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Technical Program for Monday December 15, 2014

MoPL Salon D and E

Hybrid Systems: Analysis and Control (Plenary Session)

Chair: Teel, Andrew R. — Univ. of California, Santa Barbara
Co-Chair: Jabbari, Faryar — Univ. of California, Irvine

08:30-09:30 MoPL.1

*Hybrid Systems: Analysis and Control**.
Tomlin, Claire J. — Univ. of California, Berkeley

MoA01 Salon F

Hybrid Systems I (Regular Session)

Chair: Broucke, Mireille E. — Univ. of Toronto
Co-Chair: Manchester, Ian R. — Univ. of Sydney

10:00-10:20 MoA01.1

Analysis and Verification of the Diagnosability of Hybrid Systems, pp. 1-6.
Diene, Oumar — Federal Univ. of Rio De Janeiro
dos Reis Silva, Eduardo Alexandre — Federal Univ. of Rio De Janeiro
Moreira, Marcos Vicente — Federal Univ. of Rio De Janeiro

10:20-10:40 MoA01.2

Optimal Exploration and Control for a Robotic Pick-Up and Delivery Problem, pp. 7-12.
Nenchev, Vladislav — Tech. Univ. Berlin
Cassandras, Christos G. — Boston Univ

10:40-11:00 MoA01.3

Reach Control Problem with Disturbance Rejection, pp. 13-18.
Kroeze, Zachary — Univ. of Toronto
Broucke, Mireille E. — Univ. of Toronto

11:00-11:20 MoA01.4

On the Relation between the Minimum Principle and Dynamic Programming for Hybrid Systems, pp. 19-24.
Pakniyat, Ali — McGill Univ
Caines, Peter E. — McGill Univ

11:20-11:40 MoA01.5

A Reach Control Approach to Bumpless Transfer of Robotic Manipulators, pp. 25-30.
Martino, Matthew — Univ. of Toronto
Broucke, Mireille E. — Univ. of Toronto

11:40-12:00 MoA01.6

Transverse Contraction Criteria for Stability of Nonlinear Hybrid Limit Cycles, pp. 31-36.
Tang, Justin Z. — Univ. of Sydney
Manchester, Ian R. — Univ. of Sydney

MoA02 Salon G

Nonlinear Systems I (Regular Session)

Chair: Efimov, Denis — INRIA - LNE
Co-Chair: Franci, Alessio — Cambridge Univ.

10:00-10:20 MoA02.1

Stability Analysis for Nonlinear Time-Delay Systems Applying Homogeneity, pp. 37-42.
Efimov, Denis — Inria - Lne
Polyakov, Andrey — Inria Lille Nord-Europe
Perruquetti, Wilfrid — Ec. Centrale De Lille
Richard, Jean-Pierre — Ec. Centrale De Lille

10:20-10:40 MoA02.2

Local Mode-In-State Participation Factors for Nonlinear Systems, pp. 43-48.
Hamzi, Boumediene — Imperial Coll. London
Abed, Eyad H. — Univ. of Maryland

10:40-11:00 MoA02.3

Integral Action with Time Scale Separation: A Mechanism for Modularity in Biological Systems, pp. 49-55.
Rivera, Phillip — Massachusetts Inst. of Tech
Del Vecchio, Domitilla — Massachusetts Inst. of Tech

11:00-11:20 MoA02.4

Realization of Nonlinear Behaviors from Organizing Centers, pp. 56-61.
Franci, Alessio — Univ. of Cambridge
Sepulchre, Rodolphe J. — Univ. of Cambridge

11:20-11:40 MoA02.5

Shared-Control for the Kinematic Model of a Mobile Robot, pp. 62-67.
Jiang, Jingjing — Imperial Coll. London
Astolfi, Alessandro — Imperial Coll. & Univ. of Rome

11:40-12:00 MoA02.6

Invariance Control with Chattering Reduction, pp. 68-74.
Kimmel, Melanie — Tech. Univ. München
Hirche, Sandra — Tech. Univ. München

MoA03 Salon H

Formal Methods in Control I (Invited Session)

Chair: Zamani, Majid — Tech. Univ. München
Co-Chair: Reissig, Gunther — Univ. of the Federal Armed Forces Munich
Organizer: Reissig, Gunther — Univ. of the Federal Armed Forces Munich
Organizer: Zamani, Majid — Tech. Univ. München

10:00-10:20 MoA03.1

Cooperative Decentralized Multi-Agent Control under Local LTL Tasks and Connectivity Constraints (I), pp. 75-80.
Guo, Meng — Royal Inst. of Tech.
Tumova, Jana — Royal Inst. of Tech
Dimarogonas, Dimos V. — Royal Inst. of Tech

10:20-10:40 MoA03.2

Model Predictive Control with Signal Temporal Logic Specifications (I), pp. 81-87.
Raman, Vasumathi — California Inst. of Tech
Donze, Alexandre — Univ. of California, Berkeley
Maasoumy, Mehdi — Univ. of California, Berkeley
Murray, Richard M. — California Inst. of Tech
Sangiovanni-Vincentelli, Alberto — Univ. of California, Berkeley
Seshia, Sanjit — Univ. of California, Berkeley

10:40-11:00 MoA03.3

Feedback Refinement Relations for Symbolic Controller Synthesis (I), pp. 88-94.

Reissig, Gunther	Univ. of the Federal Armed Forces Munich
Rungger, Matthias	Univ. of California at Los Angeles

11:00-11:20 MoA03.4

Finite Abstractions of Networked Control Systems (I), pp. 95-100.

Zamani, Majid	Tech. Univ. München
Mazo Jr., Manuel	Delft Univ. of Tech
Abate, Alessandro	Univ. of Oxford

11:20-11:40 MoA03.5

Hot-Swapping Robot Task Goals in Reactive Formal Synthesis, pp. 101-107.

Livingston, Scott C.	California Inst. of Tech
Murray, Richard M.	California Inst. of Tech

11:40-12:00 MoA03.6

A Formal Methods Approach to Pattern Synthesis in Reaction Diffusion Systems, pp. 108-113.

Aydin Gol, Ebru	Boston Univ
Bartocci, Ezio	Vienna Univ. of Tech
Belta, Calin	Boston Univ

MoA04 Salon I

Output Feedback and Observers I (Regular Session)

Chair: Batista, Pedro	Inst. Superior Técnico, Univ. de Lisboa
Co-Chair: Hamel, Tarek	Univ. de Nice Sophia Antipolis

10:00-10:20 MoA04.1

Velocity Aided Attitude Estimation on SO(3) with Sensor Delay, pp. 114-120.

Khosravian, Alireza	Australian National Univ
Trumpf, Jochen	Australian National Univ
Mahony, Robert	Australian National Univ
Hamel, Tarek	Univ. De Nice Sophia Antipolis

10:20-10:40 MoA04.2

Attitude and Earth Velocity Estimation - Part I: Globally Exponentially Stable Observer, pp. 121-126.

Batista, Pedro	Inst. Superior Técnico
Silvestre, Carlos	Univ. of Macau
Oliveira, Paulo Jorge	Inst. Superior Técnico

10:40-11:00 MoA04.3

Attitude and Earth Velocity Estimation - Part II: Observer on the Special Orthogonal Group, pp. 127-132.

Batista, Pedro	Inst. Superior Técnico
Silvestre, Carlos	Univ. of Macau
Oliveira, Paulo Jorge	Inst. Superior Técnico

11:00-11:20 MoA04.4

Nonlinear Observability and Observer Design through State Augmentation, pp. 133-138.

Viegas, Daniel	Inst. Superior Técnico
Batista, Pedro	Inst. Superior Técnico
Oliveira, Paulo Jorge	Inst. Superior Técnico
Silvestre, Carlos	Univ. of Macau

11:20-11:40 MoA04.5

State Estimation Strategy without Jump Detection for Hybrid Systems Using Gluing Function, pp. 139-144.

Kim, Jisu	Seoul National Univ
Cho, Hansung	Seoul National Univ
Shamsuarov, Artem	Samsung Electronics
Shim, Hyungbo	Seoul National Univ
Seo, Jin H.	Seoul National Univ

11:40-12:00 MoA04.6

Observer Design for Differentiable Lipschitz Nonlinear Systems with Time-Varying Parameters, pp. 145-152.

Wang, Yan	Auburn Univ
Rajamani, Rajesh	Univ. of Minnesota
Bevly, David M.	Auburn Univ

MoA05 Salon J

Large Scale and Distributed Optimization (Invited Session)

Chair: Nedich, Angelia	Univ. of Illinois, Urbana-Champaign
Co-Chair: Srikant, R	Univ. of Illinois, Urbana-Champaign
Organizer: Nedich, Angelia	Univ. of Illinois, Urbana-Champaign
Organizer: Srikant, R	Univ. of Illinois, Urbana-Champaign

10:00-10:20 MoA05.1

On the Convergence Rates of Asynchronous Iterations (I), pp. 153-159.

Feyzmahdavian, Hamid Reza	Royal Inst. of Tech. (KTH)
Johansson, Mikael	Royal Inst. of Tech. (KTH)

10:20-10:40 MoA05.2

Semidefinite Relaxations for Optimization Problems Over Rotation Matrices (I), pp. 160-166.

Saunderson, James	Massachusetts Inst. of Tech
Parrilo, Pablo A.	Massachusetts Inst. of Tech
Willsky, Alan S.	Massachusetts Inst. of Tech

10:40-11:00 MoA05.3

Distributed Algorithm for Optimal Power Flow on a Radial Network (I), pp. 167-172.

Peng, Qiuyu	California Inst. of Tech
Low, Steven H.	California Inst. of Tech

11:00-11:20 MoA05.4

Dynamic Stochastic Optimization (I), pp. 173-178.

Wilson, Craig	Univ. of Illinois, Urbana-Champaign
Veeravalli, Venugopal V.	Univ. of Illinois, Urbana-Champaign
Nedich, Angelia	Univ. of Illinois, Urbana-Champaign

11:20-11:40 MoA05.5

On Convergence Rate of Accelerated Dual Descent Algorithm (I), pp. 179-184.

Tutunov, Rasul	Univ. of Pennsylvania
Zargham, Michael	Univ. of Pennsylvania
Jadbabaie, Ali	Univ. of Pennsylvania

11:40-12:00 MoA05.6

Random Block Coordinate Gradient Projection Algorithms (I), pp. 185-190.

Singh, Chandramani	Indian Inst. of Sciecne
Nedich, Angelia	Univ. of Illinois, Urbana-Champaign
Srikant, R	Univ. of Illinois, Urbana-Champaign

MoA06 Salon 6

New Control Approach for Power Networks (Invited Session)

Chair: Chen, Lijun	Univ. of Colorado at Boulder
Co-Chair: Low, Steven H.	California Inst. of Tech.
Organizer: Chen, Lijun	Univ. of Colorado at Boulder
Organizer: Low, Steven H.	California Inst. of Tech.

10:00-10:20 MoA06.1

Reverse and Forward Engineering of Frequency Control in Power Networks (I), pp. 191-198.

You, Seungil	California Inst. of Tech
Chen, Lijun	Univ. of Colorado at Boulder

10:20-10:40 MoA06.2

Stochastic Optimization Based Economic Dispatch and Interruptible Load Management with Distributional Forecast of Wind Farm Generation (I), pp. 199-204.

Yang, Lei	Arizona State Univ
He, Miao	Texas Tech. Univ
Vittal, Vijay	Arizona State Univ
Zhang, Junshan	Arizona State Univ

10:40-11:00 MoA06.3

On the Operation and Value of Storage in Consumer Demand Response (I), pp. 205-210.

Xu, Yunjian	Singapore Univ. of Tech. and Design
Tong, Lang	Cornell Univ

11:00-11:20 MoA06.4

Plug-And-Play Control and Optimization in Microgrids (I), pp. 211-216.

Dörfler, Florian	Swiss Federal Inst. of Tech. Zurich
Simpson-Porco, John W.	Univ. of California Santa Barbara
Bullo, Francesco	Univ. California at Santa Barbara

11:20-11:40 MoA06.5

Stealthy Attacks in Power Systems: Limitations on Manipulating the Estimation Deviations Caused by Switching Network Topologies, pp. 217-222.

Wang, Shaocheng	Univ. of California, Riverside
Ren, Wei	Univ. of California, Riverside

11:40-12:00 MoA06.6

An Internal Model Approach to Frequency Regulation in Inverter-Based Microgrids with Time-Varying Voltages, pp. 223-228.

Trip, Sebastian	Univ. of Groningen
Bürger, Mathias	Univ. of Stuttgart
De Persis, Claudio	Univ. of Groningen

MoA07 Salon 7

Aerospace I (Regular Session)

Chair: Beard, Randal	Brigham Young Univ.
Co-Chair: Morgan, Robert	Raytheon

10:00-10:20 MoA07.1

Control of a New Convertible UAV with a Minimal Sensor Suite, pp. 229-235.

Phung, Duc-Kien	Isir, Upmc
Morin, Pascal	Upmc

10:20-10:40 MoA07.2

Autopilot Fusion with External Pilot Inputs for Enhancing Flight Safety of UAVs, pp. 236-241.

Ahsun, Umair	PSATRI, King Saud Univ
Badar, Tabish	PSATRI, King Saud Univ
Tahir, Shiraz	PSATRI, King Saud Univ
Aldosari, Saeed	King Saud Univ

10:40-11:00 MoA07.3

A Probabilistic Framework for Unmanned Aircraft Systems Collision Detection and Risk Estimation, pp. 242-247.

Sahawneh, Laith	Brigham Young Univ
Beard, Randal	Brigham Young Univ

11:00-11:20 MoA07.4

Random Geometric Graphs As a Model for Bounding the Endurance of Soaring Aircraft, pp. 248-253.

Depenbusch, Nathan Thomas	Pennsylvania State Univ
Lagoa, Constantino M.	Pennsylvania State Univ
Langelaan, Jack W.	Pennsylvania State Univ

11:20-11:40 MoA07.5

Moving Horizon Estimation with Pre-Estimation (MHE-PE) for 3D Space Debris Tracking During Atmospheric Re-Entry, pp. 254-259.

Suwantong, Rata	Onera
Bertrand, Sylvain	Onera
Dumur, Didier	Supelec
Beauvois, Dominique	Ec. Superieure D'Electricite

11:40-12:00 MoA07.6

Generalized Optimal Midcourse Guidance, pp. 260-264.

Morgan, Robert	Raytheon
Noseck, Aaron	Raytheon Missile Systems

MoA08 Salon 8

System Identification I (Regular Session)

Chair: Enqvist, Martin	Linköping Univ.
Co-Chair: Chen, Tianshi	Linköping Univ.

10:00-10:20 MoA08.1

Anomaly Detection in Homogenous Populations: A Sparse Multiple Kernel-Based Regularization Method, pp. 265-270.

Chen, Tianshi	Linköping Univ.
Andersen, Martin S.	Tech. Univ. of Denmark
Chiuso, Alessandro	Univ. of Padova
Pillonetto, Gianluigi	Univ. of Padova
Ljung, Lennart	Linkoping Univ.

10:20-10:40 MoA08.2

High Order Algorithms in Robust Least-Squares Estimation with SDD Information Matrix: Redesign, Simplification and Unification, pp. 271-276.

Stotsky, Alexander A.	Chalmers Univ. of Tech

10:40-11:00 MoA08.3

The Maximum Likelihood Estimate for Radiation Source Localization: Initializing an Iterative Search, pp. 277-282.

Bai, Er-Wei	Univ. of Iowa

Dasgupta, Soura	Univ. of Iowa
Mudumbai, Raghuraman	Univ. of Iowa

11:00-11:20 MoA08.4

A Closed-Loop Instrumental Variable Approach to Mass and Center of Mass Estimation Using IMU Data, pp. 283-289.

Linder, Jonas	Linköping Univ
Enqvist, Martin	Linköping Univ
Gustafsson, Fredrik	Linkoping Univ

11:20-11:40 MoA08.5

Distributed System Identification with ADMM, pp. 290-295.

Hansson, Anders	Linkoping Univ
Verhaegen, Michel	Delft Univ. of Tech

11:40-12:00 MoA08.6

Structured Covariance Estimation for State Prediction, pp. 296-303.

Li, Weichang	ExxonMobil Corp. Strategic Res
Badgwell, Thomas A.	ExxonMobil

MoA09 Salon 9

Estimation I (Regular Session)

Chair: Gondhalekar, Ravi	Univ. of California Santa Barbara
Co-Chair: Xin, Ming	Univ. of Missouri

10:00-10:20 MoA09.1

High-Degree Cubature Joint Probabilistic Data Association Information Filter for Multiple Sensor Multiple Target Tracking, pp. 304-309.

Jia, Bin	Intelligent Fusion Tech
Xin, Ming	Univ. of Missouri

10:20-10:40 MoA09.2

Moving-Horizon-Like State Estimation Via Continuous Glucose Monitor Feedback in MPC of an Artificial Pancreas for Type 1 Diabetes, pp. 310-315.

Gondhalekar, Ravi	Univ. of California, Santa Barbara
Dassau, Eyal	Univ. of California, Santa Barbara
Doyle III, Francis J.	Univ. of California, Santa Barbara

10:40-11:00 MoA09.3

A Sampled-Data Observer with Time-Varying Gain for a Class of Nonlinear Systems with Sampled-Measurements, pp. 316-321.

Ahmed-Ali, Tarek	Greyc Cnrs
Burlion, Laurent	Onera
Lamnabhi-Lagarrigue, Francoise	CNRS and EECI
Hann, Cheikh Ahmadou Bamba	Univ. Caen Basse-Normandie

11:00-11:20 MoA09.4

Nonlinear State Estimation with Nonlinear Equality Constraints, pp. 322-327.

Su, Jinya	Loughborough Univ
Chen, Wen-hua	Loughborough Univ
Li, Baibing	Loughborough Univ

11:20-11:40 MoA09.5

Velocity-Aided Attitude Estimation for Accelerated Rigid Bodies, pp. 328-333.

Hua, Minh-Duc	Inst. Des Systèmes Intelligents Et De Robotique (ISIR CNRS-UP
Martin, Philippe	MINES ParisTech
Hamel, Tarek	Univ. De Nice Sophia Antipolis

11:40-12:00 MoA09.6

Distributed Estimation for Spatial Rigid Motion Based on Dual Quaternions, pp. 334-339.

Zu, Yue	Iowa State Univ
Sun, Chuangchuang	Iowa State Univ
Dai, Ran	Iowa State Univ

MoA10 Salon 10

Developments in Stochastic Systems, Control, and Their Applications (Invited Session)

Chair: Prandini, Maria	Pol. di Milano
Co-Chair: Pasik-Duncan, Bozenna	Univ. of Kansas
Organizer: Pasik-Duncan, Bozenna	Univ. of Kansas
Organizer: Prandini, Maria	Pol. di Milano

10:00-10:20 MoA10.1

Decision-Based System Identification and Adaptive Resource Allocation (I), pp. 340-345.

Guo, Jin	Chinese Acad. of Sciences
Mu, Bi-Qiang	Chinese Acad. of Sciences
Wang, Le Yi	Wayne State Univ
Yin, George	Wayne State Univ
Xu, Lijian	Wayne State Univ

10:20-10:40 MoA10.2

Collaborative Extremum Seeking for Welfare Optimization (I), pp. 346-351.

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

10:40-11:00 MoA10.3

An Approximate Linear Programming Solution to the Probabilistic Invariance Problem for Stochastic Hybrid Systems (I), pp. 352-357.

Petretti, Anacleto	Pol. Di Milano
Prandini, Maria	Pol. Di Milano

11:00-11:20 MoA10.4

Optimal Demand Response for Thermal Inertial Loads Employing Stochastic Renewables: A Privacy Respecting Architecture and Its Continuum Scaling Limit (I), pp. 358-363.

Sharma, Gaurav	Texas A&M Univ
Xie, Le	Texas A&M Univ
Kumar, P. R.	Texas A&M Univ

11:20-11:40 MoA10.5

Linear-Quadratic Control with General Noise Processes (I), pp. 364-369.

Duncan, Tyrone E.	Univ. of Kansas
Pasik-Duncan, Bozenna	Univ. of Kansas

11:40-12:00 MoA10.6

Mean Field Capital Accumulation with Stochastic Depreciation, pp. 370-375.

Huang, Minyi	Carleton Univ
Nguyen, Son	Univ. of Puerto Rico, Rio Piedras

MoA11 Georgia 1

Optimization I (Regular Session)

Chair: Girard, Anouck — Univ. of Michigan, Ann Arbor
Co-Chair: Smith, Stephen L. — Univ. of Waterloo

10:00-10:20 MoA11.1

Sparse Static Output Feedback Controller Design Via Convex Optimization, pp. 376-381.

Wang, Yin — Northeastern Univ
Lopez, Jose A. — Northeastern Univ
Sznaier, Mario — Northeastern Univ

10:20-10:40 MoA11.2

Critical Observations in a Diagnostic Problem, pp. 382-387.

Christopher, Cody James — NICTA, Canberra, Australia
Grastien, Alban — NICTA, Canberra, Australia
Cordier, Marie-odile — Univ. Rennes1

10:40-11:00 MoA11.3

Integrated Planning, Scheduling, and Dynamic Optimization for Continuous Processes, pp. 388-393.

Shi, Hanyu — Northwestern Univ
Chu, Yunfei — Northwestern Univ
You, Fengqi — Northwestern Univ

11:00-11:20 MoA11.4

Control and Verification of High-Dimensional Systems with DSOS and SDSOS Programming, pp. 394-401.

Majumdar, Anirudha — Massachusetts Inst. of Tech
Ahmadi, Amir Ali — Princeton Univ
Tedrake, Russ — Massachusetts Inst. of Tech

11:20-11:40 MoA11.5

Stability Analysis of Stochastic Integer Optimization Problems, pp. 402-407.

Niendorf, Moritz — Univ. of Michigan
Las Fargeas, Jonathan — Univ. of Michigan
Kabamba, Pierre T. — Univ. of Michigan
Girard, Anouck — Univ. of Michigan

11:40-12:00 MoA11.6

Robot Monitoring for the Detection and Confirmation of Stochastic Events, pp. 408-413.

Asghar, Ahmad Bilal — Univ. of Waterloo
Smith, Stephen L. — Univ. of Waterloo

MoA12 Georgia 2

Game Theory I (Regular Session)

Chair: Khanafer, Ali — Univ. Illinois, Urbana-Champaign
Co-Chair: Marden, Jason — Univ. of Colorado at Boulder

10:00-10:20 MoA12.1

Dynamic Incentive Design in Multi-Stage Linear-Gaussian Games with Asymmetric Information: A Common Information Based Approach, pp. 414-419.

Gupta, Abhishek — Univ. of Illinois, Urbana Champaign
Basar, Tamer — Univ. of Illinois, Urbana-Champaign

10:20-10:40 MoA12.2

Approximate Solutions to a Class of Nonlinear Stackelberg Differential Games, pp. 420-425.

Mylvaganam, Thulasi — Imperial Coll. London
Astolfi, Alessandro — Imperial Coll. & Univ. of Rome

10:40-11:00 MoA12.3

Log-Linear Learning: Convergence in Discrete and Continuous Strategy Potential Games, pp. 426-432.

Tatarenko, Tatiana — TU Darmstadt

11:00-11:20 MoA12.4

Distributed Game Strategy Design with Application to Multi-Agent Formation Control, pp. 433-438.

Lin, Wei — Western Digital Corp
Qu, Zhihua — Univ. of Central Florida
Simaan, Marwan A. — Univ. of Central Florida

11:20-11:40 MoA12.5

Equivalence of Decentralized Stochastic Dynamic Decision Systems Via Girsanov's Measure Transformation, pp. 439-444.

Charalambous, Charalambos — Univ. of Cyprus
Ahmed, Nasir — Univ. of Ottawa

11:40-12:00 MoA12.6

The Role of Information in Multiagent Coordination, pp. 445-450.

Marden, Jason — Univ. of Colorado at Boulder

MoA13 Atrium 1

Delay Systems I (Regular Session)

Chair: Barbot, Jean Pierre — ENSEA
Co-Chair: Califano, Claudia — Univ. di Roma

10:00-10:20 MoA13.1

A New Approach to Exact Slow-Fast Decomposition of Singularly Perturbed Linear Systems with Small Delays, pp. 451-456.

Glizer, Valery Y. — Ort Braude Coll
Feigin, Yuri — Tel Aviv Univ
Fridman, Emilia — Tel Aviv Univ
Margaliot, Michael — Tel Aviv Univ

10:20-10:40 MoA13.2

Robust Compensation of a Chattering Time-Varying Input Delay, pp. 457-462.

Bresch-Pietri, Delphine — GIPSA-Lab
Petit, Nicolas — MINES ParisTech

10:40-11:00 MoA13.3

Overlapping Decompositions and Decentralized Robust Control of Large-Scale Systems with Distributed Time-Delay, pp. 463-468.

Iftar, Altug — Anadolu Univ

11:00-11:20 MoA13.4

Left Inversion of Nonlinear Time Delay System, pp. 469-474.

Kader, Zohra — Inria Lille Nord Europe
Zheng, Gang — Inria
Barbot, Jean Pierre — Ensea

11:20-11:40 MoA13.5

Coordinates Transformations in Nonlinear Time-Delay Systems, pp. 475-480.

Califano, Claudia — Univ. Di Roma
Moog, Claude — Cnrs

11:40-12:00 MoA13.6

Delay Compensation in Global Estimation of Rigid-Body Attitude under Biased Velocity Measurement, pp. 481-486.

Namvar, Mehrzad — Sharif Univ. of Tech
Bahrami, Somayeh — Sharif Univ. of Tech

MoA14 Olympic 1

Adversary-Aware Cyber Decision Systems (Invited Session)

Chair: Cox, Ann	Department of Homeland Security
Co-Chair: Kreidl, O. Patrick	Univ. of North Florida
Organizer: Cox, Ann	Department of Homeland Security
Organizer: Kreidl, O. Patrick	Univ. of North Florida

10:00-10:20 MoA14.1

A Science of System Security (I), pp. 487-492.

Cox, Ann	Department of Homeland Security
Roy, Sandip	Washington State Univ
Warnick, Sean	Brigham Young Univ

10:20-10:40 MoA14.2

On the Use of Feedback in an Introduction-Based Reputation Protocol (I), pp. 493-498.

Caldwell, Patrick	Univ. of North Florida
Kreidl, O. Patrick	Univ. of North Florida

10:40-11:00 MoA14.3

On Optimal Link Removals for Controllability Degradation in Dynamical Networks (I), pp. 499-504.

Fardad, Makan	Syracuse Univ
Diwadkar, Amit	Iowa State Univ
Vaidya, Umesh	Iowa State Univ

11:00-11:20 MoA14.4

Decision Fusion with Corrupted Reports in Multi-Sensor Networks: A Game-Theoretic Approach (I), pp. 505-510.

Abrardo, Andrea	Univ. of Siena
Barni, Mauro	Univ. of Siena
Kallas, Kassem	Univ. of Siena
Tondi, Benedetta	Univ. of Siena

11:20-11:40 MoA14.5

Vulnerability Analysis for Distributed and Coordinated Destabilization Attacks, pp. 511-516.

Chetty, Vasu	Brigham Young Univ
Woodbury, Nathan Scott	Brigham Young Univ
Vaziripour, Elham	Brigham Young Univ
Warnick, Sean	Brigham Young Univ

11:40-12:00 MoA14.6

A Moving-Horizon Hybrid Stochastic Game for Secure Control of Cyber-Physical Systems, pp. 517-522.

Miao, Fei	Univ. of Pennsylvania
Zhu, Quanyan	New York Univ

MoA15 Atrium 2

Adaptive Control I (Regular Session)

Chair: Su, Hongye	Zhejiang Univ.
Co-Chair: Heise, Christian David	Tech. Univ. München

10:00-10:20 MoA15.1

Exploration and Mapping of an Unknown Flight Envelope, pp. 523-528.

Ansari, Ahmad	Univ. of Michigan
Yu, Ming-Jui	Univ. of Michigan
Bernstein, Dennis S.	Univ. of Michigan

10:20-10:40 MoA15.2

Time-Delay Margin Computation of Model Reference Adaptive Control Using the Razumikhin Theorem, pp. 529-535.

Heise, Christian David	Tech. Univ. München
Holzapfel, Florian	Tech. Univ. München

10:40-11:00 MoA15.3

When Is a Parameterized Controller Suitable for Adaptive Control?, pp. 536-538.

Ortega, Romeo	LSS - SUPELEC
Panteley, Elena	LSS - SUPELEC

11:00-11:20 MoA15.4

On Parameter Convergence of Nonlinearly Parameterized Adaptive Systems: Analysis Via Contraction and First Lyapunov's Methods, pp. 539-544.

Wang, Lei	Zhejiang Univ
Ortega, Romeo	LSS - SUPELEC
Su, Hongye	Zhejiang Univ
Liu, Zhitao	Zhejiang Univ
Xu, Weihua	Zhejiang Univ

11:20-11:40 MoA15.5

Adaptive Control of Uncertain Hammerstein Systems with Hysteretic Nonlinearities, pp. 545-550.

Al Janaideh, Mohammad	The Univ. of Jordan
Bernstein, Dennis S.	Univ. of Michigan

11:40-12:00 MoA15.6

Geometric Based Estimation and Nonlinear PI Controller for Dynamic Optimization Problem, pp. 551-556.

Moshksar, Ehsan	Queen's Univ
Guay, Martin	Queen's Univ

MoA16 Olympic 2

Control of First and Second Order PDEs (Invited Session)

Chair: Armaou, Antonios	Pennsylvania State Univ.
Co-Chair: Demetriou, Michael	Worcester Pol. Inst.
Organizer: Armaou, Antonios	Pennsylvania State Univ.
Organizer: Demetriou, Michael	Worcester Pol. Inst.

10:00-10:20 MoA16.1

Guidance of a Moving Sensor Used in State Estimation of a Flexible Beam (I), pp. 557-562.

Demetriou, Michael A.	Worcester Pol. Inst

10:20-10:40 MoA16.2

Economic Model Predictive Control of a First-Order Hyperbolic PDE System (I), pp. 563-570.

Lao, Liangfeng	Univ. of California, Los Angeles
Ellis, Matthew	Univ. of California, Los Angeles
Christofides, Panagiotis D.	Univ. of California, Los Angeles

10:40-11:00 MoA16.3

Comparison of Stabilization of Current-Actuated and Voltage-Actuated Piezoelectric Beams (I), pp. 571-576.

Morris, Kirsten	Univ. of Waterloo
Ozer, A. Ozkan	Univ. of Nevada-Reno

11:00-11:20 MoA16.4

Controlling Flutter for Nonlinear Panels in Subsonic Flows Via Structural Velocity Feedback (I), pp. 577-582.

Lasiecka, Irena	Univ. of Virginia
Webster, Justin	North Carolina Sate Univ

11:20-11:40 MoA16.5

A Comparison of Morphing Control Strategies for a Flexible Wing Micro Air Vehicle Model Incorporating Spatial Hysteresis Damping (I), pp. 583-588.

Walters, Jonathan	Louisiana Tech. Univ
Evans, Katie A.	Louisiana Tech. Univ
Chakravarthy, Animesh	Wichita State Univ
Kuhn, Lisa	Southeastern Louisiana Univ

11:40-12:00 MoA16.6

Global Sensitivity Analysis for the Boundary Control of an Open Channel, pp. 589-594.

Janon, Alexandre	Univ. Paris-Sud
Nodet, Maelle	Univ. Joseph Fourier
Prieur, Christophe	Cnrs
Prieur, Clementine	Univ. Joseph Fourier

MoA17 Atrium 3

Controllability and Stability of Networked Control Systems I (Invited Session)

Chair: Belabbas, Mohamed Ali	Univ. of Illinois,Urbana-Champaign
Co-Chair: Gharesifard, Bahman	Queens Univ. Canada
Organizer: Belabbas, Mohamed Ali	Univ. of Illinois at Urbana-Champaign
Organizer: Gharesifard, Bahman	Queens Univ. Canada
Organizer: Aguilar, Cesar	California State Univ. Bakersfield

10:00-10:20 MoA17.1

Decentralized Formation of Random Regular Graphs for Robust Multi-Agent Networks (I), pp. 595-600.

Yazicioglu, A. Yasin	Massachusetts Inst. of Tech
Egerstedt, Magnus	Georgia Inst. of Tech
Shamma, Jeff S.	Kaust

10:20-10:40 MoA17.2

Centralized and Decentralized Formation Control with Controllable Interaction Laws (I), pp. 601-606.

Chen, Xudong	Univ. of Illinois at Urbana-Champaign
Brockett, Roger	Harvard Univ

10:40-11:00 MoA17.3

On the Controllability of Isotropic and Anisotropic Networks (I), pp. 607-612.

Pasqualetti, Fabio	Univ. of California, Riverside
Zampieri, Sandro	Univ. Di Padova

11:00-11:20 MoA17.4

Stability of Dynamical Systems on a Graph (I), pp. 613-618.

Pirani, Mohammad	Univ. of Waterloo
Costa, Thilan	Univ. of Waterloo
Sundaram, Shreyas	Univ. of Waterloo

11:20-11:40 MoA17.5

A Graph-Theoretic Classification for the Controllability of the Laplacian Leader-Follower Dynamics (I), pp. 619-624.

Aguilar, Cesar O	California State Univ. Bakersfield
Gharesifard, Bahman	Queens Univ. Canada

11:40-12:00 MoA17.6

On Symmetry and Controllability of Multi-Agent Systems (I), pp. 625-630.

Chapman, Airlie	Univ. of Washington
Mesbahi, Mehran	Univ. of Washington

MoA18 Olympic 3

Autonomous Systems (Regular Session)

Chair: Johansson, Karl H.	Royal Inst. of Tech.
Co-Chair: Chung, Chung Choo	Hanyang Univ.

10:00-10:20 MoA18.1

Stability Analysis on Four Agent Tetrahedral Formations, pp. 631-636.

Park, Myoung-Chul	Gwangju Inst. of Science and Tech. (GIST)
Sun, Zhiyong	Australian National Univ
Anderson, Brian D.O.	Australian National Univ
Ahn, Hyo-Sung	Gwangju Inst. of Science and Tech. (GIST)

10:20-10:40 MoA18.2

Undirected Rigid Formations Are Problematic, pp. 637-642.

Mou, Shaoshuai	Yale Univ
Morse, A. Stephen	Yale Univ
Belabbas, Mohamed Ali	Univ. of Illinois at Urbana-Champaign
Anderson, Brian D.O.	Australian National Univ

10:40-11:00 MoA18.3

Toward Robust Control of Minimally Rigid Undirected Formations, pp. 643-647.

Mou, Shaoshuai	Mit
Morse, A. Stephen	Yale Univ
Anderson, Brian D.O.	Australian National Univ

11:00-11:20 MoA18.4

Comparative Evaluation of Dynamic and Kinematic Vehicle Models, pp. 648-653.

Kang, Chang Mook	Hanyang Univ
Lee, Seung Hi	Hanyang Univ
Chung, Chung Choo	Hanyang Univ

11:20-11:40 MoA18.5

Fuel-Efficient Heavy-Duty Vehicle Platooning by Look-Ahead Control, pp. 654-660.

Turri, Valerio	Royal Inst. of Tech
Besselink, Bart	Royal Inst. of Tech
Mårtensson, Jonas	Royal Inst. of Tech
Johansson, Karl Henrik	Royal Inst. of Tech

11:40-12:00 MoA18.6

Runtime Conflict Resolution Mechanism for Functional Integrity of Autonomous Systems, pp. 661-666.

Nishi, Masataka	Hitachi Res. Lab. Hitachi Ltd

MoA19 Plaza 1

Robotics I (Regular Session)

Chair: Acosta, Jose Angel — Univ. de Sevilla
Co-Chair: Chang, Dong Eui — Univ. of Waterloo

10:00-10:20 MoA19.1

Global Estimation of Rigid-Body Attitude/position Using a Single Landmark and Biased Velocity Measurements, pp. 667-672.

Namvar, Mehrzad — Sharif Univ. of Tech
Moeini, Amir — Sharif Univ. of Tech

10:20-10:40 MoA19.2

Robust Control of Underactuated Aerial Manipulators Via IDA-PBC, pp. 673-678.

Acosta, Jose Angel — Univ. of Seville
Sanchez, M. Ivan — Univ. of Seville
Ollero, Anibal Ollero — Univ. of Seville

10:40-11:00 MoA19.3

Adaptive Neural Network Dynamic Surface Control for Musculoskeletal Robots, pp. 679-685.

Jaentsch, Michael — Tech. Univ. of Munich
Wittmeier, Steffen — Tech. Univ. of Munich
Dalamagkidis, Konstantinos — Tech. Univ. of Munich
Herrmann, Guido — Univ. of Bristol
Knoll, Alois — Tech. Univ. of Munich

11:00-11:20 MoA19.4

Construction of an Atlas for Global Flatness-Based Parameterization and Dynamic Feedback Linearization of Quadcopter Dynamics, pp. 686-691.

Chang, Dong Eui — Univ. of Waterloo
Eun, Yongsoon — Dgist

11:20-11:40 MoA19.5

Surveillance in an Abruptly Changing World Via Multiarmed Bandits, pp. 692-697.

Srivastava, Vaibhav — Princeton Univ
Reverdy, Paul — Princeton Univ
Leonard, Naomi Ehrich — Princeton Univ

11:40-12:00 MoA19.6

A Robust Control Strategy for Mobile Robots Navigation in Dynamic Environments, pp. 698-703.

Furci, Michele — Univ. of Bologna
Naldi, Roberto — Univ. of Bologna
Paoli, Andrea — Univ. of Bologna
Marconi, Lorenzo — Univ. of Bologna

MoA20 Plaza 2

Consensus I (Regular Session)

Chair: Hadjicostis, Christoforos — Univ. of Cyprus
Co-Chair: George, Jemin — U.S. Army Res. Lab.

10:00-10:20 MoA20.1

Adding Resets to an Average Consensus Algorithm to Achieve Practical Input-To-Output Stability, pp. 704-708.

Hartman, Matthew — Univ. of California, Santa Barbara
Teel, Andrew R. — Univ. of California, Santa Barbara

10:20-10:40 MoA20.2

Average Consensus in the Presence of Dynamically Changing Directed Graph Topologies and Time Delays, pp. 709-714.

Charalambous, Themistoklis — Royal Inst. of Tech. (KTH)
Hadjicostis, Christoforos — Univ. of Cyprus

10:40-11:00 MoA20.3

A Geometric Approach towards Linear Consensus Algorithms, pp. 715-720.

Bolouki, Sadegh — Lehigh Univ
Malhame, Roland P. — Ec. Pol. De Montreal
Siami, Milad — Lehigh Univ
Motee, Nader — Lehigh Univ

11:00-11:20 MoA20.4

Binary Consensus through Binary Communication, pp. 721-726.

George, Jemin — U.S. Army Res. Lab
Swami, Ananthram — U.S. Army Res. Lab

11:20-11:40 MoA20.5

The Consensus Problem in the Behavioral Approach, pp. 727-734.

Blumthaler, Ingrid — Univ. of Padova
Bisiacco, Mauro — Univ. of Padova
Valcher, Maria Elena — Univ. of Padova

11:40-12:00 MoA20.6

Optimal Strategies for Dynamic Weight Selection in Consensus Protocols in the Presence of an Adversary, pp. 735-740.

El Chamie, Mahmoud — INRIA - Sophia Antipolis Méditerranée
Basar, Tamer — Univ. of Illinois, Urbana-Champaign

MoB01 Salon F

Hybrid Systems II (Regular Session)

Chair: Maggiore, Manfredi — Univ. of Toronto
Co-Chair: Kieffer, Michel — CNRS-Supelec

13:30-13:50 MoB01.1

A Hybrid Controller for Global Uniform Exponential Stabilization of Linear Systems with Singular Input Constraints, pp. 741-746.

Casau, Pedro — Inst. Superior Técnico, Tech. Univ. of Lisbon
Sanfelice, Ricardo G. — Univ. of California at Santa Cruz
Silvestre, Carlos — Univ. of Macau

13:50-14:10 MoB01.2

A Maximum Entropy Approach to the Moment Closure Problem for Stochastic Hybrid Systems at Equilibrium, pp. 747-752.

Zhang, Jiangmeng — Univ. of Illinois at Urbana-Champaign
DeVille, Lee — Univ. of Illinois
Dhople, Sairaj — Univ. of Minnesota
Dominguez-Garcia, Alejandro — Univ. of Illinois at Urbana-Champaign

14:10-14:30 MoB01.3

Computation of Parametric Barrier Functions for Dynamical Systems Using Interval Analysis, pp. 753-758.

Bouissou, Olivier — Cea List
Chapoutot, Alexandre — ENSTA ParisTech
Djaballah, Adel — ENSTA-ParisTech
Kieffer, Michel — CNRS-Supelec

14:30-14:50 MoB01.4

A New Filter for Hybrid Systems and Its Applications to Robust Attitude Estimation, pp. 759-764.

Santana, Pedro Henrique de Rodrigues Quemel e Assis — Massachusetts Inst. of Tech
Lopes, Renato Vilela — Univ. of Brasília

Amui, Bruno Guilherme	Univ. of Brasília
Borges, Geovany A.	Univ. of Brasília
Ishihara, Joao Yoshiyuki	Univ. of Brasília
Williams, Brian	Massachusetts Inst. of Tech

14:50-15:10 MoB01.5

Discrete-Time Modeling of a Hereditary Impulsive Feedback System, pp. 765-770.

Churilov, Alexander	St.Petersburg State Marine Tech. Univ
Medvedev, Alexander V.	Uppsala Univ
Mattsson, Per	Uppsala Univ

15:10-15:30 MoB01.6

Bang Bang Hybrid Stabilization of Perturbed Double Integrators, pp. 771-776.

Serpelloni, Edoardo	Univ. of Toronto
Maggiore, Manfredi	Univ. of Toronto
Damaren, Chris J.	Univ. of Toronto

MoB02 Salon G

Nonlinear Systems II (Regular Session)

Chair: Kellett, Christopher M.	Univ. of Newcastle
Co-Chair: Hayakawa, Tomohisa	Tokyo Inst. of Tech.

13:30-13:50 MoB02.1

Nonlinear Systems with Nonlinear L2-Gain, pp. 777-782.

Dower, Peter M.	The Univ. of Melbourne
Kellett, Christopher M.	Univ. of Newcastle

13:50-14:10 MoB02.2

Passivity Indices and Passivation of Systems with Application to Systems with Input/Output Delay, pp. 783-788.

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

14:10-14:30 MoB02.3

Control Configuration Selection for Economic Model Predictive Control, pp. 789-796.

Ellis, Matthew	Univ. of California, Los Angeles
Christofides, Panagiotis D.	Univ. of California, Los Angeles

14:30-14:50 MoB02.4

Leader-Following Coordination of Nonlinear Agents under Time-Varying Communication Topologies, pp. 797-804.

Delli Priscoli, Francesco	Univ. di Roma
Isidori, Alberto	Univ. di Roma
Marconi, Lorenzo	Univ. di Bologna
Pietrabissa, Antonio	Univ. di Roma

14:50-15:10 MoB02.5

A Novel Approach to the Automatic Control of Scale Model Airplanes, pp. 805-812.

Hua, Minh-Duc	Inst. Des Systèmes Intelligents Et De Robotique (ISIR CNRS-UP
Pucci, Daniele	Istituto Italiano Di Tecnologia
Hamel, Tarek	Univ. De Nice Sophia Antipolis
Morin, Pascal	Upmc
Samson, Claude	INRIA Sophia-Antipolis

15:10-15:30 MoB02.6

Chaotic Dynamics of Orthogonally Projective Triangle Folding Map, pp. 813-815.

Nishimura, Jun	Tokyo Inst. of Tech
Hayakawa, Tomohisa	Tokyo Inst. of Tech

MoB03 Salon H

Formal Methods in Control II (Invited Session)

Chair: Reissig, Gunther	Univ. Fed. Armed Forces Munich
Co-Chair: Zamani, Majid	Tech. Univ. München
Organizer: Zamani, Majid	Tech. Univ. München
Organizer: Reissig, Gunther	Univ. Fed. Armed Forces Munich

13:30-13:50 MoB03.1

Preliminary Results on Correct-By-Construction Control Software Synthesis for Adaptive Cruise Control (I), pp. 816-823.

Nilsson, Petter	Univ. of Michigan
Hussien, Omar	Univ. of California at Los Angeles
Chen, Yuxiao	Univ. of Michigan
Balkan, Ayca	Univ. of California at Los Angeles
Rungger, Matthias	Tum
Ames, Aaron D.	Texas A&M Univ
Grizzle, Jessy W.	Univ. of Michigan
Ozay, Necmiye	Univ. of Michigan
Peng, Huei	Univ. of Michigan
Tabuada, Paulo	Univ. of California at Los Angeles

13:50-14:10 MoB03.2

Approximately Bisimilar Abstractions of Incrementally Stable Finite or Infinite Dimensional Systems (I), pp. 824-829.

Girard, Antoine	Univ. Joseph Fourier

14:10-14:30 MoB03.3

Trajectory-Based Formal Controller Synthesis for Multi-Link Robots with Elastic Joints (I), pp. 830-835.

Saha, Sayan	Rensselaer Pol. Inst
Julius, A. Agung	Rensselaer Pol. Inst

14:30-14:50 MoB03.4

Construction of Event-Based ISS Controllers on Coarse Quantizations (I), pp. 836-841.

Gruene, Lars	Univ. of Bayreuth
Sigurani, Manuela	Univ. of Bayreuth

14:50-15:10 MoB03.5

Discounting the past in Robust Finite-State Systems (I), pp. 842-847.

Rungger, Matthias	Univ. of California at Los Angeles
Tabuada, Paulo	Univ. of California at Los Angeles

15:10-15:30 MoB03.6

Anomaly Detection in Cyber-Physical Systems: A Formal Methods Approach (I), pp. 848-853.

Jones, Austin	Boston Univ
Kong, Zhaodan	Boston Univ
Belta, Calin	Boston Univ

MoB04 Salon I

Output Feedback and Observers II (Regular Session)

Chair: Zaccarian, Luca — LAAS-CNRS and Univ. of Trento
Co-Chair: Koroglu, Hakan — Chalmers Univ. of Tech.

13:30-13:50 MoB04.1

Faux-Riccati Synthesis of Nonlinear Observer-Based Compensators for Discrete-Time Nonlinear Systems, pp. 854-859.

Prach, Anna — Middle East Tech. Univ
Tekinalp, Ozan — Middle East Tech. Univ
Bernstein, Dennis S. — Univ. of Michigan

13:50-14:10 MoB04.2

Output Feedback Control for T-S Discrete-Time Nonlinear Descriptor Models, pp. 860-865.

Estrada-Manzo, Victor — Univ. of Valenciennes and Hainaut-Cambresis
Lendek, Zsofia — Tech. Univ. of Cluj-Napoca
Guerra, Thierry Marie — Univ. of Valenciennes and Hainaut Cambresis

14:10-14:30 MoB04.3

New LMI Conditions for Static Output Feedback Synthesis with Multiple Performance Objectives, pp. 866-871.

Koroglu, Hakan — Chalmers Univ. of Tech
Falcone, Paolo — Chalmers Univ. of Tech

14:30-14:50 MoB04.4

Observer-Based Output-Feedback Control to Eliminate Torsional Drill-String Vibrations, pp. 872-877.

Vromen, Thijs — Eindhoven Univ. of Tech
Van De Wouw, Nathan — Eindhoven Univ. of Tech
Doris, Apostolos — Eindhoven Univ. of Tech
Astrid, Patricia — Shell Global Solutions International B.V
Nijmeijer, Hendrik — Eindhoven Univ. of Tech

14:50-15:10 MoB04.5

Dynamic Extension without Inversion for Observers, pp. 878-883.

Andrieu, Vincent — Univ. De Lyon
Eytard, Jean-Bernard — MINES ParisTech
Praly, Laurent — MINES ParisTech

15:10-15:30 MoB04.6

A Hybrid Ripple Model and Two Hybrid Observers for Its Estimation, pp. 884-889.

Bisoffi, Andrea — Univ. of Trento
Da Lio, Mauro — Univ. of Trento
Zaccarian, Luca — LAAS-CNRS and Univ. of Trento

MoB05 Salon J

Decentralized Coordination and Control (Invited Session)

Chair: Nedich, Angelia — Univ. Illinois, Urbana-Champaign
Co-Chair: Mesbahi, Mehran — Univ. of Washington
Organizer: Morse, A. Stephen — Yale Univ.
Organizer: Nedich, Angelia — Univ. Illinois, Urbana-Champaign

13:30-13:50 MoB05.1

Dynamic Average Consensus with Distributed Event-Triggered Communication (I), pp. 890-895.

Kia, Solmaz — Univ. of California Irvine
Cortes, Jorge — Univ. of California, San Diego
Martinez, Sonia — Univ. of California, San Diego

13:50-14:10 MoB05.2

Convex Relaxation for Optimal Distributed Control Problem, pp. 896-903.

Fazelnia, Ghazal — Columbia Univ
Madani, Ramtin — Columbia Univ
Lavaei, Javad — Columbia Univ

14:10-14:30 MoB05.3

Online Distributed ADMM Via Dual Averaging (I), pp. 904-909.

Hosseini, Saghar — Univ. of Washington
Chapman, Airlie — Univ. of Washington
Mesbahi, Mehran — Univ. of Washington

14:30-14:50 MoB05.4

Ensemble Online Clustering through Decentralized Observations (I), pp. 910-915.

Katselis, Dimitrios — Univ. of Illinois, Urbana-Champaign
Beck, Carolyn L. — Univ. of Illinois, Urbana-Champaign
van der Schaar, Mihaela — Univ. of California, Los Angeles

14:50-15:10 MoB05.5

Consensus and Disagreement in Collective Homing Problems: A Mean Field Game Formulation, pp. 916-921.

Salhab, Rabih — Ec. Pol. De Montreal
Malhame, Roland P. — Ec. Pol. De Montreal
Le Ny, Jerome — Ec. Pol. De Montreal

15:10-15:30 MoB05.6

Internal Stability of Linear Consensus Processes (I), pp. 922-927.

Liu, Ji — Univ. Illinois, Urbana-Champaign
Morse, A. Stephen — Yale Univ
Nedich, Angelia — Univ. Illinois, Urbana-Champaign
Basar, Tamer — Univ. Illinois, Urbana-Champaign

MoB06 Salon 6

Electrical Power Systems I (Regular Session)

Chair: Giarré, Laura — Univ. Di Palermo
Co-Chair: Zhang, Yu — Univ. of Minnesota

13:30-13:50 MoB06.1

Power Output Smoothing for Hybrid Wind-Solar Thermal Generation Using Chance-Constrained Model Predictive Control, pp. 928-934.

Yo, Masaki — Keio Univ
Ono, Masahiro — California Inst. of Tech
Adachi, Shuichi — Keio Univ
Murayama, Dai — Toshiba Corp
Okita, Nobuo — Toshiba Corp

13:50-14:10 MoB06.2

An Improved Real-Time Economic NMPC Scheme for Wind Turbine Control Using Spline-Interpolated Aerodynamic Coefficients, pp. 935-940.

Gros, Sebastien — Chalmers Univ. of Tech
Quirynen, Rien — Katholieke Univ. Leuven
Diehl, Moritz — Katholieke Univ. Leuven

14:10-14:30 MoB06.3

Distributed Market Clearing with Wind Generation and Large-Scale Dispatchable Loads, pp. 941-946.

Zhang, Yu — Univ. of Minnesota
Giannakis, Georgios B. — Univ. of Minnesota

14:30-14:50 MoB06.4

A Distributed Anytime Algorithm for Network Utility Maximization with Application to Real-Time EV Charging Control, pp. 947-952.

Rivera, Jose	Tech. Univ. München
Jacobsen, Hans-Arno	Tech. Univ. München

14:50-15:10 MoB06.5

Redesigning Generation Control in Power Systems: Methodology, Stability and Delay Robustness, pp. 953-958.

Zhang, Xuan	Univ. of Oxford
Papachristodoulou, Antonis	Univ. of Oxford

15:10-15:30 MoB06.6

Unidirectional Direct Load Control through Smart Plugs, pp. 959-964.

Neglia, Giovanni	INRIA Sophia Antipolis Méditerranée
Di Bella, Giuseppe	Univ. di Palermo
Giarré, Laura	Univ. di Palermo
Tinnirello, Ilenia	Univ. di Palermo

MoB07 Salon 7

Aerospace II (Regular Session)

Chair: Qu, Zhihua	Univ. of Central Florida
Co-Chair: Chamseddine, Abbas	Ec. de Tech. Supérieure

13:30-13:50 MoB07.1

Optimal Bank Reversal for High-Lifting Reentry Vehicles, pp. 965-969.

Liang, Zixuan	Beihang Univ
Li, Qingdong	Beihang Univ
Ren, Zhang	Beijing Univ. of Aeronautics and Astronautics
Chen, Jian	Beijing Univ. of Aeronautics and Astronautics
Xiong, Zihao	Beihang Univ

13:50-14:10 MoB07.2

Spacecraft Position and Attitude Formation Control Using Line-Of-Sight Observations, pp. 970-975.

Wu, Tse-Huai	George Washington Univ
Lee, Taeyoung	George Washington Univ

14:10-14:30 MoB07.3

Optimal Position Seeking for Unmanned Aerial Vehicle Communication Relay Using Only Signal Strength and Angle of Arrival, pp. 976-981.

Chamseddine, Abbas	École De Tech. Supérieure
Charland-Arcand, Guillaume	École De Tech. Supérieure
Akhrif, Ouassima	École De Tech. Supérieure
Gagné, Samuel	École De Tech. Supérieure
Gagnon, François	École De Tech. Supérieure
Couillard, Denis	Ultra Electronics TCS

14:30-14:50 MoB07.4

Cooperative Bicircular Target Tracking Using Multiple Unmanned Aerial Vehicles, pp. 982-987.

Liang, Yueqian	Beihang Univ.
Jia, Yingmin	Beihang Univ.
Du, Junping	Beijing Univ. of Posts and Telecommunications
Matsuno, Fumitoshi	Kyoto Univ

14:50-15:10 MoB07.5

Optimal Design of Cooperative Guidance Law for Simultaneous Stike, pp. 988-993.

Daughtery, Edward	Univ. of Central Florida
Qu, Zhihua	Univ. of Central Florida

15:10-15:30 MoB07.6

Time-Varying LQR on Hypersonic Vehicle Profile-Following, pp. 994-998.

Xiong, Zihao	Beihang Univ
Chen, Jian	Beijing Univ. of Aeronautics and Astronautics
Li, Qingdong	Beihang Univ
Ren, Zhang	Beijing Univ. of Aeronautics and Astronautics

MoB08 Salon 8

System Identification II (Regular Session)

Chair: Ankarali, Mustafa Mert	Johns Hopkins Univ.
Co-Chair: Rivera, Daniel E.	Arizona State Univ.

13:30-13:50 MoB08.1

Worst-Case Experiment Design for Constrained MISO Systems, pp. 999-1004.

Tanaskovic, Marko	ETH Zurich
Fagiano, Lorenzo	ABB Switzerland Ltd
Morari, Manfred	ETH Zurich

13:50-14:10 MoB08.2

Parameter Identification of a Permanent Magnet Synchronous Motor, pp. 1005-1010.

Lozada-Castillo, Norma Beatriz	Cinvestav
Chairez Oria, Isaac	Cinvestav
Luviano-Juárez, Alberto	UPIITA - IPN
Escobar, Jesica Azucena	IPN

14:10-14:30 MoB08.3

A New Parametrisation of Matrix Fraction Descriptions to Improve Gradient-Based Optimisation Methods, pp. 1011-1016.

Vayssettes, Jérémy	Isae
Mercère, Guillaume	Univ. of Poitiers

14:30-14:50 MoB08.4

System Identification of Rhythmic Hybrid Dynamical Systems Via Discrete Time Harmonic Transfer Functions, pp. 1017-1022.

Ankarali, Mustafa Mert	Johns Hopkins Univ
Cowan, Noah	Johns Hopkins Univ

14:50-15:10 MoB08.5

Data-Centric Input Signal Design for Highly Interactive Dynamical Systems, pp. 1023-1028.

Deshpande, Sunil	Arizona State Univ
Rivera, Daniel E.	Arizona State Univ

15:10-15:30 MoB08.6

A Constraint Selection Technique for Set Membership Estimation of Time-Varying Parameters, pp. 1029-1034.

Casini, Marco	Univ. of Siena
Garulli, Andrea	Univ. of Siena
Vicino, Antonio	Univ. of Siena

MoB09 Salon 9

Estimation II (Regular Session)

Chair: Mahajan, Aditya — McGIll Univ.

Co-Chair: Chong, Michelle Siu Tze — Univ. of California, Santa Barbara

13:30-13:50 MoB09.1

Pi-Invariant Unscented Kalman Filter for Sensor Fusion, pp. 1035-1040.

Condomines, Jean-Philippe — ENAC/ONERA

Seren, Cedric — ONERA

Hattenberger, Gautier — ENAC, French Civil Aviation Univ

13:50-14:10 MoB09.2

On the Optimal Thresholds in Remote State Estimation with Communication Costs, pp. 1041-1046.

Chakravorty, Jhelum — McGill Univ

Mahajan, Aditya — McGIll Univ

14:10-14:30 MoB09.3

Robust Hybrid EKF Approach for State Estimation in Multi-Scale Nonlinear Singularly Perturbed Systems, pp. 1047-1054.

Daroogheh, Najmeh — Concordia Univ

Meskin, Nader — Qatar Univ

Khorasani, Khashayar — Concordia Univ

14:30-14:50 MoB09.4

Multi-Sensor Transmission Power Scheduling for Remote State Estimation under SINR Model, pp. 1055-1060.

Li, Yuzhe — Hong Kong Univ. of Science and Tech

Quevedo, Daniel E. — The Univ. of Newcastle

Lau, Vincent K. N. — Hong Kong Univ. of Science and Tech

Shi, Ling — Hong Kong Univ. of Science and Tech

14:50-15:10 MoB09.5

Output-Feedback Model Predictive Control of Sewer NetworksThrough Moving Horizon Estimation, pp. 1061-1066.

Joseph-Duran, Bernat — Tech. Univ. of Catalonia

Ocampo-Martinez, Carlos — Tech. Univ. of Catalonia

Cembrano, Gabriela — Upc-Csic

15:10-15:30 MoB09.6

State and Parameter Estimation of Nonlinear Systems: A Multi-Observer Approach, pp. 1067-1072.

Chong, Michelle Siu Tze — Univ. of California, Santa Barbara

Nesic, Dragan — Univ. of Melbourne

Postoyan, Romain — Cnrs-Cran

Kuhlmann, Levin — Univ. of Melbourne

MoB10 Salon 10

Stochastic Optimal Control and Markov Decision Processes (Regular Session)

Chair: Yuksel, Serdar — Queen's Univ.

Co-Chair: Gonçalves, Alim P. C. — UNICAMP

13:30-13:50 MoB10.1

A Unified Framework for Risk-Sensitive Markov Control Processes (I), pp. 1073-1078.

Shen, Yun — Tech. Univ. Berlin

Stannat, Wilhelm — Tech. Univ. Berlin

Obermayer, Klaus — Tech. Univ. Berlin

13:50-14:10 MoB10.2

Asymptotic Optimality of Quantized Control in Markov Decision Processes, pp. 1079-1084.

Saldi, Naci — Queen's Univ

Linder, Tamas — Queen's Univ

Yuksel, Serdar — Queen's Univ

14:10-14:30 MoB10.3

Weighted Difference Approximation of Value Functions for Slow-Discounting Markov Decision Processes, pp. 1085-1090.

Chow, Yinlam — Stanford Univ

Qin, Junjie — Stanford Univ

14:30-14:50 MoB10.4

A Learning Based Approach to Control Synthesis of Markov Decision Processes for Linear Temporal Logic Specifications, pp. 1091-1096.

Sadigh, Dorsa — Univ. of California, Berkeley

Kim, Eric S. — Univ. of California, Berkeley

Coogan, Samuel — Univ. of California, Berkeley

Sastry, S. Shankar — Univ. of California, Berkeley

Seshia, Sanjit — Univ. of California, Berkeley

14:50-15:10 MoB10.5

H-2 Output-Feedback Control of Continuous-Time MJLS with Uncertain Transition Rates, pp. 1097-1102.

Cardeliquio, Caetano — UNICAMP

Gonçalves, Alim P. C. — UNICAMP

Fioravanti, Andre R. — UNICAMP

15:10-15:30 MoB10.6

Stabilization of a Quasi-Linear Parabolic Cauchy Problem Associated with Ergodic Control of Diffusions (I), pp. 1103-1110.

Arapostathis, Ari — The Univ. of Texas at Austin

Borkar, Vivek — Indian Inst. of Tech

Kumar, Suresh — Indian Inst. of Tech

MoB11 Georgia 1

Optimization II (Regular Session)

Chair: Paschalidis, Ioannis — Boston Univ.

Co-Chair: Matni, Nikolai — California Inst. of Tech.

13:30-13:50 MoB11.1

Regularization for Design (I), pp. 1111-1118.

Matni, Nikolai — California Inst. of Tech

Chandrasekaran, Venkat — MIT

13:50-14:10 MoB11.2

A Sufficient Saddle Point Characterization for the Lagrangian Associated with General OPF Problems, pp. 1119-1124.

Ma, Xu — Iowa State Univ

Elia, Nicola — Iowa State Univ

14:10-14:30 MoB11.3

Asynchronous Decentralized Optimization in Heterogeneous Systems (I), pp. 1125-1130.

Rabbat, Michael — McGill Univ

Tsianos, Konstantinos — McGill Univ

14:30-14:50 MoB11.4

A Hessian Actor-Critic Algorithm, pp. 1131-1136.

Wang, Jing — Boston Univ

Paschalidis, Ioannis Ch. — Boston Univ

14:50-15:10 MoB11.5

R3MC: A Riemannian Three-Factor Algorithm for Low-Rank Matrix Completion, pp. 1137-1142.

Mishra, Bamdev — Univ. of Liège
Sepulchre, Rodolphe J. — Univ. of Cambridge

15:10-15:30 MoB11.6

On the Convergence to Saddle Points of Concave-Convex Functions, the Gradient Method and Emergence of Oscillations, pp. 1143-1148.

Holding, Thomas James — Univ. of Cambridge
Lestas, Ioannis — Univ. of Cambridge

MoB12 Georgia 2

Game Theory II (Regular Session)

Chair: Pavel, Lacra — Univ. of Toronto
Co-Chair: Hayel, Yezekael — Univ. of Avignon

13:30-13:50 MoB12.1

Pursuit-Evasion Games in the Presence of a Line Segment Obstacle, pp. 1149-1154.

Oyler, Dave W. — Univ. of Michigan
Kabamba, Pierre T. — Univ. of Michigan
Girard, Anouck — Univ. of Michigan

13:50-14:10 MoB12.2

Nash Equilibrium Seeking by a Gossip-Based Algorithm, pp. 1155-1160.

Salehisadaghiani, Farzad — Univ. of Toronto
Pavel, Lacra — Univ. of Toronto

14:10-14:30 MoB12.3

Stable Utility Design for Distributed Resource Allocation, pp. 1161-1166.

Gopalakrishnan, Ragavendran — Univ. of Colorado at Boulder
Nixon, Sean — Univ. of Vermont
Marden, Jason — Univ. of Colorado at Boulder

14:30-14:50 MoB12.4

Exogenous Empirical-Evidence Equilibria in Perfect-Monitoring Repeated Games Yield Correlated Equilibria, pp. 1167-1172.

Dudebout, Nicolas — Georgia Inst. of Tech
Shamma, Jeff S. — Georgia Inst. of Tech

14:50-15:10 MoB12.5

Game Theory Control Solution for Sensor Coverage Problem in Unknown Environment, pp. 1173-1178.

Salar, Rahili — Univ. of California, Riverside
Ren, Wei — Univ. of California, Riverside

15:10-15:30 MoB12.6

Complete Game-Theoretic Characterization of SIS Epidemics Protection Strategies, pp. 1179-1184.

Hayel, Yezekael — Univ. of Avignon
Trajanovski, Stojan — Delft Univ. of Tech
Altman, Eitan — Inria
Wang, Huijuan — Delft Univ. of Tech
Van Mieghem, Piet — Delft Univ. of Tech

MoB13 Atrium 1

Delay Systems II (Regular Session)

Chair: Hirche, Sandra — Tech. Univ. München
Co-Chair: Pepe, Pierdomenico — Univ. of L' Aquila

13:30-13:50 MoB13.1

Delay-Dependent Robust Unknown Input Observer for Nonlinear Time-Delay Systems (I), pp. 1185-1190.

Hassan, Lama — Cran Cnrs Umr 7039 - Ul
Zemouche, Ali — Univ. of Lorraine
Boutayeb, Mohamed — Univ. of Henri Poincaré Nancy

13:50-14:10 MoB13.2

Implicit Lyapunov-Krasovski Functionals for Time Delay Systems, pp. 1191-1196.

Polyakov, Andrey — Inria Lille Nord-Europe
Efimov, Denis — Inria - Lne
Perruquetti, Wilfrid — Ec. Centrale De Lille
Richard, Jean-Pierre — Ec. Centrale De Lille

14:10-14:30 MoB13.3

Control of Active Magnetic Bearing Systems with Input Delay for Applications in Remotely Controlled Turbomachinery, pp. 1197-1202.

Anantachaisilp, Parinya — Univ. of Virginia
Di, Long — Univ. of Virginia
Yoon, Se Young (Pablo) — Univ. of New Hampshire
Lin, Zongli — Univ. of Virginia

14:30-14:50 MoB13.4

Stabilizing Transmission Intervals and Delays for Nonlinear Networked Control Systems: The Large Delay Case, pp. 1203-1208.

Tolic, Domagoj — Univ. of Zagreb
Hirche, Sandra — Tech. Univ. München

14:50-15:10 MoB13.5

Design of Decentralized, Practically Stabilizing Controllers for a Class of Interconnected Retarded Systems, pp. 1209-1214.

Pepe, Pierdomenico — Univ. of L' Aquila
Ito, Hiroshi — Kyushu Inst. of Tech
Jiang, Zhong-Ping — New York Univ

15:10-15:30 MoB13.6

New Technique for Stability Analysis for Time-Varying Systems with Delay, pp. 1215-1220.

Mazenc, Frederic — Epi Inria Disco
Malisoff, Michael — Louisiana State Univ

MoB14 Olympic 1

Event-Triggered Systems I (Regular Session)

Chair: Jagannathan, Sarangapani — Missouri Univ. of Science & Tech.
Co-Chair: Marquez, Horacio J. — Univ. of Alberta

13:30-13:50 MoB14.1

Improved $Lcal_2$-Gain Analysis for a Class of Hybrid Systems with Applications to Reset and Event-Triggered Control, pp. 1221-1226.

Loon, van, S.J.L.M. (Bas) — Eindhoven Univ. of Tech
Heemels, W.P.M.H. — Eindhoven Univ. of Tech
Teel, Andrew R. — Univ. of California, Santa Barbara

13:50-14:10 MoB14.2

Event-Triggered Optimal Control of Nonlinear Continuous-Time Systems in Affine Form by Using Neural Networks, pp. 1227-1232.

Sahoo, Avimanyu — Missouri Univ. of Science & Tech
Xu, Hao — Texas A&M Univ. - Corp. Christi
Jagannathan, Sarangapani — Missouri Univ. of Science & Tech
Dierks, Travis — DRS Sustainment Systems, Inc

14:10-14:30 MoB14.3

Event-Triggered Optimal Regulation of Uncertain Linear Discrete-Time Systems by Using Q-Learning Scheme, pp. 1233-1238.

Sahoo, Avimanyu — Missouri Univ. of Science & Tech
Jagannathan, Sarangapani — Missouri Univ. of Science & Tech

14:30-14:50 MoB14.4

A Novel Integral-Based Event Triggering Control for Linear Time-Invariant Systems, pp. 1239-1243.

Mousavi, Seyed Hossein — Univ. of Alberta
Ghodrat, Mohsen — Univ. of Alberta
Marquez, Horacio J. — Univ. of Alberta

14:50-15:10 MoB14.5

Decentralized Event-Triggered Control for Leader-Follower Consensus, pp. 1244-1249.

Cheng, Teng-Hu — Univ. of Florida
Kan, Zhen — Univ. of Florida
Shea, John — Univ. of Florida
Dixon, Warren E. — Univ. of Florida

15:10-15:30 MoB14.6

Event Based Controller Design for a Class of Nonlinear Systems Via Convex Optimization, pp. 1250-1255.

Mousavi, Seyed Hossein — Univ. of Alberta
Marquez, Horacio J. — Univ. of Alberta

MoB15 — Atrium 2

Adaptive Control II (Regular Session)

Chair: Frazzoli, Emilio — Massachusetts Inst. of Tech.
Co-Chair: Stepanyan, Vahram — Univ. of California Santa Cruz

13:30-13:50 MoB15.1

Asymptotic Adaptive Tracking with Input Amplitude and Rate Constraints and Bounded Disturbances, pp. 1256-1263.

Yong, Sze Zheng — Massachusetts Inst. of Tech
Frazzoli, Emilio — Massachusetts Inst. of Tech

13:50-14:10 MoB15.2

Unfalsified Adaptive Control with Reset and Bumpless Transfer, pp. 1264-1270.

Patil, Sagar — Univ. of Southern California
Sung, Yu-chen — Univ. of Southern California
Safonov, Michael G. — Univ. of Southern California

14:10-14:30 MoB15.3

Detecting Oscillation with Unfalsified Adaptive Control and Its Application in Managed Pressure Drilling for Oil, pp. 1271-1276.

Jin, Huiyu — Xiamen Univ
Siahaan, Hardy B. — Int Res. Inst. of Stavanger
Safonov, Michael G. — Univ. of Southern California

14:30-14:50 MoB15.4

Kernel-Based Reinforcement Learning for Traffic Signal Control with Adaptive Feature Selection, pp. 1277-1282.

Chu, Tianshu — Stanford Univ
Wang, Jie — Stanford Univ
Cao, Jian — Shanghai Jiaotong Univ

14:50-15:10 MoB15.5

Unfalsified Adaptive Control: Multi-Objective Cost-Detectable Cost Functions, pp. 1283-1288.

Sajjanshetty, Kiran S. — Univ. of Southern California
Safonov, Michael G. — Univ. of Southern California

15:10-15:30 MoB15.6

M-MRAC with Normalization, pp. 1289-1294.

Stepanyan, Vahram — Univ. of California Santa Cruz
Krishnakumar, Kalmanje — NASA Ames Res. Center

MoB16 — Olympic 2

Distributed Parameter Systems I (Regular Session)

Chair: Herrmann, Guido — Univ. of Bristol
Co-Chair: Bresch-Pietri, Delphine — GIPSA-Lab

13:30-13:50 MoB16.1

Adaptive Output-Feedback for Wave PDE with Anti-Damping – Application to Surface-Based Control of Oil Drilling Stick-Slip Instability, pp. 1295-1300.

Bresch-Pietri, Delphine — GIPSA-Lab
Krstic, Miroslav — Univ. of California, San Diego

13:50-14:10 MoB16.2

Modeling and Estimation of the Humans' Effect on the CO2 Dynamics Inside a Conference Room (I), pp. 1301-1306.

Weekly, Kevin — Univ. of California, Berkeley
Bekiaris-Liberis, Nikolaos — Univ. of California, Berkeley
Bayen, Alexandre — Univ. of California, Berkeley

14:10-14:30 MoB16.3

Novel Representation Formulae for Discrete 2D Autonomous Systems (I), pp. 1307-1312.

Pal, Debasattam — Indian Inst. of Tech. Bombay
Pillai, Harish K. — Indian Inst. of Tech. Bombay

14:30-14:50 MoB16.4

New Stability Conditions for Semilinear Diffusion Systems with Time-Delays, pp. 1313-1317.

Solomon, Oren — Tel Aviv Univ
Fridman, Emilia — Tel Aviv Univ

14:50-15:10 MoB16.5

Cantilever Dynamics Modelling for the Transverse Dynamic Force Microscope, pp. 1318-1323.

Nguyen, Thang — Univ. of Exeter
Edwards, Christopher — Univ. of Exeter
Herrmann, Guido — Univ. of Bristol
Hatano, Toshiaki — Univ. of Bristol
Burgess, Stuart C. — Univ. of Bristol
Miles, Mervyn J — Univ. of Bristol

15:10-15:30 MoB16.6

Networked H∞ Filtering of Semilinear Diffusion PDEs (I), pp. 1324-1329.

Bar am, Netzer — Tel Aviv Univ
Fridman, Emilia — Tel Aviv Univ

MoB17 — Atrium 3

Controllability and Stability of Networked Control Systems II (Invited Session)

Chair: Belabbas, Mohamed Ali — Univ. Illinois, Urbana-Champaign
Co-Chair: De Persis, Claudio — Univ. of Groningen
Organizer: Belabbas, Mohamed Ali — Univ. Illinois, Urbana-Champaign
Organizer: Gharesifard, Bahman — Queens Univ. Canada
Organizer: Aguilar, Cesar — California State Univ. Bakersfield

13:30-13:50 MoB17.1

Fast Convergence of Quantized Consensus Using Metropolis Chains (I), pp. 1330-1334.

Basar, Tamer	Univ. Illinois, Urbana-Champaign
Etesami, Seyed Rasoul	Univ. Illinois, Urbana-Champaign
Olshevsky, Alexander	Univ. Illinois, Urbana-Champaign

13:50-14:10 MoB17.2

Control of MTDC Transmission Systems under Local Information (I), pp. 1335-1340.

Andreasson, Martin	Royal Inst. of Tech
Dimarogonas, Dimos V.	Royal Inst. of Tech
Sandberg, Henrik	Royal Inst. of Tech
Johansson, Karl Henrik	Royal Inst. of Tech

14:10-14:30 MoB17.3

Geometrical Methods for Mismatched Formation Control (I), pp. 1341-1346.

Helmke, Uwe R.	Univ. of Wuerzburg
Mou, Shaoshuai	MIT
Sun, Zhiyong	Australian National Univ
Anderson, Brian D.O.	Australian National Univ

14:30-14:50 MoB17.4

Decentralized Stabilization with Symmetric Topologies (I), pp. 1347-1352.

Belabbas, Mohamed Ali	Univ. Illinois, Urbana-Champaign
Kirkoryan, Artur	Univ. Illinois, Urbana-Champaign

14:50-15:10 MoB17.5

Further Result about Dynamic Coupling for Nonlinear Output Agreement (I), pp. 1353-1358.

Bürger, Mathias	Univ. of Stuttgart
De Persis, Claudio	Univ. of Groningen

15:10-15:30 MoB17.6

Controllability and Fraction of Leaders in Infinite Networks, pp. 1359-1364.

Enyioha, Chinwendu	Univ. of Pennsylvania
Rahimian, Mohammad Amin	Univ. of Pennsylvania
Pappas, George J.	Univ. of Pennsylvania
Jadbabaie, Ali	Univ. of Pennsylvania

MoB18 — Olympic 3

Privacy in Systems and Control I (Invited Session)

Chair: Han, Shuo	Univ. of Pennsylvania
Co-Chair: Le Ny, Jerome	Pol. Montreal

13:30-13:50 MoB18.1

Privacy: A Few Definitional Aspects and Consequences for Minimax Mean-Squared Error (I), pp. 1365-1369.

Foygel Barber, Rina	Univ. of Chicago
Duchi, John	Stanford Univ

13:50-14:10 MoB18.2

Design of Communication Networks for Distributed Computation with Privacy Guarantees (I), pp. 1370-1376.

Pequito, Sergio	Carnegie Mellon Univ. - Inst. Superior Tecnico
Kar, Soummya	Carnegie Mellon Univ
Sundaram, Shreyas	Univ. of Waterloo
Aguiar, A. Pedro	Univ. of Porto

14:10-14:30 MoB18.3

The Privacy Analysis of Battery Control Mechanisms in Demand Response: Revealing State Approach and Rate Distortion Bounds (I), pp. 1377-1382.

Yao, Jiyun	Lehigh Univ
Venkitasubramaniam, Parv	Lehigh Univ

14:30-14:50 MoB18.4

Physical Layer Methods for Privacy Provision in Distributed Control and Inference (I), pp. 1383-1388.

Jain, Shalabh	Univ. of Maryland
Ta, Tuan (Johnny)	Univ. of Maryland
Baras, John S.	Univ. of Maryland

14:50-15:10 MoB18.5

Delay and Sampling Independence of a Consensus Algorithm and Its Application to Smart Grid Privacy (I), pp. 1389-1394.

Giraldo, Jairo	Univ. De Los Andes
Cardenas, Alvaro	Univ. of Texas at Dallas
Mojica-Nava, Eduardo	National Univ. of Colombia
Quijano, Nicanor	Univ. De Los Andes
Dong, Roy	Univ. of California at Berkeley

15:10-15:30 MoB18.6

Dynamic Balanced Integration Mechanism for LQG Power Networks with Independent Types, pp. 1395-1402.

Murao, Toshiyuki	Waseda Univ
Okajima, Yusuke	Waseda Univ
Hirata, Kenji	Nagaoka Univ. of Tech
Uchida, Kenko	Waseda Univ

MoB19 — Plaza 1

Robotics II (Regular Session)

Chair: Macchelli, Alessandro	Univ. of Bologna - Italy
Co-Chair: Karaman, Sertac	Massachusetts Inst. of Tech.

13:30-13:50 MoB19.1

An Impedance Grasping Strategy, pp. 1403-1408.

Munoz-Arias, Mauricio	Univ. of Groningen
Scherpen, Jacquelien M.A.	Univ. of Groningen
Macchelli, Alessandro	Univ. of Bologna

13:50-14:10 MoB19.2

Optimal Control Strategies for Maximizing the Performance of Variable Stiffness Joints with Nonlinear Springs, pp. 1409-1416.

Özparpucu, Mehmet Can	German Aerospace Center (DLR)
Albu-Schaeffer, Alin	German Aerospace Center (DLR)

14:10-14:30 MoB19.3

Polling-Systems-Based Control of High-Performance Provably-Safe Autonomous Intersections, pp. 1417-1423.

Miculescu, David	Massachusetts Inst. of Tech
Karaman, Sertac	Massachusetts Inst. of Tech

14:30-14:50 MoB19.4

Reachability-Based Safe Learning with Gaussian Processes, pp. 1424-1431.

Akametalu, Anayo K.	UC Berkeley
Fisac, Jaime F.	UC Berkeley
Gillula, Jeremy	Stanford Univ
Kaynama, Shahab	UC Berkeley
Zeilinger, Melanie N.	UC Berkeley
Tomlin, Claire J.	UC Berkeley

14:50-15:10 MoB19.5

Controlling Stochastic Growth Processes on Lattices: Wildfire Management with Robotic Fire Extinguishers, pp. 1432-1437.

Somanath, Amith	Massachusetts Inst. of Tech
Karaman, Sertac	Massachusetts Inst. of Tech
Youcef-Toumi, Kamal	Massachusetts Inst. of Tech

15:10-15:30 MoB19.6

Robot Navigation under Uncertainties Using Event Based Sampling, pp. 1438-1445.

Colledanchise, Michele	KTH - Royal Inst. of Tech
Dimarogonas, Dimos V.	KTH - Royal Inst. of Tech
Ogren, Petter	KTH - Royal Inst. of Tech

MoB20 Plaza 2

Consensus II (Regular Session)

Chair: Shim, Hyungbo	Seoul National Univ.
Co-Chair: Swami, Ananthram	Army Res. Lab

13:30-13:50 MoB20.1

Consensus under Time-Delayed Information on States and Network, pp. 1446-1451.

Lee, Jin Gyu	Seoul National Univ
Shim, Hyungbo	Seoul National Univ

13:50-14:10 MoB20.2

Graph Topology Optimization for Fast Consensus Based on the Influence of New Links to a Quadratic Criterion, pp. 1452-1457.

Charalampidis, Alexandros	National Tech. Univ. of Athens

14:10-14:30 MoB20.3

Distributed Linear Supervisory Control, pp. 1458-1463.

Khanafer, Ali	Univ. of Illinois, Urbana-Champaign
Basar, Tamer	Univ. of Illinois, Urbana-Champaign
Liberzon, Daniel	Univ. of Illinois, Urbana-Champaign

14:30-14:50 MoB20.4

Complex Constrained Consensus, pp. 1464-1469.

Liu, Ji	Univ. of Illinois, Urbana-Champaign
Nedich, Angelia	Univ. of Illinois, Urbana-Champaign
Basar, Tamer	Univ. of Illinois, Urbana-Champaign

14:50-15:10 MoB20.5

Minimum-Energy Distributed Consensus of Uncertain Agents, pp. 1470-1475.

Zamani, Mohammad	Univ. of New South Wales
Shames, Iman	The Univ. of Melbroune
Ugrinovskii, Valery	Univ. of New South Wales

15:10-15:30 MoB20.6

Success and Failure of Adaptation-Diffusion Algorithms for Consensus in Multi-Agent Networks, pp. 1476-1481.

Morral, Gemma	Telecom ParisTech
Bianchi, Pascal	Telecom ParisTech - CNRS/LTCI

MoB21 Salon D and E

Big Data and Sparsity in Systems and Control. Part I: Identification and Model (In)Validation (Tutorial Session)

Chair: Sznaier, Mario	Northeastern Univ.
Co-Chair: Dabbene, Fabrizio	CNR-IEIIT
Organizer: Sznaier, Mario	Northeastern Univ.

13:30-14:00 MoB21.1

Bayesian and Regularization Approaches to Multivariable Linear System Identification: The Role of Rank Penalties (I), pp. 1482-1487.

Prando, Giulia	Univ. of Padova
Chiuso, Alessandro	Univ. of Padova
Pillonetto, Gianluigi	Univ. of Padova

14:00-14:30 MoB21.2

*Handling Big Data in Set-Membership Identification through a Sparse Optimization Approach (I)**.

Cerone, Vito	Pol. di Torino
Regruto, Diego	Pol. di Torino

14:30-15:00 MoB21.3

*Variable Selection in Identification of a High Dimensional Nonlinear Non-Parametric System (I)**.

Bai, Er-Wei	Univ. of Iowa

15:00-15:30 MoB21.4

Surviving the Upcoming Data Deluge: A Systems and Control Perspective (I), pp. 1488-1498.

Sznaier, Mario	Northeastern Univ
Camps, Octavia I.	Northeastern Univ
Ozay, Necmiye	Univ. of Michigan
Lagoa, Constantino M.	Pennsylvania State Univ

MoC01 Salon F

Stability of Hybrid Systems (Regular Session)

Chair: Azuma, Shun-ichi	Kyoto Univ.
Co-Chair: Akbari Hamed, Kaveh	The Univ. of Michigan

16:00-16:20 MoC01.1

Convex Computation of the Reachable Set for Controlled Polynomial Hybrid Systems, pp. 1499-1506.

Shia, Victor	UC Berkeley
Vasudevan, Ramanarayan	Massachusetts Inst. of Tech
Bajcsy, Ruzena	UC Berkeley
Tedrake, Russ	Massachusetts Inst. of Tech

16:20-16:40 MoC01.2

Continuous-Time Controllers for Stabilizing Periodic Orbits of Hybrid Systems: Application to an Underactuated 3D Bipedal Robot, pp. 1507-1513.

Akbari Hamed, Kaveh	Univ. of Michigan
Buss, Brian G.	Univ. of Michigan
Grizzle, Jessy W.	Univ. of Michigan

16:40-17:00 MoC01.3

Lyapunov-Based versus Poincare Map Analysis of the Rimless Wheel, pp. 1514-1520.

Saglam, Cenk Oguz	Univ. of California, Santa Barbara
Teel, Andrew R.	Univ. of California, Santa Barbara
Byl, Katie	Univ. of California, Santa Barbara

17:00-17:20 MoC01.4

Structural Monostability of Activation-Inhibition Boolean Networks, pp. 1521-1526.

Azuma, Shun-ichi — Kyoto Univ
Yoshida, Takahiro — Kyoto Univ
Sugie, Toshiharu — Kyoto Univ

17:20-17:40 MoC01.5

Set Theory Conditions for Stability of Linear Impulsive Systems, pp. 1527-1532.

Fiacchini, Mirko — GIPSA-Lab
Morarescu, Irinel-Constantin — Cran Cnrs Umr 7039 - Ul

17:40-18:00 MoC01.6

Output Feedback Control for a Class of Switching Discrete-Time Linear Systems, pp. 1533-1538.

Alessandri, Angelo — Univ. of Genoa
Bedouhene, Fazia — Univ. of Mouloud Mammeri
Kheloufi, Houria — Univ. of Mouloud Mammeri
Zemouche, Ali — Univ. of Lorraine

MoC02 — Salon G

Nonlinear Systems III (Regular Session)

Chair: Margaliot, Michael — Tel Aviv Univ.
Co-Chair: Wu, Andy — Univ. of California, Los Angeles

16:00-16:20 MoC02.1

On Three Generalizations of Contraction, pp. 1539-1544.

Sontag, Eduardo D. — Rutgers Univ
Margaliot, Michael — Tel Aviv Univ
Tuller, Tamir — Tel Aviv Univ

16:20-16:40 MoC02.2

Minimum-Time Control of Boolean Networks: An Algebraic Approach (I), pp. 1545-1550.

Laschov, Dmitriy — Tel Aviv Univ
Margaliot, Michael — Tel Aviv Univ

16:40-17:00 MoC02.3

Feedback Control for Oscillations with CPG Architecture, pp. 1551-1556.

Wu, Andy — Univ. of California, Los Angeles
Iwasaki, Tetsuya — Univ. of California, Los Angeles

17:00-17:20 MoC02.4

Further Results on Lyapunov-Like Conditions of Forward Invariance and Boundedness for a Class of Unstable Systems (I), pp. 1557-1562.

Gorban, Alexander N. — ETH-Zentrum
Tyukin, Ivan — Univ. of Leicester
Nijmeijer, Hendrik — Eindhoven Univ. of Tech

17:20-17:40 MoC02.5

Dynamic Interconnection and Damping Assignment, pp. 1563-1568.

Nunna, Kameswarie — Imperial Coll. London
Sassano, Mario — Univ. of Rome, Tor Vergata
Astolfi, Alessandro — Imperial Coll. & Univ. of Rome

17:40-18:00 MoC02.6

State Observer Design for Non Linear Coupled Partial Differential Equations with Application to Radiative-Conductive Heat Transfer Systems, pp. 1569-1574.

Ghattassi, Mohamed — Univ. De Lorraine
Boutayeb, Mohamed — Univ. of Henri Poincaré Nancy

MoC03 — Salon H

Max-Plus Methods for Optimal Control and Zero-Sum Games (Invited Session)

Chair: Akian, Marianne — INRIA and CMAP, Ec. Pol
Co-Chair: Qu, Zheng — Univ. of Edinburgh
Organizer: Akian, Marianne — INRIA and CMAP, Ec. Pol.

16:00-16:20 MoC03.1

A Max-Plus Based Randomized Algorithm for Solving a Class of HJB PDEs (I), pp. 1575-1580.

Qu, Zheng — Univ. of Edinburgh

16:20-16:40 MoC03.2

Generic Uniqueness of the Bias Vector of Mean Payoff Zero-Sum Games (I), pp. 1581-1587.

Akian, Marianne — INRIA and CMAP, Ec. Pol
Gaubert, Stephane — INRIA and Ec. Pol
Hochart, Antoine — Ec. Pol

16:40-17:00 MoC03.3

Approximate Dynamic Programming with (min, +) Linear Function Approximation for Markov Decision Processes (I), pp. 1588-1593.

Lakshminarayanan, Chandrashekar — Indian Inst. of Science, Bangalore
Bhatnagar, Shalabh — Indian Inst. of Science

17:00-17:20 MoC03.4

Generalizations of Bounds on the Index of Convergence to Weighted Digraphs (I), pp. 1594-1599.

Merlet, Glenn — Univ. D'Aix-Marseille
Nowak, Thomas — École Normale Supérieure
Schneider, Hans — Univ. of Wisconsin - Madison
Sergeev, Sergei — Univ. of Birmingham

17:20-17:40 MoC03.5

Non-Linear Eigenvalue Problems Arising from Growth Maximization of Positive Linear Dynamical Systems (I), pp. 1600-1607.

Calvez, Vincent — Ec. Normale Superieure De Lyon
Gabriel, Pierre — Univ. De Versailles St-Quentin-En-Yvelines
Gaubert, Stephane — INRIA and Ec. Pol

17:40-18:00 MoC03.6

Analytic Expressions in Stochastic Max-Plus-Linear Algebra, pp. 1608-1613.

van den Boom, Ton J. J. — Delft Univ. of Tech
De Schutter, Bart — Delft Univ. of Tech

MoC04 — Salon I

Observers for Linear Systems (Regular Session)

Chair: Perruquetti, Wilfrid — Ec. Centrale de Lille
Co-Chair: Alma, Marouane — CRAN Lorraine Univ.

16:00-16:20 MoC04.1

Predictor-Based Sampled-Data Stabilization Via Continuous-Discrete Observers, pp. 1614-1619.

Mazenc, Frederic — Epi Inria Disco
Fridman, Emilia — Tel Aviv Univ

16:20-16:40 MoC04.2

Secure State Estimation and Control Using Multiple (insecure) Observers, pp. 1620-1625.

Mishra, Shaunak — Univ. of California, Los Angeles
Karamchandani, Nikhil — Univ. of California, Los Angeles

Tabuada, Paulo	Univ. of California, Los Angeles
Diggavi, Suhas	Univ. of California, Los Angeles

16:40-17:00 MoC04.3

Finite-Time Observer for the Output Depending Observer Form, pp. 1626-1630.

Zheng, Gang	Inria
Efimov, Denis	Inria - Lne
Perruquetti, Wilfrid	Ec. Centrale De Lille

17:00-17:20 MoC04.4

H∞ Dynamic Observer Design for Linear Time Invariant Systems, pp. 1631-1636.

Gao, Nan	CRAN Lorraine Univ
Darouach, Mohamed	CRAN Lorraine Univ
Voos, Holger	Univ. of Luxembourg
Alma, Marouane	CRAN Lorraine Univ

17:20-17:40 MoC04.5

Interval Observers Design for Singularly Perturbed Systems, pp. 1637-1642.

Yousfi, Besma	National Engineering School of Gabes
Raïssi, Tarek	Conservatoire National Des Arts Et Métiers
Amairi, Messaoud	National Engineering School of Gabes
Aoun, Mohamed	National Engineering School of Gabes

17:40-18:00 MoC04.6

An Inverse Problem of Tomographic Type in Population Dynamics, pp. 1643-1648.

Zeng, Shen	Univ. of Stuttgart
Waldherr, Steffen	Otto-Von-Guericke-Univ
Allgöwer, Frank	Univ. of Stuttgart

MoC05 Salon J

Decentralized Control (Regular Session)

Chair: Scardovi, Luca	Univ. of Toronto
Co-Chair: Gupta, Abhishek	Univ. Illinois, Urbana Champaign

16:00-16:20 MoC05.1

A Class of Rendezvous Controllers for Underactuated Thrust-Propelled Rigid Bodies, pp. 1649-1654.

Roza, Ashton	Univ. of Toronto
Maggiore, Manfredi	Univ. of Toronto
Scardovi, Luca	Univ. of Toronto

16:20-16:40 MoC05.2

H Infinity Almost Output Synchronization for Heterogeneous Networks without Exchange of Controller States, pp. 1655-1660.

Zhang, Meirong	Washington State Univ
Saberi, Ali	Washington State Univ
Stoorvogel, Anton A.	Univ. of Twente
Grip, Håvard Fjær	NTNU

16:40-17:00 MoC05.3

Localized LQR Optimal Control, pp. 1661-1668.

Wang, Yuh-Shyang	California Inst. of Tech
Matni, Nikolai	California Inst. of Tech
Doyle, John C.	California Inst. of Tech

17:00-17:20 MoC05.4

Team Optimal Control of Coupled Subsystems with Mean-Field Sharing, pp. 1669-1674.

Arabneydi, Jalal	McGill Univ
Mahajan, Aditya	McGIll Univ

17:20-17:40 MoC05.5

Balancing through Signaling in Decentralized Routing, pp. 1675-1680.

Ouyang, Yi	Univ. of Michigan
Teneketzis, Demosthenis	Univ. of Michigan

17:40-18:00 MoC05.6

Existence of Optimal Strategies in a Class of Dynamic Stochastic Teams, pp. 1681-1686.

Gupta, Abhishek	Univ. Illinois, Urbana Champaign
Yuksel, Serdar	Queen's Univ
Basar, Tamer	Univ. Illinois, Urbana Champaign

MoC06 Salon 6

Electrical Power Systems II (Regular Session)

Chair: Chow, Joe H.	Rensselaer Pol. Inst.
Co-Chair: Chakrabortty, Aranya	North Carolina State Univ.

16:00-16:20 MoC06.1

Distribution Network Electricity Market Clearing: Parallelized PMP Algorithms with Minimal Coordination, pp. 1687-1694.

Ntakou, Elli	Boston Univ
Caramanis, Michael C.	Boston Univ

16:20-16:40 MoC06.2

Stability of an Adaptive Switched Controller for Power System Oscillation Damping Using Remote Synchrophasor Signals, pp. 1695-1700.

R. Pour Safaei, Farshad	Univ. of California, Santa Barbara
Ghiocel, Scott G.	Exponent, Inc
Hespanha, Joao P.	Univ. of California, Santa Barbara
Chow, Joe H.	Rensselaer Pol. Inst

16:40-17:00 MoC06.3

Cost Allocation Strategies for Wide-Area Control of Power Systems Using Nash Bargaining Solution, pp. 1701-1706.

Lian, Feier	North Carolina State Univ
Duel-Hallen, Alexandra	North Carolina State Univ
Chakrabortty, Aranya	North Carolina State Univ

17:00-17:20 MoC06.4

Forward Electricity Markets with Uncertain Supply: Cost Sharing and Efficiency Loss, pp. 1707-1713.

Lin, Weixuan	Cornell Univ
Bitar, Eilyan	Cornell Univ

17:20-17:40 MoC06.5

Duration-Differentiated Energy Services with a Continuum of Loads, pp. 1714-1719.

Nayyar, Ashutosh	Univ. of Southern California
Negrete-Pincetic, Matias	Univ. of California, Berkeley
Poolla, Kameshwar	Univ. of California, Berkeley
Varaiya, Pravin P.	Univ. of California, Berkeley

17:40-18:00 MoC06.6

Gaussian-Laplacian Mixture Model for Electricity Market, pp. 1720-1726.

Shenoy, Saahil	Stanford Univ
Gorinevsky, Dimitry	Stanford Univ

MoC07 Salon 7

Traffic Control (Regular Session)

Chair: Balakrishnan, Hamsa — Massachusetts Inst. of Tech.
Co-Chair: Moulin, Philippe — IFP Energies Nouvelles

16:00-16:20 MoC07.1

Robust H_infinity Control of a Class of Switched Nonlinear Systems with Application to Macroscopic Urban Traffic Control, pp. 1727-1732.

Hajiahmadi, Mohammad — Delft Univ. of Tech
De Schutter, Bart — Delft Univ. of Tech
Hellendoorn, Hans — Delft Univ. of Tech

16:20-16:40 MoC07.2

A Piecewise-Deterministic Markov Model of Freeway Accidents, pp. 1733-1740.

Jin, Li — Massachusetts Inst. of Tech
Amin, Saurabh — Massachusetts Inst. of Tech

16:40-17:00 MoC07.3

Time-Varying Triggering Conditions for the Robust Control of Freeway Systems, pp. 1741-1746.

Ferrara, Antonella — Univ. of Pavia
Sacone, Simona — Univ. of Genoa
Siri, Silvia — Univ. of Genoa

17:00-17:20 MoC07.4

Urban Traffic Eco-Driving: Speed Advisory Tracking, pp. 1747-1752.

De Nunzio, Giovanni — IFPen, INP Grenoble
Canudas de Wit, Carlos — CNRS, GIPSA-Lab
Moulin, Philippe — IFP Energies Nouvelles

17:20-17:40 MoC07.5

Analysis and Design of a Variable Speed Limit Control System at a Freeway Lane-Drop Bottleneck: A Switched Systems Approach, pp. 1753-1758.

Jin, Wen-Long — Univ. of California, Irvine
Jin, Huiyu — Xiamen Univ

17:40-18:00 MoC07.6

Increasing Efficiency Though Flexibility in Airport Resource Allocation, pp. 1759-1766.

Ramanujam, Varun — Massachusetts Inst. of Tech
Balakrishnan, Hamsa — Massachusetts Inst. of Tech

MoC08 Salon 8

System Identification III (Regular Session)

Chair: Karlsson, Johan — KTH Royal Inst. of Tech.
Co-Chair: Pait, Felipe — Univ. Sao Paulo

16:00-16:20 MoC08.1

On Robustness of L1-Regularization Methods for Spectral Estimation, pp. 1767-1773.

Karlsson, Johan — KTH Royal Inst. of Tech
Ning, Lipeng — Harvard Medical School

16:20-16:40 MoC08.2

Interval System Identification for MIMO ARX Models of Minimal Order, pp. 1774-1779.

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

16:40-17:00 MoC08.3

Bayesian Dynamic System Estimation, pp. 1780-1785.

Ninness, Brett — Univ. of Newcastle
Tran, Khoa — Univ. of Newcastle
Kellett, Christopher M. — Univ. of Newcastle

17:00-17:20 MoC08.4

Topology Identification for Sparse Dynamic Point Process Networks, pp. 1786-1791.

Pasha, Syed Ahmed — Univ. of New South Wales
Solo, Victor — Univ. of New South Wales

17:20-17:40 MoC08.5

Parameter and Time-Delay Identification of Continuous-Time Models from Non-Uniformly Sampled Data, pp. 1792-1797.

Chen, Fengwei — Univ. of Lorraine
Garnier, Hugues — Univ. of Lorraine
Gilson, Marion — Univ. of Lorraine

17:40-18:00 MoC08.6

Direct Filter Tuning and Optimization in Multivariable Identification, pp. 1798-1803.

Romano, Rodrigo Alvite — Inst. Mauá De Tecnologia
Pait, Felipe — Univ. Sao Paulo

MoC09 Salon 9

Estimation III (Regular Session)

Chair: Parisini, Thomas — Imperial Coll. & Univ. of Trieste
Co-Chair: Abedinpour Fallah, Mehdi — École Pol. de Montréal

16:00-16:20 MoC09.1

Robust Parametric Estimation of Biased Sinusoidal Signals: A Parallel Pre-Filtering Approach, pp. 1804-1809.

Chen, Boli — Imperial Coll. London
Pin, Gilberto — Electrolux Professional S.p.A.
Parisini, Thomas — Imperial Coll. & Univ. of Trieste

16:20-16:40 MoC09.2

Distributed Estimation of Multi-Agent Systems with Coupling in the Measurements: Bulk Algorithm and Approximate Kalman-Type Filtering, pp. 1810-1815.

Abedinpour Fallah, Mehdi — École Pol. De Montréal
Malhame, Roland P. — École Pol. De Montréal
Martinelli, Francesco — Univ. Di Roma Tor Vergata

16:40-17:00 MoC09.3

MMOSPA-Based Track Extraction in the PHD Filter - a Justification for K-Means Clustering, pp. 1816-1821.

Baum, Marcus — Karlsruhe Inst. of Tech. (KIT)
Willett, Peter K. — Univ. of Connecticut
Hanebeck, Uwe D. — Karlsruhe Inst. of Tech. (KIT)

17:00-17:20 MoC09.4

Macroscopic Analysis of Crowd Motion in Video Sequences, pp. 1822-1827.

Nakhmani, Arie — Univ. of Alabama at Birmingham
Surana, Amit — United Tech. Res. Center
Tannenbaum, Allen — Univ. of Alabama at Birmingham

17:20-17:40 MoC09.5

UIO Approach for Estimation of Non Linear Components Behavior, pp. 1828-1833.

Tarasov, Evgeny — Ec. Centrale De Lille

Sueur, Christophe — Ec. Centrale De Lille
Ould Bouamama, Belkacem — Lail

17:40-18:00 — MoC09.6

Estimation of Actuator and Sensor Faults for Nonlinear Systems Using a Descriptor System Approach, pp. 1834-1839.

Zhang, Jian — Univ. of Auckland
Swain, Akshya — Univ. of Auckland
Nguang, Sing Kiong — Univ. of Auckland
Nasiri, Alireza — The Univ. of Auckland

MoC10 — Salon 10

Stochastic Optimal Control (Regular Session)

Chair: Rutquist, Per — Tomlab Optimization AB
Co-Chair: Charalambous, Charalambos D. — Univ. of Cyprus

16:00-16:20 — MoC10.1

Solving the Hamilton-Jacobi-Bellman Equation for a Stochastic System with State Constraints, pp. 1840-1845.

Rutquist, Per — Tomlab Optimzation
Wik, Torsten — Chalmers Univ. of Tech
Breitholtz, Claes — Chalmers Univ. of Tech

16:20-16:40 — MoC10.2

Maximum Principle for Decentralized Stochastic Differential Decision Systems, pp. 1846-1851.

Charalambous, Charalambos D. — Univ. of Cyprus
Ahmed, Nasir — Univ. of Ottawa

16:40-17:00 — MoC10.3

Optimal Stabilizing Controllers for Discrete-Time Linear Systems with Markovian Jumping Parameters under State Measurements, pp. 1852-1857.

Dragan, Vasile — Romanian Acad
Costa, Eduardo F. — Univ. Sao Paulo

17:00-17:20 — MoC10.4

A Martingale Approach and Time-Consistent Sampling-Based Algorithms for Risk Management in Stochastic Optimal Control, pp. 1858-1865.

Huynh, Vu — Massachusetts Inst. of Tech
Kogan, Leonid — Sloan School of Management, MIT
Frazzoli, Emilio — Massachusetts Inst. of Tech

17:20-17:40 — MoC10.5

Domain Decomposition for Stochastic Optimal Control, pp. 1866-1873.

Horowitz, Matanya — California Inst. of Tech
Papusha, Ivan — California Inst. of Tech
Burdick, Joel W. — California Inst. of Tech

17:40-18:00 — MoC10.6

From Collatz-Weilandt to Donkser-Varadhan Via Krein-Rutman (I), pp. 1874-1879.

Arapostathis, Ari — The Univ. of Texas at Austin
Borkar, Vivek — Indian Inst. of Tech.
Kumar, Suresh — Indian Inst. of Tech.

MoC11 — Georgia 1

Optimization III (Regular Session)

Chair: Choi, Han-Lim — KAIST
Co-Chair: Kishida, Masako — Univ. of Canterbury

16:00-16:20 — MoC11.1

Periodic Sensing Trajectory Generation for Persistent Monitoring, pp. 1880-1886.

Ha, Jung-Su — KAIST
Choi, Han-Lim — KAIST

16:20-16:40 — MoC11.2

Generalized Gradient Elements for Nonsmooth Optimal Control Problems, pp. 1887-1892.

Khan, Kamil — Massachusetts Inst. of Tech
Barton, Paul — Massachusetts Inst. of Tech

16:40-17:00 — MoC11.3

Towards Data-Centric Input Signal Design Using Sparse Polynomial Optimization, pp. 1893-1898.

Deshpande, Sunil — Arizona State Univ
Rivera, Daniel E. — Arizona State Univ

17:00-17:20 — MoC11.4

Simulation-Based Method for Optimizing Multi-Echelon Inventory Systems, pp. 1899-1904.

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

17:20-17:40 — MoC11.5

Volume Maximization of Consistent Parameter Sets for Linear Fractional Models, pp. 1905-1910.

Kishida, Masako — Univ. of Canterbury
Braatz, Richard D. — Massachusetts Inst. of Tech

17:40-18:00 — MoC11.6

Reconstruction of Support of a Measure from Its Moments, pp. 1911-1916.

M. Jasour, Ashkan — Pennsylvania State Univ
Lagoa, Constantino M. — Pennsylvania State Univ

MoC12 — Georgia 2

Game Theory III (Regular Session)

Chair: Bopardikar, Shaunak D. — United Tech. Res. Center, Inc.
Co-Chair: Kim, Kwang-Ki — Georgia Inst. of Tech.

16:00-16:20 — MoC12.1

The Impact of Observation and Action Errors on Informational Cascades, pp. 1917-1922.

Le, Tho — Northwestern Univ
Subramanian, Vijay G. — Northwestern Univ
Berry, Randall — Northwestern Univ

16:20-16:40 — MoC12.2

Stability of Nash Equilibria in the Congestion Game under Replicator Dynamics, pp. 1923-1929.

Drighès, Benjamin — Ec. Pol
Krichene, Walid — Univ. of California, Berkeley
Bayen, Alexandre — Univ. of California, Berkeley

16:40-17:00 — MoC12.3

LP Formulation of Asymmetric Zero-Sum Stochastic Games, pp. 1930-1935.

Li, Lichun — Georgia Inst. of Tech
Shamma, Jeff S. — Kaust

17:00-17:20 — MoC12.4

Incremental Approximate Saddle-Point Computation in Zero-Sum Matrix Games, pp. 1936-1941.

Bopardikar, Shaunak D. — United Tech. Res. Center, Inc

Langbort, Cedric — Univ. Illinois, Urbana-Champaign

17:20-17:40 — MoC12.5

Multi-Agent Sequential Hypothesis Testing, pp. 1942-1947.

Kim, Kwang-Ki — Georgia Inst. of Tech
Shamma, Jeff S. — Kaust

MoC13 — Atrium 1

Delay Systems III (Regular Session)

Chair: Shafai, Bahram — Northeastern Univ.
Co-Chair: Ebihara, Yoshio — Kyoto Univ.

16:00-16:20 — MoC13.1

Positive Stabilization with Maximum Stability Radius for Linear Time-Delay Systems, pp. 1948-1953.

Shafai, Bahram — Northeastern Univ
Oghbaee, Amirreza — Northeastern Univ
Tanaka, Takashi — Massachusetts Inst. of Tech

16:20-16:40 — MoC13.2

Persistence Analysis of Interconnected Positive Systems with Communication Delays, pp. 1954-1959.

Ebihara, Yoshio — Kyoto Univ
Peaucelle, Dimitri — LAAS-CNRS, Univ. De Toulouse
Arzelier, Denis — Laas-Cnrs

16:40-17:00 — MoC13.3

Necessary Conditions for the Exponential Stability of a Class of Distributed Delay-Systems, pp. 1960-1965.

Cuvas, Carlos — Cinvestav-IPN
Mondié, Sabine — Cinvestav-IPN

17:00-17:20 — MoC13.4

Truncated State Prediction for Control of Lipschitz Nonlinear Systems with Input Delay, pp. 1966-1971.

Ding, Zhengtao — Univ. of Manchester
Lin, Zongli — Univ. of Virginia

17:20-17:40 — MoC13.5

Inverse Optimality for a Class of Nonlinear Time Delay Systems: A Constructive Approach, pp. 1972-1977.

Rodríguez, Liliam — Cinvestav-IPN
Santos, Omar — Univ. Aut. Del Estado De Hidalgo
Mondié, Sabine — Cinvestav-IPN

17:40-18:00 — MoC13.6

On Dwell Time Minimization for Switched Delay Systems: Free-Weighting Matrices Method, pp. 1978-1982.

Koru, Ahmet Taha — Yildiz Tech. Univ
Delibasi, Akin — Yildiz Tech. Univ
Ozbay, Hitay — Bilkent Univ

MoC14 — Olympic 1

Event-Triggered Systems II (Regular Session)

Chair: Ren, Wei — Univ. of California, Riverside
Co-Chair: Trimpe, Sebastian — Max Planck Inst. for Intelligent Systems

16:00-16:20 — MoC14.1

Decentralized Consensus for Linear Multi-Agent Systems under General Directed Graphs Based on Event-Triggered/Self-Triggered Strategy, pp. 1983-1988.

Yang, Dapeng — Beijing Inst. of Tech
Ren, Wei — Univ. of California, Riverside
Liu, Xiangdong — Beijing Inst. of Tech

16:20-16:40 — MoC14.2

Event-Triggered Control with Bounded Data Rate, pp. 1989-1994.

Tallapragada, Pavankumar — Univ. of California, San Diego
Cortes, Jorge — Univ. of California, San Diego

16:40-17:00 — MoC14.3

Distributed Estimation of 1-D Convection-Diffusion Phenomena by Discrete-Time Event-Triggered Consensus Dynamics, pp. 1995-2000.

Muranishi, Yu — Osaka Univ
Hamada, Kenta — Osaka Univ
Hayashi, Naoki — Osaka Univ
Takai, Shigemasa — Osaka Univ

17:00-17:20 — MoC14.4

On the Robustness of Event-Based Synchronization under Switching Interactions, pp. 2001-2006.

Shisheh Foroush, Hamed — Univ. of California at San Diego
Martinez, Sonia — Univ. of California at San Diego

17:20-17:40 — MoC14.5

Distributed Event-Triggered Optimization for Linear Programming, pp. 2007-2012.

Richert, Dean — Univ. of California, San Diego
Cortes, Jorge — Univ. of California, San Diego

17:40-18:00 — MoC14.6

Stability Analysis of Distributed Event-Based State Estimation, pp. 2013-2019.

Trimpe, Sebastian — Max Planck Inst. for Intelligent Systems

MoC15 — Atrium 2

Robust Adaptive Control (Regular Session)

Chair: Pisano, Alessandro — Univ. of Cagliari
Co-Chair: Yamakita, Masaki — Tokyo Inst. of Tech.

16:00-16:20 — MoC15.1

Robust Self-Tuning Controller under Outliers, pp. 2020-2025.

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

16:20-16:40 — MoC15.2

Data-Driven Online Unfalsified Control by Using Analytic Center, pp. 2026-2031.

Saeki, Masami — Hiroshima Univ
Kondo, Ko — Hiroshima Univ
Wada, Nobutaka — Hiroshima Univ
Satoh, Satoshi — Hiroshima Univ

16:40-17:00 — MoC15.3

Adaptive Robust Model Predictive Control of Nonlinear Systems Using Tubes Based on Interval Inclusions, pp. 2032-2037.

Hariprasad, K — IIT Bombay
Bhartiya, Sharad — IIT Bombay

17:00-17:20 — MoC15.4

Time-Based Adaptive Second Order Sliding Mode Controller for Wind Energy Conversion Optimization, pp. 2038-2043.

Evangelista, Carolina — CONICET and LEICI, Facultad De

	Ingeniería, Univ. Nacional
Pisano, Alessandro	Univ. of Cagliari
Puleston, Paul Frederick	Univ. Nacional De La Plata
Usai, Elio	Univ. of Cagliari

17:20-17:40 MoC15.5

Third Order Sliding Mode Controller Based on Adaptive Integral Sliding Mode Concept: Experimental Application to an Electropneumatic Actuator, pp. 2044-2049.

Taleb, Mohammed	IRCCyN-Ec. Centrale De Nantes
Yan, Xinming	LUNAM Univ. IRCCyN-Ec. Centrale De Nantes
Plestan, Franck	Ec. Centrale De Nantes-IRCCyN

17:40-18:00 MoC15.6

A Nonparametric Adaptive Nonlinear Statistical Filter, pp. 2050-2057.

Busch, Michael	Univ. of California, Santa Barbara
Moehlis, Jeff	Univ. of California, Santa Barbara

MoC16 — Olympic 2

Distributed Parameter Systems II (Regular Session)

Chair: Dashkovskiy, Sergey	Univ. of Applied Sciences Erfurt
Co-Chair: Hasan, Agus	NTNU

16:00-16:20 MoC16.1

Disturbance Attenuation of $n+1$ Coupled Hyperbolic PDEs, pp. 2058-2064.

Hasan, Agus	NTNU

16:20-16:40 MoC16.2

Dyadic Perturbation Observer Framework for Control of a Class of Nonlinear PDE/ODE Systems, pp. 2065-2070.

Paranjape, Aditya A.	McGill Univ
Chung, Soon-Jo	Univ. of Illinois, Urbana-Champaign

16:40-17:00 MoC16.3

Stability of Nonlinear Infinite Dimensional Impulsive Systems and Their Interconnections (I), pp. 2071-2076.

Dashkovskiy, Sergey	Univ. of Applied Sciences Erfurt
Mironchenko, Andrii	Univ. of Würzburg

17:00-17:20 MoC16.4

Scattering Representations of Dirac Structures for Infinite Dimensional Network Systems (I), pp. 2077-2082.

Iftime, Orest V.	Univ. of Groningen
Sandovici, Adrian	"Gheorghe Asachi" Tech. Univ

17:20-17:40 MoC16.5

Output Feedback Control of the Linear Korteweg-De Vries Equation, pp. 2083-2087.

Marx, Swann	ENS De Cachan
Cerpa, Eduardo	Univ. Técnica Federico Santa María

17:40-18:00 MoC16.6

Time, Space, and Space-Time Hybrid Clustering POD with Application to the Burgers' Equation (I), pp. 2088-2093.

Sahyoun, Samir	Univ. of Tennessee
Djouadi, Seddik, M.	Univ. of Tennessee

MoC17 — Atrium 3

Dynamics in Social Networks: Opinions, Games and Optimization (Invited Session)

Chair: Frasca, Paolo	Univ. of Twente
Co-Chair: Ishii, Hideaki	Tokyo Inst. of Tech.
Organizer: Frasca, Paolo	Univ. of Twente
Organizer: Ishii, Hideaki	Tokyo Inst. of Tech.
Organizer: Ravazzi, Chiara	Pol. di Torino
Organizer: Tempo, Roberto	CNR-IEIIT, Pol. di Torino

16:00-16:20 MoC17.1

Opinion Dynamics in Coalitional Games with Transferable Utilities (I), pp. 2094-2099.

Bauso, Dario	Univ. di Palermo
Basar, Tamer	Univ. of Illinois, Urbana-Champaign

16:20-16:40 MoC17.2

Dynamics in Network Games with Local Coordination and Global Congestion Effects (I), pp. 2100-2105.

Brero, Gianluca	Pol. di Torino
Como, Giacomo	Lund Univ
Fagnani, Fabio	Pol. di Torino

16:40-17:00 MoC17.3

Fluctuation Analysis of a Long-Range Opinion Dynamics (I), pp. 2106-2111.

Zhang, Jiangbo	Chinese Acad. of Sciences
Hong, Yiguang	Chinese Acad. of Sciences

17:00-17:20 MoC17.4

Consensus and Polarization in Altafini's Model with Bidirectional Time-Varying Network Topologies (I), pp. 2112-2117.

Proskurnikov, Anton	Univ. of Groningen
Matveev, Alexey S.	St.Petersburg Univ
Cao, Ming	Univ. of Groningen

17:20-17:40 MoC17.5

A Lifting Approach to Models of Opinion Dynamics with Antagonisms (I), pp. 2118-2123.

Hendrickx, Julien M.	Univ. Catholique De Louvain

17:40-18:00 MoC17.6

On the Properties of Optimal Weak Links in Consensus Networks (I), pp. 2124-2129.

Fardad, Makan	Syracuse Univ
Zhang, Xi	Syracuse Univ
Lin, Fu	Argonne National Lab
Jovanovic, Mihailo	Univ. of Minnesota

MoC18 — Olympic 3

Privacy in Systems and Control II (Invited Session)

Chair: Pappas, George J.	Univ. of Pennsylvania
Co-Chair: Le Ny, Jerome	Pol. Montreal

16:00-16:20 MoC18.1

Entropy-Minimizing Mechanism for Differential Privacy of Discrete-Time Linear Feedback Systems (I), pp. 2130-2135.

Wang, Yu	Univ. Illinois, Urbana-Champaign
Huang, Zhenqi	Univ. Illinois, Urbana-Champaign
Mitra, Sayan	Univ. Illinois, Urbana-Champaign
Dullerud, Geir E.	Univ. Illinois, Urbana-Champaign

16:20-16:40 MoC18.2

Privacy and Customer Segmentation in the Smart Grid (I), pp. 2136-2141.

Ratliff, Lillian	Univ. of California, Berkeley

Dong, Roy	Univ. of California, Berkeley
Ohlsson, Henrik	Linköping Univ
Cardenas, Alvaro	Univ. of Texas at Dallas
Sastry, S. Shankar	Univ. of California, Berkeley

16:40-17:00 MoC18.3

Computation of Privacy-Preserving Prices in Smart Grids (I), pp. 2142-2147.

Koufogiannis, Fragkiskos	Univ. of Pennsylvania
Han, Shuo	Univ. of Pennsylvania
Pappas, George J.	Univ. of Pennsylvania

17:00-17:20 MoC18.4

Differentially Private MIMO Filtering for Event Streams and Spatio-Temporal Monitoring (I), pp. 2148-2153.

Le Ny, Jerome	Ec. Pol. De Montreal
Mohammady, Meisam	Ec. Pol. De Montreal

17:20-17:40 MoC18.5

Privacy Preserving Average Consensus, pp. 2154-2159.

Mo, Yilin	California Inst. of Tech
Murray, Richard M.	California Inst. of Tech

17:40-18:00 MoC18.6

Differentially Private Convex Optimization with Piecewise Affine Objectives (I), pp. 2160-2166.

Han, Shuo	Univ. of Pennsylvania
Topcu, Ufuk	Univ. of Pennsylvania
Pappas, George J.	Univ. of Pennsylvania

MoC19 Plaza 1

Vision-Based Control (Regular Session)

Chair: Sakai, Satoru	Shinshu Univ.
Co-Chair: Stipanovic, Dusan M.	Univ. of Illinois, Urbana-Champaign

16:00-16:20 MoC19.1

Projection Homography Based Uncalibrated Visual Servoing of Wheeled Mobile Robots, pp. 2167-2172.

Li, Baoquan	Nankai Univ
Fang, Yongchun	Nankai Univ
Zhang, Xuebo	Nankai Univ

16:20-16:40 MoC19.2

On the Visual Systems & Control on Matrix Space, pp. 2173-2178.

Sakai, Satoru	Shinshu Univ
Ando, Masayuki	Shinshu Univ

16:40-17:00 MoC19.3

Landing on a Moving Target Using Image-Based Visual Servo Control, pp. 2179-2184.

Serra, Pedro	Inst. Superior Técnico, ISR
Cunha, Rita	Inst. Superior Técnico, ISR
Hamel, Tarek	Univ. De Nice Sophia Antipolis
Cabecinhas, David	Inst. Superior Técnico, ISR
Silvestre, Carlos	Univ. of Macau

17:00-17:20 MoC19.4

A Switched Systems Approach to Image-Based Localization of Targets That Temporarily Leave the Field of View, pp. 2185-2190.

Parikh, Anup	Univ. of Florida
Cheng, Teng-Hu	Univ. of Florida
Licitra, Ryan	Univ. of Florida
Dixon, Warren E.	Univ. of Florida

17:20-17:40 MoC19.5

On Time-Optimal Trajectories for Differential Drive Vehicles with Field-Of-View Constraints, pp. 2191-2197.

Cristofaro, Andrea	NTNU
Salaris, Paolo	Univ. of Pisa
Pallottino, Lucia	Univ. of Pisa
Giannoni, Fabio	Univ. of Camerino
Bicchi, Antonio	Univ. of Pisa

17:40-18:00 MoC19.6

Vision-Based Dynamic Coverage Control for Nonholonomic Agents, pp. 2198-2203.

Panagou, Dimitra	Univ. of Michigan, Ann Arbor
Stipanovic, Dusan M.	Univ. Illinois, Urbana-Champaign
Voulgaris, Petros G.	Univ. Illinois, Urbana-Champaign

MoC20 Plaza 2

Consensus III (Regular Session)

Chair: Li, Tao	Shanghai Univ.
Co-Chair: di Bernardo, Mario	Univ. of Bristol

16:00-16:20 MoC20.1

Spectral Analysis of Extended Consensus Algorithms for Multiagent Systems, pp. 2204-2209.

van de Hoef, Sebastian	Royal Inst. of Tech
Dimarogonas, Dimos V.	Royal Inst. of Tech
Tsiotras, Panagiotis	Georgia Inst. of Tech

16:20-16:40 MoC20.2

On Asymptotic Properties of Continuous-Time Stochastic Approximation Type Consensus Protocols (I), pp. 2210-2215.

Tang, Huaibin	Shandong Univ
Li, Tao	Shanghai Univ

16:40-17:00 MoC20.3

Stochastic Approximation for Consensus Over General Digraphs with Markovian Switches, pp. 2216-2221.

Huang, Minyi	Carleton Univ
Li, Tao	Shanghai Univ
Zhang, Ji-Feng	Chinese Acad. of Sciences

17:00-17:20 MoC20.4

Inverse Optimal Design of the Distributed Consensus Protocol for Formation Control of Multiple Mobile Robots, pp. 2222-2227.

Lee, Jae Young	Yonsei Univ
Choi, Yoon Ho	Kyonggi Univ
Park, Jin Bae	Yonsei Univ

17:20-17:40 MoC20.5

Sparse Solutions to the Average Consensus Problem Via L1-Norm Regularization of the Fastest Mixing Markov-Chain Problem, pp. 2228-2233.

Gnecco, Giorgio	Inst. for Advanced Studies, Lucca
Morisi, Rita	Inst. for Advanced Studies, Lucca
Bemporad, Alberto	Inst. for Advanced Studies, Lucca

17:40-18:00 MoC20.6

Adaptive Weight Selection for Optimal Consensus Performance, pp. 2234-2239.

Kempton, Louis	Univ. of Bristol
Herrmann, Guido	Univ. of Bristol
di Bernardo, Mario	Univ. of Naples Federico II

MoC21	Salon D and E
Big Data and Sparsity in Systems and Control. Part II: Control and Optimization (Tutorial Session)	
Chair: Lagoa, Constantino M.	Pennsylvania State Univ.
Co-Chair: Regruto, Diego	Pol. di Torino
Organizer: Sznaier, Mario	Northeastern Univ.
16:00-16:30	MoC21.1
Decentralized Control with Structural and Information Flow Constraints (I), pp. 2240-2247.	
Sabau, Serban	Stevens Inst. of Tech
16:30-17:00	MoC21.2
Dealing with the Curse of Dimensionality in Systems and Control: The Randomization Paradigm (I), pp. 2248-2256.	
Dabbene, Fabrizio	Cnr-Ieiit
17:00-17:30	MoC21.3
Graph-Theoretic Algorithms for Polynomial Optimization Problems (I), pp. 2257-2271.	
Sojoudi, Somayeh	NYU Langone Medical Center
Madani, Ramtin	Columbia Univ
Fazelnia, Ghazal	Columbia Univ
Lavaei, Javad	Columbia Univ
17:30-18:00	MoC21.4
Towards Scalable Algorithms with Formal Guarantees for Lyapunov Analysis of Control Systems Via Algebraic Optimization (I), pp. 2272-2281.	
Ahmadi, Amir Ali	Princeton Univ
Parrilo, Pablo A.	Massachusetts Inst. of Tech

TuPL Salon D and E

PDE Control: Designs and Applications (Plenary Session)

Chair: Jabbari, Faryar — Univ. of California at Irvine
Co-Chair: Teel, Andrew R. — Univ. of California at Santa Barbara

08:30-09:30 TuPL.1

*PDE Control: Designs and Applications**.

Krstic, Miroslav — Univ. of California, San Diego

TuA01 Salon F

Variational Analysis in Dynamics and Control I (Invited Session)

Chair: Goebel, Rafal — Loyola Univ. Chicago
Co-Chair: Sanfelice, Ricardo — Univ. of Arizona

10:00-10:20 TuA01.1

Results on Robust Stability and Feedback Stabilization for Systems with a Continuum of Equilibria (I), pp. 2282-2286.

Goebel, Rafal — Loyola Univ. Chicago

10:20-10:40 TuA01.2

Asymptotic Properties of Solutions to Set Dynamical Systems (I), pp. 2287-2292.

Sanfelice, Ricardo G. — Univ. of California at Santa Cruz

10:40-11:00 TuA01.3

Uniting Control Lyapunov and Control Barrier Functions, pp. 2293-2298.

Romdlony, Muhammad Zakiyullah — Univ. of Groningen
Jayawardhana, Bayu — Univ. of Groningen

11:00-11:20 TuA01.4

Spectral Conditions for the Reachability of Discrete-Time Conewise Linear Systems (I), pp. 2299-2303.

Kaba, Mustafa Devrim — Univ. of Groningen
Camlibel, M. Kanat — Univ. of Groningen

11:20-11:40 TuA01.5

Another Look at Strong Invariance on Stratified Domains (I), pp. 2304-2309.

Wolenski, Peter R. — Louisiana State Univ

11:40-12:00 TuA01.6

A Krasovskii-LaSalle Function Based Recurrence Principle for a Class of Stochastic Hybrid Systems, pp. 2310-2315.

Subbaraman, Anantharaman — Univ. of California, Santa Barbara
Teel, Andrew R. — Univ. of California, Santa Barbara

TuA02 Salon G

Nonlinear Systems IV (Regular Session)

Chair: Chesi, Graziano — Univ. of Hong Kong
Co-Chair: Qian, Chunjiang — Univ. of Texas, San Antonio

10:00-10:20 TuA02.1

On the Unstable of Continuous-Time Linearized Nonlinear Systems, pp. 2316-2321.

Chesi, Graziano — Univ. of Hong Kong

10:20-10:40 TuA02.2

Synchronization Via Sampled-Data Output Feedback for a Class of Chaotic Systems, pp. 2322-2327.

Yan, Song — Univ. of Texas at San Antonio
Qian, Chunjiang — Univ. of Texas at San Antonio
Tingwen, Huang — Texas A& M Univ. at Qatar, Doha
Lin, Wei — Case Western Res. Univ

10:40-11:00 TuA02.3

HJB-Based Optimal Nonlinear Control for Multiple Objectives in Different Levels of Excitations, pp. 2328-2333.

Hemmat-Abiri, Elham — Univ. of Southern California
Johnson, Erik A — Univ. of Southern California

11:00-11:20 TuA02.4

Stability Analysis Via Averaging for Nonlinear Systems with Delays, pp. 2334-2339.

Yang, Yang — Florida Atlantic Univ
Wang, Yuan — Florida Atlantic Univ

11:20-11:40 TuA02.5

Generalized Homogeneous Approximations and the Global Stabilization of Nonlinear Systems, pp. 2340-2345.

Battilotti, Stefano — Univ. La Sapienza

11:40-12:00 TuA02.6

New Results on Control by Interconnection and Energy-Balancing Passivity-Based Control of Port-Hamiltonian Systems, pp. 2346-2351.

Ortega, Romeo — LSS Supélec
Borja, Luis Pablo — LSS Supélec

TuA03 Salon H

Control of Monotone Systems (Invited Session)

Chair: Rantzer, Anders — Lund Univ.
Co-Chair: Jonsson, Vanessa — California Inst. of Tech.
Organizer: Rantzer, Anders — Lund Univ.
Organizer: Jonsson, Vanessa — California Inst. of Tech.

10:00-10:20 TuA03.1

Synthesizing Combination Therapies for Evolutionary Dynamics of Disease for Nonlinear Pharmacodynamics (I), pp. 2352-2358.

Jonsson, Vanessa — California Inst. of Tech
Matni, Nikolai — California Inst. of Tech
Murray, Richard M. — California Inst. of Tech

10:20-10:40 TuA03.2

Stabilization Via Switching of Positive Markov Jump Linear Systems (I), pp. 2359-2364.

Bolzern, Paolo — Pol. di Milano
Colaneri, Patrizio — Pol. di Milano
De Nicolao, Giuseppe — Univ. Pavia

10:40-11:00 TuA03.3

Modified Balanced Truncation Preserving Ellipsoidal Cone-Invariance (I), pp. 2365-2370.

Grussler, Christian — Lund Univ
Rantzer, Anders — Lund Univ

11:00-11:20 TuA03.4

Max and Sum-Separable Lyapunov Functions for Monotone Systems and Their Level Sets (I), pp. 2371-2377.

Ito, Hiroshi — Kyushu Inst. of Tech
Rüffer, Björn S. — Univ. of Paderborn
Rantzer, Anders — Lund Univ

11:20-11:40 TuA03.5

Control of Convex-Monotone Systems (I), pp. 2378-2383.

Rantzer, Anders — Lund Univ
Bernhardsson, Bo M. — Lund Univ

11:40-12:00 TuA03.6

Stability of Monotone Dynamical Flow Networks (I), pp. 2384-2389.

Lovisari, Enrico — Lund Univ
Como, Giacomo — Lund Univ
Savla, Ketan — Univ. of Southern California

TuA04 Salon I

Linear Systems I (Regular Session)

Chair: Galeani, Sergio — Univ. di Roma Tor Vergata
Co-Chair: Schmid, Robert — Univ. of Melbourne

10:00-10:20 TuA04.1

Generation of Stable Polytopes of Hurwitz Polynomials Via Routh Parameters, pp. 2390-2395.

Nurges, Ulo — Tallinn Univ. of Tech
Belikov, Juri — Tallinn Univ. of Tech
Artemchuk, Igor — Tallinn Univ. of Tech

10:20-10:40 TuA04.2

On Dynamic Input Allocation for Fat Plants Subject to Multi-Sinusoidal Exogenous Inputs, pp. 2396-2403.

Galeani, Sergio — Univ. Di Roma Tor Vergata
Pettinari, Silvia — Univ. of Camerino

10:40-11:00 TuA04.3

Computing the L_infty-Induced Norm of LTI Systems, pp. 2404-2409.

Kim, Jung Hoon — Kyoto Univ
Hagiwara, Tomomichi — Kyoto Univ

11:00-11:20 TuA04.4

Robust Eigenvalue Assignment for Time-Delay Systems, pp. 2410-2413.

Schmid, Robert — Univ. of Melbourne
Nguyen, Thang — Univ. of Exeter

11:20-11:40 TuA04.5

Controllability Analysis of the First FM Model of 2D Systems: A Row (Column) Process, pp. 2414-2419.

Argha, Ahmadreza — Univ. of Tech. Sydney
Li, Li — Univ. of Tech. Sydney
Su, Steven W. — Univ. of Tech. Sydney
Nguyen, Hung T. — Univ. of Tech. Sydney

11:40-12:00 TuA04.6

A Path Defense Approach to the Multiplayer Reach-Avoid Game, pp. 2420-2426.

Chen, Mo — Univ. of California, Berkeley
Zhou, Zhengyuan — Stanford Univ
Tomlin, Claire J. — Univ. of California, Berkeley

TuA05 Salon J

Distributed Control I (Regular Session)

Chair: Imura, Jun-ichi — Tokyo Inst. of Tech.
Co-Chair: Liu, Jinfeng — Univ. of Alberta

10:00-10:20 TuA05.1

Distributed Parameter E-Modification for an Aeroelastic Torsion Model, pp. 2427-2432.

Ishihara, Abraham K. — Carnegie-Mellon Univ
Nguyen, Nhan — NASA Ames Res. Center

10:20-10:40 TuA05.2

On the Fundamental Limitations of Performance for Distributed Decision-Making in Robotic Networks, pp. 2433-2440.

Rossi, Federico — Stanford Univ
Pavone, Marco — Stanford Univ

10:40-11:00 TuA05.3

Real-Time Pricing Based on Networked Estimators, pp. 2441-2446.

Izumi, Shinsaku — Kyoto Univ
Azuma, Shun-ichi — Kyoto Univ
Sugie, Toshiharu — Kyoto Univ

11:00-11:20 TuA05.4

Hierarchical Distributed Control for Networked Linear Systems, pp. 2447-2452.

Sadamoto, Tomonori — Tokyo Inst. of Tech
Ishizaki, Takayuki — Tokyo Inst. of Tech
Imura, Jun-ichi — Tokyo Inst. of Tech

11:20-11:40 TuA05.5

Self-Organizing Control of Unidirectionally Coupled Heterogeneous Agents with Information Request, pp. 2453-2460.

Schuh, Rene — Ruhr Univ. Bochum
Lunze, Jan — Ruhr-Univ. Bochum

11:40-12:00 TuA05.6

An Analytic Price-Driven Coordination Scheme for Distributed Model Predictive Control Systems, pp. 2461-2466.

Hassanzadeh, Bardia — Univ. of Alberta
Liu, Jinfeng — Univ. of Alberta
Forbes, J. Fraser — Univ. of Alberta

TuA06 Salon 6

Smart Grid Solutions with Innovative Communication and Control Technologies (Invited Session)

Chair: Zhang, Bowen — Boston Univ.
Co-Chair: Zhu, Minghui — Pennsylvania State Univ.
Organizer: Zhang, Bowen — Boston Univ.
Organizer: Caramanis, Michael C. — Boston Univ.
Organizer: Baillieul, John — Boston Univ.

10:00-10:20 TuA06.1

Optimal Decentralized Primary Frequency Control in Power Networks (I), pp. 2467-2473.

Zhao, Changhong — California Inst. of Tech
Low, Steven H. — California Inst. of Tech

10:20-10:40 TuA06.2

On Market-Based Coordination of Thermostatically Controlled Loads with User Preference (I), pp. 2474-2480.

Li, Sen — The Ohio State Univ
Zhang, Wei — The Ohio State Univ
Lian, Jianming — Pacific Northwest National Lab
Kalsi, Karanjit — Pacific Northwest National Lab

10:40-11:00 TuA06.3

Optimal Price-Controlled Demand Response with Explicit Modeling of Consumer Preference Dynamics (I), pp. 2481-2486.

Zhang, Bowen — Boston Univ
Caramanis, Michael C. — Boston Univ
Baillieul, John — Boston Univ

11:00-11:20 TuA06.4

Stability Constrained Incentive Design for Distributed Frequency Control of Power Grid (I), pp. 2487-2492.

Zhu, Minghui	Pennsylvania State Univ
Li, Na	Harvard Univ

11:20-11:40 TuA06.5

Delay-Aware Co-Designs for Wide-Area Control of Power Grids, pp. 2493-2498.

Soudbakhsh, Damoon	Massachusetts Inst. of Tech
Chakrabortty, Aranya	North Carolina State Univ
Annaswamy, Anuradha	Massachusetts Inst. of Tech

11:40-12:00 TuA06.6

A Bilevel Approach for the Optimal Control of Interconnected Microgrids, pp. 2499-2504.

Robba, Michela	Univ. di Genova
Minciardi, Riccardo	Univ. di Genova

TuA07 Salon 7

Automotive Applications of Nonlinear Control (Regular Session)

Chair: Maran, Fabio	Univ. di Padova
Co-Chair: Josevski, Martina	RWTH Aachen Univ.

10:00-10:20 TuA07.1

Towards Time-Optimal Race Car Driving Using Nonlinear MPC in Real-Time, pp. 2505-2510.

Verschueren, Robin	Katholieke Univ. Leuven
De Bruyne, Stijn	LMS International
Zanon, Mario	Katholieke Univ. Leuven
Frasch, Janick	Univ. of Heidelberg
Diehl, Moritz	Katholieke Univ. Leuven

10:20-10:40 TuA07.2

Robust Stable Economic MPC with Applications in Engine Control, pp. 2511-2516.

Broomhead, Timothy	The Univ. of Melbourne
Manzie, Chris	The Univ. of Melbourne
Shekhar, Rohan C.	The Univ. of Melbourne
Brear, Michael	The Univ. of Melbourne
Hield, Peter	Defence Science and Tech. Org.

10:40-11:00 TuA07.3

A Non-Linear MPC Based Motion Cueing Implementation for a 9 DOFs Dynamic Simulator Platform, pp. 2517-2522.

Bruschetta, Mattia	Univ. of Padova
Maran, Fabio	Univ. Di Padova
Beghi, Alessandro	Univ. Di Padova

11:00-11:20 TuA07.4

Multi-Time Scale Model Predictive Control Framework for Energy Management of Hybrid Electric Vehicles, pp. 2523-2528.

Josevski, Martina	RWTH Aachen Univ
Abel, Dirk	RWTH Aachen Univ

11:20-11:40 TuA07.5

On the Impact of Model Simplification in Input Constrained Optimal Control: Application to HEV Energy-Thermal Management, pp. 2529-2535.

Maamria, Djamaleddine	Ifpen
Chaplais, Francois	MINES ParisTech
Petit, Nicolas	MINES ParisTech
Sciarretta, Antonio	Swiss Federal Inst. of Tech

11:40-12:00 TuA07.6

Analysis of Braking Dynamics Using Parameter-Dependent Polynomial Control Lyapunov Functions, pp. 2536-2541.

Nemeth, Balazs	MTA SZTAKI Hungarian Acad. of Sciences
Gaspar, Peter	MTA SZTAKI Hungarian Acad. of Sciences
Bokor, Jozsef	MTA SZTAKI Hungarian Acad. of Sciences

TuA08 Salon 8

Identification of Linear Parameter-Varying Systems (Invited Session)

Chair: Tóth, Roland	Eindhoven Univ. of Tech.
Co-Chair: Mohammadpour, Javad	Univ. of Georgia
Organizer: Tóth, Roland	Eindhoven Univ. of Tech.
Organizer: Mohammadpour, Javad	Univ. of Georgia
Organizer: Larimore, Wallace E.	Adaptics, Inc.

10:00-10:20 TuA08.1

A Variational Bayesian Approach to Identification of Switched ARX Models (I), pp. 2542-2547.

Lu, Yaojie	Univ. of Alberta
Khatibisepehr, Shima	Univ. of Alberta
Huang, Biao	Univ. of Alberta

10:20-10:40 TuA08.2

LPV System Identification Using a Separable Least Squares Support Vector Machines Approach (I), pp. 2548-2554.

Lopes dos Santos, P.	Univ. Do Porto
Azevedo Perdicoulis, T-P	ISR-Coimbra & UTAD
Ramos, Jose A.	Nova Southeastern Univ
Deshpande, Sunil	Arizona State Univ
Rivera, Daniel E.	Arizona State Univ
Martins de Carvalho, J.L.	Faculdade De Engenharia Da Univ. Do Porto

10:40-11:00 TuA08.3

A Bayesian Approach for Estimation of Linear-Regression LPV Models (I), pp. 2555-2560.

Golabi, Arash	Qatar Univ
Meskin, Nader	Qatar Univ
Tóth, Roland	Eindhoven Univ. of Tech
Mohammadpour, Javad	Univ. of Georgia

11:00-11:20 TuA08.4

Shrinking Complexity of Scheduling Dependencies in LS-SVM Based LPV System Identification (I), pp. 2561-2566.

Duijkers, René	Eindhoven Univ. of Tech
Tóth, Roland	Eindhoven Univ. of Tech
Piga, Dario	Scuola Univ. Professionale Della Svizzera Italiana
Laurain, Vincent	Univ. De Lorraine

11:20-11:40 TuA08.5

Continuous Time Frequency Domain LPV State Space Identification Via Periodic Time-Varying Input-Output Modeling (I), pp. 2567-2572.

Goos, Jan	Vrije Univ. Brussel
Pintelon, Rik M.	Vrije Univ. Brussel

11:40-12:00 TuA08.6

A Convex Optimization Approach to Semi-Supervised Identification of Switchet ARX Systems, pp. 2573-2578.

Cheng, Yongfang — Northeastern Univ
Wang, Yin — Northeastern Univ
Sznaier, Mario — Northeastern Univ

TuA09 Salon 9

Estimation IV (Regular Session)

Chair: Welsh, James S. — Univ. of Newcastle
Co-Chair: Ordaz, Patricio — CINVESTAV

10:00-10:20 TuA09.1

State Estimation in Power Distribution Networks with Poorly Synchronized Measurements, pp. 2579-2584.

Todescato, Marco — Univ. di Padova
Carli, Ruggero — Univ. di Padova
Bolognani, Saverio — Massachusetts Inst. of Tech

10:20-10:40 TuA09.2

Global Stability of PD+ Controller with Velocity Estimation, pp. 2585-2590.

Ordaz, Patricio — CINVESTAV
Espinoza Quesada, Eduardo Steed — Pol. Univ. of Pachuca
Muñoz Palacios, Filiberto — Univ. Pol. De Pachuca

10:40-11:00 TuA09.3

Moving-Horizon Estimation for Discrete-Time Linear Systems with Measurements Subject to Outliers, pp. 2591-2596.

Alessandri, Angelo — Univ. di Genova
Awawdeh, Moath — Univ. di Genova

11:00-11:20 TuA09.4

Ensuring Stability in Continuous Time System Identification Instrumental Variable for Over-Parameterized Models, pp. 2597-2602.

Ha, Huong — Univ. of Newcastle
Welsh, James S. — Univ. of Newcastle

11:20-11:40 TuA09.5

Ellipsoidal State Estimation for Systems with Interval Uncertainties, pp. 2603-2608.

Ben Chabane, Sofiane — SUPELEC
Stoica Maniu, Cristina Nicoleta — SUPELEC
Alamo, Teodoro — Univ. de Sevilla
Camacho, Eduardo F. — Univ. de Sevilla
Dumur, Didier — SUPELEC

11:40-12:00 TuA09.6

Cramer-Rao-Leibniz Lower Bound a New Estimation Bound for Finite Support Measurement Noise, pp. 2609-2614.

Bar-Shalom, Yaakov — Univ. of Connecticut
Osborne, III, Richard — Univ. of Connecticut
Willett, Peter K. — Univ. of Connecticut
Daum, Frederick E. — Raytheon

TuA10 Salon 10

Stochastic Systems I (Regular Session)

Chair: Mukaidani, Hiroaki — Hiroshima Univ.
Co-Chair: Dolgov, Maxim — Karlsruhe Inst. of Tech. (KIT)

10:00-10:20 TuA10.1

Bivariate Angular Estimation under Consideration of Dependencies Using Directional Statistics, pp. 2615-2621.

Kurz, Gerhard — Karlsruhe Inst. of Tech. (KIT)
Gilitschenski, Igor — Karlsruhe Inst. of Tech. (KIT)
Dolgov, Maxim — Karlsruhe Inst. of Tech. (KIT)
Hanebeck, Uwe D. — Karlsruhe Inst. of Tech. (KIT)

10:20-10:40 TuA10.2

Simultaneous Perturbation Algorithms for Batch Off-Policy Search, pp. 2622-2627.

Fonteneau, Raphael — Univ. of Liège
L.A., Prashanth — Inria

10:40-11:00 TuA10.3

A Theory of Sufficient Statistics for Teams, pp. 2628-2635.

Wu, Jeff — Stanford Univ
Lall, Sanjay — Stanford Univ

11:00-11:20 TuA10.4

On the Variance of Identified SIMO Systems with Spatially Correlated Output Noise, pp. 2636-2641.

Bottegal, Giulio — KTH Royal Inst. of Tech
Hjalmarsson, Håkan — KTH Royal Inst. of Tech

11:20-11:40 TuA10.5

Metrics for Matrix-Valued Measures Via Test Functions (I), pp. 2642-2647.

Ning, Lipeng — Harvard Medical School
Georgiou, Tryphon T. — Univ. of Minnesota

11:40-12:00 TuA10.6

H_2/H_infinity Control Problem for Stochastic Delay Systems with Multiple Decision Makers, pp. 2648-2653.

Mukaidani, Hiroaki — Hiroshima Univ

TuA11 Georgia 1

Extremum Seeking I (Regular Session)

Chair: Ebenbauer, Christian — Univ. of Stuttgart
Co-Chair: Benosman, Mouhacine — Mitsubishi Electric Res. Lab.

10:00-10:20 TuA11.1

Constrained Extremum Seeking in 1 Dimension, pp. 2654-2659.

Mills, Greg — Univ. of California, San Diego
Krstic, Miroslav — Univ. of California, San Diego

10:20-10:40 TuA11.2

The Multidimensional N-Th Order Heavy Ball Method and Its Application to Extremum Seeking, pp. 2660-2666.

Michalowsky, Simon — Univ. of Stuttgart
Ebenbauer, Christian — Univ. of Stuttgart

10:40-11:00 TuA11.3

Extremum Seeking Control for Nonlinear Systems on Compact Riemannian Manifolds, pp. 2667-2672.

Taringoo, Farzin — The Univ. of Melbourne
Nesic, Dragan — The Univ. of Melbourne
Tan, Ying — The Univ. of Melbourne
Dower, Peter M. — The Univ. of Melbourne

11:00-11:20 TuA11.4

Extremum Seeking for Parameter Identification, Implementation for Electron Beam Property Prediction, pp. 2673-2678.

Scheinker, Alexander — Los Alamos National Lab

Gessner, Spencer — SLAC National Lab

11:20-11:40 TuA11.5

A Dither-Free Extremum-Seeking Control Approach Using 1st-Order Least-Squares Fits for Gradient Estimation, pp. 2679-2684.

Hunnekens, Bram — Eindhoven Univ. of Tech
Haring, Mark — NTNU
Van De Wouw, Nathan — Eindhoven Univ. of Tech
Nijmeijer, Hendrik — Eindhoven Univ. of Tech

11:40-12:00 TuA11.6

Multi-Parametric Extremum Seeking-Based Auto-Tuning for Robust Input-Output Linearization Control, pp. 2685-2690.

Benosman, Mouhacine — Mitsubishi Electric Res. Lab

TuA12 — Georgia 2

Mean Field Games I (Invited Session)

Chair: Basar, Tamer — Univ. Illinois, Urbana-Champaign
Co-Chair: Bauso, Dario — Univ. di Palermo

10:00-10:20 TuA12.1

Linear-Quadratic Risk-Sensitive Mean Field Games (I), pp. 2691-2696.

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

10:20-10:40 TuA12.2

Discrete-Time LQG Mean Field Games with Unreliable Communication, pp. 2697-2702.

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

10:40-11:00 TuA12.3

Dual Two-State Mean Field Games (I), pp. 2703-2708.

Gomes, Diogo — King Abdullah Univ.
Velho, Roberto M. — King Abdullah Univ.
Wolfram, Marie-Therese — Univ. of Vienna

11:00-11:20 TuA12.4

Mean Field Games with Partially Observed Major Player and Stochastic Mean Field (I), pp. 2709-2715.

Sen, Nevroz — McGill Univ
Caines, Peter E. — McGill Univ

11:20-11:40 TuA12.5

Passive Dynamics in Mean Field Control (I), pp. 2716-2721.

Busic, Ana — Inria and École Normale Supérieure
Meyn, Sean P. — Univ. of Florida

11:40-12:00 TuA12.6

Mean-Field Games and Two-Point Boundary Value Problems (I), pp. 2722-2727.

Mylvaganam, Thulasi — Imperial Coll. London
Bauso, Dario — Univ. di Palermo
Astolfi, Alessandro — Imperial Coll. & Univ. of Rome

TuA13 — Atrium 1

Economic Model Predictive Control (Invited Session)

Chair: Gruene, Lars — Univ. of Bayreuth
Co-Chair: Jones, Colin N. — École Pol. Fédérale de Lausanne
Organizer: Gruene, Lars — Univ. of Bayreuth

10:00-10:20 TuA13.1

An Economic Model Predictive Control Scheme with Terminal Penalty for Continuous-Time Systems (I), pp. 2728-2733.

Alessandretti, Andrea — Inst. Superior Técnico (IST)/École Pol. Fédérale De Laus
Aguiar, A. Pedro — Univ. of Porto
Jones, Colin N. — École Pol. Fédérale De Lausanne

10:20-10:40 TuA13.2

Turnpike and Dissipativity Properties in Dynamic Real-Time Optimization and Economic MPC (I), pp. 2734-2739.

Faulwasser, Timm — École Pol. Fédérale De Lausanne
Korda, Milan — École Pol. Fédérale De Lausanne
Jones, Colin N. — École Pol. Fédérale De Lausanne
Bonvin, Dominique — École Pol. Fédérale De Lausanne

10:40-11:00 TuA13.3

A Lyapunov Function for Economic MPC without Terminal Conditions (I), pp. 2740-2745.

Gruene, Lars — Univ. of Bayreuth
Stieler, Marleen — Univ. of Bayreuth

11:00-11:20 TuA13.4

Local Properties of Economic NMPC, Dissipativity and Dynamic Programming (I), pp. 2746-2751.

Zanon, Mario — Katholieke Univ. Leuven
Gros, Sebastien — Chalmers Univ. of Tech
Diehl, Moritz — Katholieke Univ. Leuven

11:20-11:40 TuA13.5

Symmetric Algorithmic Differentiation Based Exact Hessian SQP Method and Software for Economic MPC (I), pp. 2752-2757.

Quirynen, Rien — Katholieke Univ. Leuven
Houska, Boris — Shanghai Jiao Tong Univ
Vallerio, Mattia — Katholieke Univ. Leuven
Telen, Dries — Katholieke Univ. Leuven
Logist, Filip — Katholieke Univ. Leuven
Van Impe, Jan F.M. — Katholieke Univ. Leuven
Diehl, Moritz — Katholieke Univ. Leuven

11:40-12:00 TuA13.6

Economic Model Predictive Control of Parabolic PDE Systems: Handling State Constraints by Adaptive Proper Orthogonal Decomposition (I), pp. 2758-2763.

Lao, Liangfeng — Univ. of California, Los Angeles
Ellis, Matthew — Univ. of California, Los Angeles
Armaou, Antonios — The Pennsylvania State Univ
Christofides, Panagiotis D. — Univ. of California, Los Angeles

TuA14 — Olympic 1

Event-Triggered and Self-Triggered Control (Invited Session)

Chair: Heemels, W.P.M.H. — Eindhoven Univ. of Tech.
Co-Chair: Hirche, Sandra — Tech. Univ. München
Organizer: Heemels, W.P.M.H. — Eindhoven Univ. of Tech.
Organizer: Hirche, Sandra — Tech. Univ. München
Organizer: Johansson, Karl H. — Royal Inst. of Tech.

10:00-10:20 TuA14.1

Dynamic Event-Triggered Control: Tradeoffs between Transmission Intervals and Performance (I), pp. 2764-2769.

Dolk, Victor Sebastiaan — Eindhoven Univ. of Tech
Borgers, Dominicus Paulus — Eindhoven Univ. of Tech
Heemels, W.P.M.H. — Eindhoven Univ. of Tech

10:20-10:40 TuA14.2

A New Event-Driven Cooperative Receding Horizon Controller for Multi-Agent Systems in Uncertain Environments (I), pp. 2770-2775.

Khazaeni, Yasaman	Boston Univ
Cassandras, Christos G.	Boston Univ

10:40-11:00 TuA14.3

Event-Triggered Scheduling for Stochastic Multi-Loop Networked Control Systems with Packet Dropouts (I), pp. 2776-2782.

Mamduhi, Mohammad Hossein	Tech. Univ. München
Tolic, Domagoj	Univ. of Zagreb
Molin, Adam	Tech. Univ. München
Hirche, Sandra	Tech. Univ. München

11:00-11:20 TuA14.4

Event-Triggered Pinning Control of Complex Networks with Switching Topologies (I), pp. 2783-2788.

Adaldo, Antonio	Royal Inst. of Tech
Alderisio, Francesco	Univ. of Bristol
Liuzza, Davide	Royal Inst. of Tech
Shi, Guodong	The Australian National Univ
Dimarogonas, Dimos V.	Royal Inst. of Tech
di Bernardo, Mario	Univ. of Bristol
Johansson, Karl Henrik	Royal Inst. of Tech

11:20-11:40 TuA14.5

An Event-Triggered Observer Based Control Strategy for SISO Systems, pp. 2789-2794.

Sbarbaro, Daniel G.	Univ. De Concepcion
Tarbouriech, Sophie	Laas-Cnrs
Gomes da Silva Jr, Joao Manoel	Univ. Federal Do Rio Grande Do Sul (UFRGS)

11:40-12:00 TuA14.6

On Self-Triggered Reduced-Attention Control for Constrained Systems (I), pp. 2795-2801.

Koegel, Markus	OVG Univ. Magdeburg
Findeisen, Rolf	OVG Univ. Magdeburg

TuA15 Atrium 2

New Directions in Robust Optimal Control (Invited Session)

Chair: Streif, Stefan	OVG Univ. Magdeburg
Co-Chair: Mesbah, Ali	Massachusetts Inst. of Tech.
Organizer: Mesbah, Ali	Univ. of California, Berkeley
Organizer: Streif, Stefan	Ilmenau Univ. of Tech.
Organizer: Braatz, Richard D.	Massachusetts Inst. of Tech.

10:00-10:20 TuA15.1

Fast Stochastic Model Predictive Control of High-Dimensional Systems (I), pp. 2802-2809.

Paulson, Joel	Massachusetts Inst. of Tech
Mesbah, Ali	Univ. of California, Berkeley
Streif, Stefan	Ilmenau Univ. of Tech
Findeisen, Rolf	OVG Univ. Magdeburg
Braatz, Richard D.	Massachusetts Inst. of Tech

10:20-10:40 TuA15.2

Scenario Optimization with Certificates and Applications to Anti-Windup Design (I), pp. 2810-2815.

Formentin, Simone	Pol. di Milano
Dabbene, Fabrizio	CNR-IEIIT
Tempo, Roberto	CNR-IEIIT, Pol. di Torino
Zaccarian, Luca	LAAS-CNRS and Univ. of Trento
Savaresi, Sergio M.	Pol. di Milano

10:40-11:00 TuA15.3

Multi-Stage Nonlinear Model Predictive Control with Verified Robust Constraint Satisfaction (I), pp. 2816-2821.

Lucia, Sergio	TU Dortmund
Paulen, Radoslav	TU Dortmund
Engell, Sebastian	TU Dortmund

11:00-11:20 TuA15.4

Optimality of Certainty Equivalence in Expected Value Problems for Uncertain Linear Systems (I), pp. 2822-2827.

Chuang, Frank Fu-Han	Univ. of California, Berkeley
Danielson, Claus	Univ. of California, Berkeley
Borrelli, Francesco	Univ. of California, Berkeley

11:20-11:40 TuA15.5

Robust State Feedback Control Design with Probabilistic System Parameters (I), pp. 2828-2833.

Bhattacharya, Raktim	Texas A&M

11:40-12:00 TuA15.6

On Robust Solutions to Uncertain Monotone Linear Complementarity Problems and Their Variants, pp. 2834-2839.

Shanbhag, Uday V.	Pennsylvania State Univ
Xie, Yue	Pennsylvania State Univ

TuA16 Olympic 2

Control and Optimization of Hyperbolic PDE Systems (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

10:00-10:20 TuA16.1

Boundary Control Synthesis for Hyperbolic Systems: A Singular Perturbation Approach (I), pp. 2840-2845.

Tang, Ying	Grenoble Univ
Prieur, Christophe	CNRS
Girard, Antoine	Univ. Joseph Fourier

10:20-10:40 TuA16.2

Well-Posedness and Stability of a 1D Wave Equation with Saturating Distributed Input (I), pp. 2846-2851.

Prieur, Christophe	CNRS
Tarbouriech, Sophie	LAAS-CNRS
Gomes da Silva Jr, Joao Manoel	Univ. Federal Do Rio Grande Do Sul

10:40-11:00 TuA16.3

Synchronization Optimization of Networked Second Order Infinite Dimensional Systems (I), pp. 2852-2857.

Demetriou, Michael A.	Worcester Pol. Inst
Fahroo, Fariba	AFOSR

11:00-11:20 TuA16.4

Nonlinear Stabilization of a Viscous Hamilton-Jacobi PDE (I), pp. 2858-2863.

Bekiaris-Liberis, Nikolaos	Univ. of California, Berkeley
Bayen, Alexandre	Univ. of California, Berkeley

11:20-11:40 TuA16.5

Control of Hyperbolic PDE Systems with Actuator Dynamics (I), pp. 2864-2869.

Burns, John A — Virginia Tech
Cliff, Eugene M. — Virginia Tech

11:40-12:00 TuA16.6

Robust Adaptive Model Tracking Control for Linear Infinite Dimensional Symmetric Hyperbolic Systems (I), pp. 2870-2876.

Balas, Mark — Embry-Riddle Aeronautical Univ
Frost, Susan — NASA Ames Res. Center

TuA17 — Atrium 3

Network Analysis and Control I (Regular Session)

Chair: Blanchini, Franco — Univ. degli Studi di Udine
Co-Chair: Zelazo, Daniel — Tech. - Israel Inst. of Tech.

10:00-10:20 TuA17.1

Towards Control of Evolutionary Games on Networks, pp. 2877-2882.

Riehl, James Robert — Univ. of Groningen
Cao, Ming — Univ. of Groningen

10:20-10:40 TuA17.2

Submodularity of Energy Related Controllability Metrics, pp. 2883-2888.

Cortesi, Fabrizio — ETH Zurich
Summers, Tyler — ETH Zurich
Lygeros, John — ETH Zurich

10:40-11:00 TuA17.3

Robust Network Routing under Cascading Failures, pp. 2889-2894.

Savla, Ketan — Univ. of Southern California
Como, Giacomo — Lund Univ
Dahleh, Munther A. — Massachusetts Inst. of Tech

11:00-11:20 TuA17.4

On the Definiteness of the Weighted Laplacian and Its Connection to Effective Resistance, pp. 2895-2900.

Zelazo, Daniel — Tech. - Israel Inst. of Tech
Buerger, Mathias — Univ. of Stuttgart

11:20-11:40 TuA17.5

Network-Decentralized Robust Congestion Control with Node Traffic Splitting, pp. 2901-2906.

Blanchini, Franco — Univ. of Udine
Giordano, Giulia — Univ. of Udine
Montessoro, Pier Luca — Univ. of Udine

11:40-12:00 TuA17.6

Opinion Dynamics with Persistent Leaders, pp. 2907-2913.

Mai, Van Sy — Univ. of Maryland
Abed, Eyad H. — Univ. of Maryland

TuA18 — Olympic 3

Cooperative Control I (Regular Session)

Chair: Cao, Ming — Univ. of Groningen
Co-Chair: Tayebi, Abdelhamid — Lakehead Univ.

10:00-10:20 TuA18.1

Event-Triggered Cooperative Control with General Linear Dynamics and Communication Delays, pp. 2914-2919.

Garcia, Eloy — Infoscitex Corp
Cao, Yongcan — Air Force Res. Lab
Casbeer, David W. — Air Force Res. Lab

10:20-10:40 TuA18.2

Dynamics of Pursuit and Evasion in a Heterogeneous Herd, pp. 2920-2925.

Scott, William — Princeton Univ
Leonard, Naomi Ehrich — Princeton Univ

10:40-11:00 TuA18.3

Cooperative Aircraft Defense from an Attacking Missile, pp. 2926-2931.

Garcia, Eloy — Infoscitex Corp
Casbeer, David W. — Air Force Res. Lab
Pham, Khanh D. — Air Force Res. Lab
Pachter, Meir — AFIT

11:00-11:20 TuA18.4

Cooperative Receding Horizon Conflict Resolution at Traffic Intersections, pp. 2932-2937.

Rodrigues De Campos, Gabriel — Chalmers Univ. of Tech
Falcone, Paolo — Chalmers Univ. of Tech
Wymeersch, Henk — Chalmers Univ. of Tech
Hult, Robert — Chalmers Univ. of Tech
Sjöberg, Jonas — Chalmers Univ. of Tech

11:20-11:40 TuA18.5

Containment Control for Networked Lagrangian Systems under a Directed Graph and Communication Constraints, pp. 2938-2943.

Abdessameud, Abdelkader — Univ. of Western Ontario
Polushin, Ilia G. — Univ. of Western Ontario
Tayebi, Abdelhamid — Lakehead Univ

11:40-12:00 TuA18.6

Target Localization: Energy-Information Trade-Offs Using Mobile Sensor Networks, pp. 2944-2949.

Wu, Wencen — Rensselaer Pol. Inst
Zhang, Fumin — Georgia Inst. of Tech
Wardi, Yorai — Georgia Inst. of Tech

TuA19 — Plaza 1

Robot Locomotion (Regular Session)

Chair: Byl, Katie — Univ. of California, Santa Barbara
Co-Chair: Verriest, Erik I. — Georgia Inst. of Tech.

10:00-10:20 TuA19.1

Embedding of SLIP Dynamics on Underactuated Bipedal Robots through Multi-Objective Quadratic Program Based Control, pp. 2950-2957.

Hereid, Ayonga — Texas A&M Univ
Powell, Matthew — Texas A&M Univ
Ames, Aaron D. — Texas A&M Univ

10:20-10:40 TuA19.2

Graceful Gait Transitions for Biomimetic Locomotion – the Worm, pp. 2958-2963.

Memon, Abdul Basit — Georgia Inst. of Tech
Verriest, Erik I. — Georgia Inst. of Tech
Hyun, Nak-seung Patrick — Georgia Inst. of Tech

10:40-11:00 TuA19.3

Trajectory Optimization for Walking Robots with Series Elastic Actuators, pp. 2964-2970.

Werner, Alexander — German Aerospace Center (DLR)

Lampariello, Roberto	German Aerospace Center (DLR)
Ott, Christian	German Aerospace Center (DLR)

11:00-11:20 TuA19.4

A Higher Order Partial Feedback Linearization Based Method for Controlling an Underactuated Hopping Robot with a Compliant Leg, pp. 2971-2978.

Terry, Patrick	Univ. of California, Santa Barbara
Byl, Katie	Univ. of California, Santa Barbara

11:20-11:40 TuA19.5

Metastable Markov Chains, pp. 2979-2985.

Saglam, Cenk Oguz	Univ. of California, Santa Barbara
Byl, Katie	Univ. of California, Santa Barbara

11:40-12:00 TuA19.6

Hierarchical Control of Series Elastic Actuators through Control Lyapunov Functions, pp. 2986-2992.

Powell, Matthew	Texas A&M Univ
Ames, Aaron D.	Texas A&M Univ

TuA20 Plaza 2

Multi-Agent Systems (Regular Session)

Chair: Lamperski, Andrew	Univ. of Cambridge
Co-Chair: Lin, Zhiyun	Zhejiang Univ.

10:00-10:20 TuA20.1

Consensus of Linear Multi-Agent Systems with Fully Distributed Control Gains under a General Directed Graph, pp. 2993-2998.

Mei, Jie	Harbin Inst. of Tech.
Ren, Wei	Univ. of California, Riverside
Chen, Jie	City Univ. of Hong Kong
Anderson, Brian D.O.	Australian National Univ

10:20-10:40 TuA20.2

Leader-Following Consensus of Multi-Agent Systems Over Finite Fields, pp. 2999-3004.

Xu, Xiangru	Univ. of Michigan
Hong, Yiguang	Chinese Acad. of Sciences

10:40-11:00 TuA20.3

A New Coordinated Path-Following Control for Second-Order Multi-Agent Systems, pp. 3005-3010.

Zuo, Zongyu	Beihang Univ.

11:00-11:20 TuA20.4

Leader-Following Consensus with Connectivity Preservation of Uncertain Euler-Lagrange Multi-Agent Systems, pp. 3011-3016.

Dong, Yi	The Chinese Univ. of Hong Kong
Huang, Jie	The Chinese Univ. of Hong Kong

11:20-11:40 TuA20.5

Affi Ne Formation of Multi-Agent Systems Over Directed Graphs, pp. 3017-3022.

Wang, Lili	Zhejiang Univ
Lin, Zhiyun	Zhejiang Univ
Fu, Minyue	Univ. of Newcastle

11:40-12:00 TuA20.6

Stability and Consensus for Multi-Agent Systems with Poisson Clock Noise, pp. 3023-3028.

Lamperski, Andrew	Univ. of Minnesota
Papachristodoulou, Antonis	Univ. of Oxford

TuA21 Plaza 3

Biological Systems I (Regular Session)

Chair: Ching, ShiNung	Washington Univ. in St. Louis
Co-Chair: Armaou, Antonios	The Pennsylvania State Univ.

10:00-10:20 TuA21.1

Optimization of Interruptions in HIV Treatment Using a Multiscale Mechanistic Model, pp. 3029-3034.

Xu, Serena	The Pennsylvania State Univ
Srinivasan, Premanand	The Pennsylvania State Univ
Armaou, Antonios	The Pennsylvania State Univ

10:20-10:40 TuA21.2

Scale-Invariance in Singularly Perturbed Systems, pp. 3035-3040.

Skataric, Maja	Rutgers Univ
Nikolaev, Evgeni	Rutgers Univ
Sontag, Eduardo D.	Rutgers Univ

10:40-11:00 TuA21.3

Non-Negative Inputs for Underactuated Control of Spiking in Coupled Integrate-And-Fire Neurons, pp. 3041-3046.

Nandi, Anirban	Washington Univ. in St. Louis
Ritt, Jason	Boston Univ
Ching, ShiNung	Washington Univ. in St. Louis

11:00-11:20 TuA21.4

First–passage Time Calculations for a Gene Expression Model, pp. 3047-3052.

Ghusinga, Khem Raj	Univ. of Delaware
Singh, Abhyudai	Univ. of Delaware

11:20-11:40 TuA21.5

Quasi-Steady-State Approximations of the Chemical Master Equation in Enzyme Kinetics - Application to the Double Phosphorylation/Dephosphorylation Cycle, pp. 3053-3058.

Bersani, Alberto Maria	Univ. of Rome "La Sapienza"
Borri, Alessandro	IASI-CNR
Carravetta, Francesco	IASI-CNR
Mavelli, Gabriella	CNR
Palumbo, Pasquale	IASI-CNR

11:40-12:00 TuA21.6

Stability Analysis of PDEs Modelling Cell Dynamics in Acute Myeloid Leukemia, pp. 3059-3064.

Avila, José Luis	INRIA-Lab. Des Signaux Et Systèmes Supélec
Bonnet, Catherine	INRIA Saclay-Ile-De-France
Fridman, Emilia	Tel-Aviv Univ
Mazenc, Frederic	Epi Inria Disco
Clairambault, Jean	Inria

TuB01 Salon F

Variational Analysis in Dynamics and Control II (Invited Session)

Chair: Sanfelice, Ricardo G.	Univ. of Arizona
Co-Chair: Goebel, Rafal	Loyola Univ. Chicago

13:30-13:50 TuB01.1

Sensitivity Analysis of Hybrid Systems with State Jumps with Application to Trajectory Tracking (I), pp. 3065-3070.

Saccon, Alessandro	Eindhoven Univ. of Tech
Van De Wouw, Nathan	Eindhoven Univ. of Tech
Nijmeijer, Hendrik	Eindhoven Univ. of Tech

13:50-14:10 TuB01.2

Stochastic Hybrid Inclusions with Diffusive Flows (I), pp. 3071-3076.

Teel, Andrew R. — Univ. of California, Santa Barbara

14:10-14:30 TuB01.3

On Output Regulation in Systems with Differential Variational Inequalities (I), pp. 3077-3082.

Tanwani, Aneel — Univ. of Kaiserslautern
Brogliato, Bernard — INRIA
Prieur, Christophe — CNRS

14:30-14:50 TuB01.4

On Almost Lyapunov Functions (I), pp. 3083-3088.

Liberzon, Daniel — Univ. Illinois, Urbana-Champaign
Ying, Charles — Univ. Illinois, Urbana-Champaign
Zharnitsky, Vadim — Univ. Illinois, Urbana-Champaign

14:50-15:10 TuB01.5

Results on Incremental Stability for a Class of Hybrid Systems, pp. 3089-3094.

Li, Yuchun — Univ. of California, Santa Cruz
Phillips, Sean — Univ. of California, Santa Cruz
Sanfelice, Ricardo G. — Univ. of California, Santa Cruz

15:10-15:30 TuB01.6

Time-Stepping Methods for Constructing Periodic Solutions in Maximally Monotone Set-Valued Dynamical Systems (I), pp. 3095-3100.

Heemels, W.P.M.H. — Eindhoven Univ. of Tech
Sessa, Valentina — Univ. of Sannio
Vasca, Francesco — Univ. of Sannio
Camlibel, M. Kanat — Univ. of Groningen

TuB02 — Salon G

Stability of Nonlinear Systems I (Regular Session)

Chair: Rüffer, Björn S. — Univ. of Paderborn
Co-Chair: Lestas, Ioannis — Univ. of Cambridge

13:30-13:50 TuB02.1

Robust Lyapunov Functions for Complex Reaction Networks: An Uncertain System Framework, pp. 3101-3106.

Ali, Muhammad — Imperial College, London
Angeli, David — Imperial College, London

13:50-14:10 TuB02.2

Global CLF Stabilization of Systems with Respect to a Hyperbox, Allowing the Null-Control Input in Its Boundary (positive Controls) (I), pp. 3107-3112.

Leyva, Horacio — Sonora Univ
Solis-Daun, Julio — Univ. Autonoma Metropolitana-Iztapalapa

14:10-14:30 TuB02.3

Delay-Independent Global Convergence in Time-Varying Monotone Systems of Delay Differential Equations Satisfying a Scalability Condition, pp. 3113-3118.

Devane, Eoin — Univ. of Cambridge
Lestas, Ioannis — Univ. of Cambridge

14:30-14:50 TuB02.4

Robust Stability for Delayed Port-Hamiltonian Systems Using Improved Wirtinger Based Inequality, pp. 3119-3124.

Aoues, Saïd — Univ. of Lyon
Lombardi, Warody — Cea - Leti
Eberard, Damien — Univ. of Lyon
Seuret, Alexandre — Cnrs

14:50-15:10 TuB02.5

A New LMI Condition for Decentralized Observer-Based Control of Linear Systems with Nonlinear Interconnections, pp. 3125-3130.

Zemouche, Ali — Univ. of Lorraine
Alessandri, Angelo — Univ. of Genoa

15:10-15:30 TuB02.6

Non-Conservative Dissipativity and Small-Gain Theory for ISS Networks, pp. 3131-3136.

Noroozi, Navid — Sheikh Bahaei Univ
Rüffer, Björn S. — Univ. of Paderborn

TuB03 — Salon H

Bilinear and Driftless Systems (Regular Session)

Chair: Yamashita, Yuh — Hokkaido Univ.
Co-Chair: Olaru, Sorin — SUPELEC

13:30-13:50 TuB03.1

On Structural Controllability of a Class of Bilinear Systems, pp. 3137-3142.

Ghosh, Supratim — Singapore Univ. of Tech. and Design
Ruths, Justin — Singapore Univ. of Tech. & Design

13:50-14:10 TuB03.2

Control Design and Analysis for Discrete Time Bilinear Systems Using Sum of Squares Methods, pp. 3143-3148.

Vatani, Mohsen — Norwegian Univ. of Science and Tech
Hovd, Morten — Norwegian Univ. of Sci & Tech
Olaru, Sorin — Supelec

14:10-14:30 TuB03.3

Generalized Hankel Interaction Index Array for Control Structure Selection for Discrete-Time MIMO Bilinear Processes and Plants, pp. 3149-3154.

Shaker, Hamid Reza — Univ. of Southern Denmark
Tahavori, Maryamsadat — Univ. of Southern Denmark

14:30-14:50 TuB03.4

Integral Input-To-State Stability of Bilinear Infinite-Dimensional Systems, pp. 3155-3160.

Mironchenko, Andrii — Univ. of Würzburg
Ito, Hiroshi — Kyushu Inst. of Tech

14:50-15:10 TuB03.5

On Controllability of Driftless Inhomogeneous Bilinear Systems, pp. 3161-3166.

Tie, Lin — Beihang Univ.

15:10-15:30 TuB03.6

Homogeneous Stabilization of Driftless Input-Affine Systems Using Wiener Processes, pp. 3167-3172.

Hoshino, Kenta — Aoyama Gakuin Univ
Yamashita, Yuh — Hokkaido Univ
Nishimura, Yuki — Kagoshima Univ
Tsubakino, Daisuke — Hokkaido Univ

TuB04 Salon I

Linear Systems II (Regular Session)

Chair: Romagnoli, Raffaele — Univ. Pol. delle Marche
Co-Chair: Mabrok, Mohamed Abdalla — Univ. of New South Wales at ADFA

13:30-13:50 TuB04.1

Output-Transition Optimization through a Multi-Objective Least Square Procedure, pp. 3173-3179.

Orsini, Valentina — Univ. Pol. Delle Marche
Jetto, L. — Univ. Pol. Delle Marche
Romagnoli, Raffaele — Univ. Pol. Delle Marche

13:50-14:10 TuB04.2

A Subspace System Identification Algorithm Guaranteeing the Negative Imaginary Property, pp. 3180-3185.

Mabrok, Mohamed Abdalla — Univ. of New South Wales at the AustralianDefenceForceAcad
Haggag, Mohamed — Mansoura Univ
Petersen, Ian R. — Univ. of New South Wales at the AustralianDefenceForceAcad
Lanzon, Alexander — Univ. of Manchester

14:10-14:30 TuB04.3

Performance Survey of Robust Pole Placement Methods, pp. 3186-3191.

Pandey, Amit — Univ. of California, San Diego
Schmid, Robert — The Univ. of Melbourne
Nguyen, Thang — Univ. of Exeter
Yang, Yaguang — NRC
Sima, Vasile — Nat. Inst. F. Res. in Informatics
Tits, Andre L. — Univ. of Maryland

14:30-14:50 TuB04.4

A New Method for Finding Minimum Phase Outputs, pp. 3192-3196.

Jahangiri, Fatemeh — Amirkabir Univ. of Tech
Talebi, H.A. — Amirkabir Univ. of Tech
Menhaj, Mohammad Bagher — Amirkabir Univ. of Tech
Ebenbauer, Christian — Univ. of Stuttgart
Allgöwer, Frank — Univ. of Stuttgart

14:50-15:10 TuB04.5

Experimental Flutter and Buffet Suppression of a Sectional Suspended-Bridge, pp. 3197-3202.

Zhao, Xiaowei — Univ. of Warwick
Gouder, Kevin — Imperial Coll. London
Limebeer, David — Univ. of Oxford
Graham, J Michael R — Imperial Coll. London

15:10-15:30 TuB04.6

Multiple Access Gaussian Channels with Feedback, pp. 3203-3208.

Freudenberg, James S. — Univ. of Michigan
Middleton, Richard H. — The Univ. of Newcastle

TuB05 Salon J

Distributed Control II (Regular Session)

Chair: Gayme, Dennice — The Johns Hopkins Univ.
Co-Chair: Dominguez-Garcia, Alejandro — Univ. of Illinois at Urbana-Champaign

13:30-13:50 TuB05.1

Minimizing Interactions in Mixed Oscillator Networks, pp. 3209-3215.

Grunberg, Theodore — The Johns Hopkins Univ
Gayme, Dennice — The Johns Hopkins Univ

13:50-14:10 TuB05.2

Distributed Control of Drinking Water Networks Using Population Dynamics: Barcelona Case Study, pp. 3216-3221.

Barreiro-Gomez, Julian — Univ. De Los Andes
Quijano, Nicanor — Univ. De Los Andes
Ocampo-Martinez, Carlos — Tech. Univ. of Catalonia (UPC)

14:10-14:30 TuB05.3

A Newton Algorithm for Distributed Semi-Definite Programs Using the Primal-Dual Interior-Point Method, pp. 3222-3227.

Gros, Sebastien — Chalmers Univ. of Tech

14:30-14:50 TuB05.4

Stochastic Distributed Predictive Control of Independent Systems with Coupling Constraints, pp. 3228-3233.

Perizzato, Andrea — Pol. di Milano
Farina, Marcello — Pol. di Milano
Scattolini, Riccardo — Pol. di Milano

14:50-15:10 TuB05.5

A Set Stabilization Approach for Circular Formations of Rigid Bodies, pp. 3234-3239.

El-Hawwary, Mohamed, I. — Univ. of Toronto

15:10-15:30 TuB05.6

Convergence Rate of a Distributed Algorithm for Matrix Scaling to Doubly Stochastic Form, pp. 3240-3245.

Dominguez-Garcia, Alejandro — Univ. Illinois,Urbana-Champaign
Hadjicostis, Christoforos — Univ. of Cyprus

TuB06 Salon 6

Electrical Power Systems III (Regular Session)

Chair: Bodson, Marc — Univ. of Utah
Co-Chair: Salapaka, Srinivasa — Univ. of Illinois

13:30-13:50 TuB06.1

Viability and Analysis of Implementing Only Voltage-Power Droop for Parallel Inverter Systems, pp. 3246-3251.

Salapaka, Srinivasa — Univ. of Illinois
Johnson, Brian — National Renewable Energy Lab.
Lundstrom, Blake — National Renewable Energy Lab.
Kim, Sangsun — Google Inc.
Collyer, Scott — Google Inc.
Salapaka, Murti V. — Univ. of Minnesota, Minneapolis

13:50-14:10 TuB06.2

Preventing Cascading Failures in Microgrids with One-Sided Support Vector Machines, pp. 3252-3258.

Wytock, Matt — Carnegie Mellon Univ
Salapaka, Srinivasa — Univ. of Illinois
Salapaka, Murti V. — Univ. of Minnesota, Minneapolis

14:10-14:30 TuB06.3

Variability and the Locational Marginal Value of Energy Storage, pp. 3259-3265.

Bose, Subhonmesh — California Inst. of Tech
Bitar, Eilyan — Cornell Univ

14:30-14:50 TuB06.4

Multi-Time-Scale Stability Analysis and Design Conditions of a VSC Terminal with DC Voltage Droop Control for HVDC Networks, pp. 3266-3271.

Chen, Yijing — The Lab. of Signals and Systems
Damm, Gilney — Evry Univ

Benchaib, Abdelkrim	Areva T&D PEM
Lamnabhi-Lagarrigue, Francoise	CNRS and EECI

14:50-15:10 TuB06.5

Almost Global Asymptotic Stability of a Constant Field Current Synchronous Machine Connected to an Infinite Bus, pp. 3272-3279.

Natarajan, Vivek	Tel Aviv Univ
Weiss, George	Tel Aviv Univ

15:10-15:30 TuB06.6

Cooperative Line-Flow Power Electronics Control for Transient Stabilization, pp. 3280-3285.

Cvetkovic, Milos	Carnegie Mellon Univ
Ilic, Marija	Carnegie Mellon Univ

TuB07 Salon 7

Automotive Control (Regular Session)

Chair: Horn, Martin	Graz Univ. of Tech.
Co-Chair: Sun, Zongxuan	Univ. of Minnesota

13:30-13:50 TuB07.1

A Model-Based Approach for Prediction-Based Interconnection of Dynamic Systems, pp. 3286-3291.

Stettinger, Georg	Graz Univ. of Tech
Horn, Martin	Graz Univ. of Tech
Benedikt, Martin	Virtual Vehicle Res. Center
Zehetner, Josef	AVL List GmbH

13:50-14:10 TuB07.2

Robust Position Tracking Control of a Camless Engine Valve Actuator with Time-Varying Reference Frequency (I), pp. 3292-3297.

Yoon, Yongsoon	Univ. of Minnesota
Yang, Meng	Univ. of Minnesota
Sun, Zongxuan	Univ. of Minnesota

14:10-14:30 TuB07.3

Robust Anti-Jerk Control for Electric Vehicles with Multi-Speed Transmission, pp. 3298-3303.

König, Daniel H.	TU Darmstadt
Riemann, Bernd	TU Darmstadt
Böhning, Marc	Zeppelin Power Systems GmbH & Co. KG
Syrnik, Robert	Continental Automotive GmbH
Rinderknecht, Stephan	TU Darmstadt

14:30-14:50 TuB07.4

A Dual Decomposition Approach to Complete Energy Management for a Heavy-Duty Vehicle, pp. 3304-3309.

Romijn, T.C.J.	Eindhoven Univ. of Tech
Donkers, M.C.F.	Eindhoven Univ. of Tech
Kessels, J.T.B.A.	Eindhoven Univ. of Tech
Weiland, Siep	Eindhoven Univ. of Tech

14:50-15:10 TuB07.5

Energy and Power Management in a Series Hybrid Electric Vehicle Using Selective Evolutionary Generation (I), pp. 3310-3315.

Menezes, Amor A.	Univ. of California, Berkeley
Kolmanovsky, Ilya V.	Univ. of Michigan

15:10-15:30 TuB07.6

Control Design for an Automotive Turbine Rankine Cycle System Based on Nonlinear State Estimation, pp. 3316-3321.

Peralez, Johan	IFP Energies Nouvelles
Nadri, Madiha	Univ. Claude Bernard Lyon 1
Dufour, Pascal	Univ. Claude Bernard Lyon 1
Tona, Paolino	Ifp
Sciarretta, Antonio	Swiss Federal Inst. of Tech

TuB08 Salon 8

System Identification, Estimation and Probabilistic Robustness (Invited Session)

Chair: Pasik-Duncan, Bozenna	Univ. of Kansas
Co-Chair: Ljung, Lennart	Linkoping Univ.
Organizer: Pasik-Duncan, Bozenna	Univ. of Kansas
Organizer: Ljung, Lennart	Linkoping Univ.

13:30-13:50 TuB08.1

A Weighted Least-Squares Method for Parameter Estimation in Structured Models (I), pp. 3322-3327.

Galrinho, Miguel	KTH Royal Inst. of Tech
Rojas, Cristian R.	KTH Royal Inst. of Tech
Hjalmarsson, Håkan	KTH Royal Inst. of Tech

13:50-14:10 TuB08.2

Identification of Wiener Systems with Process Noise Is a Nonlinear Errors-In-Variables Problem (I), pp. 3328-3333.

Wahlberg, Bo	KTH Royal Inst. of Tech
Welsh, James S.	Univ. of Newcastle
Ljung, Lennart	Linkoping Univ

14:10-14:30 TuB08.3

Direct and Indirect Continuous-Time Identification in Dynamic Networks (I), pp. 3334-3339.

Dankers, Arne	Delft Univ. of Tech
Van den Hof, Paul M.J.	Eindhoven Univ. of Tech
Bombois, Xavier	Delft Univ. of Tech

14:30-14:50 TuB08.4

Stochastic Embedding Revisited: A Modern Interpretation (I), pp. 3340-3345.

Ljung, Lennart	Linkoping Univ
Goodwin, Graham C.	Univ. of Newcastle
Agüero, Juan C.	Univ. of Newcastle

14:50-15:10 TuB08.5

On the Design of Multiple Kernels for Nonparametric Linear System Identification (I), pp. 3346-3351.

Chiuso, Alessandro	Univ. di Padova
Chen, Tianshi	Linköping Univ
Ljung, Lennart	Linkoping Univ
Pillonetto, Gianluigi	Univ. di Padova

15:10-15:30 TuB08.6

Strong Consistency of the Sign-Perturbed Sums Method, pp. 3352-3357.

Csaji, Balazs	MTA SZTAKI
Campi, M. C.	Univ. di Brescia
Weyer, Erik	Univ. of Melbourne

TuB09 Salon 9

Estimation V (Regular Session)

Chair: Burke, James V. — Univ. of Washington
Co-Chair: Zhou, Tong — Tsinghua Univ.

13:30-13:50 TuB09.1

Optimal Distributed Observer Design for Networked Dynamical Systems, pp. 3358-3363.

Zhou, Tong — Tsinghua Univ.

13:50-14:10 TuB09.2

Fast Inertia Property Estimation Via Convex Optimization for the Asteroid Redirect Mission, pp. 3364-3369.

Lee, Unsik — Univ. of Washington
Besson, David — Univ. of Washington
Mesbahi, Mehran — Univ. of Washington

14:10-14:30 TuB09.3

Minimum-Energy Distributed Filtering, pp. 3370-3375.

Zamani, Mohammad — Univ. of New South Wales ADFA
Ugrinovskii, Valery — Univ. of New South Wales ADFA

14:30-14:50 TuB09.4

IMU-Based Vehicle Load Estimation under Normal Driving Conditions, pp. 3376-3381.

Sadeghi Reineh, Maryam — Linköping Univ
Enqvist, Martin — Linköping Univ
Gustafsson, Fredrik — Linkoping Univ

14:50-15:10 TuB09.5

Smoothing Dynamic Systems with State-Dependent Covariance Matrices, pp. 3382-3387.

Aravkin, Aleksandr Y. — IBM T.J. Watson Res. Center
Burke, James V. — Univ. of Washington

15:10-15:30 TuB09.6

Generalized Innovation and Inference Algorithms for Hidden Mode Switched Linear Stochastic Systems with Unknown Inputs, pp. 3388-3394.

Yong, Sze Zheng — Massachusetts Inst. of Tech
Zhu, Minghui — Pennsylvania State Univ
Frazzoli, Emilio — Massachusetts Inst. of Tech

TuB10 Salon 10

Stochastic Systems II (Regular Session)

Chair: Zamani, Majid — Tech. Univ. München
Co-Chair: Maginnis, Peter A. — Univ. Illinois, Urbana Champaign

13:30-13:50 TuB10.1

Compositional Approximations of Interconnected Stochastic Hybrid Systems, pp. 3395-3400.

Zamani, Majid — Tech. Univ. München

13:50-14:10 TuB10.2

Exact Simulation of Continuous Time Markov Jump Processes with Anticorrelated Variance Reduced Monte Carlo Estimation, pp. 3401-3407.

Maginnis, Peter A. — Univ. Illinois, Urbana Champaign
West, Matthew — Univ. Illinois, Urbana Champaign
Dullerud, Geir E. — Univ. Illinois, Urbana Champaign

14:10-14:30 TuB10.3

Stochastic Bounded Confidence Opinion Dynamics, pp. 3408-3413.

Baccelli, Francois — Inria
Chatterjee, Avhishek — The Univ. of Texas at Austin
Vishwanath, Sriram — The Univ. of Texas at Austin

14:30-14:50 TuB10.4

Mean Field Limits by Population Acceleration, pp. 3414-3419.

Honnappa, Harsha — Univ. of Southern California
Jain, Rahul — Univ. of Southern California
Ward, Amy — Usc

14:50-15:10 TuB10.5

Stochastic Numerical Analysis for Brownian Motion on SO(3), pp. 3420-3425.

Piggott, Marc James — Univ. of New South Wales
Solo, Victor — Univ. of New South Wales

15:10-15:30 TuB10.6

Sampling Multidimensional Wiener Processes, pp. 3426-3431.

Nar, Kamil — Univ. Illinois, Urbana Champaign
Basar, Tamer — Univ. Illinois, Urbana Champaign

TuB11 Georgia 1

Extremum Seeking II (Regular Session)

Chair: Guay, Martin — Queen's Univ.
Co-Chair: Oliveira, Tiago Roux — State Univ. of Rio de Janeiro

13:30-13:50 TuB11.1

Fast Extremum Seeking for Optimization of Brake Specific Fuel Consumption, pp. 3432-3437.

Sharafi, Jalil — The Univ. of Melbourne
Hager, Simon — ETH Zurich
Moase, William H. — The Univ. of Melbourne
Dennis, Peter — The Univ. of Melbourne
Brear, Michael — The Univ. of Melbourne
Manzie, Chris — The Univ. of Melbourne

13:50-14:10 TuB11.2

A Utopic Multi-Objective Extremum-Seeking Controller Design Technique, pp. 3438-3443.

Guay, Martin — Queen's Univ
Dochain, Denis — Univ. Catholique De Louvain

14:10-14:30 TuB11.3

Plasma Impedance Matching Using Fractional Order Sliding Mode Based Extremum Seeking Control, pp. 3444-3449.

Li, Zhuo — Univ. of California, Merced
Yin, Chun — Univ. of California, Merced
Chen, Yang-Quan — Univ. of California, Merced

14:30-14:50 TuB11.4

Extremum-Seeking Control of Distributed Systems Using Consensus Estimation, pp. 3450-3455.

Dougherty, Sean — Queen's Univ
Guay, Martin — Queen's Univ

14:50-15:10 TuB11.5

Monitoring Function Based Extremum Seeking Control for Uncertain Relative Degrees with Light Source Seeking Experiments, pp. 3456-3462.

Oliveira, Tiago Roux — State Univ. of Rio De Janeiro
Aminde, Nerito Oliveira — Federal Univ. of Rio De Janeiro
Hsu, Liu — COPPE/UFRJ

15:10-15:30 TuB11.6

A Hybrid Seeking Approach for Robust Learning in Multi-Agent Systems, pp. 3463-3468.

Poveda, J. Iván — Univ. of California, Santa Barbara
Teel, Andrew R. — Univ. of California, Santa Barbara

TuB12 Georgia 2

Mean Field Games II (Invited Session)

Chair: Bauso, Dario — Univ. di Palermo
Co-Chair: Gomes, Diogo — King Abdullah Univ. of Science and Tech.

13:30-13:50 TuB12.1

Density Flow Over Networks: A Mean-Field Game Theoretic Approach (I), pp. 3469-3474.

Bauso, Dario — Univ. di Palermo
Zhang, Xuan — Univ. of Oxford
Papachristodoulou, Antonis — Univ. of Oxford

13:50-14:10 TuB12.2

Opinion Dynamics, Stubbornness and Mean--Field Games (I), pp. 3475-3480.

Bauso, Dario — Univ. di Palermo
Pesenti, Raffaele — Univ. of Venice - Ca' Foscari

14:10-14:30 TuB12.3

A Stochastic Maximum Principle for Risk-Sensitive Mean-Field Type Control (I), pp. 3481-3486.

Djehiche, Boualem — The Royal Inst. of Tech
Tembine, Hamidou — Supelec
Tempone, Raul — Kaust

14:30-14:50 TuB12.4

A Coupled Oscillators-Based Control Architecture for Locomotory Gaits (I), pp. 3487-3492.

Taghvaei, Amirhossein — Univ. Illinois, Urbana-Champaign
Hutchinson, Seth — Univ. Illinois, Urbana-Champaign
Mehta, Prashant G. — Univ. Illinois, Urbana-Champaign

14:50-15:10 TuB12.5

A Class of Collective Target Tracking Problems in Energy Systems: Cooperative versus Non-Cooperative Mean Field Control Solutions (I), pp. 3493-3498.

Kizilkale, Arman C. — Ec. Pol. De Montreal
Malhame, Roland P. — Ec. Pol. De Montreal

15:10-15:30 TuB12.6

The Importance of Exploration in Online Marketplaces (I), pp. 3499-3504.

Banerjee, Siddhartha — Stanford Univ
Zhou, Zhengyuan — Stanford Univ
Johari, Ramesh — Stanford Univ

TuB13 Atrium 1

Nonlinear Predictive Control (Regular Session)

Chair: Copp, David A. — Univ. of California, Santa Barbara
Co-Chair: He, Defeng — Zhejiang Univ. of Tech.

13:30-13:50 TuB13.1

Lyapunov-Based Dual-Mode Method for Economic Optimization Model Predictive Control, pp. 3505-3510.

He, Defeng — Zhejiang Univ. of Tech
Yu, Shiming — Zhejiang Univ. of Tech
Song, Xiulan — Zhejiang Univ. of Tech

13:50-14:10 TuB13.2

Nonlinear Output-Feedback Model Predictive Control with Moving Horizon Estimation, pp. 3511-3517.

Copp, David A. — Univ. of California, Santa Barbara
Hespanha, Joao P. — Univ. of California, Santa Barbara

14:10-14:30 TuB13.3

Optimistic Planning with a Limited Number of Action Switches for Near-Optimal Nonlinear Control, pp. 3518-3523.

Mathe, Koppany — Tech. Univ. of Cluj-Napoca
Busoniu, Lucian — Tech. Univ. of Cluj-Napoca
Munos, Rémi — INRIA Lille-Nord Europe
De Schutter, Bart — Delft Univ. of Tech

14:30-14:50 TuB13.4

Dynamic Modelling and Control of a Micro-CHP System with Stirling Engine, pp. 3524-3529.

Saida, Flila — Univ. De Picardie Jules Verne
Ahmed, Rachid — Univ. De Picardie Jules Verne

14:50-15:10 TuB13.5

Non-Linear Moving Horizon State Estimation and Control for the Superfluid Helium Cryogenic Circuit at the Large Hadron Collider, pp. 3530-3535.

Noga, Rafal — Univ. of Valladolid
de Prada, Cesar — Univ. of Valladolid
Ohtsuka, Toshiyuki — Kyoto Univ
Blanco, Enrique — CERN, European Center for Nuclear Res
Casas, Juan — CERN, European Center for Nuclear Res

15:10-15:30 TuB13.6

Robust Constrained Model Predictive Control Using Contraction Theory, pp. 3536-3541.

Liu, Xiaotao — Univ. of Victoria
Shi, Yang — Univ. of Victoria
Constantinescu, Daniela — Univ. of Victoria

TuB14 Olympic 1

Output-Based Event-Triggered Control (Invited Session)

Chair: Heemels, W.P.M.H. — Eindhoven Univ. of Tech.
Co-Chair: Hirche, Sandra — Tech. Univ. München
Organizer: Heemels, W.P.M.H. — Eindhoven Univ. of Tech.
Organizer: Hirche, Sandra — Tech. Univ. München
Organizer: Johansson, Karl Henrik — Royal Inst. of Tech.

13:30-13:50 TuB14.1

Event Triggering in Vehicular Networked Systems with Limited Bandwidth and Deep Fading (I), pp. 3542-3547.

Hu, Bin — Univ. of Notre Dame
Lemmon, Michael — Univ. of Notre Dame

13:50-14:10 TuB14.2

Event-Triggered Projected Luenberger Observer for Linear Systems under Sparse Sensor Attacks (I), pp. 3548-3553.

Shoukry, Yasser — Univ. of California, Los Angeles
Tabuada, Paulo — Univ. of California, Los Angeles

14:10-14:30 TuB14.3

Distributed Event-Triggered Control for Output Synchronization of Dynamical Networks with Non-Identical Nodes (I), pp. 3554-3559.

Liu, Tao	The Univ. of Hong Kong
Cao, Ming	Univ. of Groningen
Hill, David J.	The Univ. of Sydney

14:30-14:50 TuB14.4

Co-Design of Output Feedback Laws and Event-Triggering Conditions for Linear Systems (I), pp. 3560-3565.

Abdelrahim, Mahmoud	Univ. De Lorraine
Postoyan, Romain	Cnrs-Cran
Daafouz, Jamal	Univ. De Lorraine, CRAN, CNRS
Nesic, Dragan	Univ. of Melbourne

14:50-15:10 TuB14.5

Event-Triggered Output Feedback Stabilization of Networked Systems with External Disturbance (I), pp. 3566-3571.

Garcia, Eloy	Infoscitex Corp
Antsaklis, Panos J.	Univ. of Notre Dame

15:10-15:30 TuB14.6

Output Synchronization of Heterogeneous LTI Plants with Event-Triggered Communication (I), pp. 3572-3577.

Almeida, João	Inst. Superior Técnico
Silvestre, Carlos	Univ. of Macau
Pascoal, Antonio Manuel	Inst. Superior Tecnico

TuB15 Atrium 2

Interative Learning Control and Optimization (Regular Session)

Chair: Schoellig, Angela	Univ. of Toronto
Co-Chair: Bolder, Joost	Eindhoven Univ. of Tech.

13:30-13:50 TuB15.1

Model-Free Adaptive Learning Solutions for Discrete-Time Dynamic Graphical Games, pp. 3578-3583.

Abouheaf, Mohammed	King Fahd Univ. of Petroleum & Mineral (KFUPM)
Lewis, Frank L.	Univ. of Texas at Arlington
Mahmoud, Magdi S.	King Fahd Univ. for Petroleum and Minerals

13:50-14:10 TuB15.2

Aspects in Inferential Iterative Learning Control: A 2D Systems Analysis, pp. 3584-3589.

Bolder, Joost	Eindhoven Univ. of Tech
Oomen, Tom	Eindhoven Univ. of Tech
Steinbuch, Maarten	Eindhoven Univ. of Tech

14:10-14:30 TuB15.3

Design of Norm-Optimal Iterative Learning Controllers: The Effect of an Iteration-Domain Kalman Filter for Disturbance Estimation, pp. 3590-3596.

Degen, Nicolas	ETH Zurich
Schoellig, Angela Petra	Univ. of Toronto

14:30-14:50 TuB15.4

An Actor Critic Algorithm Based on Grassmanian Search, pp. 3597-3602.

K.J., Prabuchandran	Indian Inst. of Science, Bangalore
Bhatnagar, Shalabh	Indian Inst. of Science
Borkar, Vivek	Indian Inst. of Tech

14:50-15:10 TuB15.5

Adaptive Dynamic Programming for Nonlinear Nonaffine Systems, pp. 3603-3608.

Bian, Tao	New York Univ
Jiang, Yu	New York Univ
Jiang, Zhong-Ping	New York Univ

15:10-15:30 TuB15.6

Control of a Gantry Crane: A Reach Control Approach, pp. 3609-3614.

Vukosavljev, Marijan	Univ. of Toronto
Broucke, Mireille E.	Univ. of Toronto

TuB16 Olympic 2

Model Reduction I (Regular Session)

Chair: Ionescu, Tudor C.	Univ. of Sheffield
Co-Chair: Sootla, Aivar	Imperial Coll. London

13:30-13:50 TuB16.1

On Projection-Based Model Reduction of Biochemical Networks Part I: The Deterministic Case, pp. 3615-3620.

Sootla, Aivar	Imperial Coll. London
Anderson, James	Univ. of Oxford

13:50-14:10 TuB16.2

On Projection-Based Model Reduction of Biochemical Networks Part II: The Stochastic Case, pp. 3621-3626.

Sootla, Aivar	Imperial Coll. London
Anderson, James	Univ. of Oxford

14:10-14:30 TuB16.3

Reduced-Order Fuzzy Modeling for Nonlinear Switched Systems, pp. 3627-3630.

Su, Xiaojie	Chongqing Univ
Shi, Peng	Univ. of Adelaide
Wu, Ligang	Harbin Inst. of Tech
Zhang, Lixian	Harbin Inst. of Tech
Zhao, Yuxin	Harbin Inst. of Tech

14:30-14:50 TuB16.4

Model Reduction by Moment Matching for ZIP Systems, pp. 3631-3636.

Padoan, Alberto	Imperial Coll. London
Astolfi, Alessandro	Imperial Coll. & Univ. of Rome

14:50-15:10 TuB16.5

Approximate Regularization Path for Nuclear Norm Based H2 Model Reduction, pp. 3637-3641.

Blomberg, Niclas	KTH Royal Inst. of Tech
Rojas, Cristian R.	KTH Royal Inst. of Tech
Wahlberg, Bo	KTH Royal Inst. of Tech

15:10-15:30 TuB16.6

Model Reduction by Moment Matching for Nonlinear Time-Delay Systems, pp. 3642-3647.

Scarciotti, Giordano	Imperial Coll. London
Astolfi, Alessandro	Imperial Coll. & Univ. of Rome

TuB17 Atrium 3

Network Analysis and Control II (Regular Session)

Chair: Savla, Ketan	Univ. of Southern California
Co-Chair: Como, Giacomo	Lund Univ.

13:30-13:50 TuB17.1

Robustness of Large-Scale Stochastic Matrices to Localized Perturbations, pp. 3648-3653.

Como, Giacomo	Lund Univ
Fagnani, Fabio	Pol. di Torino

13:50-14:10 TuB17.2

Spatial Decay Analysis in Interconnected Dynamical Systems Using Vector Lyapunov Functions, pp. 3654-3660.

Deroo, Frederik	Tech. Univ. München
Hirche, Sandra	Tech. Univ. München
Anderson, Brian D.O.	Australian National Univ

14:10-14:30 TuB17.3

On the Strengths of Connectivity and Robustness in General Random Intersection Graphs, pp. 3661-3668.

Zhao, Jun	Carnegie Mellon Univ
Yagan, Osman	Carnegie Mellon Univ
Gligor, Virgil	Carnegie Mellon Univ

14:30-14:50 TuB17.4

Robust Scheduling in a Flexible Fork-Join Network, pp. 3669-3676.

Pedarsani, Ramtin	Univ. of California, Berkeley
Walrand, Jean	Univ. of California, Berkeley
Zhong, Yuan	Columbia Univ

14:50-15:10 TuB17.5

Bounded Synchronization in Resistive Multi-Terminal VSC-HVDC Transmission Systems, pp. 3677-3682.

Dòria-Cerezo, Arnau	Univ. Pol. De Catalunya
Olm, Josep M.	Univ. Pol. De Catalunya
di Bernardo, Mario	Univ. of Naples Federico II
Quaglia, Massimiliano	Univ. of Naples Federico II
Nuño, Emmanuel	Univ. of Guadalajara

15:10-15:30 TuB17.6

On the Control of Power Consumption in Server Farms Via Heavy Traffic Approximation, pp. 3683-3688.

Leite, Saul de Castro	Federal Univ. of Juiz De Fora
Fragoso, Marcelo	Lncc / Mct

TuB18 Olympic 3

Cooperative Control II (Regular Session)

Chair: Bechlioulis, Charalampos	National Tech. Univ. of Athens
Co-Chair: Morarescu, Irinel-Constantin	Univ. de Lorraine

13:30-13:50 TuB18.1

Robust Control of Large Vehicular Platoons with Prescribed Transient and Steady State Performance, pp. 3689-3694.

Bechlioulis, Charalampos	National Tech. Univ. of Athens
Dimarogonas, Dimos V.	Royal Inst. of Tech
Kyriakopoulos, Kostas J.	National Tech. Univ. of Athens

13:50-14:10 TuB18.2

Distributed Formation Tracking Control of Multiple Mobile Robotic Systems, pp. 3695-3700.

Chen, Chunyu	Univ. of Texas-Pan American
Xing, Yifan	Utpa
Djapic, Vladimir	Nurc
Dong, Wenjie	The Univ. of Texas -Pan American

14:10-14:30 TuB18.3

Escaping Local Optima in a Class of Multi-Agent Distributed Optimization Problems: A Boosting Function Approach, pp. 3701-3706.

Sun, Xinmiao	Boston Univ
Cassandras, Christos G.	Boston Univ
Gokbayrak, Kagan	Bilkent Univ

14:30-14:50 TuB18.4

Stability of a Distributed Algorithm for Solving Linear Algebraic Equations, pp. 3707-3712.

Liu, Ji	Univ. Illinois, Urbana-Champaign
Morse, A. Stephen	Yale Univ
Nedich, Angelia	Univ. Illinois, Urbana-Champaign
Basar, Tamer	Univ. Illinois, Urbana-Champaign

14:50-15:10 TuB18.5

Coordination in Networks of Linear Impulsive Agents, pp. 3713-3718.

Morarescu, Irinel-Constantin	Cran Cnrs Umr 7039 - Ul
Martin, Samuel	Univ. De Lorraine
Girard, Antoine	Univ. Joseph Fourier

15:10-15:30 TuB18.6

Trajectory Optimization for Multi-Agent Persistent Monitoring in Two-Dimensional Spaces, pp. 3719-3724.

Lin, Xuchao	Boston Univ
Cassandras, Christos G.	Boston Univ

TuB19 Plaza 1

Motion Planning (Regular Session)

Chair: Cowlagi, Raghvendra V.	Worcester Pol. Inst.
Co-Chair: Kawski, Matthias	Arizona State Univ.

13:30-13:50 TuB19.1

Trailer-Like Leader Following Trajectory Planning, pp. 3725-3730.

Ótão Pereira, Pedro Miguel	Inst. Superior Técnico
Cunha, Rita	Inst. Superior Técnico
Cabecinhas, David	Inst. Superior Tecnico
Silvestre, Carlos	Univ. of Macau
Oliveira, Paulo Jorge	Inst. Superior Técnico

13:50-14:10 TuB19.2

Minimal Complexity Sinusoidal Controls for Path Planning, pp. 3731-3736.

Kawski, Matthias	Arizona State Univ
Gauthier, Jean-Paul	Université de Toulon

14:10-14:30 TuB19.3

Embedding Nonlinear Optimization in RRT for Optimal Kinodynamic Planning*, pp. 3737-3744.

Stoneman, Samantha	German Aerospace Center (DLR)
Lampariello, Roberto	German Aerospace Center (DLR)

14:30-14:50 TuB19.4

Multiresolution Path-Planning with Traversal Costs Based on Time-Varying Spatial Fields, pp. 3745-3750.

Cowlagi, Raghvendra V.	Worcester Pol. Inst

14:50-15:10 TuB19.5

On F-Invariant and Attractive Affine Varieties for Continuous-Time Polynomial Systems: The Case of Robot Motion Planning, pp. 3751-3756.

Possieri, Corrado — Univ. Di Roma Tor Vergata
Tornambe, Antonio — Univ. Di Roma Tor Vergata

TuB20 Plaza 2

Networked Control Systems: Consensus, Estimation and Security (Invited Session)

Chair: Mo, Yilin — California Inst. of Tech.
Co-Chair: Shi, Ling — Hong Kong Univ. of Sci. and Tech.
Organizer: Mo, Yilin — California Inst. of Tech.
Organizer: Shi, Ling — Hong Kong Univ. of Sci. and Tech.
Organizer: Sinopoli, Bruno — Carnegie Mellon Univ.

13:30-13:50 TuB20.1

Detecting Integrity Attacks on Control Systems Using Robust Physical Watermarking (I), pp. 3757-3764.

Weerakkody, Sean — Carnegie Mellon Univ
Mo, Yilin — California Inst. of Tech
Sinopoli, Bruno — Carnegie Mellon Univ

13:50-14:10 TuB20.2

Optimal DoS Attack on Bayesian Quickest Change Detection (I), pp. 3765-3770.

Ren, Xiaoqiang — Hong Kong Univ. of Sci. and Tech.
Mo, Yilin — California Inst. of Tech
Shi, Ling — Hong Kong Univ. of Sci. and Tech.

14:10-14:30 TuB20.3

Data Rate for Quantized Consensus of High-Order Multi-Agent Systems with Poles on the Unit Circle (I), pp. 3771-3776.

Qiu, Zhirong — Nanyang Tech. Univ
Xie, Lihua — Nanyang Tech. Univ
Hong, Yiguang — Chinese Acad. of Sciences

14:30-14:50 TuB20.4

Opportunistic Sensor Scheduling in Wireless Control Systems (I), pp. 3777-3782.

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

14:50-15:10 TuB20.5

Probabilistic Convergence of Kalman Filtering with Nonstationary Intermittent Observations (I), pp. 3783-3788.

Wu, Junfeng — Royal Inst. of Tech. (KTH)
Shi, Guodong — The Australian National Univ
Johansson, Karl H. — Royal Inst. of Tech. (KTH)

15:10-15:30 TuB20.6

Consensus Based Bisection Approach for Economic Power Dispatch (I), pp. 3789-3794.

Xing, Hao — Zhejiang Univ
Mou, Yuting — Zhejiang Univ
Fu, Minyue — Univ. of Newcastle
Lin, Zhiyun — Zhejiang Univ

TuB21 Plaza 3

Biological Systems II (Regular Session)

Chair: Del Vecchio, Domitilla — Massachusetts Inst. of Tech.
Co-Chair: Freudenberg, James S. — Univ. of Michigan

13:30-13:50 TuB21.1

Human Control Strategies in Pursuit Tracking with a Disturbance Input, pp. 3795-3800.

Yu, Bo — Univ. of Michigan, Ann Arbor
Gillespie, Brent — Univ. of Michigan
Freudenberg, James S. — Univ. of Michigan
Cook, Jeffrey A. — Univ. of Michigan

13:50-14:10 TuB21.2

Direction Following Control of Planar Snake Robots Using Virtual Holonomic Constraints, pp. 3801-3808.

Mohammadi, Alireza — Univ. of Toronto
Rezapour, Ehsan — Norwegian Univ. of Science and Tech
Maggiore, Manfredi — Univ. of Toronto
Pettersen, Kristin Y. — Norwegian Univ. of Science and Tech

14:10-14:30 TuB21.3

Delayed Evolutionary Game Dynamics Wit Non-Uniform Interaction in Two Communities, pp. 3809-3814.

Ben Khalifa, Nesrine — Univ. of Avignon
El-Azouzi, Rachid — Univ. D'avignon
Hayel, Yezekael — Univ. of Avignon

14:30-14:50 TuB21.4

Economic Optimization Based on Nonlinear Parametric GPC for a Wastewater Treatment Plant, pp. 3815-3820.

El bahja, Hicham — Univ. De Salamanca
Revollar, Silvana — Univ. Simón Bolívar
Vega, Pastora — Univ. of Salamanca

14:50-15:10 TuB21.5

Analyzing the Effect of an Integrate and Fire Encoder and Decoder in Feedback, pp. 3821-3828.

Saxena, Shreya — Massachusetts Inst. of Tech
Dahleh, Munther A. — Massachusetts Inst. of Tech

15:10-15:30 TuB21.6

Mitigation of Resource Competition in Synthetic Genetic Circuits through Feedback Regulation, pp. 3829-3834.

Hamadeh, Abdullah Omar — Massachusetts Inst. of Tech
Del Vecchio, Domitilla — Massachusetts Inst. of Tech

TuB22 Salon D and E

Differential Analysis of Nonlinear Systems (Tutorial Session)

Chair: Sepulchre, Rodolphe J. — Univ. of Cambridge
Co-Chair: Forni, Fulvio — Univ. of Liège
Organizer: Sepulchre, Rodolphe J. — Univ. of Cambridge
Organizer: Forni, Fulvio — Univ. of Liège

13:30-14:10 TuB22.1

Contraction Methods for Nonlinear Systems: A Brief Introduction and Some Open Problems (I), pp. 3835-3847.

Aminzare, Zahra — Rutgers Univ
Sontag, Eduardo D. — Rutgers Univ

14:10-14:50 TuB22.2

Differential Analysis of Nonlinear Systems: Revisiting the Pendulum Example (I), pp. 3848-3859.

Forni, Fulvio — Univ. of Liège
Sepulchre, Rodolphe J. — Univ. of Cambridge

14:50-15:30 TuB22.3

*An Introduction to Horizontal Contraction and Differential Positivity (I)**.

Forni, Fulvio — Univ. of Liège
Sepulchre, Rodolphe J. — Univ. of Cambridge

TuC01 — Salon F

Quantized Systems (Regular Session)

Chair: Tarraf, Danielle C. — The Johns Hopkins Univ.
Co-Chair: Basin, Michael V. — Autonomous Univ. of Nuevo Leon

16:00-16:20 TuC01.1

Design and Analysis of Distributed Averaging with Quantized Communication, pp. 3860-3865.

El Chamie, Mahmoud — INRIA - Sophia Antipolis Méditerranée
Liu, Ji — Univ. of Illinois at Urbana-Champaign
Basar, Tamer — Univ. of Illinois, Urbana-Champaign

16:20-16:40 TuC01.2

Quantized Distributed Load Balancing with Capacity Constraints, pp. 3866-3871.

Gravelle, Evan — Ucsd
Martinez, Sonia — Univ. of California at San Diego

16:40-17:00 TuC01.3

Receding Horizon Control and Scheduling of Quantized Control Systems with Communication Constraints, pp. 3872-3877.

Zou, Yuanyuan — East China Univ. of Science & Tech
Niu, Yugang — East China Univ. of Science & Tech
Li, Shaoyuan — Shanghai Jiao Tong Univ
Li, Dewei — Shanghai Jiao Tong Univ

17:00-17:20 TuC01.4

Quantized Control for Nonlinear Markovian Jump Systems, pp. 3878-3883.

Wu, Ligang — Harbin Inst. of Tech
Shi, Peng — Univ. of Adelaide
Li, Fanbiao — The Univ. of Adelaide
Basin, Michael V. — Autonomous Univ. of Nuevo Leon
Zhao, Yuxin — Coll. of Automation, Harbin Engineering Univ

17:20-17:40 TuC01.5

On Finite Memory Observability of a Class of Systems Over Finite Alphabets with Linear Dynamics, pp. 3884-3891.

Fan, Donglei — The Johns Hopkins Univ
Tarraf, Danielle C. — The Johns Hopkins Univ

17:40-18:00 TuC01.6

Output Feedback Stabilization of Switched Linear Systems with Limited Information, pp. 3892-3897.

Wakaiki, Masashi — Kyoto Univ
Yamamoto, Yutaka — Kyoto Univ

TuC02 — Salon G

Stability of Nonlinear Systems II (Regular Session)

Chair: Efimov, Denis — INRIA - LNE
Co-Chair: Alexandridis, Antonio — Univ. of Patras

16:00-16:20 TuC02.1

Uniform Stability Analysis for Time-Varying Systems Applying Homogeneity, pp. 3898-3902.

Ríos, Héctor — National Autonomous Univ. of Mexico
Efimov, Denis — Inria - Lne
Fridman, Leonid M. — National Autonomous Univ. of Mexico
Moreno, Jaime A. — National Autonomous Univ. of Mexico
Perruquetti, Wilfrid — Ec. Centrale De Lille

16:20-16:40 TuC02.2

Stability of Infinite-Horizon Optimal Control with Discounted Cost, pp. 3903-3908.

Postoyan, Romain — Cnrs-Cran
Busoniu, Lucian — Tech. Univ. of Cluj-Napoca
Nesic, Dragan — Univ. of Melbourne
Daafouz, Jamal — Univ. De Lorraine, CRAN, CNRS

16:40-17:00 TuC02.3

Nonlinear Analysis of a Grid-Connected Photovoltaic/dc-Load System Driven by Local Current-Mode Controllers, pp. 3909-3914.

Krommydas, Konstantinos — Univ. of Patras
Alexandridis, Antonio — Univ. of Patras

17:00-17:20 TuC02.4

On Necessary Conditions of Instability and Design of Destabilizing Controls (I), pp. 3915-3917.

Efimov, Denis — Inria - Lne
Perruquetti, Wilfrid — Ec. Centrale De Lille
Petreczky, Mihaly — Ec. Des Mines De Douai

17:20-17:40 TuC02.5

A Complete and Convex Search for Discrete-Time Noncausal FIR Zames-Falb Multipliers, pp. 3918-3923.

Wang, Shuai — Univ. of Manchester
Heath, William Paul — Univ. of Manchester
Carrasco, Joaquin — Univ. of Manchester

17:40-18:00 TuC02.6

Stability Analysis of a Reduced Transcription-Translation Model of RNA Polymerase, pp. 3924-3929.

Belgacem, Ismail — INRIA Biocore
Grac, Edith — Inria
Ropers, Delphine — Inria
Gouze, Jean-Luc — Inria

TuC03 — Salon H

Piecewise Affine and Polytopic Systems (Regular Session)

Chair: Camlibel, M. Kanat — Univ. of Groningen
Co-Chair: Massioni, Paolo — INSA de Lyon

16:00-16:20 TuC03.1

Concurrent Learning Adaptive Identification of Piecewise Affine Systems, pp. 3930-3935.

Kersting, Stefan — Tech. Univ. München
Buss, Martin — Tech. Univ. Muenchen

16:20-16:40 TuC03.2

In-Block Controllability of Affine Systems on Polytopes, pp. 3936-3942.

Helwa, Mohamed K. — McGill Univ
Caines, Peter E. — McGill Univ

16:40-17:00 TuC03.3

Relaxed In-Block Controllability of Affine Systems on Polytopes, pp. 3943-3949.

Helwa, Mohamed K. — McGill Univ
Caines, Peter E. — McGill Univ

17:00-17:20 TuC03.4

Hierarchical Control of Piecewise Affine Hybrid Systems, pp. 3950-3956.

Helwa, Mohamed K. — McGill Univ
Caines, Peter E. — McGill Univ

17:20-17:40 TuC03.5

Autonomy, Forward Non-Zenoness and Quadratic Stability of Bimodal Higher-Order Piecewise Linear System, pp. 3957-3962.

Rapisarda, Paolo — Univ. of Southampton
Camlibel, M. Kanat — Univ. of Groningen

17:40-18:00 TuC03.6

A Piecewise-Affine Approach to the Analysis of Non-Linear Control Laws for Pneumatic Systems, pp. 3963-3969.

Ameur, Omar — Ec. Centrale Lyon - Univ. De Lyon
Massioni, Paolo — INSA De Lyon
Scorletti, Gerard — Ec. Centrale De Lyon
Brun, Xavier — Insa De Lyon
Smaoui, Mohamed — INSA De Lyon

TuC04 — Salon I

Linear Systems III (Regular Session)

Chair: Consolini, Luca — Univ. of Parma
Co-Chair: Pal, Debasattam — Indian Inst. of Tech. Guwahati

16:00-16:20 TuC04.1

Dissipativity Analysis of SISO Systems Using Nyquist-Plot-Compatible (NPC) Supply Rates, pp. 3970-3975.

Narahari, Santosh Kumar — IIT Guwahati
Pal, Debasattam — Indian Inst. of Tech. Bombay

16:20-16:40 TuC04.2

Some Critical Properties of Sign Inverting Control for LTI Systems with Multiple Delays 92047, pp. 3976-3981.

Gao, Qingbin — Univ. of Connecticut
Kammer, Ayhan Sebastian — Univ. of Connecticut
Zalluhoglu, Umut — Univ. of Connecticut
Olgac, Nejat — Univ. of Connecticut

16:40-17:00 TuC04.3

Safe and Efficient Operation of Centrifugal Compressors Using Linearized MPC, pp. 3982-3987.

Cortinovis, Andrea — ABB Corp. Res
Ferreau, Hans Joachim — ABB Corp. Res
Lewandowski, Daniel — ABB Corp. Res
Mercangoz, Mehmet — ABB Corp. Res

17:00-17:20 TuC04.4

Static Output Feedback of Equivariant Linear Systems with Applications to the Control of Interconnected Agents, pp. 3988-3993.

Consolini, Luca — Univ. of Parma
Tosques, Mario — Univ. of Parma

17:20-17:40 TuC04.5

A Bode-Like Integral for Discrete-Time Linear Periodic Systems, pp. 3994-3999.

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

17:40-18:00 TuC04.6

An Interpolation Approach with Stable Polynomial Interpolants Applied to the Simultaneous Stabilization of a Segment of Systems, pp. 4000-4005.

Fonte, Christophe — CNRS & Nancy-Univ
Meddeb, Houda — Univ. De Lorraine, CRAN
Zasadzinski, Michel — Univ. De Lorraine & CRAN

TuC05 — Salon J

Topics in Decentralized and Distributed Control (Invited Session)

Chair: Lessard, Laurent — Univ. of California, Berkeley
Co-Chair: Jovanovic, Mihailo — Univ. of Minnesota
Organizer: Lessard, Laurent — Univ. of California, Berkeley

16:00-16:20 TuC05.1

Distributed Control Subject to Delays Satisfying an H-Infinity Norm Bound (I), pp. 4006-4013.

Matni, Nikolai — California Inst. of Tech

16:20-16:40 TuC05.2

Individually Optimal Solutions to a Remote State Estimation Problem with Communication Costs (I), pp. 4014-4019.

Park, Shinkyu — Univ. of Maryland
Martins, Nuno C. — Univ. of Maryland

16:40-17:00 TuC05.3

Convex Risk Averse Control Design (I), pp. 4020-4025.

Dvijotham, Krishnamurthy — California Inst. of Tech
Todorov, Emanuel — Univ. of Washington
Fazel, Maryam — Univ. of Washington

17:00-17:20 TuC05.4

State-Space Solution to a Minimum-Entropy H-Infinity Optimal Control Problem with a Nested Information Constraint (I), pp. 4026-4031.

Lessard, Laurent — Univ. of California, Berkeley

17:20-17:40 TuC05.5

Stabilizing Decentralized Systems with Arbitrary Information (I), pp. 4032-4038.

Alavian, Alborz — Univ. of Maryland
Rotkowitz, Michael C. — Univ. of Maryland

17:40-18:00 TuC05.6

An ADMM Algorithm for Optimal Sensor and Actuator Selection (I), pp. 4039-4044.

Dhingra, Neil K — Univ. of Minnesota
Jovanovic, Mihailo — Univ. of Minnesota
Luo, Zhi-Quan — Univ. of Minnesota

TuC06 — Salon 6

Electrical Power Systems IV (Regular Session)

Chair: Kojima, Chiaki — Univ. of Tokyo
Co-Chair: Bitar, Eilyan — Cornell Univ.

16:00-16:20 TuC06.1

Demand Response in Smart Grids: Participants, Challenges, and a Taxonomy (I), pp. 4045-4052.

Hansen, Jacob	Aalborg Univ
Knudsen, Jesper	Aalborg Univ
Annaswamy, Anuradha	Massachusetts Inst. of Tech

16:20-16:40 TuC06.2

A Characterization of Energy Transfer in Swing Instability of Hierarchical Power Network Based on Mode Decomposition (I), pp. 4053-4058.

Kojima, Chiaki	Univ. of Tokyo
Hirata, Masato	Univ. of Tokyo
Tsumura, Koji	Univ. of Tokyo

16:40-17:00 TuC06.3

Characterizing Flexibility of an Aggregation of Deferrable Loads, pp. 4059-4064.

Hao, He	Univ. of California at Berkeley
Chen, Wei	The Hong Kong Univ. of Science and Tech

17:00-17:20 TuC06.4

Price of Uncertainty in Multistage Stochastic Power Dispatch, pp. 4065-4070.

Qin, Junjie	Stanford Univ
Rajagopal, Ram	Stanford Univ

17:20-17:40 TuC06.5

Sinusoidal Signal Estimation from a Noisy-Biased Measurement by an Enhanced PLL with Generalized Error Filtering, pp. 4071-4076.

Pin, Gilberto	Electrolux Professional S.p.A.
Karimi Ghartemani, Masoud	Mississippi State Univ
Chen, Boli	Imperial Coll. London
Parisini, Thomas	Imperial Coll. & Univ. of Trieste

17:40-18:00 TuC06.6

Design of Controllers in the Complex Domain, pp. 4077-4082.

Bodson, Marc	Univ. of Utah

TuC07 Salon 7

Advances in Vehicle Dynamics Control (Invited Session)

Chair: Mohammadpour, Javad	Univ. of Georgia
Co-Chair: Di Cairano, Stefano	Mitsubishi Electric Res. Lab.
Organizer: Onori, Simona	Clemson Univ.
Organizer: Mohammadpour, Javad	Univ. of Georgia
Organizer: Di Cairano, Stefano	Mitsubishi Electric Res. Lab.

16:00-16:20 TuC07.1

On Convergence and Robustness of the Extended Cooperative Cruise Control (I), pp. 4083-4088.

Montanaro, Umberto	Univ. of Naples Federico II
Tufo, Manuela	Univ. Del Sannio
Fiengo, Giovanni	Univ. Del Sannio
di Bernardo, Mario	Univ. of Naples Federico II
Santini, Stefania	Univ. of Naples Federico II

16:20-16:40 TuC07.2

Governor-Based Control for Rack-Wheel Coordination in Mechanically Decoupled Steering Systems (I), pp. 4089-4094.

Di Cairano, Stefano	Mitsubishi Electric Res. Lab
Zafeiropoulos, Spyridon	Georgia Tech

16:40-17:00 TuC07.3

Hierarchical Control of Overactuated Vehicles Via Sliding Mode Techniques (I), pp. 4095-4100.

Polesel, Mattia	Univ. of Pavia
Shyrokau, Barys	Nanyang Tech. Univ
Tanelli, Mara	Pol. Di Milano
Savitski, Dzmitry	Ilmenay Tech. Univ
Ivanov, Valentin	Ilmenay Tech. Univ
Ferrara, Antonella	Univ. of Pavia

17:00-17:20 TuC07.4

Transition Threshold Optimization for a Rule Based Automotive Cruise Control (I), pp. 4101-4106.

McDonough, Kevin	Univ. of Michigan
D'Amato, Anthony	Ford Motor Company
Mullen, Jon	Univ. of Kentucky
Petersen, Christopher	Univ. of Michigan
Kolmanovsky, Ilya V.	TUniv. of Michigan
Filev, Dimitre P.	Ford Motor Company

17:20-17:40 TuC07.5

Optimal Control of Connected Vehicle Systems (I), pp. 4107-4112.

Ge, Jin	Univ. of Michigan
Orosz, Gabor	Univ. of Michigan

17:40-18:00 TuC07.6

Robust LPV Control for Vehicle Steerability and Lateral Stability, pp. 4113-4118.

Doumiati, Moustapha	Univ. De Tech. De Compiègne
Victorino, Alessandro	Univ. De Tech. De Compiègne
Talj, Reine	Heudiasyc, UTC
Charara, Ali	Umr Cnrs 6599

TuC08 Salon 8

Identification for Control (Regular Session)

Chair: Sugimoto, Kenji	Nara Inst. of Science and Tech.
Co-Chair: Chowdhary, Girish	Oklahoma State Univ.

16:00-16:20 TuC08.1

Feedforward Learning Control for MIMO Plant with Finite Zeros: Parameterization of Numerator Polynomial Matrix, pp. 4119-4124.

Sugimoto, Kenji	Nara Inst. of Science and Tech
Mateo, Lorlynn Asuncion	Nara Inst. of Science and Tech

16:20-16:40 TuC08.2

Applications Oriented Input Design for Closed-Loop System Identification: A Graph-Theory Approach, pp. 4125-4130.

Ebadat, Afrooz	KTH Royal Inst. of Tech
Valenzuela, Patricio E.	KTH Royal Inst. of Tech
Rojas, Cristian R.	KTH Royal Inst. of Tech
Hjalmarsson, Håkan	KTH Royal Inst. of Tech
Wahlberg, Bo	KTH Royal Inst. of Tech

16:40-17:00 TuC08.3

Concurrent Learning Adaptive Control for Systems with Unknown Sign of Control Effectiveness, pp. 4131-4136.

Reish, Benjamin	Oklahoma State Univ
Chowdhary, Girish	Oklahoma State Univ

17:00-17:20 TuC08.4

The APA Based Time-Variant System Identification, pp. 4137-4141.

Semushin, Innokentiy	Ulyanovsk State Univ

17:20-17:40 TuC08.5

Semi-Receding Horizon Algorithm for "Sufficiently Exciting" MPC with Adaptive Search Step, pp. 4142-4147.

Zacekova, Eva	Czech Tech. Univ. in Prague,

Pcolka, Matej	Czech Tech. Univ. in Prague
Celikovsky, Sergej	Inst. of Information Theory and Automation
Sebek, Michael	Czech Tech. Univ. in Prague

17:40-18:00 TuC08.6

Learning a Nonlinear Controller from Data: Theory and Computation, pp. 4148-4153.

Fagiano, Lorenzo	ABB Switzerland Ltd
Novara, Carlo	Pol. Di Torino

TuC09 Salon 9

Filtering (Regular Session)

Chair: Georgiou, Tryphon T.	Univ. of Minnesota
Co-Chair: Monteriù, Andrea	Univ. Pol. delle Marche

16:00-16:20 TuC09.1

Iterative Unscented Statistically Linearized Filter for Nonlinear Gaussian Observation Models, pp. 4154-4159.

Murata, Masaya	NTT Communication Science Lab. NTT Corp
Nagano, Hidehisa	NTT Communication Science Lab. NTT Corp
Kashino, Kunio	NTT Communication Science Lab. NTT Corp

16:20-16:40 TuC09.2

Robust Estimation with Faulty Measurements Using Recursive-RANSAC, pp. 4160-4165.

Niedfeldt, Peter C.	Brigham Young Univ
Beard, Randal	Brigham Young Univ

16:40-17:00 TuC09.3

The Flatness of Power Spectral Zeros and Their Significance in Quadratic Estimation, pp. 4166-4171.

Chen, Yongxin	Univ. of Minnesota
Georgiou, Tryphon T.	Univ. of Minnesota

17:00-17:20 TuC09.4

A Detection-Estimation Approach to Filtering for Gaussian Systems with Intermittent Observations, pp. 4172-4177.

Fasano, Antonio	Univ. Campus Bio-Medico, Roma
Germani, Alfredo	Univ. Dell'Aquila
Monteriù, Andrea	Univ. Pol. Delle Marche

17:20-17:40 TuC09.5

Tracking of the UAV Trajectory on the Basis of Bearing-Only Observations, pp. 4178-4184.

Miller, Alexander	Inst. for Information Transmission Problems
Miller, Boris	Monash Univ

17:40-18:00 TuC09.6

Poisson's Equation in Nonlinear Filtering (I), pp. 4185-4190.

Laugesen, Richard S.	Univ. Illinois, Urbana-Champaign
Mehta, Prashant G.	Univ. Illinois, Urbana-Champaign
Meyn, Sean P.	Univ. of Florida
Raginsky, Maxim	Univ. Illinois, Urbana-Champaign

TuC10 Salon 10

Stochastic Systems III (Regular Session)

Chair: Yin, George	Wayne State Univ.
Co-Chair: Todorov, Marcos	LNCC

16:00-16:20 TuC10.1

Best-Response Search Algorithms for Non-Stationary Discrete Stochastic Optimization, pp. 4191-4196.

Namvar Gharehshiran, Omid	Univ. of British Columbia
Krishnamurthy, Vikram	Univ. of British Columbia
Yin, George	Wayne State Univ

16:20-16:40 TuC10.2

Sequence-Based LQG Control Over Stochastic Networks with Linear Integral Constraints, pp. 4197-4203.

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

16:40-17:00 TuC10.3

Simultaneous Input and State Smoothing for Linear Discrete-Time Stochastic Systems with Unknown Inputs, pp. 4204-4209.

Yong, Sze Zheng	Massachusetts Inst. of Tech
Zhu, Minghui	Pennsylvania State Univ
Frazzoli, Emilio	Massachusetts Inst. of Tech

17:00-17:20 TuC10.4

Saliency Based Control in Random Feature Networks, pp. 4210-4215.

Baillieul, John	Boston Univ
Kong, Zhaodan	Boston Univ

17:20-17:40 TuC10.5

Stochastic Bounded Real Lemma for Switched Stochastic Systems with Average Dwell Time, pp. 4216-4221.

Ma, Hongji	Beijing Univ. of Aeronautics and Astronautics
Jia, Yingmin	Beihang Univ
Du, Junping	Beijing Univ. of Posts and Telecommunications
Matsuno, Fumitoshi	Kyoto Univ

17:40-18:00 TuC10.6

New Methods for Mode-Independent Robust Control of Markov Jump Linear Systems, pp. 4222-4227.

Todorov, Marcos	Lncc
Fragoso, Marcelo	Lncc / Mct

TuC11 Georgia 1

Optimization Algorithms I (Regular Session)

Chair: Quijano, Nicanor	Univ. de los Andes
Co-Chair: Shanbhag, Uday V.	Pennsylvania State Univ.

16:00-16:20 TuC11.1

Data-Driven First-Order Methods for Misspecified Convex Optimization Problems: Global Convergence and Rate Estimates, pp. 4228-4233.

Shanbhag, Uday V.	Pennsylvania State Univ
Ahmadi, Hesam	Pennsylvania State Univ

16:20-16:40 TuC11.2

Douglas-Rachford Splitting: Complexity Estimates and Accelerated Variants, pp. 4234-4239.

Patrinos, Panagiotis	IMT Inst. for Advanced Studies Lucca
Stella, Lorenzo	IMT Inst. for Advanced Studies Lucca
Bemporad, Alberto	IMT Inst. for Advanced Studies Lucca

16:40-17:00 TuC11.3

A Primal-Dual Algorithm for Distributed Optimization, pp. 4240-4245.

Bianchi, Pascal	Telecom ParisTech - CNRS/LTCI
Hachem, Walid	Telecom ParisTech - CNRS/LTCI

17:00-17:20 TuC11.4

Output Invisible Control Allocation with Steady-State Input Optimization for Weakly Redundant Plants, pp. 4246-4253.

Cristofaro, Andrea	NTNU
Galeani, Sergio	Univ. Di Roma Tor Vergata

17:20-17:40 TuC11.5

A Proximal Alternating Minimization Method for L0-Regularized Nonlinear Optimization Problems: Application to State Estimation, pp. 4254-4259.

Patrascu, Andrei - Mihai	Univ. Pol. of Bucharest
Necoara, Ion	Univ. Pol. of Bucharest
Patrinos, Panagiotis	IMT Inst. for Advanced Studies Lucca

17:40-18:00 TuC11.6

Constrained Distributed Optimization Based on Population Dynamics, pp. 4260-4265.

Barreiro-Gomez, Julian	Univ. De Los Andes
Quijano, Nicanor	Univ. De Los Andes
Ocampo-Martinez, Carlos	Tech. Univ. of Catalonia (UPC)

TuC12 Georgia 2

Optimal Control I (Regular Session)

Chair: Casbeer, David W.	Air Force Res. Lab.
Co-Chair: Tsiotras, Panagiotis	Georgia Inst. of Tech.

16:00-16:20 TuC12.1

An Optimal Evader Strategy in a Two-Pursuer One-Evader Problem, pp. 4266-4271.

Sun, Wei	Georgia Inst. of Tech
Tsiotras, Panagiotis	Georgia Inst. of Tech

16:20-16:40 TuC12.2

An Asymmetric Version of the Two Car Pursuit-Evasion Game, pp. 4272-4277.

Exarchos, Ioannis	Georgia Inst. of Tech
Tsiotras, Panagiotis	Georgia Inst. of Tech

16:40-17:00 TuC12.3

Image Reconstruction Via Non-Isotropic Diffusion in Dubins/Reed–Shepp-Like Control Systems, pp. 4278-4283.

Prandi, Dario	École Pol
Boscain, Ugo V.	Cnrs
Gauthier, Jean-Paul	Univ
Remizov, Alexey	CMAP, École Pol

17:00-17:20 TuC12.4

Moving Ground Target Isolation by a UAV Using Predicted Observations, pp. 4284-4289.

Casbeer, David W.	Air Force Res. Lab
Kalyanam, Krishnamoorthy	Infoscitex Corp
Chandler, Phillip R.	Usaf
Pachter, Meir	AFIT

17:20-17:40 TuC12.5

An Engage or Retreat Differential Game with an Escort Region, pp. 4290-4297.

Fuchs, Zachariah	United States Air Force Res. Lab
Khargonekar, Pramod P.	Univ. of Florida

17:40-18:00 TuC12.6

Sensitivity Relations for the Mayer Problem of Optimal Control, pp. 4298-4303.

Cannarsa, Piermarco	Univ. Roma Tor Vergata
Frankowska, Helene	CNRS and Univ. Pierre Et Marie Curie (Paris 6)
Scarinci, Teresa	Univ. Di Roma Tor Vergata, Sorbonne Univ. UPMC Paris

TuC13 Atrium 1

LMIs (Regular Session)

Chair: Zemouche, Ali	Univ. of Lorraine
Co-Chair: Lavaei, Javad	Columbia Univ.

16:00-16:20 TuC13.1

Semi-Definite Programming and Functional Inequalities for Distributed Parameter Systems, pp. 4304-4309.

Valmórbida, Giórgio	Univ. of Oxford
Ahmadi, Mohamadreza	Univ. of Oxford
Papachristodoulou, Antonis	Univ. of Oxford

16:20-16:40 TuC13.2

Input-Output Analysis of Distributed Parameter Systems Using Convex Optimization, pp. 4310-4315.

Ahmadi, Mohamadreza	Univ. of Oxford
Valmórbida, Giórgio	Univ. of Oxford
Papachristodoulou, Antonis	Univ. of Oxford

16:40-17:00 TuC13.3

Robust Finite-Time Bounded H_{infty} Control for a Class of Nonlinear Quadratic Markovian Jump Systems, pp. 4316-4321.

Jun, Cheng	Univ. of Electronic Science and Tech. of China
Hong, Zhu	Univ. of Electronic Science and Tech. of China
Shouming, Zhong	Univ. of Electronic Science and Tech. of China
Yong, Zeng	Univ. of Electronic Science and Tech. of China
Zhang, Yuping	Univ. of Electronic Science and Tech. of China

17:00-17:20 TuC13.4

A Novel Method for Modelling Cardinality and Rank Constraints, pp. 4322-4327.

Hempel, Andreas Berndt	Swiss Federal Inst. of Tech. Zurich
Goulart, Paul J.	ETH Zurich

17:20-17:40 TuC13.5

Low-Rank Solutions of Matrix Inequalities with Applications to Polynomial Optimization and Matrix Completion Problems, pp. 4328-4335.

Madani, Ramtin	Columbia Univ
Fazelnia, Ghazal	Columbia Univ
Sojoudi, Somayeh	NYU Langone Medical Center
Lavaei, Javad	Columbia Univ

17:40-18:00 TuC13.6

Robust $mathcal{H}_infty$ Observer-Based Controller for Lipschitz Nonlinear Discrete-Time Systems with Parameter Uncertainties, pp. 4336-4341.

Kheloufi, Houria	Univ. of Mouloud Mammeri
Zemouche, Ali	Univ. of Lorraine

Bedouhene, Fazia — Univ. of Mouloud Mammeri
Souley Ali, Harouna — Cran Umr 7039 Cnrs

TuC14 — Olympic 1
Sampled-Data Control (Regular Session)

Chair: Plestan, Franck — Ec. Centrale de Nantes-IRCCyN
Co-Chair: Wang, Xiaofeng — Univ. of South Carolina

16:00-16:20 — TuC14.1

Stability Analysis of Asynchronous Sampled-Data Systems with Discrete-Time Constant Input Delay, pp. 4342-4347.

Seuret, Alexandre — CNRS
Briat, Corentin — ETH Zürich
Gouaisbaut, Frederic — Univ. of Toulouse, LAAS CNRS

16:20-16:40 — TuC14.2

Optimal Anti-Aliasing Filter Based on Multi Criteria Sampled-Data Hinfinity Control, pp. 4348-4354.

Lennartson, Bengt — Chalmers Univ. of Tech
Middleton, Richard H. — The Univ. of Newcastle

16:40-17:00 — TuC14.3

H2 State Feedback Sampled-Data Control for Markov Jump Linear Systems, pp. 4355-4360.

Vital, Gabriela Werner Gabriel — FEEC - Unicamp
Souza, Matheus — FEEC - Unicamp
Geromel, Jose C. — Unicamp

17:00-17:20 — TuC14.4

Sampling Period Assignment: A Cooperative Design Approach, pp. 4361-4366.

Moraes, Vitor Mateus — Univ. Federal De Santa Catarina
Jungers, Marc — CNRS - Univ. De Lorraine
Moreno, Ubirajara F. — Univ. Federal De Santa Catarina
Castelan, Eugenio B. — Univ. Federal De Santa Catarina

17:20-17:40 — TuC14.5

Real-Time Lebesgue-Sampled Model for Continuous-Time Nonlinear Systems, pp. 4367-4372.

Wang, Xiaofeng — Univ. of South Carolina
Zhang, Bin — Univ. of South Carolina

17:40-18:00 — TuC14.6

Discrete-Time Twisting Controller without Numerical Chattering: Analysis and Experimental Results with an Implicit Method, pp. 4373-4378.

Huber, Olivier — Inria
Acary, Vincent — INRIA Rhone-Alpes
Brogliato, Bernard — Inria
Plestan, Franck — Ec. Centrale De Nantes-IRCCyN

TuC15 — Atrium 2
Robust Control (Regular Session)

Chair: Smith, Roy S. — ETH Zurich
Co-Chair: Espinosa, Jairo — Univ. Nacional de Colombia

16:00-16:20 — TuC15.1

Convex Characterization of Robust Stability Analysis and Control Synthesis for Positive Linear Systems, pp. 4379-4384.

Colombino, Marcello — ETH Zurich
Smith, Roy S. — ETH Zurich

16:20-16:40 — TuC15.2

A Robust Tracking Controller for Dynamically Positioned Surface Vessels with Added Mass, pp. 4385-4390.

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

16:40-17:00 — TuC15.3

A Gain Adaptive Variable Structure Control Methodology for Second Order Nonlinear Dynamic Sysems, pp. 4391-4397.

Jayakody, Hiranya Samanga — Univ. of New South Wales
Katupitiya, Jayantha — Univ. of New South Wales

17:00-17:20 — TuC15.4

H-Infinity Filtering for a System with Uncertain Preview Information, pp. 4398-4403.

Kojima, Akira — Tokyo Metropolitan Univ

17:20-17:40 — TuC15.5

Asymptotic Rejection of Sinusoidal Disturbances with Recovered Nominal Transient Performance for Uncertain Linear Systems, pp. 4404-4409.

Park, Gyunghoon — Seoul National Univ
Joo, Youngjun — Hanyang Univ
Shim, Hyungbo — Seoul National Univ

17:40-18:00 — TuC15.6

Min-Max Economic Model Predictive Control, pp. 4410-4415.

Marquez, Alejandro — Univ. Nacional De Colombia
Patiño, Julian Alberto — Univ. Nacional De Colombia
Espinosa, Jairo — Univ. Nacional De Colombia

TuC16 — Olympic 2
Model Reduction II (Regular Session)

Chair: Wisniewski, Rafal — Aalborg Univ.
Co-Chair: Hadjicostis, Christoforos — Univ. of Cyprus

16:00-16:20 — TuC16.1

Irredundant Lattice Piecewise Affine Representations and Their Applications in Explicit Model Predictive Control, pp. 4416-4421.

Xu, Jun — China Univ. of Petroleum (Beijing)
van den Boom, Ton J. J. — Delft Univ. of Tech
De Schutter, Bart — Delft Univ. of Tech

16:20-16:40 — TuC16.2

Model Reduction of Linear Switched Systems by Restricting Discrete Dynamics, pp. 4422-4427.

Bastug, Mert — Aalborg Univ. Ec. Des Mines De Douai
Petreczky, Mihaly — Ec. Des Mines De Douai
Wisniewski, Rafal — Aalborg Univ
Leth, John — Aalborg Univ

16:40-17:00 — TuC16.3

Controller Order Reduction with Pole Region Constraint, pp. 4428-4433.

Datta, Subashish — Tech. Univ. Berlin
Chakraborty, Debraj — Indian Inst. of Tech. Bombay

17:00-17:20 — TuC16.4

Structure-Preserving Model Reduction of Physical Network Systems by Clustering, pp. 4434-4440.

Monshizadeh, Nima — Univ. of Groningen
van der Schaft, Arjan J. — Univ. of Groningen

17:20-17:40 TuC16.5

Approximation of Markov Processes by Lower Dimensional Processes, pp. 4441-4446.

Tzortzis, Ioannis	Univ. of Cyprus
Charalambous, Charalambos D.	Univ. of Cyprus
Charalambous, Themistoklis	KTH - Royal Inst. of Tech
Hadjicostis, Christoforos	Univ. of Cyprus
Johansson, Mikael	KTH - Royal Inst. of Tech

TuC17 Atrium 3

Social and Economic Networks (Invited Session)

Chair: Ajorlou, Amir	Univ. of Pennsylvania
Co-Chair: Kakhbod, Ali	Univ. of Michigan
Organizer: Ajorlou, Amir	Univ. of Pennsylvania
Organizer: Kakhbod, Ali	MIT
Organizer: Jadbabaie, Ali	Univ. of Pennsylvania

16:00-16:20 TuC17.1

An Efficient Curing Policy for Epidemics on Graphs (I), pp. 4447-4454.

Drakopoulos, Kimon	Massachusetts Inst. of Tech
Ozdaglar, Asu	Massachusetts Inst. of Tech
Tsitsiklis, John	Massachusetts Inst. of Tech

16:20-16:40 TuC17.2

Optimal Budget Allocation in Social Networks: Quality or Seeding? (I), pp. 4455-4460.

Fazeli, Arastoo	Univ. of Pennsylvania
Ajorlou, Amir	Univ. of Pennsylvania
Jadbabaie, Ali	Univ. of Pennsylvania

16:40-17:00 TuC17.3

Towards an Algebra for Cascade Effects (I), pp. 4461-4466.

Adam, Elie M.	Massachusetts Inst. of Tech
Dahleh, Munther A.	Massachusetts Inst. of Tech
Ozdaglar, Asu	Massachusetts Inst. of Tech

17:00-17:20 TuC17.4

Blackwell's Approachability in Stackelberg Stochastic Games: A Learning Version (I), pp. 4467-4472.

Kalathil, Dileep	Univ. of Southern California
Borkar, Vivek	Indian Inst. of Tech
Jain, Rahul	Univ. of Southern California

17:20-17:40 TuC17.5

Global Games with Noisy Sharing of Information (I), pp. 4473-4478.

Touri, Behrouz	Univ. of Colorado Boulder
Shamma, Jeff S.	Kaust

17:40-18:00 TuC17.6

The Role of a Market Maker in Networked Cournot Competition (I), pp. 4479-4484.

Bose, Subhonmesh	California Inst. of Tech
Cai, Desmond W. H.	California Inst. of Tech
Low, Steven H.	California Inst. of Tech
Wierman, Adam	California Inst. of Tech

TuC18 Olympic 3

Cooperative Control III (Regular Session)

Chair: Chen, Zhiyong	The Univ. of Newcastle
Co-Chair: Bechlioulis, Charalampos	National Tech. Univ. of Athens

16:00-16:20 TuC18.1

Finite-Time Average Consensus in Networked Dynamic Systems, pp. 4485-4490.

Zoghlami, Naim	Univ. of Evry
Beji, Lotfi	Univ. of Evry
Mlayeh, Rhouma	Pol. School of Tunisia
Abichou, Azgal	Ec. Pol. De Tunis

16:20-16:40 TuC18.2

Synchronization of Nonlinear Heterogeneous Multiple Agents in Diverse Patterns, pp. 4491-4496.

Chen, Zhiyong	The Univ. of Newcastle

16:40-17:00 TuC18.3

Cooperative Receding Horizon Control for Multi-Target Interception in Uncertain Environments, pp. 4497-4502.

Khosravi, Mohammad	Concordia Univ
Aghdam, Amir G.	Concordia Univ

17:00-17:20 TuC18.4

Joint Synthesis of Dynamic Feed-Forward and Static State Feedback for Platoon Control, pp. 4503-4508.

Koroglu, Hakan	Chalmers Univ. of Tech
Falcone, Paolo	Chalmers Univ. of Tech

17:20-17:40 TuC18.5

Robust Model-Free Formation Control with Prescribed Performance and Connectivity Maintenance for Nonlinear Multi-Agent Systems, pp. 4509-4514.

Bechlioulis, Charalampos	National Tech. Univ. of Athens
Kyriakopoulos, Kostas J.	National Tech. Univ. of Athens

17:40-18:00 TuC18.6

Stability Analysis for Replicator Dynamics of Evolutionary Snowdrift Games, pp. 4515-4520.

Ramazi, Pouria	Univ. of Groningen
Cao, Ming	Univ. of Groningen

TuC19 Plaza 1

Path Following and Tracking (Regular Session)

Chair: Lee, Seung Hi	Hanyang Univ.
Co-Chair: Böck, Martin	Vienna Univ. of Tech.

16:00-16:20 TuC19.1

Path Following for Formations of Underactuated Marine Vessels under Influence of Constant Ocean Currents, pp. 4521-4528.

Belleter, Dennis	NTNU
Pettersen, Kristin Y.	NTNU

16:20-16:40 TuC19.2

Manifold Stabilization and Path-Following Control for Flat Systems with Application to a Laboratory Tower Crane, pp. 4529-4535.

Böck, Martin	Vienna Univ. of Tech
Kugi, Andreas	Vienna Univ. of Tech

16:40-17:00 TuC19.3

Online Approximate Optimal Path-Following for a Mobile Robot, pp. 4536-4541.

Walters, Patrick	Univ. of Florida
Kamalapurkar, Rushikesh	Univ. of Florida
Andrews, Lindsey	Univ. of Florida
Dixon, Warren E.	Univ. of Florida

17:00-17:20 TuC19.4

Reference Redesigned Perfect Tracking Control, with Application to

Servo Control System, pp. 4542-4547.

Lee, Seung Hi	Hanyang Univ
Chung, Chung Choo	Hanyang Univ

17:20-17:40 TuC19.5

Improving Tracking Accuracy of a MIMO State Feedback Controller for Elastic Joint Robots, pp. 4548-4553.

Le, Tien Luc	German Aerospace Center (DLR)
Albu-Schaeffer, Alin	German Aerospace Center (DLR)

17:40-18:00 TuC19.6

A Trajectory Tracking Control Design for a Skid-Steering Mobile Robot by Modulating Its Desired Instantaneous Center of Rotation, pp. 4554-4559.

Jun, Jae Yun	Univ. Pierre Et Marie Curie
Hua, Minh-Duc	Inst. Des Systèmes Intelligents Et De Robotique
Ben Amar, Faiz	Univ. Pierre Et Marie Curie

TuC20 — Plaza 2

Synchronization (Regular Session)

Chair: Sarlette, Alain	Ghent Univ.
Co-Chair: Vaidya, Umesh	Iowa State Univ.

16:00-16:20 TuC20.1

Stochastic Positive Real Lemma and Synchronization Over Uncertain Networks, pp. 4560-4565.

Diwadkar, Amit	Iowa State Univ
Dasgupta, Sambarta	Iowa State Univ
Vaidya, Umesh	Iowa State Univ

16:20-16:40 TuC20.2

Low Order Controllers for Output Synchronization of Linear Heterogeneous SISO Agents, pp. 4566-4572.

Khodaverdian, Saman	Tech. Univ. Darmstadt
Adamy, Jürgen	Tech. Univ. Darmstadt

16:40-17:00 TuC20.3

About Synchronization of Homogeneous Nonlinear Agents Over Switching Networks, pp. 4573-4578.

Casadei, Giacomo	Univ. di Bologna
Marconi, Lorenzo	Univ. di Bologna
Isidori, Alberto	Univ. di Roma

17:00-17:20 TuC20.4

Synchronization in Complex Network System with Uncertainty, pp. 4579-4584.

Diwadkar, Amit	Iowa State Univ
Vaidya, Umesh	Iowa State Univ

17:20-17:40 TuC20.5

Synchronization of Kuramoto Oscillators with Non-Identical Natural Frequencies: A Quantum Dynamical Decoupling Approach, pp. 4585-4590.

Zhang, Zhifei	Ghent Univ
Sarlette, Alain	Ghent Univ
Ling, Zhihao	East China Univ. of Science & Tech

17:40-18:00 TuC20.6

Incremental-Dissipativity-Based Output Synchronization of Dynamical Networks with Switching Topology, pp. 4591-4596.

Liu, Tao	The Univ. of Hong Kong
Hill, David J.	The Univ. of Sydney
Zhao, Jun	Northeastern Univ

TuC21 — Plaza 3

Biomolecular Systems (Regular Session)

Chair: Hori, Yutaka	California Inst. of Tech.
Co-Chair: Milias-Argeitis, Andreas	ETH Zurich

16:00-16:20 TuC21.1

On the Reachable Set of the Controlled Gene Expression System, pp. 4597-4604.

Parise, Francesca	ETH Zurich
Valcher, Maria Elena	Univ. di Padova
Lygeros, John	ETH Zurich

16:20-16:40 TuC21.2

Design of a Molecular Bistable System with RNA-Mediated Regulation, pp. 4605-4610.

Mardanlou, Vahid	Univ. of California at Riverside
Tran, Claire H.	Univ. of California at Riverside
Franco, Elisa	Univ. of California at Riverside

16:40-17:00 TuC21.3

Design of a Molecular Clock with RNA--Mediated Regulation, pp. 4611-4616.

Blanchini, Franco	Univ. of Udine
Cuba Samaniego, Christian	Univ. of California at Riverside
Franco, Elisa	Univ. of California at Riverside
Giordano, Giulia	Univ. of Udine

17:00-17:20 TuC21.4

Optimization-Based Lyapunov Function Construction for Continuous-Time Markov Chains with Affine Transition Rates, pp. 4617-4622.

Milias-Argeitis, Andreas	ETH Zurich
Khammash, Mustafa H.	ETH Zurich

17:20-17:40 TuC21.5

A Subspace Semi-Definite Programming-Based Underestimation (SSDU) Method for Stochastic Global Optimization in Protein Docking, pp. 4623-4628.

Nan, Feng	Boston Univ
Moghadasi, Mohammad	Boston Univ
Vakili, Pirooz	Boston Univ
Vajda, Sandor	Boston Univ
Kozakov, Dima	Boston Univ
Paschalidis, Ioannis Ch.	Boston Univ

17:40-18:00 TuC21.6

Designing Robustness to Temperature in a Feedforward Loop Circuit, pp. 4629-4634.

Sen, Shaunak	Indian Inst. of Tech. Delhi
Kim, Jongmin	Harvard Univ
Murray, Richard M.	California Inst. of Tech

TuC22 — Salon D and E

Physics-Based Foundations for Cyber Architecture Design in Complex Electric Energy Systems (Tutorial Session)

Chair: Ilic, Marija	Carnegie Mellon Univ.
Co-Chair: Hill, David J.	The Univ. of Sydney
Organizer: Ilic, Marija	Carnegie Mellon Univ.
Organizer: Hill, David J.	The Univ. of Sydney

16:00-16:40 TuC22.1

*Smart Grids As Distributed Learning Control (I)**.

Hill, David J.	The Univ. of Sydney

16:40-17:20 TuC22.2

Physics-Based Foundations for Cyber and Market Design in Complex Electric Energy Systems (I), pp. 4635-4654.

Ilic, Marija Carnegie Mellon Univ.

Bachovchin, Kevin Carnegie Mellon Univ.

Cvetkovic, Milos Carnegie Mellon Univ.

Miao, Xia Carnegie Mellon Univ.

17:20-17:35 TuC22.3

*Automated Modeling in Standard State Space Form for Complex Electric Power Grids and Automated Nonlinear Storage Control Design for Provable Performance (I)**.

Bachovchin, Kevin Carnegie Mellon Univ.

17:35-17:50 TuC22.4

*Nonlinear Cooperative FACTS Control for Transient Stabilization in Power Systems (I)**.

Cvetkovic, Milos Carnegie Mellon Univ.

17:50-18:00 TuC22.5

*Demonstration of Smart Grid in a Room Simulator and Conclusions (I)**.

Ilic, Marija Carnegie Mellon Univ.

Bachovchin, Kevin Carnegie Mellon Univ.

Cvetkovic, Milos Carnegie Mellon Univ.

WeA01 Salon F

Switched Systems I (Regular Session)

Chair: Trofino, Alexandre — Federal Univ. of Santa Catarina
Co-Chair: Wisniewski, Rafal — Aalborg Univ.

08:30-08:50 WeA01.1

Minimum Switching Limit Cycle Oscillations for Systems of Coupled Double Integrators, pp. 4655-4660.

Garulli, Andrea — Univ. Di Siena
Giannitrapani, Antonio — Univ. Di Siena
Leomanni, Mirko — Univ. Di Siena

08:50-09:10 WeA01.2

Dwell-Time Control of Continuous-Time Switched Linear Systems, pp. 4661-4666.

Souza, Matheus — FEEC - Unicamp
Fioravanti, Andre R. — Unicamp
Shorten, Robert — Nat. Univ. of Ireland

09:10-09:30 WeA01.3

Switching Rule Design for a Class of Switched Systems with Uncertain Equilibrium, pp. 4667-4672.

Senger, Guilherme de Aguiar — Embraco
Trofino, Alexandre — Federal Univ. of Santa Catarina

09:30-09:50 WeA01.4

Optimal Control of Switched Dynamical Systems under Dwell Time Constraints, pp. 4673-4678.

Ali, Usman — Georgia Inst. of Tech
Egerstedt, Magnus — Georgia Inst. of Tech

09:50-10:10 WeA01.5

Incremental Stability of Bimodal Filippov Systems in R^n, pp. 4679-4684.

di Bernardo, Mario — Univ. of Bristol
Fiore, Davide — Univ. of Naples Federico II

10:10-10:30 WeA01.6

Robust Stability of Switched Systems, pp. 4685-4690.

Sloth, Christoffer — Aalborg Univ
Wisniewski, Rafal — Aalborg Univ

WeA02 Salon G

Output Regulation (Regular Session)

Chair: Carnevale, Daniele — Univ. di Roma
Co-Chair: Paunonen, Lassi — Tampere Univ. of Tech.

08:30-08:50 WeA02.1

Hybrid Synthesis for Almost Asymptotic Regulation of Linear Impulsive Systems with Average Dwell Time, pp. 4691-4696.

Yuan, Chengzhi — North Carolina State Univ
Wu, Fen — North Carolina State Univ

08:50-09:10 WeA02.2

Francis Equations vs Invariant Subspace Algorithm for Hybrid Output Regulation, pp. 4697-4702.

Carnevale, Daniele — Univ. di Roma Tor Vergata
Galeani, Sergio — Univ. di Roma Tor Vergata
Sassano, Mario — Univ. di Roma Tor Vergata

09:10-09:30 WeA02.3

Robust Nonlinear Regulation: Continuous-Time Internal Models and Hybrid Identifiers, pp. 4703-4708.

Forte, Francesco — Univ. di Bologna
Marconi, Lorenzo — Univ. di Bologna
Teel, Andrew R. — Univ. of California, Santa Barbara

09:30-09:50 WeA02.4

Minimal Order Controllers for Output Regulation of Locally Stable Nonlinear Systems, pp. 4709-4714.

Natarajan, Vivek — Tel Aviv Univ
Weiss, George — Tel Aviv Univ

09:50-10:10 WeA02.5

Robust Perturbed Output Regulation and Its Application to Synchronization of Nonlinear Heterogeneous Multi-Agents, pp. 4715-4720.

Chen, Xi — Univ. of Newcastle
Chen, Zhiyong — The Univ. of Newcastle
Zhang, Hai-Tao — Huazhong (Central China) Univ. of Science and Technology

10:10-10:30 WeA02.6

A New Controller Structure for Robust Output Regulation, pp. 4721-4726.

Paunonen, Lassi — Tampere Univ. of Tech
Pohjolainen, Seppo — Tampere Univ. of Tech

WeA03 Salon H

Sliding Mode Control I (Regular Session)

Chair: Levant, Arie — Tel - Aviv Univ.
Co-Chair: Fridman, Leonid M. — National Autonomous Univ. of Mexico

08:30-08:50 WeA03.1

Third Order Sliding Mode Control with Box State Constraints, pp. 4727-4732.

Ferrara, Antonella — Univ. of Pavia
Incremona, Gian Paolo — Univ. of Pavia
Rubagotti, Matteo — Nazarbayev Univ

08:50-09:10 WeA03.2

Adaptive Sliding Mode Control for a General Nonlinear Multicompartment Lung Model with Input Pressure and Rate Saturation Constraints, pp. 4733-4738.

Hou, Saing Paul — Qatar Univ
Meskin, Nader — Qatar Univ
Haddad, Wassim M. — Georgia Inst. of Tech

09:10-09:30 WeA03.3

Fast Nonsingular Integral Terminal Sliding Mode Control for Nonlinear Dynamical Systems, pp. 4739-4746.

Li, Peng — National Univ. of Defense Tech
Ma, Jianjun — National Univ. of Defense Tech
Zheng, Zhiqiang — National Univ. of Defense Tech
Geng, Lina — National Univ. of Defense Tech

09:30-09:50 WeA03.4

A New LMI Based Sliding Mode Control for the Uncertain Discrete-Time Systems, pp. 4747-4752.

Argha, Ahmadreza — Univ. of Tech. Sydney
Li, Li — Univ. of Tech. Sydney
Su, Steven W. — Univ. of Tech. Sydney
Nguyen, Hung T. — Univ. of Tech. Sydney

09:50-10:10 WeA03.5

Finite-Time Stabilization of Uncertain MIMO Systems, pp. 4753-4758.

Levant, Arie — Tel - Aviv Univ

10:10-10:30 WeA03.6

SMC with Linear Dynamic Compensator Design: Performance Margins Approach, pp. 4759-4764.

Rosales Martínez, José Antonio — National Autonomous Univ. of Mexico
Fridman, Leonid M. — National Autonomous Univ. of Mexico
Shtessel, Yuri B. — Univ. of Alabama at Huntsville

WeA04 — Salon I

Linear Parameter-Varying and Time-Varying Systems (Regular Session)

Chair: Edwards, Christopher — Univ. of Exeter
Co-Chair: Seiler, Peter — Univ. of Minnesota

08:30-08:50 WeA04.1

Discretization and Discrete-Time Output Feedback Control of Linear Parameter Varying Continuous-Time Systems, pp. 4765-4771.

Braga, Marcio F. — Univ. of Campinas - UNICAMP
Morais, Cecilia — Univ. of Campinas - UNICAMP
Tognetti, Eduardo Stockler — Univ. of Brasilia
Oliveira, Ricardo C. L. F. — Univ. of Campinas - UNICAMP
Peres, Pedro L. D. — Univ. of Campinas - UNICAMP

08:50-09:10 WeA04.2

Stabilization of LPV Positive Systems, pp. 4772-4776.

Ait Rami, Mustapha — Univ. De Valladolid
Boulkroune, Boulaid — High Studies in Engineering - HEI
El Hajjaji, Ahmed — Univ. of Picardie-Jules Verne
Pages, Olivier — Univ. of Picardie Jules Verne

09:10-09:30 WeA04.3

Sliding Mode Observers for Fault Detection of Uncertain LPV Systems with Imperfect Scheduling Parameter Knowledge, pp. 4777-4782.

Bharani Chandra, Kumar Pakki — Univ. of Exeter
Alwi, Halim — Univ. of Exeter
Edwards, Christopher — Univ. of Exeter

09:30-09:50 WeA04.4

Stochastic Tube MPC for LPV Systems with Probabilistic Set Inclusion Conditions, pp. 4783-4788.

Fleming, James M. — Univ. of Oxford
Cannon, Mark — Univ. of Oxford
Kouvaritakis, Basil — Univ. of Oxford

09:50-10:10 WeA04.5

Robust Synthesis for Linear Parameter Varying Systems Using Integral Quadratic Constraints (I), pp. 4789-4794.

Wang, Shu — Univ. of Minnesota
Pfifer, Harald — Univ. of Minnesota
Seiler, Peter J. — Univ. of Minnesota

10:10-10:30 WeA04.6

Stability Criteria for Uncertain Linear Time-Varying Systems, pp. 4795-4800.

Pandey, Amit — Univ. of California, San Diego
Sehr, Martin Arno — Univ. of California, San Diego
de Oliveira, Mauricio C. — Univ. of California, San Diego

WeA05 — Salon J

Algebraic and Geometric Methods I (Regular Session)

Chair: Gray, W. Steven — Old Dominion Univ.
Co-Chair: Fujimoto, Kenji — Kyoto Univ.

08:30-08:50 WeA05.1

A Regularity Theorem for Minimizers of Real-Analytic Subriemannian Metrics, pp. 4801-4806.

Sussmann, Hector J. — Rutgers Univ

08:50-09:10 WeA05.2

Pre-Lie Algebra Characterization of SISO Feedback Invariants, pp. 4807-4813.

Gray, W. Steven — Old Dominion Univ
Thitsa, Makhin — Mercer Univ
Duffaut Espinosa, Luis Augusto — George Mason Univ

09:10-09:30 WeA05.3

Dendriform-Tree Setting for Fully Non-Commutative Fliess Operators, pp. 4814-4819.

Duffaut Espinosa, Luis Augusto — George Mason Univ
Gray, W. Steven — Old Dominion Univ
Ebrahimi-Fard, Kurusch — Inst. De Ciencias Matemáticas

09:30-09:50 WeA05.4

On Trajectory Tracking Control of Port-Hamiltonian Systems with Quaternions, pp. 4820-4825.

Fujimoto, Kenji — Kyoto Univ
Nishiyama, Taishi — Kyoto Univ

09:50-10:10 WeA05.5

L2-Stability for a Class of Nonlinear Systems Via Potential-Based Realizations, pp. 4826-4831.

Guay, Martin — Queen's Univ
Hudon, Nicolas — Univ. Catholique De Louvain

10:10-10:30 WeA05.6

Tautological Control Systems, pp. 4832-4837.

Lewis, Andrew D. — Queen's Univ

WeA06 — Salon 6

Energy Systems and Model Predictive Control (Regular Session)

Chair: Gros, Sebastien — Chalmers Univ. of Tech.
Co-Chair: El-Farra, Nael H. — Univ. of California, Davis

08:30-08:50 WeA06.1

Energy Management for the Chlor-Alkali Process with Hybrid Renewable Energy Generation Using Receding Horizon Optimization, pp. 4838-4843.

Wang, Xiaonan — Univ. of California, Davis
Tong, Chudong — Univ. of California, Davis
Palazoglu, Ahmet N. — Univ. of California, Davis
El-Farra, Nael H. — Univ. of California, Davis

08:50-09:10 WeA06.2

A Distributed Algorithm for NMPC-Based Wind Farm Control, pp. 4844-4849.

Gros, Sebastien — Chalmers Univ. of Tech

09:10-09:30 WeA06.3

Decentralized Model Predictive Control of Thermostatically Controlled Appliances for Providing Load Balancing Service, pp. 4850-4855.

Shi, Yang — Univ. of Victoria
Liu, Mingxi — Univ. of Victoria

09:30-09:50 WeA06.4

Explicit MPC Approach to PMV-Based Thermal Comfort Control, pp. 4856-4861.

Klauco, Martin — Slovak Univ. of Tech. in Bratislava
Kvasnica, Michal — Slovak Univ. of Tech. in Bratislava

09:50-10:10 WeA06.5

Receding Horizon Control for Demand-Response Operation of Building Heating Systems, pp. 4862-4867.

Bianchini, Gianni — Univ. Di Siena
Casini, Marco — Univ. Di Siena
Vicino, Antonio — Univ. Di Siena
Zarrilli, Donato — Univ. Di Siena

10:10-10:30 WeA06.6

Utility Learning Model Predictive Control for Personal Electric Loads, pp. 4868-4874.

Yang, Insoon — Univ. of California, Berkeley
Zeilinger, Melanie N. — Univ. of California, Berkeley
Tomlin, Claire J. — Univ. of California, Berkeley

WeA07 — Salon 7

Emerging Control Applications I (Regular Session)

Chair: Maestre, J.M. — Univ. of Seville
Co-Chair: Fagiano, Lorenzo — ABB Switzerland Ltd.

08:30-08:50 WeA07.1

Social Network Ad Allocation Via Hyperbolic Embedding, pp. 4875-4880.

Gao, Peixin — Univ. of Maryland
Miao, Hui — Univ. of Maryland
Baras, John S. — Univ. of Maryland

08:50-09:10 WeA07.2

Human in the Loop Model Predictive Control: An Irrigation Canal Case Study, pp. 4881-4886.

Maestre, J.M. — Univ. of Seville
van Overloop, Peter-Jules — Delft Univ. of Tech
Hashemy, S. Mehdy — Univ. of Tehran
Sadowska, Anna — Delft Univ. of Tech
Camacho, Eduardo F. — Univ. of Seville

09:10-09:30 WeA07.3

Production Lead Time in Exponential Serial Lines: Analysis and Control, pp. 4887-4892.

Meerkov, Semyon M. — Univ. of Michigan
Yan, Chao-Bo — Univ. of Michigan

09:30-09:50 WeA07.4

Active Pitch Control of Tethered Wings for Airborne Wind Energy, pp. 4893-4898.

Galletti, Bernardo — ABB Switzerland Ltd. - Corp. Res
Buffoni, Marcelo — ABB Switzerland Ltd. - Corp. Res
Ferreau, Hans Joachim — ABB Corp. Res
Fagiano, Lorenzo — ABB Switzerland Ltd
Mercangoz, Mehmet — ABB Corp. Res

09:50-10:10 WeA07.5

A Machine Learning Based Approach for Gesture Recognition from Inertial Measurements, pp. 4899-4904.

Belgioioso, Giuseppe — Univ. di Padova
Cenedese, Angelo — Univ. di Padova
Cirillo, Giuseppe Ilario — Univ. di Padova
Fraccaroli, Francesco — Univ. di Padova
Susto, Gian Antonio — Univ. di Padova

10:10-10:30 WeA07.6

Optimal Building Climate Control: A Solution Based on Nested Dynamic Programming and Randomized Optimization, pp. 4905-4910.

Deori, Luca — Pol. Di Milano
Giulioni, Luca — Pol. Di Milano
Prandini, Maria — Pol. Di Milano

WeA08 — Salon 8

Machine Learning (Regular Session)

Chair: Surana, Amit — United Tech. Res. Center
Co-Chair: Bloem, Michael — NASA Ames Res. Center

08:30-08:50 WeA08.1

Infinite Time Horizon Maximum Causal Entropy Inverse Reinforcement Learning, pp. 4911-4916.

Bloem, Michael — NASA Ames Res. Center
Bambos, Nicholas — Stanford Univ

08:50-09:10 WeA08.2

Distributed Charging Control of Electric Vehicles Using Regret Minimization, pp. 4917-4923.

Ma, Wann-Jiun — Univ. of Notre Dame
Gupta, Vijay — Univ. of Notre Dame
Topcu, Ufuk — Univ. of Pennsylvania

09:10-09:30 WeA08.3

Lipschitz Robust Control from Off-Policy Trajectories (I), pp. 4924-4931.

Fonteneau, Raphael — Univ. of Liège
Ernst, Damien — Univ. of Liège
Boigelot, Bernard — Univ. of Liège
Louveaux, Quentin — Univ. of Liège

09:30-09:50 WeA08.4

Increasing Performance of Parametrizations for Linear MPC Via Application of a Data Mining Algorithm, pp. 4932-4937.

Goebel, Gregor — Univ. of Stuttgart
Allgöwer, Frank — Univ. of Stuttgart

09:50-10:10 WeA08.5

Unsupervised Inverse Reinforcement Learning with Noisy Data, pp. 4938-4945.

Surana, Amit — United Tech. Res. Center

10:10-10:30 WeA08.6

Using Higher Dimensionalities to Identify Abnormal Behavior in Noisy Data Sets, pp. 4946-4952.

Olsen, David Allen — Univ. of Minnesota

WeA09 — Salon 9

Fault Tolerant Systems (Regular Session)

Chair: Cristofaro, Andrea — NTNU
Co-Chair: Serrani, Andrea — The Ohio State Univ.

08:30-08:50 WeA09.1

Sensor-Fault Tolerance Using Robust MPC with Set-Based State Estimation and Active Fault Isolation, pp. 4953-4958.

Xu, Feng — Tech. Univ. of Catalonia (UPC)
Olaru, Sorin — Supelec

Puig, Vicenc	Tech. Univ. of Catalonia (UPC)
Ocampo-Martinez, Carlos	Tech. Univ. of Catalonia (UPC)
Niculescu, Silviu-Iulian	CNRS-Supelec

08:50-09:10 WeA09.2

Robust MPC for Actuator-Fault Tolerance Using Set-Based Passive Fault Detection and Active Fault Isolation, pp. 4959-4964.

Xu, Feng	Tech. Univ. of Catalonia (UPC)
Puig, Vicenc	Upc
Ocampo-Martinez, Carlos	Tech. Univ. of Catalonia (UPC)
Olaru, Sorin	Supelec
Niculescu, Silviu-Iulian	CNRS-Supelec

09:10-09:30 WeA09.3

Multiple-Model Control for Spacecraft under Actuation Sign Errors, pp. 4965-4970.

Ma, Yajie	Nanjing Univ. of Aeronautics and Astronautics
Jiang, Bin	Nanjing Univ. of Aeronautics & Astronautics
Tao, Gang	Univ. of Virginia
Liu, Hugh Hong-Tao	Univ. of Toronto

09:30-09:50 WeA09.4

Fault-Tolerant Control Allocation with Actuator Dynamics: Finite-Time Control Reconfiguration, pp. 4971-4976.

Cristofaro, Andrea	NTNU
Johansen, Tor Arne	NTNU

09:50-10:10 WeA09.5

Fault Diagnosis and Control-Reconfiguration in Large-Scale Systems: A Plug-And-Play Approach, pp. 4977-4982.

Riverso, Stefano	Univ. di Pavia
Boem, Francesca	Univ. of Trieste
Ferrari-Trecate, Giancarlo	Univ. di Pavia
Parisini, Thomas	Imperial Coll. & Univ. of Trieste

10:10-10:30 WeA09.6

Control Allocation Based Fault-Tolerant Control Design for Spacecraft Attitude Tracking, pp. 4983-4988.

Shen, Qiang	Nanyang Tech. Univ
Wang, Danwei	Nanyang Tech. Univ
Zhu, Sen Qiang	Nanyang Tech. Univ
Poh, Eng Kee	Nanyang Tech. Univ

WeA10 Salon 10

Kalman Filtering (Regular Session)

Chair: Zurakowski, Ryan	Univ. of Delaware
Co-Chair: Hexner, Gyorgy	RAFAEL, Haifa ISRAEL

08:30-08:50 WeA10.1

Steady State Kalman Filter Behavior for Unstabilizable Systems, pp. 4989-4994.

Dasgupta, Soura	Univ. of Iowa
Brown, Donald	Wpi
Wang, Rui	Wpi

08:50-09:10 WeA10.2

Quadratic Filtering for Non-Gaussian and Not Asymptotically Stable Linear Discrete-Time Systems, pp. 4995-5000.

Cacace, Filippo	Univ. Campus Biomedico Di Roma
Conte, Francesco	Univ. di Genova
Germani, Alfredo	Univ. Dell'Aquila
Palombo, Giovanni	Univ. Dell'Aquila

09:10-09:30 WeA10.3

Estimation of Mobile Vehicle Range & Position Using the Tobit Kalman Filter, pp. 5001-5007.

Miller, Cory	Univ. of Delaware
Allik, Bethany	Univ. of Deleware
Piovoso, Michael J.	Penn State Great Valley School
Zurakowski, Ryan	Univ. of Delaware

09:30-09:50 WeA10.4

An Extended Kalman Filter with a Computed Mean Square Error Bound, pp. 5008-5014.

Hexner, Gyorgy	RAFAEL, Haifa ISRAEL
Weiss, Haim M.	RAFAEL, Haifa ISRAEL

09:50-10:10 WeA10.5

State Estimation of Vehicle's Lateral Dynamics Using Unscented Kalman Filter, pp. 5015-5020.

Wielitzka, Mark	Leibniz Univ. Hannover
Dagen, Matthias	Leibniz Univ. Hannover
Ortmaier, Tobias	Leibniz Univ. Hannover

10:10-10:30 WeA10.6

A Linear Extension of Unscented Kalman Filter to Higher-Order Moment-Matching, pp. 5021-5026.

Liu, Jiang	Chongqing Inst. of Green and Intelligent Tech. Chinese
Wang, YuJin	Chongqing Univ. of Posts and Telecommunications
Zhang, Ju	Chinese Acad. of Sciences

WeA11 Georgia 1

Optimization Algorithms II (Regular Session)

Chair: Mohajerin Esfahani, Peyman	ETH Zurich
Co-Chair: Giselsson, Pontus	Lund Univ.

08:30-08:50 WeA11.1

Electric Vehicles Aggregator Optimization: A Fast and Solver-Free Solution Method, pp. 5027-5032.

Vujanic, Robin	ETH Zurich, Switzerland
Mohajerin Esfahani, Peyman	ETH Zurich
Goulart, Paul J.	ETH Zurich
Morari, Manfred	ETH Zurich

08:50-09:10 WeA11.2

Diagonal Scaling in Douglas-Rachford Splitting and ADMM, pp. 5033-5039.

Giselsson, Pontus	Lund Univ
Boyd, Stephen P.	Stanford Univ

09:10-09:30 WeA11.3

Preconditioning in Fast Dual Gradient Methods, pp. 5040-5045.

Giselsson, Pontus	Lund Univ
Boyd, Stephen P.	Stanford Univ

09:30-09:50 WeA11.4

Linear Convergence Rate for Distributed Optimization with the Alternating Direction Method of Multipliers, pp. 5046-5051.

Iutzeler, Franck	Supelec
Bianchi, Pascal	Telecom ParisTech - CNRS/LTCI
Ciblat, Philippe	Telecom ParisTech
Hachem, Walid	CNRS LTCI; Telecom ParisTech

09:50-10:10 WeA11.5

A Parametric Multi-Convex Splitting Technique with Application to Real-Time NMPC, pp. 5052-5057.

Hours, Jean-Hubert — École Pol. Fédérale De Lausanne
Jones, Colin N. — École Pol. Fédérale De Lausanne

10:10-10:30 WeA11.6

Monotonicity and Restart in Fast Gradient Methods, pp. 5058-5063.

Giselsson, Pontus — Lund Univ
Boyd, Stephen P. — Stanford Univ

WeA12 — Georgia 2

Optimal Control II (Regular Session)

Chair: Kamalapurkar, Rushikesh — Univ. of Florida
Co-Chair: Hashimoto, Tomoaki — Osaka Univ.

08:30-08:50 WeA12.1

Control-Theoretic Data Smoothing, pp. 5064-5070.

Dey, Biswadip — Univ. of Maryland
Krishnaprasad, P. S. — Univ. of Maryland

08:50-09:10 WeA12.2

Linear Quadratic Optimal Control for Systems with Continuous and Impulsive Inputs, pp. 5071-5076.

Sobiesiak, Ludwik Andrew — Univ. of Toronto
Damaren, Chris J. — Univ. of Toronto

09:10-09:30 WeA12.3

Data-Driven Optimal Stabilization for Discrete-Time Nonlinear Systems by Approximate Value Iteration, pp. 5077-5082.

Li, Yongqiang — Zhejiang Univ. of Tech
Hou, Zhongsheng — Beijing Jiaotong Univ

09:30-09:50 WeA12.4

Model-Based Reinforcement Learning for Infinite-Horizon Approximate Optimal Tracking, pp. 5083-5088.

Kamalapurkar, Rushikesh — Univ. of Florida
Andrews, Lindsey — Univ. of Florida
Walters, Patrick — Univ. of Florida
Dixon, Warren E. — Univ. of Florida

09:50-10:10 WeA12.5

Receding Horizon Control for a Class of Discrete-Time Nonlinear Implicit Systems, pp. 5089-5094.

Hashimoto, Tomoaki — Osaka Univ

10:10-10:30 WeA12.6

Adaptive Dynamic Programming for Terminally Constrained Finite-Horizon Optimal Control Problems, pp. 5095-5100.

Andrews, Lindsey — Univ. of Florida
Klotz, Justin — Univ. of Florida
Kamalapurkar, Rushikesh — Univ. of Florida
Dixon, Warren E. — Univ. of Florida

WeA13 — Atrium 1

Large-Scale Systems (Regular Session)

Chair: Li, Jr-Shin — Washington Univ. in St. Louis
Co-Chair: Motee, Nader — Lehigh Univ.

08:30-08:50 WeA13.1

Mean Field Constrained Charging Policy for Large Populations of Plug-In Electric Vehicles, pp. 5101-5106.

Parise, Francesca — ETH Zurich
Colombino, Marcello — ETH Zurich
Grammatico, Sergio — ETH Zurich
Lygeros, John — ETH Zurich

08:50-09:10 WeA13.2

Optimal Coordination of Homogeneous Agents Subject to Delayed Information Exchange, pp. 5107-5112.

Madjidian, Daria — Lund Univ
Mirkin, Leonid — Technion, Haifa
Rantzer, Anders — Lund Univ

09:10-09:30 WeA13.3

Controllability Characterization of Linear Ensemble Systems, pp. 5113-5118.

Qi, Ji — Washington Univ. in St. Louis
Li, Jr-Shin — Washington Univ. in St. Louis

09:30-09:50 WeA13.4

Systemic Measures for Performance and Robustness of Large-Scale Interconnected Dynamical Networks, pp. 5119-5124.

Siami, Milad — Lehigh Univ
Motee, Nader — Lehigh Univ

09:50-10:10 WeA13.5

On Resilience of Multicommodity Dynamical Flow Networks, pp. 5125-5130.

Nilsson, Gustav — Lund Univ
Como, Giacomo — Lund Univ
Lovisari, Enrico — Lund Univ

10:10-10:30 WeA13.6

Performance Certification of Interconnected Nonlinear Systems Using ADMM, pp. 5131-5136.

Meissen, Chris — Univ. of California, Berkeley
Lessard, Laurent — Univ. of California, Berkeley
Arcak, Murat — Univ. of California, Berkeley
Packard, Andrew K. — Univ. of California, Berkeley

WeA14 — Olympic 1

Discrete-Event Systems and Supervisory Control (Regular Session)

Chair: Mahulea, Cristian — Univ. of Zaragoza
Co-Chair: Komenda, Jan — Czech Acad. of Sciences

08:30-08:50 WeA14.1

Planning Mobile Robots with Boolean-Based Specifications, pp. 5137-5142.

Mahulea, Cristian — Univ. of Zaragoza
Kloetzer, Marius — Tech. Univ. "Gheorghe Asachi" of Iasi

08:50-09:10 WeA14.2

An Integrated Control Strategy in Disturbance Decoupling of Max-Plus Linear Systems with Applications to a High Throughput Screening System in Drug Discovery, pp. 5143-5148.

Shang, Ying — Southern Illinois Univ. Edwardsville
Hardouin, Laurent — Univ. of Angers
Lhommeau, Mehdi — Univ. of Angers
Maia, Carlos Andrey — Univ. Federal De Minas Gerais

09:10-09:30 WeA14.3

Decentralized Supervisory Control with Communicating Supervisors Based on Top-Down Coordination Control, pp. 5149-5155.

Komenda, Jan — Czech Acad. of Sciences

Masopust, Tomas — Acad. of Sciences of the Czech Republic

09:30-09:50 — WeA14.4

Synthesis of Maximally Permissive Non-Blocking Supervisors for Partially Observed Discrete Event Systems, pp. 5156-5162.

Yin, Xiang — Univ. of Michigan
Lafortune, Stephane — Univ. of Michigan

09:50-10:10 — WeA14.5

Optimality in the Control of Gene Regulatory Networks, pp. 5163-5170.

Baldissera, Fabio L. — Federal Univ. of Santa Catarina
Cury, Jose E. R. — Federal Univ. of Santa Catarina

10:10-10:30 — WeA14.6

Rapid Learning in Sequential Composition Control, pp. 5171-5176.

Najafi, Esmaeil — Delft Univ. of Tech. Univ. of Tehran
Lopes, Gabriel — Delft Univ. of Tech
Nageshrao, Subramanya — Delft Univ. of Tech
Babuska, R. — Delft Univ. of Tech

WeA15 — Atrium 2

Randomized Algorithms (Regular Session)

Chair: Dabbene, Fabrizio — CNR-IEIIT
Co-Chair: Parisio, Alessandra — Royal Inst. of Tech. (KTH)

08:30-08:50 — WeA15.1

Uniform Sample Generation in Semialgebraic Sets, pp. 5177-5182.

Dabbene, Fabrizio — Cnr-Ieiit
Henrion, Didier — Laas-Cnrs
Lagoa, Constantino M. — Pennsylvania State Univ

08:50-09:10 — WeA15.2

Beyond Monte Carlo for the Initial Uncertainty Propagation Problem, pp. 5183-5188.

Yang, Chao — Univ. of Florida
Kumar, Mrinal — Univ. of Florida

09:10-09:30 — WeA15.3

Randomized Algorithm for Estimation of Moving Point Position Using Single Camera, pp. 5189-5194.

Krivokon, Dmitry — Saint-Petersburg State Univ
Vakhitov, Alexander — Saint Petersburg State Univ

09:30-09:50 — WeA15.4

Randomized Solution for Robust Optimal Power Flow, pp. 5195-5200.

Wada, Takayuki — Osaka Univ
Morita, Ryosuke — Aoyama Gakuin Univ
Asai, Toru — Osaka Univ
Masubuchi, Izumi — Kobe Univ
Fujisaki, Yasumasa — Osaka Univ

09:50-10:10 — WeA15.5

Control of HVAC Systems Via Scenario-Based Explicit MPC, pp. 5201-5207.

Parisio, Alessandra — Royal Inst. of Tech. (KTH)
Fabietti, Luca — Royal Inst. of Tech. (KTH)
Molinari, Marco — Royal Inst. of Tech. (KTH)
Varagnolo, Damiano — LTU Luleå Univ. of Tech
Johansson, Karl Henrik — Royal Inst. of Tech. (KTH)

10:10-10:30 — WeA15.6

Randomized Iterations for Low Latency Fixed Point Computation, pp. 5208-5215.

Master, Neal — Stanford Univ
Bambos, Nicholas — Stanford Univ

WeA16 — Olympic 2

Control of Diffusion Processes (Invited Session)

Chair: Fahroo, Fariba — AFOSR
Co-Chair: Morris, Kirsten — Univ. of Waterloo
Organizer: Fahroo, Fariba — AFOSR
Organizer: Morris, Kirsten — Univ. of Waterloo

08:30-08:50 — WeA16.1

Disturbance Attenuation in Nonlinear Perturbed Diffusion Processes by Sampled-In-Space Sensing and Actuation (I), pp. 5216-5221.

Pisano, Alessandro — Univ. of Cagliari
Orlov, Yury — Cicese
Utkin, Vadim I. — The Ohio State Univ

08:50-09:10 — WeA16.2

On the Boundary Control of Coupled Reaction-Diffusion Equations Having the Same Diffusivity Parameters (I), pp. 5222-5228.

Pisano, Alessandro — Univ. of Cagliari
Orlov, Yury — Cicese
Baccoli, Antonello — Univ. of Cagliari

09:10-09:30 — WeA16.3

Optimization of Spatially Distributed Systems with Spatially Local Controllers and Partial Connectivity (I), pp. 5229-5235.

Demetriou, Michael A. — Worcester Pol. Inst

09:30-09:50 — WeA16.4

Backstepping-Forwarding Control of Parabolic PDEs with Partially Separable Kernels (I), pp. 5236-5241.

Tsubakino, Daisuke — Hokkaido Univ
Bribiesca Argomedo, Federico — Univ. of California, San Diego
Krstic, Miroslav — Univ. of California, San Diego

09:50-10:10 — WeA16.5

Homogenization in Reaction-Diffusion PDEs under Space and Time-Dependent Heterogeneities, pp. 5242-5247.

Shafi, S. Yusef — Nest
Bai, He — UtopiaCompression

10:10-10:30 — WeA16.6

Networked Controller Design and Analysis for Uncertain Distributed Processes with Measurement and Actuation Errors (I), pp. 5248-5253.

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

WeA17 — Atrium 3

Networked Control Systems I (Regular Session)

Chair: Postoyan, Romain — CNRS-CRAN
Co-Chair: Andersson, Sean — Boston Univ.

08:30-08:50 — WeA17.1

On Resilient Control of Nonlinear Systems under Denial-Of-Service, pp. 5254-5259.

De Persis, Claudio — Univ. of Groningen
Tesi, Pietro — Univ. of Groningen

08:50-09:10 WeA17.2

Preservation of System Properties for Networked Linear, Time-Invariant Control Systems in the Presence of Switching Delays, pp. 5260-5265.

Yu, Xi	Boston Univ
Andersson, Sean	Boston Univ

09:10-09:30 WeA17.3

Formal Methods for Stability Analysis of Networked Control Systems with IEEE 802.15.4 Protocol, pp. 5266-5271.

Wu, Bo	Univ. of Notre Dame
Lin, Hai	Univ. of Notre Dame
Lemmon, Michael	Univ. of Notre Dame

09:30-09:50 WeA17.4

Emulated Controller Design for Networked Control Systems Implemented on FlexRay, pp. 5272-5277.

Wang, Wei	Univ. of Melbourne
Nesic, Dragan	Univ. of Melbourne
Postoyan, Romain	Cnrs-Cran

09:50-10:10 WeA17.5

An Improved Stability Criterion of Networked Control Systems with Dynamic Controllers in the Feedback Loop, pp. 5278-5283.

Cavalcanti Vilela, João Vitor	Univ. of Brasilia
Figueredo, Luis Felipe da Cruz	Univ. of Brasília
Ishihara, Joao Yoshiyuki	Univ. of Brasília
Borges, Geovany A.	Univ. of Brasília

10:10-10:30 WeA17.6

A Jump Filter for Uncertain Dynamic Systems with Dropouts (I), pp. 5284-5289.

Dolz, Daniel	Univ. Jaume I
Quevedo, Daniel E.	The Univ. of Newcastle
Peñarrocha, Ignacio	Univ. Jaume I
Sanchis, Roberto	Univ. Jaume I

WeA18 Olympic 3

Computer Networks (Regular Session)

Chair: La, Richard J.	Univ. of Maryland, Coll. Park
Co-Chair: Gaggero, Mauro	National Res. Council of Italy

08:30-08:50 WeA18.1

Role of Network Topology in Cybersecurity, pp. 5290-5295.

La, Richard J.	Univ. of Maryland, Coll. Park

08:50-09:10 WeA18.2

A Linear Consensus Approach to Quality-Fair Video Delivery, pp. 5296-5301.

Dal Col, Laura	LAAS-CNRS
Tarbouriech, Sophie	LAAS-CNRS
Zaccarian, Luca	LAAS-CNRS and Univ. of Trento
Kieffer, Michel	CNRS-Supelec

09:10-09:30 WeA18.3

Hybrid Control of a Three-Node Network Cluster, pp. 5302-5307.

Albea, Carolina	LAAS CNRS
Seuret, Alexandre	Cnrs
Zaccarian, Luca	LAAS-CNRS and Univ. of Trento

09:30-09:50 WeA18.4

A Predictive Control Approach for Energy-Aware Consolidation of Virtual Machines in Cloud Computing, pp. 5308-5313.

Gaggero, Mauro	National Res. Council of Italy
Caviglione, Luca	Univ. of Genoa

09:50-10:10 WeA18.5

Monotonicity and Global Stability in Download Dynamics of Content-Sharing Networks, pp. 5314-5319.

Paganini, Fernando	Univ. ORT, Uruguay
Ferragut, Andres	Univ. ORT, Uruguay

10:10-10:30 WeA18.6

Control-Theoretical Load-Balancing for Cloud Applications with Brownout, pp. 5320-5327.

Dürango, Jonas	Lund Univ
Dellkrantz, Manfred	Lund Univ
Maggio, Martina	Lund Univ
Klein, Cristian	Umeå Univ
Papadopoulos, Alessandro V.	Lund Univ
Hernández-Rodriguez, Francisco	Umeå Univ
Elmroth, Erik	Umeå Univ
Arzen, Karl-Erik	Lund Univ

WeA19 Plaza 1

Autonomous Robots (Regular Session)

Chair: Yu, Wen	CINVESTAV-IPN
Co-Chair: Aguiar, A. Pedro	Univ. of Porto

08:30-08:50 WeA19.1

Adaptive Leader-Follower Formation Control of Autonomous Marine Vehicles, pp. 5328-5333.

Briñón Arranz, Lara	Inst. Superior Técnico
Pascoal, Antonio Manuel	Inst. Superior Tecnico
Aguiar, A. Pedro	Univ. of Porto

08:50-09:10 WeA19.2

Ellipsoid Method for Simultaneous Localization and Mapping of Mobile Robot, pp. 5334-5339.

Zamora, Erik	Cinvestav-Ipn
Yu, Wen	Cinvestav-Ipn

09:10-09:30 WeA19.3

Three-Dimensional Spiral Tracking Control for Gliding Robotic Fish, pp. 5340-5345.

Zhang, Feitian	Michigan State Univ
Tan, Xiaobo	Michigan State Univ

09:30-09:50 WeA19.4

A New Polynomial Based SLAM Algorithm for a Mobile Robot in an Unknown Indoor Environment, pp. 5346-5351.

D'Alfonso, Luigi	Univ. della Calabria
Grano, Antonio	Univ. della Calabria
Muraca, Pietro Maria	Univ. della Calabria
Pugliese, Paolo	Univ. della Calabria

09:50-10:10 WeA19.5

A Non-Myopic, Receding Horizon Control Strategy for an AUV to Track an Underwater Target in a Bistatic Sonar Scenario, pp. 5352-5358.

Ferri, Gabriele	NATO Centre for Maritime Res. and Experimentation
Munafo, Andrea	NATO Centre for Maritime Res. and Experimentation
Goldhahn, Ryan	NATO Centre for Maritime Res. and Experimentation
LePage, Kevin	NATO Centre for Maritime Res. and Experimentation

10:10-10:30 WeA19.6

NUROA: A Numerical Roadmap Algorithm, pp. 5359-5366.

Iraji, Reza	Colorado State Univ
Chitsaz, Hamidreza	Colorado State Univ

WeA20 Plaza 2

Agents and Autonomous Systems I (Regular Session)

Chair: Yucelen, Tansel	Missouri Univ. of Science and Tech.
Co-Chair: Bakolas, Efstathios	The Univ. of Texas at Austin

08:30-08:50 WeA20.1

Resilient Networked Multiagent Systems: A Distributed Adaptive Control Approach, pp. 5367-5372.

De La Torre, Gerardo	Georgia Inst. of Tech
Yucelen, Tansel	Missouri Univ. of Science and Tech
Peterson, John Daniel	Missouri Univ. of Science and Tech

08:50-09:10 WeA20.2

Algorithmic Approaches to Artistic Movement, pp. 5373-5380.

Ozcimder, Kayhan	Boston Univ
Kong, Zhaodan	Boston Univ
Baillieul, John	Boston Univ

09:10-09:30 WeA20.3

Set Input-To-State Stability for Spatially Interacting Multi-Agent Systems, pp. 5381-5386.

Gasparri, Andrea	Univ. Di Roma Tre
Williams, Ryan	Univ. of Southern California
Leccese, Antonio	Univ. Di Roma Tre
Ulivi, Giovanni	Univ. Di Roma Tre

09:30-09:50 WeA20.4

Bearing Angle Based Cooperative Source Localization, pp. 5387-5392.

Lin, Che	Zhejiang Univ
Chai, Guofei	Zhejiang Univ
Lin, Zhiyun	Zhejiang Univ
Yan, Gangfeng	Zhejiang Univ
Mao, Guoqiang	The Univ. of Tech. Sydney

09:50-10:10 WeA20.5

Partitioning Algorithms for Homogeneous Multi-Vehicle Systems with Planar Rigid Body Dynamics, pp. 5393-5398.

Bakolas, Efstathios	The Univ. of Texas at Austin

10:10-10:30 WeA20.6

Decentralized Formation Tracking Control of Autonomous Vehicles on Straight Paths, pp. 5399-5404.

Loria, Antonio	Cnrs
Kuvulmaz, Janset	Yildiz Tech. Univ
Alvarez Jarquin, Nohemi	Cinvestav-Ipn

WeA21 Plaza 3

Context-Dependence in Systems and Synthetic Biology (Invited Session)

Chair: Del Vecchio, Domitilla	Massachusetts Inst. of Tech.
Co-Chair: Yeung, Enoch	California Inst. of Tech.
Organizer: Gyorgy, Andras	Massachusetts Inst. of Tech.
Organizer: Yeung, Enoch	California Inst. of Tech.
Organizer: Murray, Richard M.	California Inst. of Tech.
Organizer: Del Vecchio, Domitilla	Massachusetts Inst. of Tech.

08:30-08:50 WeA21.1

Modeling the Effects of Compositional Context on Promoter Activity in an E. Coli Extract Based Transcription-Translation System (I), pp. 5405-5412.

Yeung, Enoch	California Inst. of Tech
Ng, Andrew	Washington Univ. in St. Louis
Kim, Jongmin	Harvard Univ
Sun, Zachary Z.	California Inst. of Tech.
Murray, Richard M.	California Inst. of Tech

08:50-09:10 WeA21.2

Pattern Formation with a Compartmental Lateral Inhibition System (I), pp. 5413-5418.

Rufino Ferreira, Ana Sofia	Univ. of California, Berkeley
Hsia, Justin	Univ. of California, Berkeley
Arcak, Murat	Univ. of California, Berkeley
Maharbiz, Michel	Univ. of California, Berkeley
Arkin, Adam	

09:10-09:30 WeA21.3

Quantifying the Effect of Interconnections on the Steady States of Biomolecular Networks (I), pp. 5419-5424.

Sontag, Eduardo D.	Rutgers Univ

09:30-09:50 WeA21.4

Detection of Loading Effects in Bacterial Stress Response Using Biochemical Stochasticity (I), pp. 5425-5430.

Buzi, Gentian	ETH Zurich
Khammash, Mustafa H.	ETH Zurich

09:50-10:10 WeA21.5

Limitations and Trade-Offs in Gene Expression Due to Competition for Shared Cellular Resources (I), pp. 5431-5436.

Gyorgy, Andras	Massachusetts Inst. of Tech
Del Vecchio, Domitilla	Massachusetts Inst. of Tech

10:10-10:30 WeA21.6

Modelling Essential Interactions between Synthetic Genes and Their Chassis Cell (I), pp. 5437-5444.

Algar, Rhys	Imperial Coll. London
Ellis, Thomas	Imperial Coll. London
Stan, Guy-Bart Vincent	Imperial Coll. London

WePL Salon D and E

Bode Lecture: The Robot Rendezvous Problem (Plenary Session)

Chair: Yamamoto, Yutaka	Kyoto Univ.
Co-Chair: Farrell, Jay A.	Univ. of California Riverside

11:00-12:00 WePL.1

*The Robot Rendezvous Problem**.

Francis, Bruce	Univ. of Toronto

WeB01 Salon F

Switched Systems II (Regular Session)

Chair: Lazar, Mircea	Eindhoven Univ. of Tech.
Co-Chair: Antunes, Duarte	Eindhoven Univ. of Tech. the Netherlands.

13:30-13:50 WeB01.1

Stability of Linear Autonomous Systems under Regular Switching Sequences, pp. 5445-5450.

Wang, Yu	Univ. Illinois, Urbana-Champaign
Roohi, Nima	Univ. Illinois, Urbana-Champaign
Dullerud, Geir E.	Univ. Illinois, Urbana-Champaign
Viswanathan, Mahesh	Univ. of Illinois

13:50-14:10 WeB01.2

Stability Analysis of Switched Linear Systems Defined by Graphs, pp. 5451-5456.

Athanasopoulos, Nikolaos	Eindhoven Univ. of Tech
Lazar, Mircea	Eindhoven Univ. of Tech

14:10-14:30 WeB01.3

Equivalence between Different Stabilities of Discrete-Time Delayed Switched Systems with Uncertainties, pp. 5457-5462.

Liu, Xingwen	Southwest Univ. for Nationalities
Liu, Duyu	Swun

14:30-14:50 WeB01.4

Efficiently Computable Lower Bounds for the p-Radius of Switching Linear Systems, pp. 5463-5468.

Ogura, Masaki	Texas Tech. Univ
Jungers, Raphaël	Univ. of Louvain

14:50-15:10 WeB01.5

On Stabilizability Conditions for Discrete-Time Switched Linear Systems, pp. 5469-5474.

Fiacchini, Mirko	GIPSA-Lab
Girard, Antoine	Univ. Joseph Fourier
Jungers, Marc	CNRS - Univ. De Lorraine

15:10-15:30 WeB01.6

Performance Analysis of a Class of Linear Quadratic Regulators for Switched Linear Systems, pp. 5475-5480.

Antunes, Duarte	Eindhoven Univ. of Tech
Heemels, W.P.M.H.	Eindhoven Univ. of Tech

WeB02 Salon G

Constructing Lyapunov Functions (Regular Session)

Chair: Moreno, Jaime A.	Univ. Nacional Autonoma de Mexico-UNAM
Co-Chair: Peet, Matthew M.	Arizona State Univ.

13:30-13:50 WeB02.1

Constructing Piecewise-Polynomial Lyapunov Functions for Local Stability of Nonlinear Systems Using Handelman's Theorem, pp. 5481-5487.

Kamyar, Reza	Arizona State Univ
Murti, Chaitanya	Illinois Inst. of Tech
Peet, Matthew M.	Arizona State Univ

13:50-14:10 WeB02.2

Structured Storage Functions for Cascaded Systems, pp. 5488-5493.

Prescott, Thomas Paul	Univ. of Oxford
Papachristodoulou, Antonis	Univ. of Oxford

14:10-14:30 WeB02.3

Construction of Lyapunov Functions for Homogeneous Second Order Systems, pp. 5494-5499.

Lopez-Ramirez, Francisco	Univ. Nacional Autonoma De Mexico-UNAM
Sanchez Ramirez, Tonametl	Univ. Nacional Autonoma De Mexico-UNAM
Moreno, Jaime A.	Univ. Nacional Autonoma De Mexico-UNAM

14:30-14:50 WeB02.4

A Constructive Lyapunov Function Design Method for a Class of Homogeneous Systems, pp. 5500-5505.

Sanchez Ramirez, Tonametl	Univ. Nacional Autonoma De Mexico-UNAM
Moreno, Jaime A.	Univ. Nacional Autonoma De Mexico-UNAM

14:50-15:10 WeB02.5

Computation of Continuous and Piecewise Affine Lyapunov Functions by Numerical Approximations of the Massera Construction, pp. 5506-5511.

Björnsson, Jóhann Sigursteinn	Univ. of Reykjavík
Giesl, Peter	Univ. of Sussex
Hafstein, Sigurdur	Univ. of Reykjavík
Kellett, Christopher M.	Univ. of Newcastle
Li, Huijuan	Univ. of Bayreuth

15:10-15:30 WeB02.6

Computation of Lyapunov Functions for Discrete-Time Systems Using the Yoshizawa Construction, pp. 5512-5517.

Li, Huijuan	Univ. of Bayreuth
Hafstein, Sigurdur	Univ. of Reykjavík
Kellett, Christopher M.	Univ. of Newcastle

WeB03 Salon H

Sliding Mode Control II (Regular Session)

Chair: Bartoszewicz, Andrzej	Tech. Univ. of Lodz
Co-Chair: Menon, Prathyush P	Univ. of Exeter

13:30-13:50 WeB03.1

Boundary Tracking Using a Suboptimal Sliding Mode Algorithm, pp. 5518-5523.

Menon, Prathyush P	Univ. of Exeter
Edwards, Christopher	Univ. of Exeter
Shtessel, Yuri B.	Univ. of Alabama at Huntsville
Ghose, Debasish	Indian Inst. of Science
Haywood, Jim	Univ. of Exeter

13:50-14:10 WeB03.2

State Estimation with Unknown Input and Measurement Noise Reconstruction Based on Descriptor Systems, pp. 5524-5529.

Zhu, Fanglai	Coll
Xu, Liyun	Tongji Univ
Zhang, Wei	Shanghai Univ. of Eng. Science
Fan, Wu	Tongji Univ

14:10-14:30 WeB03.3

Second Order Sliding Mode Control of a Mobile Hydraulic Crane, pp. 5530-5535.

Vázquez, Carlos	Umeå Univ
Aranovskiy, Stanislav	ITMO Univ
Freidovich, Leonid B.	Umeå Univ
Fridman, Leonid M.	National Autonomous Univ. of Mexico

14:30-14:50 WeB03.4

ISS-Lyapunov Functions for Output Feedback Sliding Modes, pp. 5536-5541.

Aparicio Martínez, Andrea	National Autonomous Univ. of Mexico
Castaños, Fernando	Cinvestav
Fridman, Leonid M.	National Autonomous Univ. of Mexico

14:50-15:10 WeB03.5

Networked Sliding Mode Control with Chattering Alleviation, pp. 5542-5547.

Ferrara, Antonella — Univ. of Pavia
Incremona, Gian Paolo — Univ. of Pavia
Stocchetti, Veronica — Univ. of Pavia

15:10-15:30 WeB03.6

Inverse Tangent Reaching Law for Discrete Sliding Mode Control with Application to Inventory Management, pp. 5548-5553.

Bartoszewicz, Andrzej — Tech. Univ. of Lodz
Leśniewski, Piotr — Tech. Univ. of Lodz

WeB04 — Salon I

Computational Methods I (Regular Session)

Chair: Najafi, Mahmoud — Kent State Univ.
Co-Chair: Chakraborty, Debraj — Indian Inst. of Tech. Bombay

13:30-13:50 WeB04.1

Distributed Computation of Minimum Time Consensus for Multi-Agent Systems, pp. 5554-5559.

Mulla, Ameer, Kalandar — Indian Inst. of Tech. Bombay
Patil, Deepak U. — Indian Inst. of Tech. Bombay
Chakraborty, Debraj — Indian Inst. of Tech. Bombay

13:50-14:10 WeB04.2

Computational Investigations of Decentralized Cellular Network Optimization Via Mean Field Control, pp. 5560-5567.

Aziz, Mohamad — McGill Univ
Caines, Peter E. — McGill Univ

14:10-14:30 WeB04.3

A New Semi-Smooth Newton Multigrid Method for Parabolic PDE Optimal Control Problems, pp. 5568-5573.

Liu, Jun — Southern Illinois Univ. Carbondale
Xiao, Mingqing — Southern Illinois Univ

14:30-14:50 WeB04.4

A Linear Time Algorithm to Verify Strong Structural Controllability, pp. 5574-5580.

Weber, Alexander — Univ. of the Federal Armed Forces Munich
Reissig, Gunther — Univ. of the Federal Armed Forces Munich
Svaricek, Ferdinand — Univ. of the Federal Armed Forces Munich

14:50-15:10 WeB04.5

Inverse Optimal Control with Polynomial Optimization, pp. 5581-5586.

Pauwels, Edouard — LAAS-CNRS
Henrion, Didier — LAAS-CNRS
Lasserre, Jean B. — LAAS-CNRS and Inst. of Mathematics, Univ. Oftoulouse

15:10-15:30 WeB04.6

Exploration of Analytical Solutions of Nonlinear Oscillatory Systems Via the Decomposition Method, pp. 5587-5592.

Najafi, Mahmoud — Kent State Univ
Fincher, Donald Wayne — Kent State Univ. Ashtabula

WeB05 — Salon J

Algebraic and Geometric Methods II (Regular Session)

Chair: Carravetta, Francesco — IASI-CNR
Co-Chair: Bonnabel, Silvere — Mines ParisTech

13:30-13:50 WeB05.1

Random Pairwise Gossip on CAT(0) Metric Spaces, pp. 5593-5598.

Bellachehab, Anass — Telecom SudParis
Jakubowicz, Jérémie — Telecom SudParis - CNRS

13:50-14:10 WeB05.2

Invariant Particle Filtering with Application to Localization, pp. 5599-5605.

Barrau, Axel — Mines ParisTech
Bonnabel, Silvere — Mines ParisTech

14:10-14:30 WeB05.3

An Intrinsic Robust PID Controller on Lie Groups, pp. 5606-5611.

Maithripala, D. H. S. — Univ. of Peradeniya
Berg, Jordan M. — Texas Tech. Univ

14:30-14:50 WeB05.4

Almost-Global Exponential State-Feedback Stabilization of an Underactuated Rigid-Body in 3D, pp. 5612-5617.

Carravetta, Francesco — IASI-CNR

14:50-15:10 WeB05.5

Real Analytic Control Systems, pp. 5618-5623.

Jafarpour, Saber — Queen's Univ
Lewis, Andrew D. — Queen's Univ

15:10-15:30 WeB05.6

New Conditions to Keep Static Feedback Linearizability under Addition of New Inputs, pp. 5624-5629.

Franch, Jaume — Univ. Pol. De Catalunya
Reyes, Alex — Univ. Pol. De Catalunya

WeB06 — Salon 6

Energy Systems (Regular Session)

Chair: Zampieri, Sandro — Univ. di Padova
Co-Chair: Dotoli, Mariagrazia — Pol. di Bari

13:30-13:50 WeB06.1

Decentralized Foresighted Energy Purchase and Procurement with Renewable Generation and Energy Storage, pp. 5630-5635.

Xiao, Yuanzhang — Univ. of California Los Angeles
van der Schaar, Mihaela — Univ. of California Los Angeles

13:50-14:10 WeB06.2

Optimal Frequency Separation of Power Sources by Multivariable LPV/H_{infty} Control: Application to On-Board Energy Management Systems of Electric Vehicles, pp. 5636-5641.

Nwesaty, Waleed — Gipsa-Lab
Bratcu, Antoneta — Grenoble Inst. of Tech
Sename, Olivier — Univ. Grenoble Alpes

14:10-14:30 WeB06.3

A Distributed Control Algorithm for the Minimization of the Power Generation Cost in Smart Micro-Grid, pp. 5642-5647.

Cavraro, Guido — Univ. Di Padova
Carli, Ruggero — Univ. Di Padova
Zampieri, Sandro — Univ. Di Padova

14:30-14:50 WeB06.4

Energy Scheduling of a Smart Home under Nonlinear Pricing, pp. 5648-5653.

Carli, Raffaele — Pol. Di Bari
Dotoli, Mariagrazia — Pol. Di Bari

14:50-15:10 WeB06.5

A Novel Bounded Cooperative Multi-Rate Current-Sharing Control for Parallel Charging System with Directed Communication, pp. 5654-5659.

Liu, Jiangang	Central South Univ
Huang, Zhiwu	Central South Univ
Peng, Jun	Central South Univ
Liu, Weirong	Central South Univ

15:10-15:30 WeB06.6

Closed-Loop Control of the Safety Factor Profile in the TCV Tokamak (I), pp. 5660-5665.

Barton, Justin	Lehigh Univ
Schuster, Eugenio	Lehigh Univ
Felici, Federico	Eindhoven Univ. of Tech
Sauter, Olivier	EPFL

WeB07 Salon 7

Emerging Control Applications II (Regular Session)

Chair: Lagoa, Constantino M.	Pennsylvania State Univ.
Co-Chair: Nikolakopoulos, George	Luleå Univ. of Tech.

13:30-13:50 WeB07.1

Multi-Attribute Data Dynamics Discontinuity Identification: A Probabilistic Approach Using Linear Modeling, pp. 5666-5673.

Laftchiev, Emil	Pennsylvania State Univ
Lagoa, Constantino M.	Pennsylvania State Univ
Brennan, Sean	Pennsylvania State Univ

13:50-14:10 WeB07.2

Adaptive Robust Optimization for Coordinated Capacity and Load Control in Data Centers, pp. 5674-5679.

Yin, Xiaoqi	Carnegie Mellon Univ
Sinopoli, Bruno	Carnegie Mellon Univ

14:10-14:30 WeB07.3

An Experimental Investigation of Real-Time, Occupancy-Based Control of Commercial Building Climate, pp. 5680-5685.

Brooks, Jonathan	Univ. of Florida
Goyal, Siddharth	Pacific Northwest National Lab
Subramany, Rahul	Univ. of Florida
Lin, Yashen	Univ. of Florida
Middelkoop, Timothy	Univ. of Florida
Arpan, Laura	Florida State Univ
Carloni, Luca	Columbia Univ
Barooah, Prabir	Univ. of Florida

14:30-14:50 WeB07.4

On Modeling and Control of the Retraction Phase for Airborne Wind Energy Systems, pp. 5686-5691.

Zgraggen, Aldo Urban	ETH Zurich
Fagiano, Lorenzo	ABB Switzerland Ltd
Morari, Manfred	ETH Zurich

14:50-15:10 WeB07.5

Roll Reduction and Course Keeping for the Ship Moving in Waves with Factorised NGMV Control, pp. 5692-5697.

Liu, Zhiquan	Harbin Engineering Univ
Hongzhang, Jin	Harbin Engineering Univ
Grimble, Michael John	Univ. of Strathclyde
Katebi, Reza	Univ. of Strathclyde

15:10-15:30 WeB07.6

Frame Induced Vibration Estimation and Attenuation Scheme on a Multirotor Helicopter, pp. 5698-5703.

Fresk, Emil	Luleå Univ. of Tech
Nikolakopoulos, George	Luleå Univ. of Tech

WeB08 Salon 8

Statistical Learning (Regular Session)

Chair: Jadbabaie, Ali	Univ. of Pennsylvania
Co-Chair: Hui, Qing	Texas Tech. Univ.

13:30-13:50 WeB08.1

Experimental Design for System Identification of Boolean Control Networks in Biology, pp. 5704-5709.

Busetto, Alberto Giovanni	UCSB
Lygeros, John	ETH Zurich

13:50-14:10 WeB08.2

A Parallel Method for Large Scale Convex Regression Problems, pp. 5710-5717.

Aybat, Necdet Serhat	Pennsylvania State Univ
Wang, Zi	Pennsylvania State Univ

14:10-14:30 WeB08.3

Satisficing in Gaussian Bandit Problems, pp. 5718-5723.

Reverdy, Paul	Princeton Univ
Leonard, Naomi Ehrich	Princeton Univ

14:30-14:50 WeB08.4

Novel Response Surface Methodologies with Design of Experiment for Source Localization in Unknown Spatial-Temporal Fields, pp. 5724-5729.

Liu, Zhenyi	Texas Tech. Univ
Smith, Philip	Texas Tech. Univ
Park, Trevor	Univ. Illinois, Urbana-Champaign
Trindade, A. Alexandre	Texas Tech. Univ
Hui, Qing	Texas Tech. Univ

14:50-15:10 WeB08.5

(Non-)Bayesian Learning without Recall, pp. 5730-5735.

Rahimian, Mohammad Amin	Univ. of Pennsylvania
Molavi, Pooya	Mit
Jadbabaie, Ali	Univ. of Pennsylvania

15:10-15:30 WeB08.6

Inverse Covariance Estimation from Data with Missing Values Using the Concave-Convex Procedure, pp. 5736-5742.

Thai, Jerome	Univ. of California, Berkeley
Bayen, Alexandre	Univ. of California, Berkeley
Akametalu, Anayo K.	Univ. of California, Berkeley
Tomlin, Claire J.	Univ. of California, Berkeley
Hunter, Timothy	Univ. of California, Berkeley

WeB09 Salon 9

Fault Detection I (Regular Session)

Chair: Previdi, Fabio	Univ. degli Studi di Bergamo
Co-Chair: Zhang, Xiaodong	Wright State Univ.

13:30-13:50 WeB09.1

Integrated Fault Detection, Isolation and Control Design for Continuous-Time Markovian Jump Systems with Uncertain Transition Probabilities, pp. 5743-5749.

Davoodi, Mohammadreza	Qatar Univ

Meskin, Nader — Qatar Univ
Khorasani, Khashayar — Concordia Univ

13:50-14:10 WeB09.2

A Discrete-Time Game Theoretic Multiple-Fault Detection Filter, pp. 5750-5757.

Murray, Emmanuell A. — SySense, Inc
Speyer, Jason L. — Univ. of California at Los Angeles

14:10-14:30 WeB09.3

Model-Based Fault Diagnosis and Prediction for a Class of Distributed Parameter Systems, pp. 5758-5763.

Cai, Jia — Missouri Univ. of Science & Tech
Ferdowsi, Hasan — Missouri Univ. of Science & Tech
Jagannathan, Sarangapani — Missouri Univ. of Science & Tech

14:30-14:50 WeB09.4

Robust Residual Selection for Fault Detection, pp. 5764-5769.

Khorasgani, Hamed — Vanderbilt Univ
Eriksson, Daniel — Linköping Univ
Biswas, Gautam — Vanderbilt Univ
Frisk, Erik — Linköping Univ
Krysander, Mattias — Linköping Univ

14:50-15:10 WeB09.5

Fault Detection Via Modified Principal Direction Divisive Partitioning and Application to Aerospace Electro-Mechanical Actuators, pp. 5770-5775.

Mazzoleni, Mirko — Univ. di Bergamo
Formentin, Simone — Pol. di Milano
Previdi, Fabio — Univ. di Bergamo
Savaresi, Sergio M. — Pol. di Milano

15:10-15:30 WeB09.6

Coding Sensor Outputs for Injection Attacks Detection, pp. 5776-5781.

Miao, Fei — Univ. of Pennsylvania
Zhu, Quanyan — New York Univ
Pajic, Miroslav — Univ. of Pennsylvania
Pappas, George J. — Univ. of Pennsylvania

WeB10 Salon 10

Quantum Information and Control (Regular Session)

Chair: Nurdin, Hendra Ishwara — UNSW Australia
Co-Chair: Marriott, John — Univ. of Hawaii

13:30-13:50 WeB10.1

Coherent-Classical Estimation versus Purely-Classical Estimation for Linear Quantum Systems, pp. 5782-5787.

Roy, Shibdas — Univ. of New South Wales
Petersen, Ian R. — Univ. of New South Wales at the Australian Defence Force Acad
Huntington, Elanor — Univ. of New South Wales

13:50-14:10 WeB10.2

The Round-Trip Contrast Problem (I), pp. 5788-5793.

Marriott, John — Univ. of Hawaii

14:10-14:30 WeB10.3

Indirect Control Invariance of Decoherence-Splitting Manifold (DSM), pp. 5794-5801.

Jonckheere, Edmond A. — Univ. of Southern California
Shabani, Alireza — Univ. of Southern California
Rezakhani, Ali — Sharif Univ. of Tech

14:30-14:50 WeB10.4

Robust Entanglement Control between Two Atoms in a Cavity Using Sampling-Based Learning Control, pp. 5802-5807.

Mabrok, Mohamed Abdalla — Univ. of New South Wales at the Australian Defence Force Acad
Dong, Daoyi — Univ. of New South Wales
Chen, Chunlin — Nanjing Univ
Petersen, Ian R. — Univ. of New South Wales at the Australian Defence Force Acad

14:50-15:10 WeB10.5

New Complete Parameterizations for Two Related Classes of Linear Quantum Stochastic Systems, pp. 5808-5812.

Techakesari, Onvaree — UNSW Australia
Nurdin, Hendra Ishwara — UNSW Australia

15:10-15:30 WeB10.6

Effect of Phase Shifts on EPR Entanglement Generated on Two Propagating Gaussian Fields Via Coherent Feedback, pp. 5813-5818.

Shi, Zhan — Univ. of New South Wales
Nurdin, Hendra Ishwara — Univ. of New South Wales

WeB11 Georgia 1

Optimization Algorithms III (Regular Session)

Chair: Sato, Hiroyuki — Kyoto Univ.
Co-Chair: Yousefian, Farzad — Univ. of Illinois at Urbana-Champaign

13:30-13:50 WeB11.1

Infeasibility Detection in Alternating Direction Method of Multipliers for Convex Quadratic Programs, pp. 5819-5824.

Raghunathan, Arvind — Mitsubishi Electric Res. Lab
Di Cairano, Stefano — Mitsubishi Electric Res. Lab

13:50-14:10 WeB11.2

Optimization on the Space of Rigid and Flexible Motions: An Alternative Manifold Optimization Approach, pp. 5825-5830.

Vakili, Pirooz — Boston Univ
Mirzaei, Hanieh — Boston Univ
Zarbafian, Shahrooz — Boston Univ
Paschalidis, Ioannis Ch. — Boston Univ
Kozakov, Dima — Boston Univ
Vajda, Sandor — Boston Univ

14:10-14:30 WeB11.3

Optimal Robust Smoothing Extragradient Algorithms for Stochastic Variational Inequality Problems, pp. 5831-5836.

Yousefian, Farzad — Univ. of Illinois at Urbana-Champaign
Nedich, Angelia — Univ. of Illinois, Urbana-Champaign
Shanbhag, Uday V. — Pennsylvania State Univ

14:30-14:50 WeB11.4

A Fixed Time Convergent Dynamical System to Solve Linear Programming, pp. 5837-5842.

Sánchez-Torres, Juan Diego — Centro De Investigación Y De Estudios Avanzados Del Inst. Po
Loza-Lopez, Martin J. — CINVESTAV
Ruiz-Cruz, Riemann — Inst. Tecnologico Y De Estudios Superiores De Occidente
Sanchez, Edgar N. — CINVESTAV
Loukianov, Alexander G. — CINVESTAV IPN Unidad GDL

14:50-15:10 WeB11.5

A Primal-Dual Newton Method for Distributed Quadratic Programming, pp. 5843-5848.

Klintberg, Emil — Chalmers Univ. of Tech
Gros, Sebastien — Chalmers Univ. of Tech

15:10-15:30 WeB11.6

Riemannian Conjugate Gradient Method for Complex Singular Value Decomposition Problem, pp. 5849-5854.

Sato, Hiroyuki — Tokyo Univ. of Science

WeB12 — Georgia 2

Optimal Control III (Regular Session)

Chair: Rao, Anil V. — Univ. of Florida
Co-Chair: Horowitz, Matanya — California Inst. of Tech.

13:30-13:50 WeB12.1

Geometric Optimal Control for Symmetry Breaking Cost Functions, pp. 5855-5861.

Borum, Andy — Univ. of Illinois at Urbana-Champaign
Bretl, Timothy — Univ. of Illinois, Urbana-Champaign

13:50-14:10 WeB12.2

Optimal Turning Gait for Mechanical Rectifier Systems with Three Dimensional Motion, pp. 5862-5867.

Kohannim, Saba — Univ. of California, Los Angeles
Iwasaki, Tetsuya — Univ. of California, Los Angeles

14:10-14:30 WeB12.3

An Hp Mesh Refinement Method for Optimal Control Using Discontinuity Detection and Mesh Size Reduction, pp. 5868-5873.

Liu, Fengjin — Univ. of Florida
Hager, William W. — Univ. of Florida
Rao, Anil V. — Univ. of Florida

14:30-14:50 WeB12.4

Optimal Control for Control Moment Gyros Center-Stable Manifold Approach, pp. 5874-5879.

Ishikawa, Kazuo — Nagoya Univ
Sakamoto, Noboru — Nagoya Univ

14:50-15:10 WeB12.5

Linear Hamilton Jacobi Bellman Equations in High Dimensions, pp. 5880-5887.

Horowitz, Matanya — California Inst. of Tech
Damle, Anil — Stanford Univ
Burdick, Joel W. — California Inst. of Tech

15:10-15:30 WeB12.6

Converging to and Escaping from the Global Equilibrium: Isostables and Optimal Control, pp. 5888-5893.

Mauroy, Alexandre — Univ. of Liege

WeB13 — Atrium 1

Predictive Control for Linear Systems I (Regular Session)

Chair: Findeisen, Rolf — OVG Univ. Magdeburg
Co-Chair: Jorgensen, John Bagterp — Tech. Univ. of Denmark

13:30-13:50 WeB13.1

Plug-And-Play Model Predictive Control for Electric Vehicle Charging and Voltage Control in Smart Grids, pp. 5894-5900.

Bansal, Somil — Univ. of California, Berkeley
Zeilinger, Melanie N. — Univ. of California, Berkeley
Tomlin, Claire J. — Univ. of California, Berkeley

13:50-14:10 WeB13.2

An Application of Chance-Constrained Model Predictive Control to Inventory Management in Hospitalary Pharmacy, pp. 5901-5906.

Maestre, J.M. — Univ. of Seville
Velarde, Pablo — Univ. of Seville
Jurado, Isabel — Univ. of Seville
Ocampo-Martinez, Carlos — Tech. Univ. of Catalonia (UPC)
Fernández García, Isabel — Hospital San Juan De Diós
Isla Tejera, Beatriz — Hospital Reina Sofía
Del Prado Llergo, José Ramón — Hospital Reina Sofía

14:10-14:30 WeB13.3

A Mean-Variance Criterion for Economic Model Predictive Control of Stochastic Linear Systems, pp. 5907-5914.

Sokoler, Leo Emil — Tech. Univ. of Denmark
Dammann, Bernd — Tech. Univ. of Denmark
Madsen, Henrik — Tech. Univ. of Denmark
Jorgensen, John Bagterp — Tech. Univ. of Denmark

14:30-14:50 WeB13.4

Inexact Fast Alternating Minimization Algorithm for Distributed Model Predictive Control, pp. 5915-5921.

Pu, Ye — École Pol. Fédérale De Lausanne
Zeilinger, Melanie N. — UC Berkeley
Jones, Colin N. — École Pol. Fédérale De Lausanne

14:50-15:10 WeB13.5

Stabilization of Inexact MPC Schemes, pp. 5922-5928.

Koegel, Markus — OVG Univ. Magdeburg
Findeisen, Rolf — OVG Univ. Magdeburg

15:10-15:30 WeB13.6

Control of a Semi-Active Suspension System for Comfort by Means of a Rule-Based Controller, pp. 5929-5934.

van der Sande, Thomas Petrus Johannes — Eindhoven Univ. of Tech
Besselink, Igo — Eindhoven Univ. of Tech
Nijmeijer, Hendrik — Eindhoven Univ. of Tech

WeB14 — Olympic 1

Discrete-Event Based Modeling, Diagnosis, Control and Resource Management of Complex Systems for Safe and Optimal Operations (Invited Session)

Chair: Su, Rong — Nanyang Tech. Univ.
Co-Chair: Lennartson, Bengt — Chalmers Univ. of Tech.
Organizer: Su, Rong — Nanyang Tech. Univ.
Organizer: Lennartson, Bengt — Chalmers Univ. of Tech.
Organizer: Brandin, Bertil A. — Asea Brown Boveri

13:30-13:50 WeB14.1

Symbolic Computation and Representation of Deadlock Avoidance Policies for Complex Resource Allocation Systems with Application to Multithreaded Software (I), pp. 5935-5942.

Fei, Zhennan — Chalmers Univ. of Tech
Akesson, Knut — Chalmers Univ. of Tech
Reveliotis, Spyros — Georgia Inst. of Tech

13:50-14:10 WeB14.2

Automaton-Based Timed Supervisory Control for Operational Planning and Scheduling under Multiple Job Deadlines (I), pp. 5943-5948.

Lin, Liyong	Nanyang Tech. Univ
Shehabinia, Ahmad Reza	Nanyang Tech. Univ
Su, Rong	Nanyang Tech. Univ
Brandin, Bertil A.	Asea Brown Boveri

14:10-14:30 WeB14.3

Power Distribution Network Management Using Networked Control of Timed Discrete Event Systems (I), pp. 5949-5954.

Zhao, Bo	State Grid Zhejiang Electric Power Res. Inst
Lin, Feng	Wayne State Univ
Wang, Caisheng	Wayne State Univ
Zhang, Xuesong	State Grid Zhejiang Electric Power Res. Inst
Polis, Michael P.	Oakland Univ
Wang, Le Yi	Wayne State Univ

14:30-14:50 WeB14.4

Distributed Diagnosis Using Predetermined Synchronization Strategies (I), pp. 5955-5960.

Keroglou, Christoforos	Univ. of Cyprus
Hadjicostis, Christoforos	Univ. of Cyprus

14:50-15:10 WeB14.5

Computation of the Delay Bound in Decentralized Diagnosis of Discrete Event Systems with Conditional Decisions, pp. 5961-5966.

Yokota, Shoichi	Osaka Univ
Takai, Shigemasa	Osaka Univ

15:10-15:30 WeB14.6

An Observer for Tropical Linear Event-Invariant Dynamical Systems, pp. 5967-5972.

Goncalves, Vinicius	Univ. Federal De Minas Gerais
Maia, Carlos Andrey	Univ. Federal De Minas Gerais
Hardouin, Laurent	Univ. of Angers
Shang, Ying	Southern Illinois Univ. Edwardsville

WeB15 Atrium 2

Uncertain Systems (Regular Session)

Chair: Battistelli, Giorgio	Univ. of Florence
Co-Chair: Crespo, Luis G	National Inst. of Aerospace

13:30-13:50 WeB15.1

Saddle-Node Bifurcation and Its Robustness Analysis: A Mechanism for Inducing Pluripotency in Stem Cell, pp. 5973-5978.

Inoue, Masaki	Keio Univ
Imura, Jun-ichi	Tokyo Inst. of Tech
Arai, Takayuki	Tokyo Inst. of Tech
Kashima, Kenji	Kyoto Univ
Aihara, Kazuyuki	Univ. of Tokyo

13:50-14:10 WeB15.2

Convex Hierarchical Analysis for the Performances of Uncertain Large-Scale Systems, pp. 5979-5984.

Dinh, Marc	Astrium
Korniienko, Anton	Ec. Centrale De Lyon
Scorletti, Gerard	Ec. Centrale De Lyon

14:10-14:30 WeB15.3

On the Robust H-Infinity Norm of 2D Mixed Continuous-Discrete-Time Systems with Uncertainty, pp. 5985-5990.

Chesi, Graziano	Univ. of Hong Kong

14:30-14:50 WeB15.4

Interval Predictor Models with a Formal Characterization of Uncertainty and Reliability, pp. 5991-5996.

Crespo, Luis G	National Inst. of Aerospace
Kenny, Sean	Nasa
Giesy, Daniel	Nasa

14:50-15:10 WeB15.5

A Compression Learning Perspective to Scenario Based Optimization, pp. 5997-6002.

Margellos, Kostas	Univ. of California, Berkeley
Prandini, Maria	Pol. di Milano
Lygeros, John	ETH Zurich

15:10-15:30 WeB15.6

Unfalsified Approach to Data-Driven Control Design, pp. 6003-6008.

Battistelli, Giorgio	Univ. of Florence
Mari, Daniele	Univ. of Florence
Selvi, Daniela	Univ. of Florence
Tesi, Pietro	Univ. of Groningen

WeB16 Olympic 2

Modeling I (Regular Session)

Chair: Pekarek, David	Data Tactics Corp.
Co-Chair: Mukhopadhyay, Shayok	Georgia Inst. of Tech.

13:30-13:50 WeB16.1

Energy-Based Modeling of Electric Motors, pp. 6009-6016.

Jebai, Al Kassem	MINES ParisTech
Combes, Pascal	MINES ParisTech
Malrait, Francois	Sti
Martin, Philippe	MINES ParisTech
Rouchon, Pierre	MINES ParisTech

13:50-14:10 WeB16.2

A Model for Controlling the Resting Membrane Potential of Cells Using Nanoparticles, pp. 6017-6022.

Mukhopadhyay, Shayok	Georgia Inst. of Tech
Zhang, Fumin	Georgia Inst. of Tech
Warren, Emilie	Georgia Inst. of Tech
Payne, Christine	Georgia Inst. of Tech

14:10-14:30 WeB16.3

Optimizing Your Online-Advertisement Asynchronously, pp. 6023-6030.

Huang, Longbo	Tsinghua Univ

14:30-14:50 WeB16.4

A POMDP Framework for Human-In-The-Loop System, pp. 6031-6036.

Lam, Chi Pang	Univ. of California, Berkeley
Sastry, S. Shankar	Univ. of California, Berkeley

14:50-15:10 WeB16.5

Projection-Based Modeling and Simulation of Nonsmooth Hamiltonian Mechanics, pp. 6037-6043.

Pekarek, David	Data Tactics Corp

15:10-15:30 WeB16.6

A Dynamical System Pair with Identical First Two Moments but Different Probability Densities (I), pp. 6044-6049.

Halder, Abhishek	Texas A&M Univ

Lee, Kooktae — Texas A&M Univ
Bhattacharya, Raktim — Texas A&M Univ

WeB17 — Atrium 3

Networked Control Systems II (Regular Session)

Chair: Finke, Jorge — Pontificia Univ. Javeriana
Co-Chair: Vargas, Francisco J. — Univ. Técnica Federico Santa María

13:30-13:50 — WeB17.1

Control with Minimum Communication Cost Per Symbol, pp. 6050-6055.

Pearson, Justin — Univ. of California, Santa Barbara
Hespanha, Joao P. — Univ. of California, Santa Barbara
Liberzon, Daniel — Univ. of Illinois, Urbana-Champaign

13:50-14:10 — WeB17.2

Constrained Proportional Integral Control of Dynamical Distribution Networks with State Constraints, pp. 6056-6061.

Wei, Jieqiang — Univ. of Groningen
van der Schaft, Arjan J. — Univ. of Groningen

14:10-14:30 — WeB17.3

Networked Control under Round-Robin Protocol: Multiple Sensors and Non-Small Communication Delays, pp. 6062-6067.

Fridman, Emilia — Tel-Aviv Univ
Liu, Kun — KTH Royal Inst. of Tech

14:30-14:50 — WeB17.4

Model-Based Fraud Detection in Growing Networks, pp. 6068-6073.

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

14:50-15:10 — WeB17.5

On Stabilizability of MIMO Systems Over Parallel Noisy Channels, pp. 6074-6079.

Vargas, Francisco J. — Univ. Técnica Federico Santa María
Chen, Jie — City Univ. of Hong Kong
Silva, Eduardo I. — Univ. Tecnica Federico Santa Maria

15:10-15:30 — WeB17.6

Node Selection for Probing Connections in Evoked Dynamic Networks, pp. 6080-6085.

Kafashan, Mohammad Mehdi — Washington Univ. in St. Louis
Lepage, Kyle — Boston Univ
Ching, ShiNung — Washington Univ. in St. Louis

WeB18 — Olympic 3

Coordination and Consensus Algorithms in Distributed Control Systems (Invited Session)

Chair: Fanti, Maria Pia — Pol. of Bari
Co-Chair: Hadjicostis, Christoforos — Univ. of Cyprus
Organizer: Fanti, Maria Pia — Pol. of Bari
Organizer: Hadjicostis, Christoforos N. — Univ. of Cyprus

13:30-13:50 — WeB18.1

Remarks on Diffusive-Link Synchronization Using Non-Hilbert Logarithmic Norms (I), pp. 6086-6091.

Aminzare, Zahra — Rutgers Univ
Sontag, Eduardo D. — Rutgers Univ

13:50-14:10 — WeB18.2

The Degree of Nonholonomy in Distributed Computation (I), pp. 6092-6098.

Costello, Zak — Georgia Inst. of Tech
Egerstedt, Magnus — Georgia Inst. of Tech

14:10-14:30 — WeB18.3

Coordinated Rendezvous of Underwater Drifters in Ocean Internal Waves (I), pp. 6099-6104.

Ouimet, Michael — Univ. of California, San Diego
Cortes, Jorge — Univ. of California, San Diego

14:30-14:50 — WeB18.4

Finite-Time Road Grade Computation for a Vehicle Platoon (I), pp. 6105-6110.

Yang, Tao — Royal Inst. of Tech
Yuan, Ye — Univ. of Cambridge
Li, Kezhi — Royal Inst. of Tech
Goncalves, Jorge M. — Univ. of Cambridge
Johansson, Karl Henrik — Royal Inst. of Tech

14:50-15:10 — WeB18.5

Distributed Estimation of the Inertial Parameters of an Unknown Load Via Multi-Robot Manipulation (I), pp. 6111-6116.

Franchi, Antonio — Laas-Cnrs
Petitti, Antonio — National Council of Res
Rizzo, Alessandro — Pol. di Bari

15:10-15:30 — WeB18.6

A Consensus Algorithm for Common Reference Frame Estimation in Networked Multi-Agent Systems (I), pp. 6117-6122.

López-Limón, Carlos Aurelio — Cinvestav
Franceschelli, Mauro — Univ. of Cagliari
Seatzu, Carla — Univ. of Cagliari
Ramirez, Antonio — Cinvestav-Ipn

WeB19 — Plaza 1

Quadrotor Control (Regular Session)

Chair: Franze', Giuseppe — Univ. della Calabria
Co-Chair: Lee, Taeyoung — George Washington Univ.

13:30-13:50 — WeB19.1

6-DOF Hovering Controller Design of the Quad Tiltrotor Aircraft: Simulations and Experiments, pp. 6123-6128.

Flores, Gerardo — Univ. De Tech. De Compiègne
Lugo Cárdenas, Israel — Univ. De Tech. De Compiègne
Lozano, Rogelio — Univ. De Tech. De Compiègne

13:50-14:10 — WeB19.2

Fault-Tolerant Attitude Tracking Control for a Quadrotor Aircraft, pp. 6129-6134.

Shen, Qiang — Nanyang Tech. Univ
Wang, Danwei — Nanyang Tech. Univ
Zhu, Sen Qiang — Nanyang Tech. Univ
Poh, Eng Kee — Nanyang Tech. Univ

14:10-14:30 — WeB19.3

An Obstacle Avoidance and Motion Planning Command Governor Based Scheme: The Qball-X4 Quadrotor Case of Study, pp. 6135-6140.

Lucia, Walter — Univ. Della Calabria
Sznaier, Mario — Northeastern Univ
Franze', Giuseppe — Univ. Della Calabria

14:30-14:50 WeB19.4

Geometric Control of Multiple Quadrotors Transporting a Rigid-Body Load, pp. 6141-6148.

Wu, Guofan — Carnegie Mellon Univ
Sreenath, Koushil — Carnegie Mellon Univ

14:50-15:10 WeB19.5

Adaptive Control of a Quadrotor UAV Transporting a Cable-Suspended Load with Unknown Mass, pp. 6149-6154.

Dai, Shicong — Beihang Univ
Lee, Taeyoung — George Washington Univ
Bernstein, Dennis S. — Univ. of Michigan

15:10-15:30 WeB19.6

Geometric Control of Multiple Quadrotor UAVs Transporting a Cable-Suspended Rigid Body, pp. 6155-6160.

Lee, Taeyoung — George Washington Univ

WeB20 — Plaza 2

Agents and Autonomous Systems II (Regular Session)

Chair: Lin, Zhiyun — Zhejiang Univ.
Co-Chair: Lin, Hai — Univ. of Notre Dame

13:30-13:50 WeB20.1

Formation Movements in Minimally Rigid Formation Control with Mismatched Mutual Distances, pp. 6161-6166.

Sun, Zhiyong — Australian National Univ
Mou, Shaoshuai — Yale Univ
Anderson, Brian D.O. — Australian National Univ
Morse, A. Stephen — Yale Univ

13:50-14:10 WeB20.2

Efficient Multi-Robot Formations Using Distributed Optimization, pp. 6167-6172.

Montijano, Eduardo — Centro Univ. De La Defensa
Mosteo, Alejandro R. — Centro Univ. De La Defensa

14:10-14:30 WeB20.3

Automatic Synthesis of Cooperative Multi-Agent Systems, pp. 6173-6178.

Dai, Jin — Univ. of Notre Dame
Lin, Hai — Univ. of Notre Dame

14:30-14:50 WeB20.4

Containment for Double-Integrator Multi-Agent Systems in Heterogeneous Networks, pp. 6179-6184.

Qin, Jiahu — Australian National Univ.
Zheng, Weixing — Univ. of Western Sydney
Gao, Huijun — Harbin Inst. of Tech
Ma, Qichao — Univ. of Sci. and Tech. of China

14:50-15:10 WeB20.5

A Fully Distributed Approach to Formation Maneuvering Control of Multi-Agent Systems, pp. 6185-6190.

Han, Zhimin — Zhejiang Univ
Lin, Zhiyun — Zhejiang Univ
Fu, Minyue — Univ. of Newcastle

15:10-15:30 WeB20.6

Cyclic Pursuit without Coordinates: Convergence to Regular Polygon Formations, pp. 6191-6196.

Arnold, Maxim — Univ. of Illinois
Baryshnikov, Yuliy — Univ. Illinois, Urbana-Champaign
Liberzon, Daniel — Univ. Illinois, Urbana-Champaign

WeB21 — Plaza 3

Epidemics in Networks: Analysis and Control (Invited Session)

Chair: Preciado, Victor M. — Univ. of Pennsylvania
Co-Chair: Pappas, George J. — Univ. of Pennsylvania
Organizer: Preciado, Victor M. — Univ. of Pennsylvania
Organizer: Pappas, George J. — Univ. of Pennsylvania

13:30-13:50 WeB21.1

Stability Analysis of Generalized Epidemic Models Over Directed Networks (I), pp. 6197-6202.

Nowzari, Cameron — Univ. of Pennsylavnia
Preciado, Victor M. — Univ. of Pennsylvania
Pappas, George J. — Univ. of Pennsylvania

13:50-14:10 WeB21.2

Modeling and Analysis of Competitive Propagation with Social Conversion (I), pp. 6203-6208.

Mei, Wenjun — Univ. of California, Santa Barbara
Bullo, Francesco — Univ. of California, Santa Barbara

14:10-14:30 WeB21.3

Optimal Coinfection Control of Competitive Epidemics in Multi-Layer Networks, pp. 6209-6214.

Chen, Ximing — Univ. of Pennsylvania
Preciado, Victor M. — Univ. of Pennsylvania

14:30-14:50 WeB21.4

Stability Properties of Infection Diffusion Dynamics Over Directed Networks (I), pp. 6215-6220.

Khanafer, Ali — Univ. Illinois, Urbana-Champaign
Basar, Tamer — Univ. Illinois, Urbana-Champaign
Gharesifard, Bahman — Queens Univ. Canada

14:50-15:10 WeB21.5

On the Mixing Time of the SIS Markov Chain Model for Epidemic Spread (I), pp. 6221-6227.

Ahn, Hyoung Jun — California Inst. of Tech
Hassibi, Babak — Caltech

15:10-15:30 WeB21.6

An Upper Bound for the Epidemic Threshold in Exact Markovian SIR and SIS Epidemics on Networks (I), pp. 6228-6233.

Van Mieghem, Piet — Delft Univ. of Tech
Darabi Sahneh, Faryad — Kansas State Univ
Scoglio, Caterina — Kansas State Univ

WeC01 — Salon F

Switched Systems III (Regular Session)

Chair: Liberzon, Daniel — Univ. of Illinois, Urbana-Champaign
Co-Chair: Ozay, Necmiye — Univ. of Michigan

16:00-16:20 WeC01.1

On Observer Design for a Class of Continuous-Time Affine Switched or Switching Systems, pp. 6234-6239.

Menini, Laura — Univ. Di Roma Tor Vergata
Possieri, Corrado — Univ. Di Roma Tor Vergata
Tornambe, Antonio — Univ. Di Roma Tor Vergata

16:20-16:40 WeC01.2

Input-To-State Stability for Switched Systems with Unstable Subsystems: A Hybrid Lyapunov Construction, pp. 6240-6245.

Yang, Guosong — Univ. Illinois, Urbana-Champaign
Liberzon, Daniel — Univ. Illinois, Urbana-Champaign

16:40-17:00 WeC01.3

Incremental Synthesis of Switching Protocols Via Abstraction Refinement, pp. 6246-6253.

Nilsson, Petter	Univ. of Michigan
Ozay, Necmiye	Univ. of Michigan

17:00-17:20 WeC01.4

A Hierarchical Approach to Adaptive Disturbance Attenuation Combining Switching and Tuning, pp. 6254-6259.

Battistelli, Giorgio	Univ. of Florence
Mari, Daniele	Univ. of Florence
Selvi, Daniela	Univ. of Florence
Tesi, Alberto	Univ. of Florence
Tesi, Pietro	Univ. of Groningen

17:20-17:40 WeC01.5

Cadence Control of Stationary Cycling Induced by Switched Functional Electrical Stimulation Control, pp. 6260-6265.

Bellman, Matthew	Univ. of Florida
Cheng, Teng-Hu	Univ. of Florida
Downey, Ryan J.	Univ. of Florida
Dixon, Warren E.	Univ. of Florida

17:40-18:00 WeC01.6

Explicit Sufficient Stability Conditions on Dwell Time of Linear Switched Systems, pp. 6266-6270.

Karabacak, Özkan	Istanbul Tech. Univ
İlhan, Ferruh	Istanbul Tech. Univ
Öner, Işıl	Gebze Inst. of Tech

WeC02 Salon G

Lyapunov Methods (Regular Session)

Chair: Ames, Aaron D.	Texas A&M Univ.
Co-Chair: Iervolino, Raffaele	Univ. Degli Studi Di Napoli Federico Ii

16:00-16:20 WeC02.1

Control Barrier Function Based Quadratic Programs with Application to Adaptive Cruise Control, pp. 6271-6278.

Ames, Aaron D.	Texas A&M Univ
Grizzle, Jessy W.	Univ. of Michigan
Tabuada, Paulo	Univ. of California at Los Angeles

16:20-16:40 WeC02.2

On Robustness of a Class of Homogeneous Continuous Finite Time Controllers, pp. 6279-6284.

Oza, Harshal B.	Univ. of Kent
Orlov, Yury	Cicese
Spurgeon, Sarah K.	Univ. of Kent

16:40-17:00 WeC02.3

Input-To-State Stabilizing Controller for Nonlinear Systems on Manifolds, pp. 6285-6290.

Satoh, Yasuyuki	Tokyo Univ. of Science
Nakamura, Nami	None
Nakamura, Hisakazu	Tokyo Univ. of Science

17:00-17:20 WeC02.4

Quadratic Program Based Nonlinear Embedded Control of Series Elastic Actuators, pp. 6291-6298.

Ames, Aaron D.	Texas A&M Univ
Holley, James	NASA

17:20-17:40 WeC02.5

An Innovative Approach for Identifying Boundaries of a Basin of Attraction for a Dynamical System Using Monte Carlo Techniques and Lyapunov Exponents, pp. 6299-6304.

Armiyoon, Ali Reza	Univ. of Manitoba
Wu, Qiong	Univ. of Manitoba

17:40-18:00 WeC02.6

Cone-Copositivity for Absolute Stability of Lur'e Systems, pp. 6305-6310.

Iervolino, Raffaele	Univ. di Napoli Federico Ii
Vasca, Francesco	Univ. of Sannio

WeC03 Salon H

Constrained Control (Regular Session)

Chair: Marchand, Nicolas	GIPSA-lab
Co-Chair: Monnigmann, Martin	Ruhr-Univ. Bochum

16:00-16:20 WeC03.1

Further Results on the Maximal Contractively Invariant Set of Discrete-Time Linear Systems with Multiple Inputs Subject to Actuator Saturation, pp. 6311-6316.

Li, Yuanlong	Shanghai Jiao Tong Univ
Lin, Zongli	Univ. of Virginia

16:20-16:40 WeC03.2

A Polynomial Approach to Nonlinear State Feedback Stabilization of Saturated Linear Systems, pp. 6317-6322.

Valmórbida, Giórgio	Univ. of Oxford
Zaccarian, Luca	LAAS-CNRS and Univ. of Trento
Tarbouriech, Sophie	LAAS-CNRS
Queinnec, Isabelle	LAAS-CNRS
Papachristodoulou, Antonis	Univ. of Oxford

16:40-17:00 WeC03.3

On General Relations between Null-Controllable and Controlled Invariant Sets for Linear Constrained Systems, pp. 6323-6328.

Schulze Darup, Moritz	Ruhr-Univ. Bochum
Monnigmann, Martin	Ruhr-Univ. Bochum

17:00-17:20 WeC03.4

Linear Systems with Conical Constraints and Convex Lyapunov Functions in the Framework of Convex Processes (I), pp. 6329-6334.

Goebel, Rafal	Loyola Univ. Chicago

17:20-17:40 WeC03.5

A PID-Type Global Regulator with Simple Tuning for Robot Manipulators with Bounded Inputs, pp. 6335-6341.

Mendoza, Marco	Univ. Autonoma De San Luis Potosi
Zavala-Rio, Arturo	Inst. Potosino De Investigacion Cientifica Ytecnologica
Santibanez, Victor	Inst. Tecnologico De La Laguna
Reyes, Fernando	Benemerita Univ. Autonoma De Puebla

17:40-18:00 WeC03.6

Bounded Control of a General Extended Chained Form Systems, pp. 6342-6347.

Hably, Ahmad	GÏPSA-Lab
Marchand, Nicolas	GIPSA-Lab

WeC04 Salon I

Computational Methods II (Regular Session)

Chair: Arcak, Murat — Univ. of California, Berkeley

Co-Chair: Sankaranarayanan, Sriram — Univ. of Colorado, Boulder

16:00-16:20 WeC04.1

Iterative Computation of Polyhedral Invariants Sets for Polynomial Dynamical Systems, pp. 6348-6353.

Mohamed Amin, Ben Sassi — Univ. of Colorado, Boulder

Girard, Antoine — Univ. Joseph Fourier

Sankaranarayanan, Sriram — Univ. of Colorado, Boulder

16:20-16:40 WeC04.2

Near-Ideal Behavior of Compressed Sensing Algorithms, pp. 6354-6357.

Ahsen, Mehmet Eren — Univ. of Texas at Dallas

Vidyasagar, Mathukumalli — Univ. of Texas at Dallas

16:40-17:00 WeC04.3

Trajectory-Based Reachability Analysis of Switched Nonlinear Systems Using Matrix Measures, pp. 6358-6364.

Maidens, John — Univ. of California, Berkeley

Arcak, Murat — Univ. of California, Berkeley

17:00-17:20 WeC04.4

The Disturbance Decoupling Problem for Continuous Piecewise Affine Systems, pp. 6365-6370.

Everts, Anneroos — Univ. of Groningen

Camlibel, M. Kanat — Univ. of Groningen

17:20-17:40 WeC04.5

A Numerical Method for State Estimation of Continuous Time Markov Jump Linear Systems, pp. 6371-6376.

Costa, Eduardo F. — Univ. Sao Paulo, Inst. De Ciencias Matematicas E Decomputaçã

de Saporta, Benoite — Univ. Bordeaux

17:40-18:00 WeC04.6

Symplectic Mobius Integrators for LQ Optimal Control Problems, pp. 6377-6382.

Zhuk, Sergiy — IBM

Frank, Jason — Utrecht Univ

WeC05 Salon J

Differential-Algebraic Systems (Regular Session)

Chair: Macchelli, Alessandro — Univ. of Bologna - Italy

Co-Chair: Chirikjian, Gregory — Johns Hopkins Univ.

16:00-16:20 WeC05.1

Observer Design for a Ternary Distillation Column with Side Stream, pp. 6383-6388.

Afri, Chouaib — Univ. Claude Bernard Lyon 1

Nadri, Madiha — Univ. Claude Bernard Lyon 1

Dufour, Pascal — Univ. Claude Bernard Lyon 1

16:20-16:40 WeC05.2

Computation of State Reachable Points of Descriptor Systems, pp. 6389-6394.

Datta, Subashish — Tech. Univ. Berlin

Mehrmann, Volker — Tech. Univ. Berlin

16:40-17:00 WeC05.3

Interconnection of Port-Hamiltonian Systems Via Contact Structures. an Application to Macro-Economic Systems, pp. 6395-6400.

Macchelli, Alessandro — Univ. of Bologna - Italy

17:00-17:20 WeC05.4

Gaussian Approximation of Non-Linear Measurement Models on Lie Groups, pp. 6401-6406.

Chirikjian, Gregory — Johns Hopkins Univ

Kobilarov, Marin — Johns Hopkins Univ

17:20-17:40 WeC05.5

Nearest Singular Descriptor System Having Impulsive Initial-Conditions, pp. 6407-6412.

Kothyari, Ashish — Indian Inst. of Tech. Bombay

Kalaimani, Rachel Kalpana — Indian Inst. of Tech. Bombay

Belur, Madhu N. — Indian Inst. of Tech. Bombay

17:40-18:00 WeC05.6

Auxiliary Signal Design for Failure Detection in High Index Differential-Algebraic Equations, pp. 6413-6418.

Scott, Jason — North Carolina State Univ

Campbell, Stephen L — North Carolina State Univ

WeC06 Salon 6

Dynamics in Energy Systems (Invited Session)

Chair: Wei, Ermin — MIT

Co-Chair: Ozdaglar, Asu — MIT

Organizer: Wei, Ermin — Northwestern Univ.

Organizer: Ozdaglar, Asu — MIT

16:00-16:20 WeC06.1

Selling Robustness Margins: A Framework for Optimizing Reserve Capacities for Linear Systems, pp. 6419-6424.

Zhang, Xiaojing — ETH Zurich

Kamgarpour, Maryam — Swiss Federal Inst. of Tech

Goulart, Paul J. — ETH Zurich

Lygeros, John — ETH Zurich

16:20-16:40 WeC06.2

Individual Risk in Mean Field Control with Application to Automated Demand Response (I), pp. 6425-6432.

Chen, Yue — Univ. of Florida

Busic, Ana — Inria and École Normale Supérieure

Meyn, Sean P. — Univ. of Florida

16:40-17:00 WeC06.3

Distributional Analysis for Model Predictive Deferrable Load Control (I), pp. 6433-6438.

Chen, Niangjun — California Inst. of Tech

Gan, Lingwen — California Inst. of Tech

Low, Steven H. — California Inst. of Tech

Wierman, Adam — California Inst. of Tech

17:00-17:20 WeC06.4

Capturing Aggregate Flexibility in Demand Response (I), pp. 6439-6445.

Alizadeh, Mahnoosh — Stanford Univ

Scaglione, Anna — UC Davis

Goldsmith, Andrea — Stanford Univ

Kesidis, George — Pennsylvania State Univ

17:20-17:40 WeC06.5

Stochastic Dynamic Pricing: Utilizing Demand Response in an Adaptive Manner, pp. 6446-6451.

Tang, Wenyuan — Univ. of Southern California

Jain, Rahul — Univ. of Southern California

Rajagopal, Ram — Stanford Univ

17:40-18:00 WeC06.6

Competitive Equilibrium in Electricity Markets with Heterogeneous Users and Price Fluctuation Penalty (I), pp. 6452-6458.

Wei, Ermin — Northwestern Univ
Malekian, Azarakhsh — Univ. of Toronto
Ozdaglar, Asu — MIT

WeC07 — Salon 7

Transportation Networks (Regular Session)

Chair: Alessandri, Angelo — Univ. of Genoa
Co-Chair: Work, Daniel B. — Univ. of Illinois at Urbana champaign

16:00-16:20 WeC07.1

Robust Predictive Control for the Management of Multi-Echelon Distribution Chains, pp. 6459-6464.

Alessandri, Angelo — Univ. of Genoa
Gaggero, Mauro — National Res. Council of Italy
Tonelli, Flavio — Univ. of Genoa

16:20-16:40 WeC07.2

Scheduling and Cooperative Control of Electric Vehicles' Charging at Highway Service Stations, pp. 6465-6471.

Gusrialdi, Azwirman — Univ. of Central Florida
Qu, Zhihua — Univ. of Central Florida
Simaan, Marwan A. — Univ. of Central Florida

16:40-17:00 WeC07.3

Optimization Strategies for Resilient Freight Transport and Sustainability, pp. 6472-6477.

Abadi, Afshin — Univ. of Southern California
Ioannou, Petros A. — Univ. of Southern California

17:00-17:20 WeC07.4

Analysis of Price of Anarchy in Heterogeneous Price-Sensitive Populations, pp. 6478-6483.

Wang, Xuehe — Nanyang Tech. Univ
Xiao, Nan — Singapore MIT Alliance for Res. and Tech. Centre
Xie, Lihua — Nanyang Tech. Univ
Frazzoli, Emilio — Massachusetts Inst. of Tech
Rus, Daniela — Massachusetts Inst. of Tech

17:20-17:40 WeC07.5

A Distributed Local Kalman Consensus Filter for Traffic Estimation, pp. 6484-6491.

Sun, Ye — Univ. of Illinois at Urbana-Champaign
Work, Daniel B. — Univ. of Illinois at Urbana Champaign

17:40-18:00 WeC07.6

Pressure Releasing Policy in Traffic Signal Control with Finite Queue Capacities, pp. 6492-6497.

Xiao, Nan — Singapore MIT Alliance for Res. and Tech. Centre
Frazzoli, Emilio — Massachusetts Inst. of Tech
Li, Yitong — Singapore MIT Alliance for Res. and Tech. Centre
Wang, Yu — Nanyang Tech. Univ
Wang, Danwei — Nanyang Tech. Univ

WeC08 — Salon 8

Nonlinear System Identification (Regular Session)

Chair: Bloch, Gerard — Univ. de Lorraine
Co-Chair: Bazanella, Alexandre S. — Univ. Federal Do Rio Grande Do Sul

16:00-16:20 WeC08.1

Piecewise Smooth System Identification in Reproducing Kernel Hilbert Space, pp. 6498-6503.

Lauer, Fabien — Univ. De Lorraine, LORIA, CNRS, Inria
Bloch, Gerard — Univ. De Lorraine

16:20-16:40 WeC08.2

Identification of Jump Markov Linear Models Using Particle Filters, pp. 6504-6509.

Svensson, Andreas — Uppsala Univ
Schön, Thomas (Bo) — Uppsala Univ
Lindsten, Fredrik — Linköping Univ

16:40-17:00 WeC08.3

An Approach to Stochastic System Identification in Riemannian Manifolds, pp. 6510-6515.

Solo, Victor — Univ. of New South Wales

17:00-17:20 WeC08.4

A Novel Randomized Approach to Nonlinear System Identification, pp. 6516-6521.

Falsone, Alessandro — Pol. Di Milano
Piroddi, Luigi — Pol. Di Milano
Prandini, Maria — Pol. Di Milano

17:20-17:40 WeC08.5

Identifiability and Excitation of a Class of Rational Systems, pp. 6522-6527.

Bazanella, Alexandre S. — Univ. Federal Do Rio Grande Do Sul
Gevers, Michel — Univ. Catholique De Louvain, and Vrije Univ. Brussel
Coutinho, Daniel — Univ. Federal De Santa Catarina
Rui, Rafael — Univ. Federal Do Rio Grande Do Sul

17:40-18:00 WeC08.6

Error Bound Analysis and Optimal Construction of Non-Parametric PWA Models, pp. 6528-6535.

Fujimoto, Yusuke — Kyoto Univ
Maruta, Ichiro — Kyoto Univ
Sugie, Toshiharu — Kyoto Univ

WeC09 — Salon 9

Fault Detection II (Regular Session)

Chair: Keliris, Christodoulos — Univ. of Cyprus
Co-Chair: Hadjiliadis, Olympia — City Univ. of New York

16:00-16:20 WeC09.1

A Distributed Fault Diagnosis Approach Utilizing Adaptive Approximation for a Class of Interconnected Continuous-Time Nonlinear Systems, pp. 6536-6541.

Keliris, Christodoulos — Univ. of Cyprus
Polycarpou, Marios M. — Univ. of Cyprus
Parisini, Thomas — Imperial Coll. & Univ. of Trieste

16:20-16:40 WeC09.2

Fault Detection of Boolean Control Networks, pp. 6542-6547.

Fornasini, Ettore — Univ. Di Padova
Valcher, Maria Elena — Univ. Di Padova

16:40-17:00 WeC09.3

Distributed Fault Detection in Interconnected Nonlinear Uncertain Systems, pp. 6548-6553.

Khalili, Mohsen — Wright State Univ
Zhang, Xiaodong — Wright State Univ

17:00-17:20 WeC09.4

H− /H∞ Fault Detection Observer for Switched Systems, pp. 6554-6559.

Farhat, Ahmad — Univ. Grenoble Alpes, GIPSA-Lab
Koenig, Damien — Grenoble-INP

17:20-17:40 WeC09.5

Fault Detection and Isolation of Vehicle Dynamics Sensors and Actuators for an Overactuated X-By-Wire Vehicle, pp. 6560-6566.

Ho, Lok Man — German Aerospace Center (DLR)
Ossmann, Daniel — German Aerospace Center (DLR)

17:40-18:00 WeC09.6

Detection Problem with Post-Change Drift Uncertainty, pp. 6567-6572.

Yang, Heng — City Univ. of New York
Hadjiliadis, Olympia — City Univ. of New York

WeC10 — Salon 10

Markov Processes (Regular Session)

Chair: Beck, Carolyn L. — Univ. of Illinois, Urbana-Champaign
Co-Chair: Jain, Rahul — Univ. of Southern California

16:00-16:20 WeC10.1

Empirical Policy Iteration for Approximate Dynamic Programming, pp. 6573-6578.

Haskell, William — Univ. of Southern California
Jain, Rahul — Univ. of Southern California
Kalathil, Dileep — Univ. of Southern California

16:20-16:40 WeC10.2

Scheduling in Time-Correlated Wireless Networks with Imperfect CSI and Stringent Constraint, pp. 6579-6584.

Ouyang, Wenzhuo — The Ohio State Univ
Eryilmaz, Atilla — The Ohio State Univ
Shroff, Ness B. — The Ohio State Univ

16:40-17:00 WeC10.3

H-2 Filter Design through Multi-Simplex Modeling for Discrete-Time Markov Jump Linear Systems with Partly Unknown Transition Probability Matrix, pp. 6585-6590.

Morais, Cecilia — Univ. of Campinas - UNICAMP
Braga, Marcio F. — Univ. of Campinas - UNICAMP
Lacerda, Marcio J. — Univ. of Campinas - UNICAMP
Oliveira, Ricardo C. L. F. — Univ. of Campinas - UNICAMP
Peres, Pedro L. D. — Univ. of Campinas - UNICAMP

17:00-17:20 WeC10.4

Aggregation of Markov Chains: An Analysis of Deterministic Annealing Based Methods, pp. 6591-6596.

Xu, Yunwen — Univ. of Illinois at Urbana-Champaign
Beck, Carolyn L. — Univ. of Illinois, Urbana-Champaign
Salapaka, Srinivasa — Univ. of Illinois

17:20-17:40 WeC10.5

Approximation of Constrained Average Cost Markov Control Processes, pp. 6597-6602.

Sutter, Tobias — ETH Zurich
Mohajerin Esfahani, Peyman — ETH Zurich
Lygeros, John — ETH Zurich

17:40-18:00 WeC10.6

Robotic Surveillance and Markov Chains with Minimal First Passage Time, pp. 6603-6608.

Agharkar, Pushkarini — Univ. of Califoria, Santa Barbara
Patel, Rushabh — Univ. of Califoria, Santa Barbara
Bullo, Francesco — Univ. of Califoria, Santa Barbara

WeC11 — Georgia 1

Optimization Algorithms IV (Regular Session)

Chair: Chen, Yiming — Univ. of California, Riverside
Co-Chair: Permenter, Frank — MIT

16:00-16:20 WeC11.1

High Reliability Integer Ambiguity Resolution of 6DOF RTK GPS/INS, pp. 6609-6614.

Chen, Yiming — Univ. of California, Riverside
Zhao, Sheng — Univ. of California, Riverside
Zheng, Dongfang — Univ. of California, Riverside
Farrell, Jay A. — Univ. of California, Riverside

16:20-16:40 WeC11.2

Basis Selection for SOS Programs Via Facial Reduction and Polyhedral Approximations, pp. 6615-6620.

Permenter, Frank — Massachusetts Inst. of Tech
Parrilo, Pablo A. — Massachusetts Inst. of Tech

16:40-17:00 WeC11.3

A Split-Bernstein Approach to Chance Constrained Programs, pp. 6621-6626.

Zhao, Zinan — Univ. of Florida
Kumar, Mrinal — Univ. of Florida

17:00-17:20 WeC11.4

Time-Average Optimization with Nonconvex Decision Set and Its Convergence, pp. 6627-6634.

Supittayapornpong, Sucha — Univ. of Southern California
Huang, Longbo — Tsinghua Univ
Neely, Michael J. — Univ. of Southern California

17:20-17:40 WeC11.5

Cloud-Based Optimization: A Quasi-Decentralized Approach to Multi-Agent Coordination, pp. 6635-6640.

Hale, Matthew — Georgia Inst. of Tech
Egerstedt, Magnus — Georgia Inst. of Tech

17:40-18:00 WeC11.6

Verifiable Frequency-Limited Adaptive Control Performance Based on Linear Matrix Inequalities, pp. 6641-6646.

Fravolini, Mario Luca — Univ. Di Perugia
Yucelen, Tansel — Missouri Univ. of Science & Tech
Albattat, Ali — Missouri Univ. of Science & Tech
Wagner, Daniel — Missouri Univ. of Science & Tech
Valigi, Paolo — Univ. Di Perugia

WeC12 Georgia 2

Optimal Control IV (Regular Session)

Chair: Kang, Wei — Naval Postgraduate School
Co-Chair: Dey, Biswadip — Univ. of Maryland

16:00-16:20 WeC12.1

Partial-State Stabilization and Optimal Feedback Control, pp. 6647-6652.

L'Afflitto, Andrea — Georgia Inst. of Tech
Haddad, Wassim M. — Georgia Inst. of Tech
Bakolas, Efstathios — The Univ. of Texas at Austin

16:20-16:40 WeC12.2

Bounds for Approximate Dynamic Programming Based on String Optimization and Curvature, pp. 6653-6658.

Liu, Yajing — Colorado State Univ
Chong, Edwin K. P. — Colorado State Univ
Pezeshki, Ali — Colorado State Univ
Moran, Bill — The Univ. of Melbourne

16:40-17:00 WeC12.3

Generating Function Approach to Linear Quadratic Optimal Control Problem with Constraints on the State, pp. 6659-6664.

Chen, Dijian — Nagoya Univ
Fujimoto, Kenji — Kyoto Univ
Suzuki, Tatsuya — Nagoya Univ

17:00-17:20 WeC12.4

Sum of Imaginary Parts and Performance Limitation of the LQG Problem for SIMO Systems, pp. 6665-6670.

Fukamachi, Soichiro — The Univ. of Tokyo
Kanno, Masaaki — Niigata Univ
Hara, Shinji — The Univ. of Tokyo

17:20-17:40 WeC12.5

Feasibility of the Galerkin Optimal Control Method, pp. 6671-6676.

Boucher, Randy — Naval Postgraduate School
Kang, Wei — Naval Postgraduate School
Gong, Qi — Univ. of California, Santa Cruz

17:40-18:00 WeC12.6

Reconstructing Trajectories from the Moments of Occupation Measures, pp. 6677-6682.

Claeys, Mathieu — Univ. of Cambridge
Sepulchre, Rodolphe J. — Univ. of Cambridge

WeC13 Atrium 1

Predictive Control for Linear Systems II (Regular Session)

Chair: Tran-Cao, Tri — Nanyang Tech. Univ.
Co-Chair: De Keyser, Robin M.C. — Univ. of Gent

16:00-16:20 WeC13.1

Barrier Function Based Linear Model Predictive Control with Polytopic Terminal Sets, pp. 6683-6688.

Feller, Christian — Univ. of Stuttgart
Ebenbauer, Christian — Univ. of Stuttgart

16:20-16:40 WeC13.2

Model Predictive Control Via Quadratic Dissipativity Constraint, pp. 6689-6694.

Tran-Cao, Tri — Nanyang Tech. Univ
Ling, Keck-Voon — Nanyang Tech. Univ
Maciejowski, Jan M. — Univ. of Cambridge

16:40-17:00 WeC13.3

Certification of a Class of Industrial Predictive Controllers without Terminal Conditions, pp. 6695-6700.

Dutta, Abhishek — Ghent Univ. Wolfson Coll. Cambridge
Hartley, Edward N. — Univ. of Cambridge
Maciejowski, Jan M. — Univ. of Cambridge
De Keyser, Robin M.C. — Univ. of Gent

17:00-17:20 WeC13.4

Reference and Command Governors for Systems with Slowly Time-Varying References and Time-Dependent Constraints, pp. 6701-6706.

Kalabic, Uros V. — Univ. of Michigan
Kolmanovsky, Ilya V. — Univ. of Michigan

17:20-17:40 WeC13.5

Robust Economic Model Predictive Control with Linear Average Constraints, pp. 6707-6712.

Bayer, Florian Anton — Univ. of Stuttgart
Allgöwer, Frank — Univ. of Stuttgart

17:40-18:00 WeC13.6

Robust Dual Control MPC with Guaranteed Constraint Satisfaction, pp. 6713-6718.

Weiss, Avishai — Mitsubishi Electric Res. Lab
Di Cairano, Stefano — Mitsubishi Electric Res. Lab

WeC14 Olympic 1

Discrete-Event Systems (Regular Session)

Chair: Wardi, Yorai — Georgia Inst. of Tech.
Co-Chair: Cai, Kai — Osaka City Univ.

16:00-16:20 WeC14.1

Delay-Robustness in Distributed Control of Timed Discrete-Event Systems Based on Supervisor Localization, pp. 6719-6724.

Zhang, Renyuan — School of Automation, Northwestern Pol. Univ
Cai, Kai — Osaka City Univ
Wonham, W. Murray — Univ. of Toronto

16:20-16:40 WeC14.2

Initial Marking Estimation in Labeled Petri Nets in a Probabilistic Setting, pp. 6725-6730.

Cabasino, Maria Paola — Univ. of Cagliari
Hadjicostis, Christoforos — Univ. of Cyprus
Seatzu, Carla — Univ. of Cagliari

16:40-17:00 WeC14.3

On Computing Indistinguishable States of Nondeterministic Finite Automata with Partially Observable Transitions, pp. 6731-6736.

Sears, David — Queen's Univ
Rudie, Karen — Queen's Univ

17:00-17:20 WeC14.4

Feedback Control of Nondeterministic Input/Output Automata, pp. 6737-6743.

Schuh, Melanie — Ruhr Univ. Bochum
Lunze, Jan — Ruhr-Univ. Bochum

17:20-17:40 WeC14.5

Constructing (Bi)Similar Finite State Abstractions Using Asynchronous L-Complete Approximations, pp. 6744-6751.

Schmuck, Anne-Kathrin — Tech. Univ. Berlin
Raisch, Joerg — Tech. Univ. Berlin

17:40-18:00 WeC14.6

Infinitesimal Perturbation Analysis of Stochastic Hybrid Systems: Application to Congestion Management in Traffic-Light Intersections, pp. 6752-6757.

Wardi, Yorai	Georgia Inst. of Tech
Seatzu, Carla	Univ. of Cagliari

WeC15 Atrium 2

Neural Networks and Fuzzy Systems (Regular Session)

Chair: Thumati, Balaje	The Boeing Company
Co-Chair: Zheng, Wei Xing	Univ. of Western Sydney

16:00-16:20 WeC15.1

A Fault Prediction Scheme for Takagi-Sugeno Fuzzy Systems with Immeasurable Premise Variables and Disturbance, pp. 6758-6763.

Thumati, Balaje	The Boeing Company
Jagannathan, Sarangapani	Missouri Univ. of Science & Tech

16:20-16:40 WeC15.2

Non-Fragile Output Feedback Control Design of Uncertain Takagi-Sugeno Fuzzy Systems, pp. 6764-6769.

Yoneyama, Jun	Aoyama Gakuin Univ

16:40-17:00 WeC15.3

Attitude Tracking of Mars Entry Vehicles Via Fuzzy Sampled-Data Control Approach, pp. 6770-6775.

Wang, Zi-Peng	Beihang Univ
Wu, Huai-Ning	Beihang Univ
Jiang, Bo	Beihang Univ
Guo, Lei	Beihang Univ

17:00-17:20 WeC15.4

Near Optimal Boundary Control of Distributed Parameter Systems Modeled As Parabolic PDEs by Using Finite Difference Neural Network Approximation, pp. 6776-6781.

Talaei, Behzad	Missouri Univ. of Science & Tech
Xu, Hao	Texas A&M Univ. - Corp. Christi
Jagannathan, Sarangapani	Missouri Univ. of Science & Tech

17:20-17:40 WeC15.5

Global Exponential Stabilization of Neural Networks with Time Delay Via Impulsive Control, pp. 6782-6787.

Chen, W.-H.	Guangxi Univ
Lu, X.	Guangxi Univ
Zheng, Weixing	Univ. of Western Sydney

17:40-18:00 WeC15.6

Polynomial Observer Design for Unknown Inputs Polynomial Fuzzy Systems: A Sum of Squares Approach, pp. 6788-6793.

Chibani, Ali	Ec. Pol. De Tunisie
Chadli, Mohammed	Univ. De Picardie-Jules Verne
Belhaouane, Mohamed Moez	Ec. Pol. De Tunisie
Benhadj Braiek, Naceur	Ec. Pol. De Tunisie

WeC16 Olympic 2

Modeling II (Regular Session)

Chair: Fu, Li-Chen	National Taiwan Univ.
Co-Chair: Halder, Abhishek	Texas A&M Univ.

16:00-16:20 WeC16.1

Economic Optimization of Spray Dryer Operation Using Nonlinear Model Predictive Control, pp. 6794-6800.

Petersen, Lars Norbert	Tech. Univ. of Denmark and GEA Process Engineering
Poulsen, Niels Kjølstad	Tech. Univ. of Denmark
Niemann, Henrik	Tech. Univ. of Denmark
Utzen, Christer	GEA Process Engineering A/S
Jorgensen, John Bagterp	Tech. Univ. of Denmark

16:20-16:40 WeC16.2

A Dual Probe AFM System with Effective Tilting Angles to Achieve High-Precision Scanning, pp. 6801-6806.

Lin, Yi-Ting	National Taiwan Univ
Wu, Jim-Wei	National Taiwan Univ
Lo, Yu-Ting	National Taiwan Univ
Fu, Li-Chen	National Taiwan Univ
Liu, Wei-Chih	National Taiwan Univ

16:40-17:00 WeC16.3

Optimization of Water Management in Shale Gas Production Process, pp. 6807-6812.

Gao, Jiyao	Northwestern Univ
You, Fengqi	Northwestern Univ

17:00-17:20 WeC16.4

Modeling and Simulation of Power Sharing and Interaction between Riders on a Tandem Bicycle, pp. 6813-6817.

Mohammadi Abdar, Hassan	Case Western Res. Univ
Ridgel, Angela L.	Kent State Univ
Discenzo, Frederick M.	Rockwell Automation
Loparo, Kenneth A.	Case Western Res. Univ

17:20-17:40 WeC16.5

Integrated Planning and Scheduling by Hybrid Solution Method, pp. 6818-6823.

Chu, Yunfei	Northwestern Univ
You, Fengqi	Northwestern Univ

WeC17 Atrium 3

Networked Control Systems III (Regular Session)

Chair: Litz, Lothar	Univ. of Kaiserslautern
Co-Chair: Dimarogonas, Dimos V.	Royal Inst. of Tech.

16:00-16:20 WeC17.1

Modelling and Control for Web Real-Time Communication, pp. 6824-6829.

Carlucci, Gaetano	Pol. Di Bari
De Cicco, Luca	Pol. Di Bari
Mascolo, Saverio	Pol. Di Bari

16:20-16:40 WeC17.2

Set Target Aggregation of Multiple Mechanical Systems, pp. 6830-6835.

Meng, Ziyang	Royal Inst. of Tech
Yang, Tao	Royal Inst. of Tech
Shi, Guodong	The Australian National Univ
Dimarogonas, Dimos V.	Royal Inst. of Tech
Hong, Yiguang	Chinese Acad. of Sciences
Johansson, Karl Henrik	Royal Inst. of Tech

16:40-17:00 WeC17.3

Learning Efficient Correlated Equilibria, pp. 6836-6841.

Borowski, Holly	Univ. of Colorado Boulder
Marden, Jason	Univ. of Colorado at Boulder
Shamma, Jeff S.	Georgia Inst. of Tech

17:00-17:20 WeC17.4

Control Design in a Distributed WNCS Using Energy Optimal Scheduled Medium Access, pp. 6842-6848.

Haupt, Andreas	Univ. of Kaiserslautern
Tognetti, Eduardo Stockler	Univ. of Brasilia
Bauchspiess, Adolfo	Univ. of Brasília
Litz, Lothar	Univ. of Kaiserslautern

17:20-17:40 WeC17.5

A Down-Sampled Controller to Reduce Network Usage with Guaranteed Closed-Loop Performance, pp. 6849-6856.

Araujo, Jose	Royal Inst. of Tech
Teixeira, André	Royal Inst. of Tech
Henriksson, Erik	Royal Inst. of Tech
Johansson, Karl Henrik	Royal Inst. of Tech

17:40-18:00 WeC17.6

Convex Synthesis and Limitations of Mean-Square Stabilizing Controllers for MIMO Systems Over Packet Drop Networks, pp. 6857-6862.

Rich, Matt	Iowa State Univ
Elia, Nicola	Iowa State Univ

WeC18 Olympic 3

Sensor Networks (Regular Session)

Chair: Zavlanos, Michael M.	Duke Univ.
Co-Chair: Mostofi, Yasamin	Univ. of California Santa Barbara

16:00-16:20 WeC18.1

Communication-Aware Coverage Control for Robotic Sensor Networks, pp. 6863-6868.

Kantaros, Yiannis	Duke Univ
Zavlanos, Michael M.	Duke Univ

16:20-16:40 WeC18.2

An On-Line Sensor Selection Algorithm for SPRT with Multiple Sensors, pp. 6869-6874.

Bai, Cheng-Zong	Univ. of Notre Dame
Gupta, Vijay	Univ. of Notre Dame

16:40-17:00 WeC18.3

Joint Estimation and Localization in Sensor Networks, pp. 6875-6882.

Atanasov, Nikolay	Univ. of Pennsylvania
Tron, Roberto	Univ. of Pennsylvania
Preciado, Victor M.	Univ. of Pennsylvania
Pappas, George J.	Univ. of Pennsylvania

17:00-17:20 WeC18.4

Distributed Time Synchronization under Bounded Noise in Wireless Sensor Networks, pp. 6883-6888.

He, Jianping	Zhejiang Univ
Duan, Xiaoming	Zhejiang Univ
Cheng, Peng	Zhengjiang Univ
Shi, Ling	Hong Kong Univ. of Sci. & Tech
Cai, Lin	Univ. of Victoria

17:20-17:40 WeC18.5

Dynamic Context-Aware Sensor Selection for Sequential Hypothesis Testing, pp. 6889-6894.

Virani, Nurali	Pennsylvania State Univ
Lee, Ji-Woong	Pennsylvania State Univ
Phoha, Shashi	Pennsylvania State Univ
Ray, Asok	Pennsylvania State Univ

17:40-18:00 WeC18.6

An Efficient Clustering and Path Planning Strategy in Sensor Networks for Data Collection Based on Space-Filling Curves, pp. 6895-6901.

Yan, Yuan	Univ. of California, Santa Barbara
Mostofi, Yasamin	Univ. of California, Santa Barbara

WeC19 Plaza 1

Fractional-Order Systems (Regular Session)

Chair: Wang, Yong	Univ. of Sci. and Tech. of China
Co-Chair: N'Doye, Ibrahima	King Abdullah Univ. of Science and Tech. (KAUST)

16:00-16:20 WeC19.1

Tracking Differentiator Based Fractional Order Model Reference Adaptive Control: The 1 < Alpha < 2 Case, pp. 6902-6907.

Wei, Yiheng	Univ. of Sci. and Tech. of China
Hu, Yangsheng	Univ. of Sci. and Tech. of China
Song, Lan	Univ. of Sci. and Tech. of China
Wang, Yong	Univ. of Sci. and Tech. of China

16:20-16:40 WeC19.2

Representation and LQR of Exact Fractional Order Systems, pp. 6908-6913.

Liang, Shu	Univ. of Sci. and Tech. of China
Wang, Sheng-Guo	Univ. of North Carolina, Charlotte
Wang, Yong	Univ. of Sci. and Tech. of China

16:40-17:00 WeC19.3

Positive Real Lemmas for Fractional Order Systems, pp. 6914-6919.

Zhou, Xi	Univ. of Sci. and Tech. of China
Wei, Yiheng	Univ. of Sci. and Tech. of China
Liang, Shu	Univ. of Sci. and Tech. of China
Wang, Yong	Univ. of Sci. and Tech. of China

17:00-17:20 WeC19.4

Adaptive Mittag-Leffler Stabilization of Commensurate Fractional-Order Nonlinear Systems, pp. 6920-6926.

Ding, Dongsheng	Zhejiang Univ
Qi, Donglian	Zhejiang Univ
Meng, Yao	Zhejiang Univ
Xu, Li	Zhejiang Univ

17:20-17:40 WeC19.5

H-Infinity Adaptive Observer Design and Parameter Identification for a Class of Nonlinear Fractional-Order Systems, pp. 6927-6932.

N'Doye, Ibrahima	King Abdullah Univ. of Science and Tech. (KAUST)
Voos, Holger	Univ. of Luxembourg
Laleg Kirati, Taous Meriem	King Abdullah Univ. of Science and Tech. (KAUST)
Darouach, Mohamed	Univ. De Lorraine

17:40-18:00 WeC19.6

Free-Model Fractional-Order Absolutely Continuous Sliding Mode Control for Euler-Lagrange Systems, pp. 6933-6938.

Muñoz Vázquez, Aldo Jonathan	CINVESTAV
Parra-Vega, Vicente	CINVESTAV
Sanchez, Anand	CINVESTAV

WeC20	Plaza 2
Agents and Autonomous Systems III (Regular Session)	
Chair: Stipanovic, Dusan M.	Univ. of Illinois, Urbana-Champaign
Co-Chair: Matei, Ion	Palo Alto Res. Center

16:00-16:20 WeC20.1

Active–Passive Networked Multiagent Systems, pp. 6939-6944.

Yucelen, Tansel	Missouri Univ. of Science & Tech
Peterson, John Daniel	Missouri Univ. of Science & Tech

16:20-16:40 WeC20.2

Towards Background Flow Based AUV Localization, pp. 6945-6950.

Song, Zhuoyuan	Univ. of Florida
Mohseni, Kamran	Univ. of Florida

16:40-17:00 WeC20.3

An Extesion of the Method of Multipliers for Distributed Nonlinear Programming, pp. 6951-6956.

Matei, Ion	Palo Alto Res. Center
Baras, John S.	Univ. of Maryland
Nabi-Abdolyousefi, Marzieh	Palo Alto Res. Center
Kurtoglu, Tolga	Palo Alto Res. Center

17:00-17:20 WeC20.4

Mean-Field Optimal Control by Leaders (I), pp. 6957-6962.

Fornasier, Massimo	TU Munich
Piccoli, Benedetto	Rutgers Univ. Camden
Pouradier Duteil, Nastassia	Rutgers Univ. Camden
Rossi, Francesco	Aix-Marseille Univ

17:20-17:40 WeC20.5

Swarm-Based Dynamic Coverage Control, pp. 6963-6968.

Atinc, Gokhan M.	Univ. of Illinois, Urbana-Champaign
Stipanovic, Dusan M.	Univ. of Illinois, Urbana-Champaign
Voulgaris, Petros G.	Univ. of Illinois, Urbana-Champaign
Karkoub, Mansour	Texas A&M Univ

17:40-18:00 WeC20.6

Differentiated Consensuses in Decentralized Load Balancing Problem with Randomized Topology, Noise, and Delays, pp. 6969-6974.

Amelina, Natalia	Saint Petersburg State Univ
Granichin, Oleg	Saint Petersburg State Univ
Jiang, Yuming	NTNU

WeC21	Plaza 3
Biomedical Systems (Regular Session)	
Chair: Lazar, Mircea	Eindhoven Univ. of Tech.
Co-Chair: Kirchsteiger, Harald	Johannes Kepler Univ. Linz

16:00-16:20 WeC21.1

Design of an Artificial Pancreas Using Zone Model Predictive Control with a Moving Horizon State Estimator, pp. 6975-6980.

Lee, Justin	Univ. of California, Santa Barbara
Gondhalekar, Ravi	Univ. of California, Santa Barbara
Doyle III, Francis J.	Univ. of California, Santa Barbara

16:20-16:40 WeC21.2

LMI-Based Online Estimation of a Time-Varying Time-Delay in Continuous Glucose Measurement Devices, pp. 6981-6986.

Kirchsteiger, Harald	Johannes Kepler Univ. Linz
Efendic, Hajrudin	Johannes Kepler Univ. Linz
Freckmann, Guido	Univ. of Ulm
Del Re, Luigi	Johannes Kepler Univ. Linz

16:40-17:00 WeC21.3

Domain of Attraction Computation for Tumor Dynamics, pp. 6987-6992.

Doban, Alina Ionela	Eindhoven Univ. of Tech
Lazar, Mircea	Eindhoven Univ. of Tech

17:00-17:20 WeC21.4

Observer-Based Controller for Microrobot in Pulsatile Blood Flow, pp. 6993-6998.

Sadelli, Lounis	Univ. of Orleans
Fruchard, Matthieu	Univ. of Orleans
Ferreira, Antoine	INSA Centre Val De Loire

17:20-17:40 WeC21.5

Design of a Neural Decoder by Sensory Prediction and Error Correction, pp. 6999-7004.

Lu, Junkai	Univ. of California, Berkeley
Chang, Young Hwan	Univ. of California, Berkeley
Chen, Mo	Univ. of California, Berkeley
Tomizuka, Masayoshi	Univ. of California, Berkeley
Carmena, Jose M.	Univ. of California, Berkeley
Tomlin, Claire J.	Univ. of California, Berkeley

17:40-18:00 WeC21.6

Adaptive Tracking Control of a Virtual Player in the Mirror Game, pp. 7005-7010.

Zhai, Chao	Univ. of Bristol
Alderisio, Francesco	Univ. of Bristol
Tsaneva-Atanasova, Krasimira	Univ. of Exeter
di Bernardo, Mario	Univ. of Naples Federico II