton, Kira	Univ. of Michigan, Ann Arbor
Organizer: Oomen, Tom	Eindhoven Univ. of Tech.
Organizer: Barton, Kira	Univ. of Michigan, Ann Arbor
Organizer: Mishra, Sandipan	Rensselaer Pol. Inst.
13:30-13:50	WeB16.1
Systematic Surveillance for UAVs: A Feedforward Iterative Learning Control Approach (I), pp. 5917-5922.	
Barton, Kira	Univ. of Michigan, Ann Arbor
Kingston, Derek B.	Air Force Res. Lab.
13:50-14:10	WeB16.2
Point-To-Point Learning in Human Motor Systems (I), pp. 5923-5928.	
Zhou, Shou-Han	Univ. of Melbourne
Tan, Ying	The Univ. of Melbourne
Oetomo, Denny Nurjanto	The Univ. of Melbourne
Freeman, Christopher T.	Univ. of Southampton
Burdet, Etienne	Department of Bioengineering, Imperial Coll. London
Mareels, Iven	The Univ. of Melbourne
14:10-14:30	WeB16.3
Iterative Learning Control for Fault-Tolerance in Multi-Phase Permanent-Magnet Machines (I), pp. 5929-5934.	
Mohammadpour, Ali	Rensselaer Pol. Inst.
Mishra, Sandipan	Rensselaer Pol. Inst.
Parsa, Leila	Rensselaer Pol. Inst.
14:30-14:50	WeB16.4
Norm Optimal Iterative Learning Control for a Roll to Roll Nano/Micro-Manufacturing System (I), pp. 5935-5941.	
Sutanto, Erick	Univ.
Alleyne, Andrew G.	Univ. of Illinois, Urbana-Champaign
14:50-15:10	WeB16.5
Iterative Learning Control of Bead Morphology in Laser Metal Deposition Processes (I), pp. 5942-5947.	
Sammons, Patrick	Missouri Univ. of Science and Tech.
Bristow, Douglas A.	Missouri Univ. of Science and Tech.
Landers, Robert G.	Missouri Univ. of Science and Tech.
15:10-15:30	WeB16.6
An Efficient Fixed-Point Realization of Inversion Based Repetitive Control (I), pp. 5948-5953.	
Chang, Herrick	Univ. of California, Los Angeles
Tsao, Tsu-Chin	Univ. of California, Los Angeles

WeB17	Renaissance Ballroom West B
Energy Management and Control of Advanced Propulsion Systems (Invited Session)	
Chair: Canova, Marcello	The Ohio State Univ.
Co-Chair: Scacchioli, Annalisa	New York Univ.
Organizer: Canova, Marcello	The Ohio State Univ.
Organizer: Shim, Taehyun	Univ. of Michigan-Dearborn
Organizer: Scacchioli, Annalisa	New York Univ.
Organizer: Shahbakhti, Mahdi	Michigan Tech. Univ.
13:30-13:50	WeB17.1
Fuel Economy Comparisons of Series, Parallel and HMT Hydraulic Hybrid Architectures (I), pp. 5954-5959.	
Du, Zhekang	Univ. of Minnesota, Twin Cities
Cheong, Kai Loon	Univ. of Minnesota
Li, Perry Y.	Univ. of Minnesota
Chase, Thomas R.	Univ. of Minnesota
13:50-14:10	WeB17.2
Experimental Validation of Mission Energy Prediction Model for Unmanned Ground Vehicles (I), pp. 5960-5965.	
Sadrpour, Amir	Univ. of Michigan
Ulsoy, A. Galip	Univ. of Michigan
Jin, Judy	Univ. of Michigan
14:10-14:30	WeB17.3
Analysis of Energy Management Strategies in Plug-In Hybrid Electric Vehicles: Application to the GM Chevrolet Volt (I), pp. 5966-5971.	
Tribioli, Laura	tor vergata
Onori, Simona	Ohio State Univ.
14:30-14:50	WeB17.4
Rapid Sizing for Power Split Hybrid Vehicles with Multiple Operation Modes (I), pp. 5972-5977.	
Zhang, Xiaowu	Univ. of Michigan
Peng, Huei	Univ. of Michigan
Sun, Jing	Univ. of Michigan
14:50-15:10	WeB17.5
Trip-Based Energy Management for Electric Vehicles: An Optimal Control Approach, pp. 5978-5983.	
Boehme, Thomas Juergen	IAV Automotive Engineering
Held, Florian	iav automotive engineering
Schultalbers, Matthias	IAV GmbH, Ingenieurgesellschaft Auto und Verkehr
Lampe, Bernhard P.	Univ. of Rostock
15:10-15:30	WeB17.6
A Predictive Energy Management for Hybrid Vehicles Based on Optimal Control Theory, pp. 5984-5989.	
Boehme, Thomas Juergen	IAV Automotive Engineering
Schori, Markus	Univ. of Rostock
Frank, Benjamin	IAV GmbH
Schultalbers, Matthias	IAV GmbH, Ingenieurgesellschaft Auto und Verkehr
Drewelow, Wolfgang	Univ. Rostock, Inst. für Automatisierungstechnik

WeB18 Grand Ballroom South

Online Ad Systems (Tutorial Session)

Chair: Chatwin, Richard — Adchemy, Inc.
Co-Chair: Karlsson, Niklas — Aol Advertising
Organizer: Chatwin, Richard — Adchemy, Inc.

13:30-14:30 WeB18.1

An Overview of Computational Challenges in Online Advertising (I), pp. 5990-6007.

Chatwin, Richard — Adchemy, Inc.

14:30-14:50 WeB18.2

Applications of Feedback Control in Online Advertising (I), pp. 6008-6013.

Karlsson, Niklas — Aol Networks
Zhang, Jianlong — Aol Networks

14:50-15:10 WeB18.3

*How Effective Is Targeted Advertising? (I)**. pp. 6014-6021

Farahat, Ayman — Adobe

15:10-15:30 WeB18.4

*Control Strategies for Real-Time Bidding in Display Advertising (I)**. N/A

Shanahan, James — Church and Duncan Group Inc.

WeB19 Grand Ballroom Central

Advances in High-Precision Motion Stages (Invited Session)

Chair: Heertjes, Marcel — Eindhoven Univ. of Tech.
Co-Chair: Oomen, Tom — Eindhoven Univ. of Tech.
Organizer: Heertjes, Marcel — Eindhoven Univ. of Tech.
Organizer: Oomen, Tom — Eindhoven Univ. of Tech.

13:30-13:50 WeB19.1

Precision Charge Drive with Low Frequency Voltage Feedback for Linearization of Piezoelectric Hysteresis (I), pp. 6022-6026.

Fleming, Andrew J. — Univ. of Newcastle

13:50-14:10 WeB19.2

An Experimental Comparison of PI, Inversion, and Damping Control for High Performance Nanopositioning (I), pp. 6027-6032.

Fleming, Andrew J. — Univ. of Newcastle
Leang, Kam K. — Univ. of Nevada, Reno

14:10-14:30 WeB19.3

Feedforward for Flexible Systems with Time-Varying Performance Locations (I), pp. 6033-6038.

Ronde, Michael — Eindhoven Univ. of Tech.
van den Bulk, John — Eindhoven Univ. of Tech.
Molengraft, René van de — Eindhoven Univ. of Tech.
Steinbuch, Maarten — Eindhoven Univ. of Tech.

14:30-14:50 WeB19.4

Enhancing Performance through Multivariable Weighting Function Design in H-Infinity Loop-Shaping: With Application to a Motion System (I), pp. 6039-6044.

Boeren, Frank — Eindhoven Univ. of Tech.
van Herpen, Robbert — Eindhoven Univ. of Tech.
Oomen, Tom — Eindhoven Univ. of Tech.
van de Wal, Marc — ASML
Bosgra, Okko H. — Delft Univ. of Tech.

14:50-15:10 WeB19.5

Model-Based Piecewise Affine Variable-Gain Controller Synthesis (I), pp. 6045-6050.

Hunnekens, Bram — Eindhoven Univ. of Tech.
Heertjes, Marcel — Eindhoven Univ. of Tech.
Van De Wouw, Nathan — Eindhoven Univ. of Tech.
Nijmeijer, Hendrik — Eindhoven Univ. of Tech.

15:10-15:30 WeB19.6

Experimental Verification of High Speed AFM through Local Raster Scanning} (I), pp. 6051-6056.

Huang, Peng — Boston Univ.
Andersson, Sean — Boston Univ.

WeB20 Grand Ballroom North

Optimization Problem Challenges in Physical Synthesis (Tutorial Session)

Chair: Bustany, Ismail — Mentor Graphics Corp.
Co-Chair: Hindi, Haitham — Walmart Lab.
Organizer: Bustany, Ismail — Mentor Graphics Corp.

13:30-14:30 WeB20.1

The Nature of Optimization Problem Challenges in Physical Design (I), pp. 6057-6059.

Bustany, Ismail — Mentor Graphics Corp.

14:30-14:50 WeB20.2

The Global Placement Problem in Physical Design (I), pp. 5956-5956.

Bustany, Ismail — Mentor Graphics Corp.

14:50-15:10 WeB20.3

Algorithmic Tuning of Clock Networks, Igor Markov, IEEE Fellow, University of Michigan (I), N/A

Bustany, Ismail — Mentor Graphics Corp.

15:10-15:30 WeB20.4

Lithography-Aware Place and Route Techniques, Martin Wong, IEEE Fellow, University of Illinois at Urbana-Champaign (I), N/A

Bustany, Ismail — Mentor Graphics Corp.

WeB21 Congressional Hall A

Linear Parameter-Varying Systems I (Regular Session)

Chair: Peres, Pedro L. D. — Univ. of Campinas
Co-Chair: Bohn, Christian — Tech. Univ. Clausthal

13:30-13:50 WeB21.1

H-Infinity Dynamic Output Feedback for LPV Systems Subject to Inexactly Measured Scheduling Parameters, pp. 6060-6065.

Agulhari, Cristiano Marcos — Univ. Tecnológica Federal do Paraná
Tognetti, Eduardo Stockler — Univ. of Brasilia
Oliveira, Ricardo C. L. F. — Univ. of Campinas - UNICAMP
Peres, Pedro L. D. — Univ. of Campinas

13:50-14:10 WeB21.2

Guaranteed L2 to Linf Control for Discrete-Time Polytopic LPV Systems, pp. 6066-6071.

White, Andrew — Michigan State Univ.
Choi, Jongeun — Michigan State Univ.
Zhu, Guoming — Michigan State Univ.

14:10-14:30 WeB21.3

Admissible Finite-Time Stability and Stabilization of Discrete-Time Singular Systems with Time-Varying Delays, pp. 6072-6077.

Xue, Wenping — Zhejiang Univ.
Mao, Wei-Jie — Zhejiang Univ.

14:30-14:50 WeB21.4

Gain Scheduling Compensator Synthesis for Output Regulation of Nonlinear Systems, pp. 6078-6083.

Song, Xun — Beihang Univ.
Ren, Zhang — Beijing Univ. of Aeronautics and Astronautics
Wu, Fen — North Carolina State Univ.

14:50-15:10 WeB21.5

Mean-Square Optimal Control of Linear Parameter Varying Systems with Noisy Scheduling Parameter Measurements, pp. 6084-6089.

Luspay, Tamás — Univ. of Houston
Kulcsar, Balazs — Chalmers Univ. of Tech.
Grigoriadis, Karolos M. — Univ. of Houston

15:10-15:30 WeB21.6

Design of Structured Discrete-Time LPV Gain-Scheduling Controllers through State Augmentation and Partial State Feedback, pp. 6090-6095.

Shu, Xinyu — Clausthal Univ. of Tech.
Ballesteros, Pablo — Clausthal Univ. of Tech.
Heins, Wiebke — Clausthal Univ. of Tech.
Bohn, Christian — Tech. Univ. Clausthal

WeB22 — Congressional Hall B

Control of Networks I (Regular Session)

Chair: Roy, Sandip — Washington State Univ.
Co-Chair: Aguiar, A. Pedro — Faculty of Eng., Univ. of Porto

13:30-13:50 WeB22.1

Convergence of Distributed Averaging and Maximizing Algorithms Part I: Time-Dependent Graphs, pp. 6096-6101.

Shi, Guodong — Royal Inst. of Tech.
Johansson, Karl H. — Royal Inst. of Tech.

13:50-14:10 WeB22.2

On Global and Local Consensusability of Multi-Agent Systems with Input Constraint and Uncertain Initial Conditions, pp. 6102-6107.

Manfredi, Sabato — Univ. of Naples Federico II

14:10-14:30 WeB22.3

A Structured Systems Approach for Optimal Actuator-Sensor Placement in Linear Time-Invariant Systems, pp. 6108-6113.

Pequito, Sergio Daniel — Carnegie Mellon Univ. - Inst. Superior Tecnico
Kar, Soummya — Carnegie Mellon Univ.
Aguiar, A. Pedro — Faculty of Engineering, Univ. of Porto

14:30-14:50 WeB22.4

Connecting Network Graph Structure to Linear-System Zero Structure, pp. 6114-6119.

Abad Torres, Jackeline — Washington State Univ.
Roy, Sandip — Washington State Univ.

14:50-15:10 WeB22.5

Observability and Controllability of Linearly-Coupled Dynamical Systems: Complex Interplay between Local Dynamics and Network Interactions, N/A

Xue, Mengran — Univ. of Michigan
Roy, Sandip — Washington State Univ.

15:10-15:30 WeB22.6

On Strong Structural Controllability of Networked Systems: A Constrained Matching Approach, pp. 6126-6131.

Chapman, Airlie — Univ. of Washington
Mesbahi, Mehran — Univ. of Washington

WeC01 — Room 2

Cooperative Control III (Regular Session)

Chair: Jia, Yingmin — Beihang Univ.
Co-Chair: Shamma, Jeff S. — Georgia Inst. of Tech.

16:00-16:20 WeC01.1

Consensus Based Distributed Motion Planning on a Sphere, pp. 6132-6137.

Okoloko, Innocent — Univ. of Benin

16:20-16:40 WeC01.2

Balanced Deployment of Multiple Robots Using a Modified Kuramoto Model, pp. 6138-6144.

Xu, Zhihao — Univ. of Wuerzburg
Egerstedt, Magnus — Georgia Inst. of Tech.
Droge, Greg Nathanael — Georgia Inst. of Tech.
Schilling, Klaus — Univ. Würzburg

16:40-17:00 WeC01.3

Robustness of Stochastic Stability in Game Theoretic Learning, pp. 6145-6150.

Lim, Yusun — Georgia Inst. of Tech.
Shamma, Jeff S. — Georgia Inst. of Tech.

17:00-17:20 WeC01.4

Distributed Consensus Filter on Directed Graphs with Switching Topologies, pp. 6151-6156.

Li, Shuai — Stevens Inst. of Tech.
Guo, Yi — Stevens Inst. of Tech.

17:20-17:40 WeC01.5

Set-Based Model Predictive Consensus under Bounded Additive Disturbances, pp. 6157-6162.

Gautam, Ajay — Nanyang Tech. Univ.
Soh, Yeng Chai — Nanyang Tech. Univ.
Chu, Yun-Chung — Nanyang Tech. Univ.

17:40-18:00 WeC01.6

Generalization of Deviated Linear Cyclic Pursuit, pp. 6163-6168.

Mukherjee, Dwaipayan — Indian Inst. of Science
Ghose, Debasish — Indian Inst. of Science

WeC02 — Room 3

Estimation of Moving Targets (Regular Session)

Chair: Padhi, Radhakant — Indian Inst. of Science
Co-Chair: Ohlmeyer, Ernest J. — Aero Science Applications

16:00-16:20 — WeC02.1

Moving Horizon Estimation with a Huber Penalty Function for Robust Pose Estimation of Tethered Airplanes, pp. 6169-6174.

Geebelen, Kurt — KU Leuven
Wagner, Andrew — KU Leuven
Gros, Sebastien — KU Leuven
Swevers, Jan — K. U. Leuven
Diehl, Moritz — Katholieke Univ. Leuven

16:20-16:40 — WeC02.2

State Estimation Using UKF and Predictive Guidance for Engaging Barrel Roll Aircrafts, pp. 6175-6180.

Dwivedi, Prasiddha Nath — DRDO
Bhale, Prashant Gajanan — DRDO
Bhattacharyaa, Abhijit — DRDO
Padhi, Radhakant — Indian Inst. of Science

16:40-17:00 — WeC02.3

Applications of the Particle Filter for Multi-Object Tracking and Classification, pp. 6181-6186.

Ohlmeyer, Ernest J. — Aero Science Applications
Menon, P. K. — Optimal Synthesis Inc.

17:00-17:20 — WeC02.4

H_infty Filtering with Diagonal Interacting Multiple Model Algorithm for Maneuvering Target Tracking, pp. 6187-6192.

Fu, Xiaoyan — Beihang Univ. (BUAA)
Jia, Yingmin — Beihang Univ.
Du, Junping — Beijing Univ. of Posts and Telecommunications
Zhang, Jun — Beihang Univ. (BUAA)
Li, Wenling — Beihang Univ.
Liu, Xiaohe — Beijing Information Science and Tech. Univ.

17:20-17:40 — WeC02.5

On the Estimation of Fast-Rate Systems Using Slow-Rate Image Sensors, pp. 6193-6198.

Tani, Jacopo — Rensselaer Pol. Inst.
Mishra, Sandipan — Rensselaer Pol. Inst.
Wen, John T. — Rensselaer Pol. Inst.

17:40-18:00 — WeC02.6

LED-Based Initialization and Navigation, pp. 6199-6205.

Zheng, Dongfang — Univ. of California, Riverside
Vanitsthian, Rathavut — Univ. of California, Riverside
Chen, Gang — Univ. of California at Riverside
Farrell, Jay A. — Univ. of California Riverside

WeC03 — Room 4

Hybrid Systems (Regular Session)

Chair: Murphey, Todd — Northwestern Univ.
Co-Chair: Ishihara, Joao Yoshiyuki — Univ. of Brasília

16:00-16:20 — WeC03.1

Robust Event-Based Stabilization of Periodic Orbits for Hybrid Systems: Application to an Underactuated 3D Bipedal Robot, pp. 6206-6212.

Akbari Hamed, Kaveh — The Univ. of Michigan
Grizzle, Jessy W. — Univ. of Michigan

16:20-16:40 — WeC03.2

Second-Order Switching Time and Magnitude Optimization for Impulsive Hybrid Systems, pp. 6213-6218.

Leong, Yoke Peng — California Inst. of Tech.
Murphey, Todd — Northwestern Univ.

16:40-17:00 — WeC03.3

New Algorithm for Identification of Discrete-Time Switched Linear Systems, pp. 6219-6224.

Lopes, Renato Vilela — Univ. of Brasília
Borges, Geovany A. — Univ. de Brasilia
Ishihara, Joao Yoshiyuki — Univ. of Brasília

17:00-17:20 — WeC03.4

A Hybrid Observer for a Class of DC-DC Power Converters, pp. 6225-6230.

Meghnous, Ahmed-Redha — INSA de LYON, Lab. Ampère
Pham, Minh Tu — INSA de Lyon
Lin Shi, Xuefang — INSA Lyon

17:20-17:40 — WeC03.5

Optimal Control of Partially Observable Discrete Time Stochastic Hybrid Systems for Safety Specifications, pp. 6231-6236.

Ding, Jerry — Univ. of California - Berkeley
Abate, Alessandro — TU Delft
Tomlin, Claire J. — UC Berkeley

17:40-18:00 — WeC03.6

Computing Augmented Finite Transition Systems to Synthesize Switching Protocols for Polynomial Switched Systems, pp. 6237-6244.

Ozay, Necmiye — California Inst. of Tech.
Liu, Jun — Univ. of Sheffield
Prabhakar, Pavithra — Inst. IMDEA Software
Murray, Richard M. — California Inst. of Tech.

WeC04 — Room 5

Control of MEMS (Regular Session)

Chair: Berg, Jordan M. — Texas Tech. Univ.
Co-Chair: Oldham, Kenn — Univ. of Michigan, Ann Arbor

16:00-16:20 — WeC04.1

Inversion-Free Stabilization and Regulation of Systems with Hysteresis Using Integral Action, pp. 6245-6250.

Esbrook, Alex — Michigan State Univ.
Tan, Xiaobo — Michigan State Univ.
Khalil, Hassan K. — Michigan State Univ.

16:20-16:40 WeC04.2

Delay of Side Pull-In for an Electrostatic Comb Drive Model with Rotational Degree of Freedom, pp. 6251-6256.

Wickramasinghe, Imiya	Texas Tech. Univ.
Berg, Jordan M.	Texas Tech. Univ.

16:40-17:00 WeC04.3

A Green's Function-Based Design for Deformation Control of a Microbeam with In-Domain Actuation, pp. 6257-6262.

Badkoubeh, Amir	Ec. Pol. Montreal
Zhu, Guchuan	Ec. Pol. de Montreal

17:00-17:20 WeC04.4

Modeling and Control of Optical Fiber Micro-Positioning in a Thermal Adhesive, pp. 6263-6268.

Sihite, Eric	Univ. of Michigan
Qiu, Zhen	Univ. of Michigan
Oldham, Kenn	Univ. of Michigan, Ann Arbor

17:20-17:40 WeC04.5

Oscillation Amplitude Enhancement of an Electrostatic MEMS Resonator Via Chaos Control, pp. 6269-6274.

Jimenez-Triana, A.	Univ. Distrital Francisco José de Caldas
Zhu, Guchuan	Ec. Pol. de Montreal
Saydy, Lahcen	Ec. Pol. of Montreal

17:40-18:00 WeC04.6

Modeling, Testing and Control of a Parametrically-Excited Mirror with Duty-Cycled Excitation, pp. 6275-6280.

Shahid, Wajiha	Univ. of Michigan, Ann Arbor
Qiu, Zhen	Univ. of Michigan
Duan, Xiyu	Univ. of Michigan
Li, Haijun	Univ. of Michigan
Wang, Thomas D.	Univ. of Michigan
Oldham, Kenn	Univ. of Michigan, Ann Arbor

WeC05 Room 6

Vision-Based Control (Regular Session)

Chair: Farrell, Jay A.	Univ. of California Riverside
Co-Chair: Xie, Wenfang	Concordia Univ.

16:00-16:20 WeC05.1

Visual Tracking with Sensing Dynamics Compensation Using the Expectation-Maximization Algorithm, pp. 6281-6286.

Lin, Chung-Yen	Univ. of California, Berkeley
Wang, Cong	Univ. of California, Berkeley
Tomizuka, Masayoshi	Univ. of California, Berkeley

16:20-16:40 WeC05.2

Path-Following Control for Mobile Robots Localized Via Sensor-Fused Visual Homography, pp. 6287-6293.

Satici, Aykut C	Univ. of Texas at Dallas
Tick, David	Univ. of Texas at Dallas
Shen, Jinglin	Univ. of Texas at Dallas
Gans, Nicholas	Univ. of Texas at Dallas

16:40-17:00 WeC05.3

Constrained Optimization for Opportunistic Distributed Visual Sensing, pp. 6294-6301.

Morye, Akshay A.	Univ. of California, Riverside
Ding, Chong	Univ. of California, Riverside
Roy-Chowdhury, Amit K.	Univ. of California, Riverside
Farrell, Jay A.	Univ. of California Riverside

17:00-17:20 WeC05.4

Catching Moving Objects Using a Navigation Guidance Technique in a Robotic Visual Servoing System, pp. 6302-6307.

Keshmiri, Mohammad	Concordia Univ.
Xie, Wenfang	Concordia Univ.

17:20-17:40 WeC05.5

Partially Distributed Multirobot Control with Multiple Cameras, pp. 6308-6314.

Aranda, Miguel	Univ. de Zaragoza
Mezouar, Youcef	Blaise Pascal Univ.
Lopez-Nicolas, Gonzalo	Univ. de Zaragoza
Sagues, Carlos	Univ. de Zaragoza

17:40-18:00 WeC05.6

Visual Control for Trajectory Tracking of Quadrotors and Real-Time Analysis on an Emulated Environment, pp. 6315-6321.

Romo-Morales, Leonardo	CINVESTAV
Sanchez, Anand	CINVESTAV
Parra-Vega, Vicente	CINVESTAV
Garcia, Octavio	CINVESTAV Monterrey
Ruiz-Sanchez, Francisco	Cinvestav

WeC06 Room 8

Air Traffic Management (Regular Session)

Chair: Devasia, Santosh	Univ. of Washington
Co-Chair: Habibi, Saeid	McMaster Univ.

16:00-16:20 WeC06.1

On-Demand Conflict Resolution Procedures for Air Traffic Intersections, pp. 6322-6327.

Yoo, Jeff	Univ. of Washington, Mechanical Engineering
Devasia, Santosh	Univ. of Washington

16:20-16:40 WeC06.2

Target Tracking Formulation of the SVSF As a Probabilistic Data Association Algorithm, pp. 6328-6332.

Attari, Mina	McMaster Univ.
Gadsden, Andrew	McMaster Univ.
Habibi, Saeid	McMaster Univ.

16:40-17:00 WeC06.3

An Air Traffic Prediction Model Based on Kernel Density Estimation, pp. 6333-6338.

Cao, Yi	Purdue Univ.
Sun, Dengfeng	Purdue Univ.
Zhang, Lingsong	Purdue Univ.

17:00-17:20 WeC06.4

Layers of Interacting Dynamic Networks : Motivation and Theory, pp. 6339-6344.

Dhal, Rahul	Washington State Univ.
Roy, Sandip	Washington State Univ.

17:20-17:40 WeC06.5

Multivariate Probabilistic Collocation Method for Effective Uncertainty Evaluation with Application to Air Traffic Management, pp. 6345-6350.

Zhou, Yi	Univ. of North Texas
Ramamurthy, Dinesh	Washington State Univ.
Wan, Yan	Univ. of North Texas
Roy, Sandip	Washington State Univ.
Taylor, Christine	MITRE
Wanke, Craig	MITRE

WeC07 Room 9

Stability of Nonlinear Systems IV (Regular Session)

Chair: Martinez, Sonia	Univ. of California at San Diego
Co-Chair: Forbes, James R.	McGill Univ.

16:00-16:20 WeC07.1

Conic-Sector Based Control to Circumvent Passivity Violations, pp. 6358-6363.

Bridgeman, Leila Jasmine	McGill Univ.
Forbes, James Richard	McGill Univ.

16:20-16:40 WeC07.2

Pinning Control for Complex Networks of Linearly Coupled Oscillators, pp. 6364-6369.

Manaffam, Saeed	Univ. of Central Florida
Seyedi, Alireza	Univ. of Central Florida

16:40-17:00 WeC07.3

Self-Triggered Best-Response Dynamics for Mobile Sensor Deployment, pp. 6370-6375.

Cortés, Andrés	Univ. of California, San Diego
Martinez, Sonia	Univ. of California at San Diego

17:00-17:20 WeC07.4

Complexity of Ten Decision Problems in Continuous Time Dynamical Systems, pp. 6376-6381.

Ahmadi, Amir Ali	MIT
Majumdar, Anirudha	Massachusetts Inst. of Tech.
Tedrake, Russ	MIT

17:20-17:40 WeC07.5

Optimal Trajectory Generation for Nonlinear Systems Based on Double Generating Functions, pp. 6382-6387.

Hao, Zhiwei	Nagoya Univ.
Fujimoto, Kenji	Kyoto Univ.
Hayakawa, Yoshikazu	Nagoya Univ.

17:40-18:00 WeC07.6

Distributed Nonlinear MPC Formation Control with Limited Bandwidth, pp. 6388-6393.

El Ferik, Sami	King Fahd Univ. of Petroleum and Minerals
Siddiqui, Bilal	King Fahd Univ. of Engineering and Tech.
Lewis, Frank L.	Univ. of Texas at Arlington

WeC08 Room 12

Neural Networks and Fuzzy Systems (Regular Session)

Chair: Zhang, Lixian	Harbin Inst. of Tech.
Co-Chair: Cai, Yunze	Shanghai Jiaotong Univ.

16:00-16:20 WeC08.1

Observer-Based Finite-Time Control for Discrete Fuzzy Jump Nonlinear Systems with Time Delays, pp. 6394-6399.

Zhang, Yingqi	Henan Univ. of Tech.
Shi, Peng	Univ. of Glamorgan
Nguang, Sing Kiong	The Univ. of Auckland
Karimi, Hamid Reza	Univ. of Agder

16:20-16:40 WeC08.2

Stability Analysis and Controller Design for a Class of T-S Fuzzy Markov Systems with Uncertain Expectation of Packet Dropouts, pp. 6400-6405.

Lu, Qiugang	Harbin Inst. of Tech.
Zhang, Lixian	Harbin Inst. of Tech.
Zhang, Qingrui	Harbin Inst. of Tech.
Karimi, Hamid Reza	Univ. of Agder

16:40-17:00 WeC08.3

H_infty Filter Design of Networked Nonlinear Systems with Communication Constraints Via T-S Fuzzy Dynamic Models, pp. 6406-6411.

Han, Fei	Univ. of Science and Tech. of China
Feng, Gang	City Univ. of Hong Kong
Wang, Yong	Univ. of Science and Tech. of China

17:00-17:20 WeC08.4

Robust Decentralized Control for Fuzzy Large-Scale Systems Using Dynamic Output-Feedback, pp. 6412-6417.

Koo, Geun Bum	Yonsei Univ.
Park, Jin Bae	Yonsei Univ.
Joo, YoungHoon	Kunsan National Univ.

17:20-17:40 WeC08.5

Neural Network-Based Adaptive Event-Triggered Control of Affine Nonlinear Discrete Time Systems with Unknown Internal Dynamics, pp. 6418-6423.

Sahoo, Avimanyu	Missouri Univ. of Science and Tech. Rolla, MO
Xu, Hao	Missouri Univ. of Science and Tech.
Jagannathan, Sarangapani	Missouri Univ. of Science & Tech.

17:40-18:00 WeC08.6

Constructive Design Method of Stochastic Continuous Feedback Laws for Stabilization of Deterministic Nonlinear Systems, pp. 6424-6429.

Hoshino, Kenta	Graduate School of Information Science and Technology, Hokkaido U
Nishimura, Yuki	Kagoshima Univ.
Yamashita, Yuh	Hokkaido Univ.
Tsubakino, Daisuke	Hokkaido Univ.

WeC09 Room 13

Human-In-The-Loop Control (Regular Session)

Chair: Ben Ghalia, Mounir — The Univ. of Texas - Pan American
Co-Chair: Corno, Matteo — Pol. di Milano

16:00-16:20 WeC09.1

A Haptic-Based Traction Control System, pp. 6430-6435.
Corno, Matteo — Pol. di Milano

16:20-16:40 WeC09.2

Teleoperation of a Cluster of Mobile Robots Subject to Model Uncertainty, pp. 6436-6441.
Dong, Wenjie — The Univ. of Texas - Pan American
Ben Ghalia, Mounir — The Univ. of Texas - Pan American
Chen, Chunyu — Univ. of Texas-Pan American
Xing, Yifan — UTPA

16:40-17:00 WeC09.3

Optimal Pacing in a Bicycle Time-Trial Considering Cyclist's Fatigue Dynamics, pp. 6442-6447.
Fayazi, S. Alireza — Clemson Univ.
Wan, Nianfeng — Clemson Univ.
Lucich, Stephen — Clemson Univ.
Vahidi, Ardalan — Clemson Univ.
Mocko, Gregory — Clemson Univ.

17:00-17:20 WeC09.4

Modeling Driver Behavior During Complex Maneuvers, pp. 6448-6453.
Lin, Theresa — Univ. of California - Berkeley
Tseng, Eric — Ford Motor Company
Borrelli, Francesco — University of California at Berkeley

17:20-17:40 WeC09.5

Autonomous Task Assignment of Multiple Operators for Human Robot Interaction, pp. 6454-6459.
Majji, Manoranjan — Univ. at Buffalo
Rai, Rahul — Univ. at Buffalo, SUNY

17:40-18:00 WeC09.6

Fundamental Control Characteristics of Curvilinear Motion in Human and Automatic Path Tracking Tasks, pp. 6460-6467.
Mettler, Berenice — Univ. of Minnesota
Andersh, Jon — Univ. of Minnesota

WeC10 Room 14

Mechanical Systems/Robotics III (Regular Session)

Chair: Yao, Bin — Purdue Univ.
Co-Chair: Chen, Zhiyong — The Univ. of Newcastle

16:00-16:20 WeC10.1

A Two-Loop Contour Tracking Control for Biaxial Servo Systems with Constraints and Uncertainties, pp. 6468-6473.
Lu, Lu — Purdue Univ. West Lafayette
Yao, Bin — Zhejiang Univ.
Lin, Wei — Case Western Res. Univ.

16:20-16:40 WeC10.2

Trajectory Follow-Up Control by Enclosing Control with Rotary Pneumatic 2-Link Manipulator, pp. 6474-6479.
Minamiyama, Yasuhiro — Kurume National Coll. of Tech.
Kiyota, Takanori — The Univ. of Kitakyushu
Sugimoto, Noboru — Meiji Univ.

16:40-17:00 WeC10.3

Multi-Link Mechanical Locomotors in Natural Gaits - Controller Design and Experiments, pp. 6480-6485.
Nurul, Islam — Univ. of Newcastle
Chen, Zhiyong — The Univ. of Newcastle

17:00-17:20 WeC10.4

Power Regulation of Wind Turbines Using Torque and Pitch Control, pp. 6486-6491.
Pozo, Francesc — Univ. Pol. de Catalunya-BarcelonaTECH
Vidal, Yolanda — Univ. Pol. de Catalunya
Acho, Leonardo — EUETIB-Univ. Pol. of Catalunya
Luo, Ningsu — Univ. of Girona
Zapateiro, Mauricio — Univ. Pol. de Catalunya

17:20-17:40 WeC10.5

A Robust Probing Motion Planning Scheme: A Tube-Based MPC Approach, pp. 6492-6498.
Farrokhsiar, Morteza — School of Engineering, UBC Okanagan
Najjaran, Homayoun — Univ. of British Columbia Okanagan

WeC11 Room 15

Sliding Mode Control II (Regular Session)

Chair: Edwards, Christopher — Univ. of Exeter
Co-Chair: Sinha, Alok — Pennsylvania State Univ.

16:00-16:20 WeC11.1

Fault Tolerant Control of an Octorotor Using LPV Based Sliding Mode Control Allocation, pp. 6505-6510.
Alwi, Halim — Univ. of Leicester
Edwards, Christopher — Univ. of Exeter

16:20-16:40 WeC11.2

LMI Based Design of a Sliding Mode Controller for a Class of Uncertain Fractional-Order Nonlinear Systems, pp. 6511-6516.
Yin, Chun — Univ. of California, Merced
Chen, YangQuan — Univ. of California, Merced
Zhong, Shou-ming — School of Mathematics Science, Univ. of Electronic Science

16:40-17:00 WeC11.3

High Order Sliding Mode Observer and Optimum Integral Backstepping Control for Sensorless IPMSM Drive, pp. 6517-6522.
Hamida, Mohamed Assaad — IRCCyN, Ec. Centrale de Nantes
Glumineau, Alain — Ec. Centrale Nantes
De Leon, Jesus — Univ. Autonoma de Nuevo Leon

17:00-17:20 WeC11.4

ABS Design and Active Suspension Control Based on HOSM, pp. 6523-6528.
Sánchez-Torres, Juan Diego — CINVESTAV-IPN GDL
Ferreira de Loza, Alejandra — Unam
Galicia, Marcos Israel — CINVESTAV Unidad Guadalajara
Loukianov, Alexander G. — CINVESTAV IPN GDl

17:20-17:40 WeC11.5

Adaptive Torque Ripple Compensation Technique Based on the Variable Structure Control and Its Applications to Gear Driven Motion Systems, pp. 6529-6534.

Sencer, Burak — Nagoya Univ.
Shamoto, Eiji — Nagoya Univ.

17:40-18:00 WeC11.6

Optimal Sliding Mode Gaussian Controller for a Hydropower Plant, pp. 6535-6540.

Rittenhouse, Benjamin — Penn State Univ.
Sinha, Alok — Pennsylvania State Univ.

WeC12 — Room 16

Decentralized Control II (Regular Session)

Chair: Han, Qing-Long — Central Queensland Univ.
Co-Chair: Gasparri, Andrea — Univ. of "Roma Tre"

16:00-16:20 WeC12.1

Robust Distributed Control Design for Interconnected Systems under Topology Uncertainty, pp. 6541-6546.

Xue, Dong — Tech. Univ. of Munich
Gusrialdi, Azwirman — Univ. of Central Florida
Hirche, Sandra — Tech. Univ. München

16:20-16:40 WeC12.2

A Decentralized Algorithm for Balancing a Strongly Connected Weighted Digraph, pp. 6547-6552.

Priolo, Attilio — Univ. degli Studi Roma Tre
Gasparri, Andrea — Univ. of "Roma Tre"
Montijano, Eduardo — Centro Univ. de la Defensa
Sagues, Carlos — Univ. de Zaragoza

16:40-17:00 WeC12.3

Distributed Controller Design for a Free-Electron Laser, pp. 6553-6558.

Pfeiffer, Sven — DESY
Werner, Herbert — Hamburg Univ. of Tech.
Schmidt, Christian — DESY
Schlarb, Holger — DESY

17:00-17:20 WeC12.4

Global Decentralized Control of Interconnected Nonlinear Systems by Sampled-Data Output Feedback, pp. 6559-6564.

Zhang, Chuanlin — Southeast Univ. School of Automation
Qian, Chunjiang — Univ. of Texas at San Antonio
Li, Shihua — Southeast Univ.

17:20-17:40 WeC12.5

Decentralized Event-Triggered Control for Sampled-Data Systems with Asynchronous Sampling, pp. 6565-6570.

Guan, Yanpeng — Central Queensland Univ.
Han, Qing-Long — Central Queensland Univ.
Peng, Chen — nanjing normal Univ.

17:40-18:00 WeC12.6

A Model-Based Control Method for Decentralized Calibration of Wireless Sensor Networks, pp. 6571-6576.

Ó Buadhacháin, Séamus — Univ. Coll. Cork
Provan, Gregory — Univ. Coll. Cork

WeC13 — Mount Vernon Square A

Power Systems V (Regular Session)

Chair: Peng, Huei — Univ. of Michigan
Co-Chair: Chakrabortty, Aranya — North Carolina State Univ.

16:00-16:20 WeC13.1

Voltage Stability of Weak Power Distribution Networks with Inverter Connected Sources, pp. 6577-6582.

Wang, Zhao — Univ. of Notre Dame
Xia, Meng — Univ. of Notre Dame
Lemmon, Michael — Univ. of Notre Dame

16:20-16:40 WeC13.2

Minimum Loss Reconfiguration of Electrical Distribution Networks with Quality Requirements, pp. 6583-6588.

Coslovich, Luca — Univ. of Trieste
Fanti, Maria Pia — Pol. of Bari
Mainà, Paolo — AcegasAps S.p.A.
Piccoli, Giovanni — AcegasAps S.p.A.,
Ukovich, Walter — Univ. of Trieste

16:40-17:00 WeC13.3

Real-Time Dynamic Efficiency Optimization for Induction Machines, pp. 6589-6594.

Stumper, Jean-François — Tech. Univ. München
Kennel, Ralph — Tech. Univ. München

17:00-17:20 WeC13.4

MPPT for Photovoltaic Conversion Systems Using Genetic Algorithm and Robust Control, pp. 6595-6600.

Dahmane, Menad — Univ. of Picardie Jules Verne, MIS Lab.
Bosche, Jerome — Univ. of Amiens
El Hajjaji, Ahmed — Univ. of Picardie-Jules Verne
Pierre, Xavier — Univ. of Picardy Jules Verne of Amiens

17:20-17:40 WeC13.5

Decentralized Control of Aggregated Loads for Demand Response, pp. 6601-6606.

Guo, Di — Zhejiang Univ.
Zhang, Wei — The Ohio State Univ.
Yan, Gangfeng — Zhejiang Univ.
Lin, Zhiyun — Zhejiang Univ.
Fu, Minyue — Univ. of Newcastle

17:40-18:00 WeC13.6

MPC for Reducing Energy Storage Requirement of Wind Power Systems, pp. 6607-6612.

Li, Chiao-Ting — Univ. of Michigan
Peng, Huei — Univ. of Michigan
Sun, Jing — Univ. of Michigan

WeC14	Mount Vernon Square B
Uncertain Systems IV (Regular Session)	
Chair: Gao, Zhiqiang	Cleveland State Univ.
Co-Chair: Yucelen, Tansel	Georgia Inst. of Tech.
16:00-16:20	WeC14.1
On Active Vibration Suppression of a Piezoelectric Beam, pp. 6613-6618.	
Zheng, Qinling	Cleveland State Univ.
Richter, Hanz	Cleveland State Univ.
Gao, Zhiqiang	Cleveland State Univ.
16:20-16:40	WeC14.2
On Observer-Based Active Vibration Control of Two-Inertia Systems, pp. 6619-6624.	
Zheng, Qinling	Cleveland State Univ.
Gao, Zhiqiang	Cleveland State Univ.
16:40-17:00	WeC14.3
Root Locus for a Controller Class That Yields Quadratic Gain Parameterization, pp. 6625-6630.	
Wellman, Brandon	Univ. of Kentucky
Hoagg, Jesse B.	Univ. of Kentucky
17:00-17:20	WeC14.4
Frequency-Limited Adaptive Control Architecture for Transient Response Improvement, pp. 6631-6636.	
Yucelen, Tansel	Georgia Inst. of Tech.
De La Torre, Gerardo	Georgia Inst. of Tech.
Johnson, Eric N.	Georgia Inst. of Tech.
17:20-17:40	WeC14.5
On Frequency-Domain Analysis of ADRC for Uncertain System, pp. 6637-6642.	
Xue, Wenchao	Inst. of Systems Science, Chinese Acad. of Sciences
Huang, Yi	Chinese Acad. of Sciences
17:40-18:00	WeC14.6
On the Linear Active Rejection Control of Thomson's Jumping Ring, pp. 6643-6648.	
Ramirez-Neria, Mario	CINVESTAV-IPN
Garcia Antonio, Jose Luis	Centro de Investigación y de Estudios Avanzados del IPN (CINVES
Sira-Ramirez, Hebertt	CINVESTAV
Velasco-Villa, Martin	CINVESTAV-IPN
Castro-Linares, Rafael	CINVESTAV-IPN

WeC15	Renaissance Ballroom East
Manufacturing Systems (Regular Session)	
Chair: Belikov, Sergey	NT-MDT Development
Co-Chair: Wang, Jin	Auburn Univ.
16:00-16:20	WeC15.1
Improved State Estimation for High-Mix Semiconductor Manufacturing, pp. 6649-6654.	
Wang, Jin	Auburn Univ.
He, Qinghua	Tuskegee Univ.
Edgar, Thomas F.	Univ. of Texas at Austin
16:20-16:40	WeC15.2
Demand Response for Chemical Manufacturing Using Economic MPC, pp. 6655-6660.	
Mendoza-Serrano, David	Illinois Inst. of Tech.
Chmielewski, Donald J.	Illinois Inst. of Tech.
16:40-17:00	WeC15.3
Constrained Optimization of Rotating Magnetron in Low-Pressure Plasma Sputtering, pp. 6661-6666.	
Belikov, Sergey	NT-MDT Development
17:00-17:20	WeC15.4
Modeling and Analysis of a Rotating Turret Winder in Roll-To-Roll Manufacturing Systems, pp. 6667-6672.	
Seshadri, Aravind	Oklahoma State Univ.
Pagilla, Prabhakar R.	Oklahoma State Univ.
17:20-17:40	WeC15.5
Quality-By-Design by Using the Skewed Spherical Structured Singular Value, pp. 6673-6678.	
Kishida, Masako	Univ. of Canterbury
Braatz, Richard D.	Massachusetts Inst. of Tech.

WeC16	Renaissance Ballroom West A
Developments in Iterative Learning Control (Invited Session)	
Chair: Oomen, Tom	Eindhoven Univ. of Tech.
Co-Chair: Barton, Kira	Univ. of Michigan, Ann Arbor
Organizer: Oomen, Tom	Eindhoven Univ. of Tech.
Organizer: Barton, Kira	Univ. of Michigan, Ann Arbor
Organizer: Mishra, Sandipan	Rensselaer Pol. Inst.
16:00-16:20	WeC16.1
Learning in the Synthesis of Data-Driven Variable-Gain Controllers (I), pp. 6685-6690.	
Heertjes, Marcel	Eindhoven Univ. of Tech.
Hunnekens, Bram	Eindhoven Univ. of Tech.
Van De Wouw, Nathan	Eindhoven Univ. of Tech.
Nijmeijer, Hendrik	Eindhoven Univ. of Tech.
16:20-16:40	WeC16.2
Norm Optimal Iterative Learning Control with Auxiliary Optimization -- an Inverse Model Approach (I), pp. 6691-6696.	
Owens, David H.	The Univ. of Sheffield
Freeman, Christopher T.	Univ. of Southampton
Chu, Bing	Univ. of Southampton
16:40-17:00	WeC16.3
L_1 Adaptive Control in an Iterative Learning Control Framework: Stability, Robustness and Design Trade-Offs (I), pp. 6697-6702.	
Altin, Berk	Univ. of Michigan, Ann Arbor
Barton, Kira	Univ. of Michigan, Ann Arbor
17:00-17:20	WeC16.4
Iteratively Learning the H-Infinity-Norm of Multivariable Systems Applied to Model-Error-Modeling of a Vibration Isolation System (I), pp. 6703-6708.	
Oomen, Tom	Eindhoven Univ. of Tech.
van der Maas, Rick	Eindhoven Univ. of Tech.
Rojas, Cristian R.	KTH Royal Inst. of Tech.
Hjalmarsson, Håkan	KTH Royal Inst. of Tech.

17:20-17:40 WeC16.5

LMI-Based Design of Robust Iterative Learning Control Schemes with Finite Frequency Range Tracking Specifications (I), pp. 6709-6714.

Paszke, Wojciech — Univ. of Zielona Gora
Rogers, Eric — Univ. of Southampton
Galkowski, Krzysztof — Univ. of Zielona Gora

17:40-18:00 WeC16.6

Time-Varying Norm Optimal Iterative Learning Identification (I), pp. 6715-6720.

Liu, Nanjun — Univ. of Illinois, Urbana-Champaign
Alleyne, Andrew G. — Univ. of Illinois, Urbana-Champaign

WeC17 — Renaissance Ballroom West B

Modeling and Control of Driveline and Vehicle Dynamics (Invited Session)

Chair: Scacchioli, Annalisa — New York Univ.
Co-Chair: Shim, Taehyun — Univ. of Michigan-Dearborn
Organizer: Scacchioli, Annalisa — New York Univ.
Organizer: Shim, Taehyun — Univ. of Michigan-Dearborn
Organizer: Shahbakhti, Mahdi — Michigan Tech. Univ.
Organizer: Canova, Marcello — The Ohio State Univ.

16:00-16:20 WeC17.1

Model Reference Control to Reduce Both the Jerk and Frictional Loss During DCT Gear Shifting (I), pp. 6721-6726.

Yuan, ShuLei — Shanghai Jiao Tong Univ.
Chen, Li — Shanghai Jiao Tong Univ.

16:20-16:40 WeC17.2

An Optimal Control for a Novel ABS Based on Vehicle Dynamic Load Transfer Effect for Reducing Stopping Distance (I), pp. 6727-6733.

Fan, Yinai — Pol. Inst. of New York Univ.
Scacchioli, Annalisa — New York Univ.

16:40-17:00 WeC17.3

Modeling of Comprehensive Electric Drive System for a Study of Regenerative Brake System (I), pp. 6734-6739.

Yu, Chuan — Univ. of Michigan-Dearborn
Shim, Taehyun — Univ. of Michigan-Dearborn

17:00-17:20 WeC17.4

Optimal Decoupled Control for Dry Clutch Engagement (I), pp. 6740-6745.

Jin, Taotao — Bejing Jiaotong Univ.
Li, Pingkang — Beijing Jiaotong Univ.
Zhu, Guoming — Michigan State Univ.

17:20-17:40 WeC17.5

Vehicle Yaw Dynamics Control by Torque-Based Assist Systems Enforcing Driver's Steering Feel Constraints (I), pp. 6746-6751.

Zafeiropoulos, Spyridon — Georgia Tech.
Di Cairano, Stefano — Mitsubishi Electric Res. Lab.

17:40-18:00 WeC17.6

Online Estimation of Time-Varying Torque Characteristics of Automotive Clutches Using a Control Oriented Model (I), pp. 6752-6757.

Tarasow, Alex — Clausthal Univ. of Tech.
Wachsmuth, Guido — IAV Ingenieur-gesellschaft Auto und Verkehr GmbH
Lemieux, Joseph — IAV Automotive Engineering Inc.
Serway, Roland — IAV Ingenieur-gesellschaft Auto und Verkehr GmbH
Bohn, Christian — Tech. Univ. Clausthal

WeC18 — Grand Ballroom South

Wide-Area Control of Large Power Systems (Tutorial Session)

Chair: Chakrabortty, Aranya — North Carolina State Univ.
Co-Chair: Khargonekar, Pramod P. — Univ. of Florida
Organizer: Chakrabortty, Aranya — North Carolina State Univ.
Organizer: Khargonekar, Pramod P. — Univ. of Florida

16:00-16:40 WeC18.1

Introduction to Wide-Area Control of Power Systems (I), pp. 6758-6770.

Chakrabortty, Aranya — North Carolina State Univ.
Khargonekar, Pramod P. — Univ. of Florida

16:40-17:00 WeC18.2

*Wide-Area Monitoring and Control Research in the NSF/DOE CURENT ERC (I)**. N/A

Chow, Joe H. — Rensselaer Pol. Inst.

17:00-17:20 WeC18.3

*Model Based Control and Protection of the Power Grid (I)**. N/A

Bose, Anjan — Washington State Univ.

17:20-17:40 WeC18.4

*Mining PMU Data for Real-Time Insights into Grid Power Flow Properties (I)**. pp. 6771

DeMarco, Christopher L — Univ. of Wisconsin-Madison

WeC19 — Grand Ballroom Central

Markov Processes (Regular Session)

Chair: How, Jonathan P. — MIT
Co-Chair: Mehta, Prashant G. — Univ. of Illinois, Urbana-Champaign

16:00-16:20 WeC19.1

Feedback Particle Filter for a Continuous-Time Markov Chain, pp. 6772-6777.

Yang, Tao — Univ. of Illinois at Urbana-Champaign
Mehta, Prashant G. — Univ. of Illinois, Urbana-Champaign
Meyn, Sean — Univ. of Florida

16:20-16:40 WeC19.2

Dynamic Programming with Non-Convex Risk-Sensitive Measures, pp. 6778-6783.

Lin, Kun — Univ. of Maryland - Coll. Park
Marcus, Steve — Univ. of Maryland

16:40-17:00 WeC19.3

Robust Stability and Stabilization of Discrete-Time Markov Jump Linear Systems with Partly Unknown Transition Probability Matrix, pp. 6784-6789.

Braga, Marcio — Univ. of Campinas (UNICAMP)
Morais, Cecília — State Univ. of Campinas (Unicamp)
Oliveira, Ricardo C. L. F. — Univ. of Campinas - UNICAMP
Peres, Pedro L. D. — Univ. of Campinas

17:00-17:20 WeC19.4

Rational Inattention in Controlled Markov Processes, pp. 6790-6797.

Shafieepoorfard, Ehsan — Univ. of Illinois Urbana Champaign
Raginsky, Maxim — Univ. of Illinois at Urbana-Champaign
Meyn, Sean — Univ. of Florida

17:20-17:40 WeC19.5

Design of a Robust Adaptive Vehicle Observer towards Delayed and Missing Vehicle Dynamics Sensor Signals by Usage of Markov Chains, pp. 6798-6803.

Korte, Matthias — Intedis GmbH
Kaiser, Gerd — Intedis
Holzmann, Frederic — Intedis
Roth, Hubert — Univ. Siegen

WeC20 — Grand Ballroom North

Optimization Methods for Cancer Radiation Treatment Planning (Tutorial Session)

Chair: Hindi, Haitham — Walmart Lab.
Co-Chair: Romeijn, H. Edwin — Univ. of Michigan
Organizer: Hindi, Haitham — Walmart Lab.

16:00-17:00 WeC20.1

A Tutorial on Optimization Methods for Cancer Radiation Treatment Planning (I), pp. 6804-6816.

Hindi, Haitham — Walmart Lab.

17:00-17:40 WeC20.2

*Implementation and Large Scale Optimization for Radiation Treatment Planning (I)**. N/A

Hindi, Haitham — Walmart Lab.

WeC21 — Congressional Hall A

Linear Parameter-Varying Systems II (Regular Session)

Chair: Mohammadpour, J. — Univ. of Georgia
Co-Chair: Sato, Masayuki — Japan Aerospace Exploration Agency

16:00-16:20 WeC21.1

Sampled-Data Linear Parameter Varying Control of a Turbocharged Diesel Engine, pp. 6817-6822.

Luspay, Tamás — Univ. of Houston
Grigoriadis, Karolos M. — Univ. of Houston
Franchek, Matthew A. — Univ. of Houston

16:20-16:40 WeC21.2

LPV Model Identification for Motion Control Systems, pp. 6823-6828.

Chen, Nanhu — Corning Incorporated
Wen, John T. — Rensselaer Pol. Inst.

16:40-17:00 WeC21.3

Robust Gain-Scheduled Flight Controller Using Inexact Scheduling Parameters, pp. 6829-6834.

Sato, Masayuki — Japan Aerospace Exploration Agency

17:00-17:20 WeC21.4

One-Step Receding Horizon Control for LPV Systems in Presence of Constraints, pp. 6835-6840.

Nguyen, Hoai-Nam — Faculty of Civil and Environmental Engineering, Tech. Haifa
Olaru, Sorin — Supelec
Gutman, Per-Olof — Tech.

17:20-17:40 WeC21.5

LPV Gain-Scheduled Control of a Control Moment Gyroscope, pp. 6841-6846.

Abbas, Hossam Seddik — Faculty of Engineering, Assiut Univ.
Ali, Ahsan — Inst. of Control Systems, Hamburg Univ. of Technology
Hashemi, Seyed Mahdi — Hamburg Univ. of Tech.
Werner, Herbert — Hamburg Univ. of Tech.

17:40-18:00 WeC21.6

Sampled-Data Control of Linear Parameter Varying Time-Delay Systems Using State Feedback, pp. 6847-6852.

Ramezanifar, Amin — Univ. of Houston
Mohammadpour, Javad — Univ. of Georgia
Grigoriadis, Karolos M. — Univ. of Houston

WeC22 — Congressional Hall B

Control of Networks II (Regular Session)

Chair: Aghdam, Amir G. — Concordia Univ.
Co-Chair: Zhao, Xia — Shanghai Jiaotong Univ.

16:00-16:20 WeC22.1

Identifiability of Links and Nodes in Multi-Agent Systems under the Agreement Protocol, pp. 6853-6858.

Rahimian, Mohammad Amin — Concordia Univ.
Ajorlou, Amir — Concordia Univ.
Tutunov, Rasul — Univ. of Pennsylvania
Aghdam, Amir G. — Concordia Univ.

16:20-16:40 WeC22.2

Convergence of Distributed Averaging and Maximizing Algorithms Part II: State-Dependent Graphs, pp. 6859-6864.

Shi, Guodong — Royal Inst. of Tech.
Johansson, Karl H. — Royal Inst. of Tech.

16:40-17:00 WeC22.3

Synchronization of Coupled Nonlinear Oscillators with Shifted Gamma-Distributed Delays, pp. 6865-6870.

Morarescu, Irinel Constantin — Univ. de Lorraine
Michiels, Wim — K.U. Leuven
Jungers, Marc — CNRS - Univ. de Lorraine

17:00-17:20 WeC22.4

Structural Controllability of Multi-Agent Networks: Importance of Individual Links, pp. 6871-6876.

Rahimian, Mohammad Amin — Concordia Univ.
Aghdam, Amir G. — Concordia Univ.

17:20-17:40	WeC22.5

Distributed Coverage Optimization in a Network of Static and Mobile Sensors, pp. 6877-6881.

Mahboubi, Hamid	Concordia Univ.
Habibi, Jalal	Concordia Univ.
Aghdam, Amir G.	Concordia Univ.
Sayrafian-Pour, Kamran	National Inst. of Standard & Tech.

17:40-18:00	WeC22.6

Self-Deployment Algorithms for Coverage Improvement in a Network of Nonidentical Mobile Sensors with Limited Communication Ranges, pp. 6882-6887.

Mahboubi, Hamid	Concordia Univ.
Aghdam, Amir G.	Concordia Univ.

Additional Papers:

Decentralized Linear State Observers for Vehicle Formations with Time-Varying Topologies pp. 65-70
Daniel Viegas, Pedro Batista, Paulo Oliveira, Carlos Silvestre

Optimal Distributed State Estimations for a Networked Dynamical System pp. 101-106
Tong Zhou

Bayesian Hybrid Estimation of LTI Networked Systems using Finite Set Statistics pp. 396-401
Islam I. Hussein, Francesco Sorrentino, R. S. Erwin

Communication and Path Planning Strategies of a Robotic Coverage Operation pp. 860-866
Yuan Yan, Yasamin Mostofi

Distributed Adaptive Sliding Mode Observers for a Network of Dynamical Systems pp. 1537-1542
Prathyush P. Menon, Christopher Edwards

Model Predictive Control of Burgers Equation Based on Galerkin Models pp. 1651-1656
Mathias Hakenberg, Dirk Abel

Time-Varying Internal Model-Based Tracking Control for a Voice Coil Motor Servo Gantry pp. 2872-2877
Zhen Zhang, Peng Yan, Chao Lu, Tongtong Leng, Bofeng Liu

A Distributed Control Strategy for Connectivity Preservation of Multi-Agent Systems Subject to Actuator Saturation pp. 4044-4049
Iman Saboori, H. Nayyeri, K. Khorasani

L1 Adaptive Output-Feedback Controller for Linear Time-Varying Reference Systems pp. 4183-4188
Justin Vanness, Evgeny Kharisov, N. Hovakimyan

State Detection from Local Measurements in Network Synchronization Processes pp. 6120-6125
Chih-Wei Chen, Sandip Roy

Robust Vehicle Routing Policies Using Local Communications & Sensing pp. 6351-6357
David Pike, Sidner Givigi, Joshua Marshall, Adrian Taylor, Alain Beaulieu

Modeling and Linear Control of a Flapping-Wing MAV with Split-Amplitude and Phase-Modulated Wingbeat pp. 6499-6504
Pratik Vernekar, Andrea Serrani

Decentralized Stabilization of Symmetric Systems with Delayed Observer-Based Feedback pp. 6679-6684
Lubomir Bakule, Manuel de la Sen, Martin Papik, Branislav Rehak