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Content List of 55th IEEE Conference on Decision and Control

Technical Program for Monday December 12, 2016

MoSP1	Juniper 4

Modeling and Control of Power Flow for Transient Thermal Systems (Semiplenary Session)

| Chair: Bullo, Francesco | Univ. California at Santa Barbara |
| Co-Chair: Jovanovic, Mihailo | Univ. of Minnesota |

08:30-09:30	MoSP1.1

Modeling and Control of Power Flow for Transient Thermal Systems*.

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

MoSP2	Ironwood 5

On the First Experimental Realization of a Quantum State Feedback (Semiplenary Session)

| Chair: Giua, Alessandro | Aix-Marseille Univ. France / Univ. of Cagliari, Italy |
| Co-Chair: Cortes, Jorge | Univ. of California, San Diego |

08:30-09:30	MoSP2.1

On the First Experimental Realization of a Quantum State Feedback*.

| Rouchon, Pierre | Mines ParisTech |

MoA01	Starvine 1

Network Analysis and Control I (Regular Session)

| Chair: Charalambous, Themistoklis | Chalmers Univ. of Tech |
| Co-Chair: Roy, Sandip | Washington State Univ |

10:00-10:20	MoA01.1

Opinion Dynamics Control by Leadership with Bounded Influence (I), pp. 1-6.

Dietrich, Florian	CRAN - Univ. De Lorraine
Martin, Samuel	Univ. De Lorraine
Jungers, Marc	CNRS - Univ. De Lorraine

10:20-10:40	MoA01.2

Time Scale Modeling for Consensus in Sparse Directed Networks with Time-Varying Topologies, pp. 7-12.

Martin, Samuel	Univ. De Lorraine
Morarescu, Irinel-Constantin	Cran Cnrs Umr 7039 - Ul
Nesic, Dragan	Univ. of Melbourne

10:40-11:00	MoA01.3

On the Network Reliability Problem of the Heterogeneous Key Predistribution Scheme, pp. 13-18.

| Eletreby, Rashad | Carnegie Mellon Univ |
| Yagan, Osman | Carnegie Mellon Univ |

11:00-11:20	MoA01.4

Consensus on Spheres: Convergence Analysis and Perturbation Theory, pp. 19-24.

| Lageman, Christian | Univ. of Wuerzburg |
| Sun, Zhiyong | Australian National Univ |

11:20-11:40	MoA01.5

Totally Asynchronous Distributed Estimation of Eigenvector Centrality in Digraphs with Application to the PageRank Problem, pp. 25-30.

Charalambous, Themistoklis	Chalmers Univ. of Tech
Hadjicostis, Christoforos N.	Univ. of Cyprus
Rabbat, Michael	McGill Univ
Johansson, Mikael	KTH - Royal Inst. of Tech

11:40-12:00	MoA01.6

Detecting Topology Variations in Networks of Linear Systems with Static Coupling, pp. 31-36.

| Battistelli, Giorgio | Univ. of Florence |
| Tesi, Pietro | Univ. of Groningen |

MoA02	Starvine 2

Agents-Based Systems I (Regular Session)

| Chair: Gans, Nicholas | Univ. of Texas at Dallas |
| Co-Chair: Liu, Ji | Univ. of Illinois at Urbana-Champaign |

10:00-10:20	MoA02.1

Periodic Behavior of a Diffusion Model Over Directed Graphs, pp. 37-42.

Gao, Zuguang	Univ. of Illinois at Urbana-Champaign
Chen, Xudong	Univ. of Colorado, Boulder
Liu, Ji	Univ. of Illinois at Urbana-Champaign
Basar, Tamer	Univ. of Illinois, Urbana-Champaign

10:20-10:40	MoA02.2

Multi-Robot Coverage on Dendritic Topologies under Communication Constraints, pp. 43-48.

| Loizou, Savvas | Cyprus Univ. of Tech |
| Constantinou, Christos | Cyprus Univ. of Tech |

10:40-11:00	MoA02.3

Distributed Control of Cyclic Formations with Local Relative Position Measurements, pp. 49-56.

Fathian, Kaveh	Univ. of Texas at Dallas
Rachinskii, Dmitrii	Univ. of Texas at Dallas
Summers, Tyler H.	Univ. of Texas at Dallas
Gans, Nicholas	Univ. of Texas at Dallas

11:00-11:20	MoA02.4

Controlling a Rigid Formation from a Triangle, pp. 57-62.

Belabbas, Mohamed Ali	Univ. of Illinois at Urbana-Champaign
Chen, Xudong	Univ. of Colorado, Boulder
Basar, Tamer	Univ. of Illinois, Urbana-Champaign

11:20-11:40	MoA02.5

Dynamic Fault Tolerant Control for Multi-Agent Uncertain System with Intermittent Sampling, pp. 63-68.

Wang, Bohui	Shanghai Jiao Tong Univ
Wang, Jingcheng	Shanghai Jiaotong Univ
Zhu, Huifeng	Department of Shanghai Municipal Monitoring Centre of Water Supp
Zhang, Bin	Univ. of South Carolina
Ii, Xiaocheng	Shanghai Jiao Tong Univ
Wang, Xiaofeng	Univ. of South Carolina
Dai, Leijie	Department of Shanghai Municipal Monitoring Centre of Water Supp

Wang, Ruiqing	Department of Shanghai Municipal Monitoring Centre of Water Supp

11:40-12:00	MoA02.6

Coordination of Multi-Agent Leader-Follower System with Time-Varying Objective Function, pp. 69-74.

Fabian, Zalan	Univ. of New Hampshire
Yoon, Se Young (Pablo)	Univ. of New Hampshire

MoA03	Starvine 3
Cooperative Control I (Regular Session)	
Chair: Scardovi, Luca	Univ. of Toronto
Co-Chair: Bai, He	Oklahoma State Univ

10:00-10:20	MoA03.1

A Two-Time-Scale Dynamic Average Consensus Estimator, pp. 75-80.

Bai, He	Oklahoma State Univ

10:20-10:40	MoA03.2

Abstractions of Varying Decentralization Degree for Coupled Multi-Agent Systems, pp. 81-86.

Boskos, Dimitris	KTH
Dimarogonas, Dimos V.	Royal Inst. of Tech

10:40-11:00	MoA03.3

A Smooth Distributed Feedback for Global Rendezvous of Unicycles, pp. 87-92.

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

11:00-11:20	MoA03.4

A Cooperative Receding Horizon Controller for Multi-Target Interception with Obstacle Avoidance, pp. 93-98.

Khosravi, Mohammad	Concordia Univ
Khodadadi, Hossein	Concordia Univ
Aghdam, Amir G.	Concordia Univ
Rivaz, Hassan	Concordia Univ

11:20-11:40	MoA03.5

Decentralized Biconnectivity Conditions in Multi-Robot Systems, pp. 99-104.

Zareh Eshghdoust, Mehran	Univ. of Modena and Reggio Emilia
Sabattini, Lorenzo	Univ. of Modena and Reggio Emilia
Secchi, Cristian	Univ. of Modena & Reggio Emilia

11:40-12:00	MoA03.6

Coordinated Distributed MHE for Linear Systems (I), pp. 105-110.

An, Tianrui	Univ. of Alberta
Liu, Jinfeng	Univ. of Alberta
Forbes, J. Fraser	Univ. of Alberta

MoA04	Starvine 4
Analysis and Synthesis of Dynamical Networks (Invited Session)	
Chair: Motee, Nader	Lehigh Univ
Co-Chair: Somarakis, Christoforos	Lehigh Univ
Organizer: Siami, Milad	Lehigh Univ
Organizer: Somarakis, Christoforos	Lehigh Univ
Organizer: Motee, Nader	Lehigh Univ

10:00-10:20	MoA04.1

Resilience of Locally Routed Network Flows: More Capacity Is Not Always Better (I), pp. 111-116.

Yazicioglu, A. Yasin	Massachusetts Inst. of Tech
Roozbehani, Mardavij	Massachusetts Inst. of Tech
Dahleh, Munther A.	Massachusetts Inst. of Tech

10:20-10:40	MoA04.2

Koopman Performance Analysis of a Class of Nonlinear Dynamical Networks (I), pp. 117-122.

Mousavi, Hossein K.	Lehigh Univ
Somarakis, Christoforos	Lehigh Univ
Motee, Nader	Lehigh Univ

10:40-11:00	MoA04.3

Closed-Loop Feedback Sparsification under Parametric Uncertainties (I), pp. 123-128.

Arastoo, Reza	Lehigh Univ
Bahavarnia, MirSaleh	Lehigh Univ
Kothare, Mayuresh V.	Lehigh Univ
Motee, Nader	Lehigh Univ

11:00-11:20	MoA04.4

State-Based Communication Design for Wireless Control Systems (I), pp. 129-134.

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

11:20-11:40	MoA04.5

Online Algorithms for Network Formation (I), pp. 135-140.

Meng, De	Univ. of Washington
Fazel, Maryam	Univ. of Washington
Mesbahi, Mehran	Univ. of Washington

11:40-12:00	MoA04.6

Optimal Control for Information Diffusion Over Heterogeneous Networks, pp. 141-146.

Liu, Fangzhou	Tech. Univ. München
Buss, Martin	Tech. Univ. Muenchen

MoA05	Starvine 5
Distributed and Large-Scale Optimization I (Invited Session)	
Chair: Nedich, Angelia	Univ. of Illinois, Urbana-Champaign
Co-Chair: Olshevsky, Alexander	Univ. of Illinois at Urbana-Champaign
Organizer: Nedich, Angelia	Arizona State Univ
Organizer: Notarstefano, Giuseppe	Univ. Del Salento
Organizer: Olshevsky, Alexander	Boston Univ

10:00-10:20	MoA05.1

Large Scale Data Clustering and Graph Partitioning Via Simulated Mixing (I), pp. 147-152.

Bhatti, Shahzad	Univ. of Illinois at Urbana Champaign
Beck, Carolyn L.	Univ. of Illinois, Urbana-Champaign
Nedich, Angelia	Univ. of Illinois, Urbana-Champaign

10:20-10:40	MoA05.2

A Randomized Primal Distributed Algorithm for Partitioned and Big-Data Non-Convex Optimization (I), pp. 153-158.

Notarnicola, Ivano	Univ. Del Salento
Notarstefano, Giuseppe	Univ. Del Salento

10:40-11:00	MoA05.3

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Qu, Guannan	Harvard Univ
Li, Na	Harvard Univ

11:00-11:20	MoA05.4

Distributed Cooperative Decision-Making in Multiarmed Bandits: Frequentist and Bayesian Algorithms (I), pp. 167-172.

Landgren, Peter	Princeton Univ
Srivastava, Vaibhav	Michigan State Univ
Leonard, Naomi Ehrich	Princeton Univ

11:20-11:40	MoA05.5

Global Convergence Rate of Incremental Aggregated Gradient Methods for Nonsmooth Problems (I), pp. 173-178.

Vanli, Nuri Denizcan	MIT
Gurbuzbalaban, Mert	New York Univ. Courant Inst
Ozdaglar, Asu	MIT

11:40-12:00	MoA05.6

On Performance of Consensus Protocols Subject to Noise: Role of Hitting Times and Network Structure (I), pp. 179-184.

Jadbabaie, Ali	MIT
Olshevsky, Alexander	Boston Univ

MoA06	Starvine 6
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Chair: Chen, Mo	Univ. of California, Berkeley
Co-Chair: Borum, Andy	Univ. of Illinois at Urbana-Champaign

10:00-10:20	MoA06.1

Helices, Relative Equilibria, and Optimality on the Special Euclidean Group, pp. 185-190.

Borum, Andy	Univ. of Illinois at Urbana-Champaign
Bretl, Timothy	Univ. of Illinois, Urbana-Champaign

10:20-10:40	MoA06.2

Fast Reachable Set Approximations Via State Decoupling Disturbances, pp. 191-196.

Chen, Mo	Univ. of California, Berkeley
Herbert, Sylvia	UC Berkeley
Tomlin, Claire J.	UC Berkeley

10:40-11:00	MoA06.3

Optimal Control of a Stochastic Oscillator in Non-Equilibrium Thermodynamics, pp. 197-202.

Huang, Yunlong	Univ. of Maryland
Krishnaprasad, P. S.	Univ. of Maryland

11:00-11:20	MoA06.4

Trajectory Planning for Car--Like Vehicles: A Modular Approach, pp. 203-209.

Frego, Marco	Univ. of Trento
Bevilacqua, Paolo	Univ. of Trento

Bertolazzi, Enrico	Univ. of Trento
Biral, Francesco	Univ. of Trento
Fontanelli, Daniele	Univ. of Trento
Palopoli, Luigi	Univ. of Trento

11:20-11:40	MoA06.5

Optimal Control Problems for Path Planing of AUV Using Simplified Models, pp. 210-215.

de Pinho, Maria do Rosario	Univ. Do Porto, Fac. Engenharia
Foroodandeh, Zahra	Faculty of Mathematics and Computer Science, Amirkabir Univ
Matos, Anibal Castilho	Faculdade De Engenharia Da Univ. Do Porto

11:40-12:00	MoA06.6

A Discussion on the Discrete-Time Finite-Horizon Indefinite LQ Problem, pp. 216-220.

Ferrante, Augusto	Univ. Di Padova
Ntogramatzidis, Lorenzo	Curtin Univ

MoA07	Starvine 7
Optimization Algorithms I (Regular Session)	
Chair: Orosz, Gabor	Univ. of Michigan
Co-Chair: Li, Na	Harvard Univ

10:00-10:20	MoA07.1

Practical Coding Schemes for Bandwidth Limited One-Way Communication Resource Allocation, pp. 221-226.

Magnusson, Sindri	KTH - Royal Inst. of Tech
Enyioha, Chinwendu	Harvard Univ
Li, Na	Harvard Univ
Fischione, Carlo	Royal Inst. of Tech

10:20-10:40	MoA07.2

Sequential Parametric Optimization for Connected Cruise Control with Application to Fuel Economy Optimization (I), pp. 227-232.

Li, Nan	Univ. of Michigan
He, Chaozhe	Univ. of Michigan
Orosz, Gabor	Univ. of Michigan

10:40-11:00	MoA07.3

Global Linear Convergence in Operator Splitting Methods, pp. 233-238.

Banjac, Goran	Univ. of Oxford
Goulart, Paul	Univ. of Oxford

11:00-11:20	MoA07.4

Computing Minimum-Time Trajectories for Quadrotors Via Transverse Coordinates, pp. 239-244.

Spedicato, Sara	Univ. Del Salento
Notarstefano, Giuseppe	Univ. Del Salento

11:20-11:40	MoA07.5

Distributed Dynamic Optimization Over Directed Graphs, pp. 245-250.

Xi, Chenguang	Tufts Univ. Ec
Khan, Usman A.	Tufts Univ

11:40-12:00	MoA07.6

Discrete Consensus for Asynchronous Distributed Task Assignment, pp. 251-255.

Fanti, Maria Pia	Pol. of Bari
Mangini, Agostino Marcello	Pol. Di Bari
Pedroncelli, Giovanni	Univ. of Triste

Ukovich, Walter	Univ. of Trieste

MoA08	Starvine 8
Advances in Control, Game Theory, and Identification for Stochastic Systems (Invited Session)	
Chair: Pasik-Duncan, Bozenna	Univ. of Kansas
Co-Chair: Prandini, Maria	Pol. Di Milano
Organizer: Pasik-Duncan, Bozenna	Univ. of Kansas
Organizer: Prandini, Maria	Pol. Di Milano

10:00-10:20	MoA08.1

A Stochastic Strategy Integrating Wind Compensation for Trajectory Tracking in Aircraft Motion Control (I), pp. 256-261.

Deori, Luca	Pol. Di Milano
Garatti, Simone	Pol. Di Milano
Prandini, Maria	Pol. Di Milano

10:20-10:40	MoA08.2

Sign-Perturbed Sums (SPS) with Asymmetric Noise: Robustness Analysis and Robustification Techniques (I), pp. 262-267.

Carè, Algo	Hungarian Acad. of Sciences (MTA), Budapest
Csaji, Balazs	MTA SZTAKI: Inst. for Computer Science and Control, Hungaria
Campi, M. C.	Univ. Di Brescia

10:40-11:00	MoA08.3

Mean Field Game $epsilon$-Nash Equilibria for Partially Observed Optimal Execution Problems in Finance (I), pp. 268-275.

Firoozi, Dena	McGill Univ
Caines, Peter E.	McGill Univ

11:00-11:20	MoA08.4

Optimal Strategies for Stochastic Linear Quadratic Differential Games with Costly Information (I), pp. 276-282.

Maity, Dipankar	Univ. of Maryland, Coll. Park
Baras, John S.	Univ. of Maryland

11:20-11:40	MoA08.5

Secure Control of Networked Cyber-Physical Systems (I), pp. 283-289.

Satchidanandan, Bharadwaj	Texas A&M Univ
Kumar, P. R.	Texas A&M Univ

11:40-12:00	MoA08.6

On the Analysis of a Continuous-Time Bi-Virus Model (I), pp. 290-295.

Liu, Ji	Univ. of Illinois at Urbana-Champaign
Pare, Philip	Univ. of Illinois at Urbana-Champaign
Nedich, Angelia	Univ. of Illinois, Urbana-Champaign
Tang, Choon Yik	Univ. of Oklahoma
Beck, Carolyn L.	Univ. of Illinois, Urbana-Champaign
Basar, Tamer	Univ. of Illinois, Urbana-Champaign

MoA09	Starvine 9
Estimation I (Regular Session)	
Chair: Tayebi, Abdelhamid	Lakehead Univ
Co-Chair: Farokhi, Farhad	The Univ. of Melbourne

10:00-10:20	MoA09.1

Exteroceptive Measurement Filtering Embedded within an SO(3)-Based Attitude Estimator, pp. 296-301.

Zlotnik, David Evan	Univ. of Michigan
Forbes, James Richard	McGill Univ

10:20-10:40	MoA09.2

Optimal State Estimation with Measurements Corrupted by Laplace Noise, pp. 302-307.

Farokhi, Farhad	The Univ. of Melbourne
Milosevic, Jezdimir	KTH Royal Inst. of Tech
Sandberg, Henrik	KTH Royal Inst. of Tech

10:40-11:00	MoA09.3

A Globally Exponentially Stable Hybrid Attitude and Gyro-Bias Observer, pp. 308-313.

Berkane, Soulaimane	Western Univ
Abdessameud, Abdelkader	Univ. of Western Ontarion
Tayebi, Abdelhamid	Lakehead Univ

11:00-11:20	MoA09.4

Constrained Stochastic Hybrid System Modeling to Road Map - GPS Integration for Vehicle Positioning, pp. 314-319.

Kwon, Cheolhyeon	Purdue Univ
Hwang, Inseok	Purdue Univ

11:20-11:40	MoA09.5

The Structure of Optimal Communication Policies for Remote Estimation Over the Collision Channel with Private and Common Observations, pp. 320-326.

Vasconcelos, Marcos M.	Univ. of Southern California
Martins, Nuno C.	Univ. of Maryland

11:40-12:00	MoA09.6

Optimal Remote State Estimation for Self-Propelled Particle Models, pp. 327-333.

Park, Shinkyu	Massachusetts Inst. of Tech
Martins, Nuno C.	Univ. of Maryland

MoA10	Starvine 10
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Chair: Fujimoto, Kenji	Kyoto Univ
Co-Chair: Santillo, Mario	Ford Motor Company

10:00-10:20	MoA10.1

Generalized Composite Adaptive IMC: Design and Analysis, pp. 334-340.

Qiu, Zeng	Univ. of Michigan, Ann Arbor
Sun, Jing	Univ. of Michigan
Jankovic, Mrdjan	Ford Res. & Advanced Engineering
Santillo, Mario	Ford Motor Company

10:20-10:40	MoA10.2

A Weighted Least Squares Method for Estimation of Unstable Systems, pp. 341-346.

Galrinho, Miguel	Kungliga Tekniska Högskolan
Rojas, Cristian R.	KTH Royal Inst. of Tech
Hjalmarsson, Håkan	KTH Royal Inst. of Tech

10:40-11:00	MoA10.3

A High Performance Approach to Local Active Noise Reduction, pp. 347-352.

Kwan, Chi-Man	Applied Res. LLC

11:00-11:20	MoA10.4

Learning Hybrid Models with Logical and Continuous Dynamics Via Multiclass Linear Separation, pp. 353-358.

Breschi, Valentina	IMT Lucca
Piga, Dario	IMT Inst. for Advanced Studies Lucca
Bemporad, Alberto	IMT Inst. for Advanced Studies Lucca

11:20-11:40	MoA10.5

Algebraic Estimation of a Biased and Noisy Continuous Signal Via Orthogonal Polynomials, pp. 359-364.

Ushirobira, Rosane	Inria
Quadrat, Alban	INRIA Saclay

11:40-12:00	MoA10.6

Measurement Difference Autocovariance Method for Noise Covariance Matrices Estimation, pp. 365-370.

Dunik, Jindrich	Univ. of West Bohemia
Straka, Ondrej	Univ. of West Bohemia
Kost, Oliver	Univ. of West Bohemia

MoA11	Starvine 11
Adaptive Control I (Regular Session)	
Chair: Bernstein, Dennis S.	Univ. of Michigan
Co-Chair: Yucelen, Tansel	Univ. of South Florida

10:00-10:20	MoA11.1

Retrospective Cost Adaptive Control with Concurrent Closed-Loop Identification of Time-Varying Nonminimum-Phase Zeros, pp. 371-376.

Sobolic, Frantisek	Univ. of Michigan
Bernstein, Dennis S.	Univ. of Michigan

10:20-10:40	MoA11.2

On Model Reference Adaptive Control for Uncertain Dynamical Systems with Unmodeled Dynamics, pp. 377-382.

Dogan, Kadriye Merve	Univ. OF SOUTH FLORIDA
Yucelen, Tansel	Univ. of South Florida
Gruenwald, Benjamin	Univ. of South Florida
Muse, Jonathan	Wright Patterson Air Force Base

10:40-11:00	MoA11.3

Adaptive Control of Plants That Are Practically Impossible to Control by Fixed-Gain Control Laws, pp. 383-388.

Rahman, Yousaf	Univ. of Michigan
Bernstein, Dennis S.	Univ. of Michigan

11:00-11:20	MoA11.4

Adaptive Control of a Surface Marine Craft with Parameter Identification Using Integral Concurrent Learning, pp. 389-394.

Bell, Zachary	Univ. of Florida
Parikh, Anup	Univ. of Florida
Nezvadovitz, Jason	Univ. of Florida
Dixon, Warren E.	Univ. of Florida

11:20-11:40	MoA11.5

Synthesis of Adaptive Controllers for Spacecraft Rendezvous Maneuvers Using Nonlinear Models of Relative Motion, pp. 395-400.

Zhang, Kewen	Worcester Pol. Inst
Demetriou, Michael A.	Worcester Pol. Inst

11:40-12:00	MoA11.6

Distributed Robust Stochastic Learning in Asynchronous Networks of Sampled-Data Systems, pp. 401-406.

Poveda, Jorge I.	Univ. of California at Santa Barbara
Teel, Andrew R.	Univ. of California at Santa Barbara

MoA12	Starvine 12
Automata (Regular Session)	
Chair: Hadjicostis, Christoforos N.	Univ. of Cyprus
Co-Chair: Seatzu, Carla	Univ. of Cagliari

10:00-10:20	MoA12.1

Controller Design under Safety Specifications for a Class of Bounded Hybrid Automata, pp. 407-413.

Hoehener, Daniel	Massachusetts Inst. of Tech
Del Vecchio, Domitilla	Massachusetts Inst. of Tech

10:20-10:40	MoA12.2

Reliable Conditional-Coobservability for Decentralized Supervisory Control of Discrete Event Systems with Conditional Decisions, pp. 414-419.

Yoshida, Sho	Osaka Univ
Takai, Shigemasa	Osaka Univ

10:40-11:00	MoA12.3

K-Detectability in Discrete Event Systems, pp. 420-425.

Hadjicostis, Christoforos N.	Univ. of Cyprus
Seatzu, Carla	Univ. of Cagliari

11:00-11:20	MoA12.4

Risk-Averse Control of Markov Decision Processes with Omega-Regular Objectives, pp. 426-433.

Ehlers, Ruediger	Univ. of Bremen
Moarref, Salar	Univ. of Pennsylvania
Topcu, Ufuk	The Univ. of Texas at Austin

11:20-11:40	MoA12.5

Automata Theory Meets Approximate Dynamic Programming: Optimal Control with Temporal Logic Constraints, pp. 434-440.

Papusha, Ivan	California Inst. of Tech
Fu, Jie	Worcester Pol. Inst
Topcu, Ufuk	The Univ. of Texas at Austin
Murray, Richard M.	California Inst. of Tech

11:40-12:00	MoA12.6

Distributed Computation of Maximally Permissive Supervisors in Three-Level Relaxed Coordination Control of Discrete-Event Systems, pp. 441-446.

Komenda, Jan	Czech Acad. of Sciences
Masopust, Tomas	TU Dresden
van Schuppen, Jan H.	Van Schuppen Control Res

MoA13	Starvine 13
Input to State Stability and Its Variants (Invited Session)	
Chair: Kellett, Christopher M.	Univ. of Newcastle
Co-Chair: Rüffer, Björn S.	The Univ. of Newcastle
Organizer: Kellett, Christopher M.	Univ. of Newcastle
Organizer: Rüffer, Björn S.	The Univ. of Newcastle

10:00-10:20	MoA13.1

On Lyapunov--Krasovskii Characterizations of Stability Notions for Discrete-Time Systems with Unknown Time-Varying Time-Delays (I), pp. 447-452.

Pepe, Pierdomenico	Univ. of L' Aquila
Pola, Giordano	Univ. of L'Aquila
Di Benedetto, M. Domenica	Univ. of L'Aquila

10:20-10:40	MoA13.2

Output-To-State Stability for Systems on Manifolds with Multiple Invariant Sets (I), pp. 453-458.

Forni, Paolo	Imperial Coll. London
Angeli, David	Imperial Coll

10:40-11:00	MoA13.3

Cascades of Iiss and Strong Iiss Systems with Multiple Invariant Sets (I), pp. 459-464.

Forni, Paolo	Imperial Coll. London
Angeli, David	Imperial Coll

11:00-11:20	MoA13.4

Analysis of Different Lyapunov Function Constructions for Interconnected Hybrid Systems (I), pp. 465-470.

Yang, Guosong	Univ. of Illinois at Urbana-Champaign
Liberzon, Daniel	Univ. of Illinois, Urbana-Champaign
Mironchenko, Andrii	Univ. of Passau

11:20-11:40	MoA13.5

Lower-Power Lyapunov Functions for Networks of Integral Input-To-State Stable Systems (I), pp. 471-476.

Ito, Hiroshi	Kyushu Inst. of Tech

11:40-12:00	MoA13.6

Incremental Stability Properties for Discrete-Time Systems (I), pp. 477-482.

Tran, Duc	The Univ. of Newcastle
Rüffer, Björn S.	The Univ. of Newcastle
Kellett, Christopher M.	Univ. of Newcastle

MoA14	Ironwood 1
Event-Triggered and Self-Triggered Control Based on Unreliable and Quantized Information (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	MoA14.1

Input-To-State Stabilizing Event-Triggered Control for Linear Systems with Output Quantization (I), pp. 483-488.

Abdelrahim, Mahmoud	Control Systems Tech. Group, Department of Mechanical Engin
Dolk, Victor Sebastiaan	Eindhoven Univ. of Tech
Heemels, W.P.M.H.	Eindhoven Univ. of Tech

10:20-10:40	MoA14.2

Resilient Self-Triggered Network Synchronization (I), pp. 489-494.

Senejohnny, Danial	Univ. of Groningen
Tesi, Pietro	Univ. of Groningen
De Persis, Claudio	Univ. of Groningen

10:40-11:00	MoA14.3

Event-Triggered Control for Nonlinear Systems with Time-Varying Input Delay (I), pp. 495-500.

Nozari, Erfan	Univ. of California, San Diego
Tallapragada, Pavankumar	Univ. of California, San Diego
Cortes, Jorge	Univ. of California, San Diego

11:00-11:20	MoA14.4

Predictor-Based Networked Control in the Presence of Uncertain Time-Varying Delays (I), pp. 501-506.

Selivanov, Anton	Tel Aviv Univ
Fridman, Emilia	Tel-Aviv Univ

11:20-11:40	MoA14.5

A Non-Monotonic Approach to Periodic Event-Triggered Control with Packet Loss (I), pp. 507-512.

Linsenmayer, Steffen	Univ. of Stuttgart
Dimarogonas, Dimos V.	Royal Inst. of Tech
Allgöwer, Frank	Univ. of Stuttgart

11:40-12:00	MoA14.6

Decentralized Event-Triggered Medium Access Control for Networked Control Systems (I), pp. 513-519.

Mamduhi, Mohammad Hossein	Tech. Univ. München
Kneissl, Maximilian	Tech. Univ. of Munich
Hirche, Sandra	Tech. Univ. München

MoA15	Ironwood 2
PDE Control and Adaptive Structures (Invited Session)	
Chair: Meurer, Thomas	Christian-Albrechts-Univ. Kiel
Co-Chair: Macchelli, Alessandro	Univ. of Bologna - Italy
Organizer: Meurer, Thomas	Christian-Albrechts-Univ. Kiel
Organizer: Le Gorrec, Yann	Ensmm, Femto-St / As2m

10:00-10:20	MoA15.1

Modelling and Flatness-Based Motion Planning for an Interconnected Flexible Beam Structure (I), pp. 520-525.

Kater, Andreas	Christian-Albrechts-Univ. Kiel
Meurer, Thomas	Christian-Albrechts-Univ. Kiel

10:20-10:40	MoA15.2

Output Feedback Control of the One-Phase Stefan Problem (I), pp. 526-531.

Koga, Shumon	Univ. of California, San Diego
Diagne, Mamadou	Univ. of Michigan Ann Arbor
Krstic, Miroslav	Univ. of California, San Diego

10:40-11:00	MoA15.3

Design of Damping for Optimal Energy Dissipation of Vibrations (I), pp. 532-536.

Morris, Kirsten	Univ. of Waterloo
Vest, Ambroise	Lycée Henri Poincare

11:00-11:20	MoA15.4

Bilateral Boundary Control of One-Dimensional First and Second-Order PDEs Using Infinite-Dimensional Backstepping (I), pp. 537-542.

Vazquez, Rafael	Univ. De Sevilla
Krstic, Miroslav	Univ. of California, San Diego

11:20-11:40	MoA15.5

Brayton-Moser Formulation of Infinite Dimensional Port-Hamiltonian Systems with Application to Boundary Control (I), pp. 543-548.

Macchelli, Alessandro   Univ. of Bologna - Italy

11:40-12:00   MoA15.6

Backstepping Observer Based-Control for an Anti-Damped Boundary Wave PDE in Presence of In-Domain Viscous Damping, pp. 549-554.

Roman, Christophe	GIPSA-Lab -- Grenoble INP
Bresch-Pietri, Delphine	CNRS, GIPSA-Lab
Cerpa, Eduardo	Univ. Técnica Federico Santa María
Prieur, Christophe	CNRS
Sename, Olivier	Univ. Grenoble Alpes

MoA16   Ironwood 3

Delay Systems I (Regular Session)

Chair: Califano, Claudia	Univ. Di Roma
Co-Chair: Bonnet, Catherine	INRIA Saclay-Ile-De-France

10:00-10:20   MoA16.1

On the Geometric Interpretation of the Polynomial Lie Bracket for Nonlinear Time-Delay Systems (I), pp. 555-560.

Califano, Claudia	Univ. Di Roma
Battilotti, Stefano	Univ. La Sapienza
Moog, Claude H.	CNRS

10:20-10:40   MoA16.2

Stability of a Delay System Coupled to a Differential-Difference System Describing the Coexistence of Ordinary and Mutated Hematopoietic Stem Cells, pp. 561-566.

Djema, Walid	INRIA Saclay-Ile-De-France
Mazenc, Frederic	Epi Inria Disco
Bonnet, Catherine	INRIA Saclay-Ile-De-France
Clairambault, Jean	INRIA
Hirsch, Pierre	Groupe De Recherche Clinique Sur Les Myé Loproliferations A
Delhommeau, François	Groupe De Recherche Clinique Sur Les Myé Loproliferations A

10:40-11:00   MoA16.3

Analysis of PWA Control of Discrete-Time Linear Dynamics in the Presence of Variable Time-Delay, pp. 567-572.

Laraba, Mohammed-Tahar	Lab. of Signals and Systems
Olaru, Sorin	CentraleSupélec
Niculescu, Silviu-Iulian	CNRS-Supelec

11:00-11:20   MoA16.4

Differential Dynamic Programming for Time-Delayed Systems, pp. 573-579.

Fan, David D.	Georgia Inst. of Tech
Theodorou, Evangelos A.	Georgia Inst. of Tech

11:20-11:40   MoA16.5

Unknown Input Functional Observability of Descriptor Systems with Delays, pp. 580-585.

Bejarano, Francisco Javier	Inst. Pol. Nacional, ESIME Ticomán
Zheng, Gang	INRIA

11:40-12:00   MoA16.6

H_inf State-Feedback Control of Linear Systems with Time-Varying Input Delays, pp. 586-591.

Yuan, Chengzhi	Univ. of Rhode Island
Wu, Fen	North Carolina State Univ

MoA17   Ironwood 6

Variational Analysis in Dynamics and Control (Invited Session)

Chair: Goebel, Rafal	Loyola Univ. Chicago
Co-Chair: Sanfelice, Ricardo G.	Univ. of California at Santa Cruz
Organizer: Goebel, Rafal	Loyola Univ. Chicago
Organizer: Sanfelice, Ricardo G.	Univ. of California at Santa Cruz

10:00-10:20   MoA17.1

Generalized Derivatives of Optimal Control Problems with Nonsmooth Differential-Algebraic Equations Embedded (I), pp. 592-597.

Stechlinski, Peter	MIT
Barton, Paul I.	MIT

10:20-10:40   MoA17.2

How Well-Posedness of Hybrid Systems Can Extend Beyond Zeno Times (I), pp. 598-603.

Goebel, Rafal	Loyola Univ. Chicago
Sanfelice, Ricardo G.	Univ. of California at Santa Cruz

10:40-11:00   MoA17.3

LQ Optimal Control for a Class of Hybrid Systems (I), pp. 604-609.

Possieri, Corrado	Univ. Di Roma Tor Vergata
Teel, Andrew R.	Univ. of California at Santa Barbara

11:00-11:20   MoA17.4

Differential-Algebraic Inclusions with Maximal Monotone Operators (I), pp. 610-615.

Camlibel, M. Kanat	Univ. of Groningen
Iannelli, Luigi	Univ. of Sannio in Benevento
Tanwani, Aneel	Laas -- Cnrs
Trenn, Stephan	Univ. of Kaiserslautern

11:20-11:40   MoA17.5

Continuously Generalized Model Predictive Control (I), pp. 616-621.

Rakovic, Sasa V.	Texas A&M Univ
Levine, William S.	Univ. of Maryland
Acikmese, Behcet	Univ. of Washington

11:40-12:00   MoA17.6

Results on Invariance-Based Feedback Control for Hybrid Dynamical Systems (I), pp. 622-627.

Chai, Jun	The Univ. of California at Santa Cruz
Sanfelice, Ricardo G.	Univ. of California at Santa Cruz

MoA18   Ironwood 7

H-Infinity Control (Regular Session)

Chair: Aguilar, Luis T.	Inst. Pol. Nacional
Co-Chair: Mylvaganam, Thulasi	Imperial Coll. London

10:00-10:20   MoA18.1

Nonlinear Robust H-Infinity Tracking Control for 6 DOF Spacecraft Formation with Input Saturation, pp. 628-633.

Huang, Yi	Beihang Univ
Jia, Yingmin	Beihang Univ

10:20-10:40   MoA18.2

Robust Sensorless Speed-Tracking Controller for Surface-Mount Permanent Magnet Synchronous Motors, pp. 634-639.

Ramirez-Villalobos, Ramon	Inst. Tecnologico De Tijuana

Ferreira de Loza, Alejandra	Unam
Aguilar, Luis T.	Inst. Pol. Nacional
Coria, Luis N.	Inst. Tecnologico De Tijuana

| 10:40-11:00 | MoA18.3 |

H-Infinity Filtering for Markovian Jump Linear Systems with Mode Partial Information, pp. 640-645.

Graciani Rodrigues, Caio César	National Lab. for Scientific Computing - LNCC
Todorov, Marcos	LNCC
Fragoso, Marcelo	Lncc / Mct

| 11:00-11:20 | MoA18.4 |

Reduction of SDPs in H-Infinity Control of SISO Systems and Performance Limitations Analysis, pp. 646-651.

Waki, Hayato	Inst. of Mathematics for Industry, Kyushu Univ
Ebihara, Yoshio	Kyoto Univ
Sebe, Noboru	Kyushu Inst. of Tech

| 11:20-11:40 | MoA18.5 |

Dynamic Algorithms for Solving Coupled Algebraic Riccati Equations Arising in Mixed H2/H-Infinity Control for Scalar Linear Systems, pp. 652-657.

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

| 11:40-12:00 | MoA18.6 |

A Global Optimization Approach to Structured Regulation Design under H Infinity Constraints, pp. 658-663.

monnet, dominique	ENSTA Bretagne
NININ, Jordan	ENSTA Bretagne
CLEMENT, Benoit	ENSTA Bretagne

MoA19	Ironwood 8
Power Systems I (Regular Session)	
Chair: Rajagopal, Ram	Stanford Univ
Co-Chair: Lavaei, Javad	UC Berkeley

| 10:00-10:20 | MoA19.1 |

Decentralized Optimal Frequency Control of Interconnected Power Systems with Transient Constraints (I), pp. 664-671.

Wang, Zhaojian	Tsinghua Univ
Liu, Feng	Tsinghua Univ
Low, Steven	California Inst. of Tech
Zhao, Changhong	National Renewable Energy Lab
Mei, Shengwei	Tsinghua Univ

| 10:20-10:40 | MoA19.2 |

Power System State Estimation with a Limited Number of Measurements, pp. 672-679.

Madani, Ramtin	The Univ. of Texas at Arlington
Ashraphijuo, Morteza	Univ. of California, Berkeley
Lavaei, Javad	UC Berkeley
Baldick, Ross	Univ. of Texas, Austin

| 10:40-11:00 | MoA19.3 |

A Price-Based Approach for Voltage Regulation and Power Loss Minimization in Power Distribution Networks, pp. 680-685.

Jafarian, Matin	KTH Royal Inst. of Tech
Scherpen, Jacquelien M.A.	Univ. of Groningen
Aiello, Marco	Univ. of Groningen

| 11:00-11:20 | MoA19.4 |

Submodularity of Energy Storage Placement in Power Networks (I), pp. 686-693.

Qin, Junjie	Stanford Univ
Yang, Insoon	Univ. of Southern California
Rajagopal, Ram	Stanford Univ

| 11:20-11:40 | MoA19.5 |

A Strong Semidefinite Programming Relaxation of the Unit Commitment Problem, pp. 694-701.

Ashraphijuo, Morteza	Univ. of California, Berkeley
Fattahi, Salar	Univ. of California, Berkeley
Lavaei, Javad	UC Berkeley
Atamturk, Alper	UC Berkeley

| 11:40-12:00 | MoA19.6 |

Power System Controllability through Nontraditional Generation (I), pp. 702-708.

Wilches-Bernal, Felipe	Sandia National Lab
Lackner, Christoph	Rensselaer Pol. Inst
Chow, Joe H.	Rensselaer Pol. Inst

MoA20	Coppearleaf 1
Advanced Vehicle Control Technology (Invited Session)	
Chair: Onori, Simona	Clemson Univ
Co-Chair: Pisu, Pierluigi	Clemson Univ
Organizer: Wang, Yue-Yun	General Motors Company
Organizer: Onori, Simona	Clemson Univ
Organizer: Borhan, Ali	Cummins Inc

| 10:00-10:20 | MoA20.1 |

Vehicle Tracking Control on Piecewise-Clothoidal Trajectories by MPC with Guaranteed Error Bounds (I), pp. 709-714.

Di Cairano, Stefano	Mitsubishi Electric Res. Labs
Kalabic, Uros V.	Mitsubishi Electric Res. Lab. (MERL)
Berntorp, Karl	Mitsubishi Electric Res. Labs

| 10:20-10:40 | MoA20.2 |

A Fuel Efficient Control Strategy for Connected Vehicles in Multiple-Lane Urban Roads (I), pp. 715-720.

| Du, Zhiyuan | Clemson Univ |
| Pisu, Pierluigi | Clemson Univ |

| 10:40-11:00 | MoA20.3 |

A Model Predictive Control Approach for Semi-Active Suspension Control Problem of a Full Car (I), pp. 721-726.

NGUYEN, Manh Quan	CNRS GIPSA-LAb Grenoble Univ
Canale, Massimo	Pol. Di Torino
Sename, Olivier	Univ. Grenoble Alpes
Dugard, Luc	CNRS-Grenoble INP

| 11:00-11:20 | MoA20.4 |

Hierarchical Reasoning Game Theory Based Approach for Evaluation and Testing of Autonomous Vehicle Control Systems (I), pp. 727-733.

Li, Nan	Univ. of Michigan
Oyler, Dave W.	Univ. of Michigan
Zhang, Mengxuan	The Univ. of Michigan
Yildiz, Yildiray	Bilkent Univ
Girard, Anouck	Univ. of Michigan, Ann Arbor
Kolmanovsky, Ilya V.	The Univ. of Michigan

| 11:20-11:40 | MoA20.5 |

Robust Control of Electrified Turbocharged Diesel Engines, pp. 734-

739.

Zhao, Dezong	Loughborough Univ
Winward, Edward	Loughborough Univ
Yang, Zhijia	Loughborough Univ
Stobart, Richard	Loughborough Univ
Steffen, Thomas	Loughborough Univ

11:40-12:00	MoA20.6

Robust Observer-Based Sliding Mode Controller for Vehicles with Roll Dynamics, pp. 740-745.

Ley-Rosas, Juan José	Cinvestav Gdl
González Jiménez, Luis Enrique	Iteso Ac
Loukianov, Alexander G.	CINVESTAV IPN Unidad GDL
Ruiz-Duarte, Jorge Enrique	Cinvestav Unidad Guadalajara

MoA21	Coppearleaf 2

In-Vivo Identification and Control of Biomolecular Systems (Invited Session)

Chair: Menolascina, Filippo	Univ. of Edinburgh
Co-Chair: Briat, Corentin	ETH Zürich
Organizer: Menolascina, Filippo	Univ. of Edinburgh
Organizer: Sontag, Eduardo D.	Rutgers Univ

10:00-10:20	MoA21.1

Reachability Analysis for Switched Affine Systems and Its Application to Controlled Stochastic Biochemical Reaction Networks (I), pp. 746-751.

Parise, Francesca	ETH Zurich
Valcher, Maria Elena	Univ. Di Padova
Lygeros, John	ETH Zurich

10:20-10:40	MoA21.2

Robust Ergodicity and Tracking in Antithetic Integral Control of Stochastic Biochemical Reaction Networks (I), pp. 752-757.

Briat, Corentin	ETH Zürich
Khammash, Mustafa H.	ETH Zurich

10:40-11:00	MoA21.3

Mitigation of Ribosome Competition through Distributed Srna Feedback (I), pp. 758-763.

Qian, Yili	Massachusetts Inst. of Tech
Del Vecchio, Domitilla	Massachusetts Inst. of Tech

11:00-11:20	MoA21.4

In-Vivo Identification and Control of Aerotaxis in Bacillus Subtilis (I), pp. 764-769.

Menolascina, Filippo	Univ. of Edinburgh
Stocker, Roman	Massachusetts Inst. of Tech
Sontag, Eduardo D.	Rutgers Univ

11:20-11:40	MoA21.5

Scalable Inference Using PMCMC and Parallel Tempering for High-Throughput Measurements of Biomolecular Reaction Networks (I), pp. 770-775.

Bronstein, Leo	Tech. Univ. Darmstadt
Koeppl, Heinz	Tech. Univ. Darmstadt

11:40-12:00	MoA21.6

Online Model Selection for Synthetic Gene Networks (I), pp. 776-782.

Pan, Wei	Imperial Coll. London
Menolascina, Filippo	Univ. of Edinburgh
Stan, Guy-Bart Vincent	Imperial Coll. London

MoA22	Coppearleaf 3

Control for Smart Cities and Internet of Things (Invited Session)

Chair: Lin, Hai	Univ. of Notre Dame
Co-Chair: Su, Rong	Nanyang Tech. Univ
Organizer: Jia, (Samuel) Qing-Shan	Tsinghua Univ
Organizer: Su, Rong	Nanyang Tech. Univ
Organizer: Lin, Hai	Univ. of Notre Dame

10:00-10:20	MoA22.1

Analysis of Consensus-Based Economic Dispatch Algorithm under Uniform Time Delays (I), pp. 783-788.

Zhao, Chengcheng	Zhejiang Univ
Duan, Xiaoming	Zhejiang Univ
Shi, Yang	Univ. of Victoria

10:20-10:40	MoA22.2

Price of Anarchy in Transportation Networks by Estimating User Cost Functions from Actual Traffic Data (I), pp. 789-794.

Zhang, Jing	Boston Univ
Pourazarm, Sepideh	Boston Univ
Cassandras, Christos G.	Boston Univ
Paschalidis, Ioannis Ch.	Boston Univ

10:40-11:00	MoA22.3

Assume-Guarantee Reasoning Framework for MDP-POMDP (I), pp. 795-800.

Zhang, Xiaobin	Univ. of Notre Dame
Wu, Bo	Univ. of Notre Dame
Lin, Hai	Univ. of Notre Dame

11:00-11:20	MoA22.4

Optimal Power Demand Management among Consumers with Aggregator Considering State and Control Constraints (I), pp. 801-806.

Okawa, Yoshihiro	Keio Univ
Namerikawa, Toru	Keio Univ

11:20-11:40	MoA22.5

Stochastic Model Predictive Control for Optimal Energy Management of District Heating Power Plants (I), pp. 807-812.

Verrilli, Francesca	Univ. of Sannio
Parisio, Alessandra	Royal Inst. of Tech. (KTH)
Glielmo, Luigi	Univ. of Sannio

11:40-12:00	MoA22.6

Sharing Electricity Storage, pp. 813-820.

Wu, Chenye	ETH Zurich
Kalathil, Dileep	Univ. of California, Berkeley
Poolla, Kameshwar	Univ. of California at Berkeley
Varaiya, Pravin P.	Univ. of California at Berkeley

MoA23	Coppearleaf 4

Mechanical Systems (Regular Session)

Chair: Sreenath, Koushil	Carnegie Mellon Univ
Co-Chair: Xin, Xin	Okayama Prefectural Univ

10:00-10:20	MoA23.1

Controllability and Observability of an N-Link Underactuated Planar Robot with Different Actuator-Sensor Configurations: Active Intermediate Joint or Joints, pp. 821-826.

Xin, Xin	Okayama Prefectural Univ

10:20-10:40	MoA23.2

3D Dynamic Walking on Stepping Stones with Control Barrier Functions, pp. 827-834.

Nguyen, Quan	Carnegie Mellon Univ
Hereid, Ayonga	Georgia Inst. of Tech
Grizzle, Jessy W.	Univ. of Michigan
Ames, Aaron D.	Georgia Inst. of Tech
Sreenath, Koushil	Carnegie Mellon Univ

10:40-11:00	MoA23.3

Velocity Field Control with Energy Compensation Toward Therapeutic Exercise, pp. 835-842.

Fukui, Yoshiro	Ritsumeikan Univ
Wada, Takahiro	Ritsumeikan Univ

11:00-11:20	MoA23.4

Continuous Finite-Time Control Approach for Series Elastic Actuator, pp. 843-848.

Wang, Meng	Nankai Univ
Sun, Lei	Nankai Univ
Yin, Wei	Nankai Univ
Dong, Shuai	Nankai Univ
Liu, Jingtai	Inst. of Robotics and Automatic Information System，Na

11:20-11:40	MoA23.5

Proposal and Estimation of Improved Passive Dynamic Control for Two-Link Pneumatic Artificial Muscle Manipulator, pp. 849-854.

Kiyota, Takanori	The Univ. of Kitakyushu
narimatu, kouki	The Univ. of Kitakyusyu
Minamiyama, Yasuhiro	Kurume National Coll. of Tech
Yamamoto, Shuhei	Kitakyushu Univ

11:40-12:00	MoA23.6

Improving DAC Resolution in Closed-Loop Control of Precision Mechatronic Systems Using Dithering, pp. 855-861.

Eielsen, Arnfinn Aas	Univ. of Newcastle
Fleming, Andrew J.	Univ. of Newcastle

MoB01	Starvine 1
Network Analysis and Control II (Regular Session)	
Chair: Johansson, Mikael	KTH - Royal Inst. of Tech
Co-Chair: Pequito, Sergio	Univ. of Pennsylvania

13:30-13:50	MoB01.1

Saddle-Point Dynamics for Distributed Convex Optimization on General Directed Graphs, pp. 862-866.

Touri, Behrouz	Univ. of Colorado Boulder
Gharesifard, Bahman	Queens Univ. Canada

13:50-14:10	MoB01.2

Growing Controllable Networks Via Whiskering and Submodular Optimization, pp. 867-872.

Hudoba de Badyn, Mathias	Univ. of Washington
Mesbahi, Mehran	Univ. of Washington

14:10-14:30	MoB01.3

The Cost of Dishonesty on Optimal Distributed Frequency Control of Power Networks, pp. 873-878.

Monshizadeh, Nima	Univ. of Groningen
De Persis, Claudio	Univ. of Groningen
Simpson-Porco, John W.	Univ. of Waterloo

14:30-14:50	MoB01.4

Consensus Speed Optimisation with Finite Leadership Perturbation in K-Nearest Neighbour Networks, pp. 879-884.

Clark, Ruaridh	Univ. of Strathclyde
Punzo, Giuliano	Univ. of Strathclyde
Macdonald, Malcolm	Univ. of Strathclyde

14:50-15:10	MoB01.5

Decentralized Observability with Limited Communication between Sensors, pp. 885-890.

Alexandru, Andreea Beatrice	Univ. of Pennsylvania
Pequito, Sergio	Univ. of Pennsylvania
Jadbabaie, Ali	MIT
Pappas, George J.	Univ. of Pennsylvania

15:10-15:30	MoB01.6

Laplacian Dynamics on Signed Networks, pp. 891-896.

Pan, Lulu	Univ. of Washington
Shao, Haibin	Shanghai Jiao Tong Univ
Mesbahi, Mehran	Univ. of Washington

MoB02	Starvine 2
Agents-Based Systems II (Regular Session)	
Chair: Wang, Chen	Peking Univ
Co-Chair: Sakurama, Kazunori	Tottori Univ

13:30-13:50	MoB02.1

Multi-Stage Discrete Time Dynamic Average Consensus, pp. 897-903.

Franceschelli, Mauro	Univ. of Cagliari
Gasparri, Andrea	Univ. of "Roma Tre"

13:50-14:10	MoB02.2

Distance-Based Control of K4 Formation with Almost Global Convergence, pp. 904-909.

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

14:10-14:30	MoB02.3

Synchronization in an Homogeneous, Time-Varying Network with Nonuniform Time-Varying Communication Delays, pp. 910-915.

Stoorvogel, Anton A.	Univ. of Twente
Saberi, Ali	Washington State Univ
Zhang, Meirong	Washington State Univ

14:30-14:50	MoB02.4

Controlling Anonymous Mobile Agents to Form a Circle Formation in a Plane without Collision, pp. 916-921.

Wang, Chen	Peking Univ
Xie, Guangming	Peking Univ

14:50-15:10	MoB02.5

Further Analysis on Graph Rigidity, pp. 922-927.

Trinh, Hoang Minh	Gwangju Inst. of Science and Tech. (GIST)
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)
Pham, Viet Hoang	GIST

| 15:10-15:30 | MoB02.6 |

Distributed Control of Networked Multi-Agent Systems for Formation with Freedom of Special Euclidean Group, pp. 928-932.

| Sakurama, Kazunori | Tottori Univ |

MoB03	Starvine 3
Cooperative Control II (Regular Session)	
Chair: Aghdam, Amir G.	Concordia Univ
Co-Chair: Yoon, Se Young (Pablo)	Univ. of New Hampshire

| 13:30-13:50 | MoB03.1 |

Distributed Control and Parameter Estimation for Homogeneous Lagrangian Multi-Agent Systems, pp. 933-938.

Bechlioulis, Charalampos P.	National Tech. Univ. of Athens
Demetriou, Michael A.	Worcester Pol. Inst
Kyriakopoulos, Kostas J.	National Tech. Univ. of Athens

| 13:50-14:10 | MoB03.2 |

Weighted Centroid Tracking Control for Multi-Agent Systems, pp. 939-944.

Yang, Qingkai	Univ. of Groningen
Cao, Ming	Univ. of Groningen
Fang, Hao	Beijing Inst. of Tech
Chen, Jie	Beijing Inst. of Tech

| 14:10-14:30 | MoB03.3 |

Learning and Synchronization of Movement Primitives for Bimanual Manipulation Tasks, pp. 945-950.

Thota, Pavan kumar	Univ. of Connecticut, UConn
Ravichandar, Harish	Univ. of Connecticut
Dani, Ashwin P	Univ. of Connecticut

| 14:30-14:50 | MoB03.4 |

Cooperative Output Regulation of Multi-Agent Systems with Incomplete Exosystem Measurement, pp. 951-956.

| Basu, Himadri | Univ. of New Hampshire |
| Yoon, Se Young (Pablo) | Univ. of New Hampshire |

| 14:50-15:10 | MoB03.5 |

On a Relation between Graph Signal Processing and Multi-Agent Consensus, pp. 957-961.

Izumi, Shinsaku	Okayama Prefectural Univ
Azuma, Shun-ichi	Kyoto Univ
Sugie, Toshiharu	Kyoto Univ

| 15:10-15:30 | MoB03.6 |

Consensus by Maximum Hands-Off Distributed Control with Sampled-Data State Observation, pp. 962-966.

Ikeda, Takuya	Kyoto Univ
Nagahara, Masaaki	The Univ. of Kitakyushu
Kashima, Kenji	Kyoto Univ

MoB04	Starvine 4
Analysis and Control of Complex Network Dynamics (Invited Session)	
Chair: Bolouki, Sadegh	Univ. of Illinois, Urbana-Champaign
Co-Chair: Liu, Ji	Univ. of Illinois at Urbana-Champaign
Organizer: Bolouki, Sadegh	Univ. of Illinois, Urbana-Champaign
Organizer: Liu, Ji	Univ. of Illinois at Urbana-Champaign
Organizer: Nedich, Angelia	Arizona State Univ

| 13:30-13:50 | MoB04.1 |

Efficient Containment of Exact SIR Markovian Processes on Networks (I), pp. 967-972.

| Ogura, Masaki | Univ. of Pennsylvania |
| Preciado, Victor M. | Univ. of Pennsylvania |

| 13:50-14:10 | MoB04.2 |

The Effect of Awareness on Networked SIS Epidemics (I), pp. 973-978.

Paarporn, Keith	Georgia Inst. of Tech
Eksin, Ceyhun	Georgia Inst. of Tech
Weitz, Joshua	Georgia Inst. of Tech
Shamma, Jeff S.	KAUST

| 14:10-14:30 | MoB04.3 |

Ignoring Extreme Opinions in Complex Networks: The Impact of Heterogeneous Thresholds (I), pp. 979-984.

| Sundaram, Shreyas | Purdue Univ |

| 14:30-14:50 | MoB04.4 |

Characterizing the Positive Semidefiniteness of Signed Laplacians Via Effective Resistances (I), pp. 985-990.

Chen, Wei	Univ. of California at Berkeley
Liu, Ji	Univ. of Illinois at Urbana-Champaign
Chen, Yongxin	Univ. of Minnesota
Khong, Sei Zhen	Univ. of Minnesota
Wang, Dan	Hong Kong Univ. of Science and Tech
Basar, Tamer	Univ. of Illinois, Urbana-Champaign
Qiu, Li	Hong Kong Univ. of Sci. & Tech
Johansson, Karl H.	Royal Inst. of Tech

| 14:50-15:10 | MoB04.5 |

Networked Control under Communication Constraints: The Discrete-Time Case (I), pp. 991-996.

Liu, Kun	Beijing Inst. of Tech
Pan, Xia	Beijing Inst. of Tech
Xia, Yuanqing	Beijing Inst. of Tech
Fridman, Emilia	Tel-Aviv Univ
Lam, James	The Univ. of Hong Kong

| 15:10-15:30 | MoB04.6 |

On a Framework for Analysis and Design of Cascades on Boolean Networks, pp. 997-1002.

| Kearney, Griffin | Syracuse Univ |
| Fardad, Makan | Syracuse Univ |

MoB05	Starvine 5
Distributed and Large-Scale Optimization II (Invited Session)	
Chair: Nedich, Angelia	Univ. of Illinois, Urbana-Champaign
Co-Chair: Olshevsky, Alexander	Univ. of Illinois at Urbana-Champaign

Organizer: Nedich, Angelia	Arizona State Univ
Organizer: Notarstefano, Giuseppe	Univ. Del Salento
Organizer: Olshevsky, Alexander	Boston Univ

13:30-13:50	MoB05.1

An Exact Distributed Newton Method for Reinforcement Learning (I), pp. 1003-1008.

Tutunov, Rasul	Univ. of Pennsylvania
Bou Ammar, Haitham	Princeton Univ
Jadbabaie, Ali	MIT

13:50-14:10	MoB05.2

Disciplined Convex-Concave Programming, pp. 1009-1014.

Shen, Xinyue	Tsinghua Univ
Diamond, Steven	Stanford Univ
Gu, Yuantao	Tsinghua Univ
Boyd, Stephen	Stanford Univ

14:10-14:30	MoB05.3

Line Search for Averaged Operator Iteration (I), pp. 1015-1022.

Giselsson, Pontus	Lund Univ
Fält, Mattias	Lund Univ
Boyd, Stephen	Stanford Univ

14:30-14:50	MoB05.4

A Geometrically Convergent Method for Distributed Optimization Over Time-Varying Graphs (I), pp. 1023-1029.

Nedich, Angelia	Univ. of Illinois, Urbana-Champaign
Olshevsky, Alexander	Boston Univ
Shi, Wei	Boston Univ

14:50-15:10	MoB05.5

Approximate Projections for Decentralized Optimization with SDP Constraints, pp. 1030-1035.

Lee, Soomin	Georgia Inst. of Tech
Zavlanos, Michael M.	Duke Univ

15:10-15:30	MoB05.6

Exponentially Fast Distributed Coordination for Nonsmooth Convex Optimization (I), pp. 1036-1041.

Niederlaender, Simon	Univ. of Stuttgart
Allgöwer, Frank	Univ. of Stuttgart
Cortes, Jorge	Univ. of California, San Diego

MoB06	Starvine 6
Optimal Control II (Regular Session)	
Chair: Dower, Peter M.	The Univ. of Melbourne
Co-Chair: Reissig, Gunther	Univ. of the Federal Armed Forces Munich

13:30-13:50	MoB06.1

Carleman Discretization of Impulsive Systems: Application to the Optimal Control Problem of Anti-Angiogenic Tumor Therapies (I), pp. 1042-1047.

Cacace, Filippo	Univ. Campus Biomedico Di Roma
Cusimano, Valerio	Univ. Campus Bio-Medico Di Roma
Germani, Alfredo	Univ. Dell'aquila
Palumbo, Pasquale	IASI-CNR

13:50-14:10	MoB06.2

LQG Control for Systems with Random Unbounded Communication Delay, pp. 1048-1055.

Bengtsson, Fredrik	Chalmers Univ
Hassibi, Babak	Caltech
Wik, Torsten	Chalmers Univ. of Tech

14:10-14:30	MoB06.3

Soap-Bubble Optimization of Gaits, pp. 1056-1062.

Ramasamy, Suresh	Oregon State Univ
Hatton, Ross	Oregon State Univ

14:30-14:50	MoB06.4

Approximate Value Iteration for a Class of Deterministic Optimal Control Problems with Infinite State and Input Alphabets, pp. 1063-1068.

Reissig, Gunther	Univ. of the Federal Armed Forces Munich

14:50-15:10	MoB06.5

Second Order Conditions in Optimal Control Problems with Equality Constraints, pp. 1069-1073.

Arutyunov, Aram V.	Peoples Friendship Univ. Russia
Shvartsman, Ilya	Penn State Harrisburg
Zhukovskaya, Zukhra	Peoples' Friendship Univ. of Russsia, Faculty of Science, D

15:10-15:30	MoB06.6

A Game Representation for State Constrained Linear Regulator Problems, pp. 1074-1079.

Dower, Peter M.	The Univ. of Melbourne
McEneaney, William M.	Univ. California San Diego
Cantoni, Michael	Univ. of Melbourne

MoB07	Starvine 7
Optimization Algorithms II (Regular Session)	
Chair: Zhu, Shanying	Nanyang Tech. Univ
Co-Chair: Kekatos, Vassilis	Virginia Tech

13:30-13:50	MoB07.1

Distributed Flight Routing and Scheduling in Air Traffic Flow Management, pp. 1080-1085.

Zhang, Yicheng	Nanyang Tech. Univ
Su, Rong	Nanyang Tech. Univ
Li, Qing	Nanyang Tech. Univ
Cassandras, Christos G.	Boston Univ
Xie, Lihua	Nanyang Tech. Univ

13:50-14:10	MoB07.2

A Quadratically Convergent Primal Decomposition Algorithm with Soft Coupling for Nonlinear Parameter Estimation, pp. 1086-1092.

Kouzoupis, Dimitris	Univ. of Freiburg
Quirynen, Rien	KU Leuven
Lago Garcia, Jesus	Univ. of Freiburg
Erhard, Michael	SkySails GmbH
Diehl, Moritz	Univ. of Freiburg

14:10-14:30	MoB07.3

A Forward-Backward Bregman Splitting Scheme for Regularized Distributed Optimization Problems, pp. 1093-1098.

Xu, Jinming	Nanyang Tech. Univ
Zhu, Shanying	Shanghai Jiao Tong Univ
Soh, Yeng Chai	Nanyang Tech. Univ
Xie, Lihua	Nanyang Tech. Univ

14:30-14:50	MoB07.4

Exploiting Convexity in Direct Optimal Control: A Sequential Convex Quadratic Programming Method, pp. 1099-1104.

Verschueren, Robin	Univ. of Freiburg
Van Duijkeren, Niels	KU Leuven
Quirynen, Rien	KU Leuven
Diehl, Moritz	Univ. of Freiburg

14:50-15:10	MoB07.5

A Generalized Frank-Wolfe Approach to Decentralized Electric Vehicle Charging (I), pp. 1105-1111.

Zhang, Liang	Univ. of Minnesota
Kekatos, Vassilis	Virginia Tech
Giannakis, Georgios B.	Univ. of Minnesota

15:10-15:30	MoB07.6

Extremum Seeking Control for Multi-Objective Optimization Problems, pp. 1112-1118.

Kumar, Saurav	Univ. of Texas at Dallas
Gans, Nicholas	Univ. of Texas at Dallas

MoB08	Starvine 8
Stochastic Optimal Control I (Regular Session)	

Chair: Theodorou, Evangelos A.	Georgia Inst. of Tech
Co-Chair: Bakolas, Efstathios	The Univ. of Texas at Austin

13:30-13:50	MoB08.1

Stochastic Drift Counteraction Optimal Control and Enhancing Convergence of Value Iteration, pp. 1119-1124.

Zidek, Robert A. E.	Univ. of Michigan
Kolmanovsky, Ilya V.	The Univ. of Michigan

13:50-14:10	MoB08.2

Cyber Physical Attacks with Control Objectives and Detection Constraints, pp. 1125-1130.

Chen, Yuan	Carnegie Mellon Univ
Kar, Soummya	Carnegie Mellon Univ
Moura, Jose' M. F.	Carnegie Mellon Univ

14:10-14:30	MoB08.3

Automated Synthesis of Low-Rank Control Systems from Sc-LTL Specifications Using Tensor-Train Decompositions, pp. 1131-1138.

Alora, John Irvin	MIT
Gorodetsky, Alex	Massachusetts Inst. of Tech
Karaman, Sertac	Massachusetts Inst. of Tech
Marzouk, Youssef	Massachusetts Inst. of Tech
Lowry, Nathan	C.S. Draper Lab

14:30-14:50	MoB08.4

On the Stochastic Minimum Principle for Hybrid Systems, pp. 1139-1144.

Pakniyat, Ali	McGill Univ
Caines, Peter E.	McGill Univ

14:50-15:10	MoB08.5

Infinite Dimensional Control of Doubly Stochastic Jump Diffusions, pp. 1145-1152.

Bakshi, Kaivalya S.	Georgia Inst. of Tech
Theodorou, Evangelos A.	Georgia Inst. of Tech

15:10-15:30	MoB08.6

Optimal Covariance Control for Discrete-Time Stochastic Linear Systems Subject to Constraints, pp. 1153-1158.

Bakolas, Efstathios	The Univ. of Texas at Austin

MoB09	Starvine 9
Estimation II (Regular Session)	

Chair: Sinopoli, Bruno	Carnegie Mellon Univ
Co-Chair: Bikcora, Can	Eindhoven Univ. of Tech

13:30-13:50	MoB09.1

Adaptive Input Estimation for Nonminimum-Phase Discrete-Time Systems, pp. 1159-1164.

Ansari, Ahmad	Univ. of Michigan
Bernstein, Dennis S.	Univ. of Michigan

13:50-14:10	MoB09.2

On Deterministic Attitude Observers on the Special Orthogonal Group SO(3), pp. 1165-1170.

Berkane, Soulaimane	Western Univ
Tayebi, Abdelhamid	Lakehead Univ

14:10-14:30	MoB09.3

Efficient Cauchy Estimation Via a Pre-Computational Technique, pp. 1171-1178.

Bai, Yu	UCLA
Speyer, Jason L.	Univ. of California at Los Angeles
Idan, Moshe	Tech. - Israel Istitute of Tech

14:30-14:50	MoB09.4

Design of Variable Exponential Forgetting for Estimation of the Statistics of the Normal Distribution, pp. 1179-1184.

Dokoupil, Jakub	CEIT, Brno Univ. of Tech
Vaclavek, Pavel	Brno Univ. of Tech

14:50-15:10	MoB09.5

A Min-Min Approach to Non-Blind and Blind Parameter Estimation under Admissibility and Domination Constraints, pp. 1185-1191.

Bikcora, Can	Eindhoven Univ. of Tech
Weiland, Siep	Eindhoven Univ. of Tech

15:10-15:30	MoB09.6

A Bayesian Approach to Joint Attack Detection and Resilient State Estimation, pp. 1192-1198.

Forti, Nicola	Univ. of Florence
Battistelli, Giorgio	Univ. of Florence
Chisci, Luigi	Univ. Di Firenze
Sinopoli, Bruno	Carnegie Mellon Univ

MoB10	Starvine 10
Identification II (Regular Session)	

Chair: Bemporad, Alberto	IMT Inst. for Advanced Studies Lucca
Co-Chair: Welsh, James S.	Univ. of Newcastle

13:30-13:50	MoB10.1

Estimation of a Drone's Rotational Dynamics with Piloted Android Flight Data, pp. 1199-1204.

Alsharif, Mohammad	Uni Bremen
Holzel, Matthew	Univ. of Bremen

13:50-14:10	MoB10.2

Parameter and Delay Estimation of Continuous-Time Models Utilizing Multiple Filtering, pp. 1205-1210.

Ha, Huong	Univ. of Newcastle
Welsh, James S.	Univ. of Newcastle

14:10-14:30	MoB10.3

On the Effects of Changing Reference Command As Humans Learn to Control Dynamic Systems, pp. 1211-1216.

Matveeva, Faina	Univ. of Kentucky
Seyyedmousavi, Seyyedalireza	Univ. of Kentucky
Zhang, Xingye	Univ. of Kentucky
Seigler, Thomas M.	Univ. of Kentucky
Hoagg, Jesse B.	Univ. of Kentucky

14:30-14:50	MoB10.4

On System Identification for ARMAX Models Based on the Variational Bayesian Method, pp. 1217-1222.

Fujimoto, Kenji	Kyoto Univ
Takaki, Yuji	Kyoto Univ

14:50-15:10	MoB10.5

Alternative Form of Predictor Based Identification of LPV-SS Models with Innovation Noise, pp. 1223-1228.

Cox, Pepijn B.	Eindhoven Univ. of Tech
Tóth, Roland	Eindhoven Univ. of Tech

15:10-15:30	MoB10.6

Identification of Linear Dynamic Errors-In-Variables Systems with a Dynamic Uncertain Input Using the EM Algorithm, pp. 1229-1234.

Wu, Ouyang	Univ. of Alberta
Hariprasad, K	Univ. of Alberta
Huang, Biao	Univ. of Alberta
Forbes, J. Fraser	Univ. of Alberta

MoB11	Starvine 11
Adaptive Control II (Regular Session)	
Chair: Yong, Sze Zheng	Massachusetts Inst. of Tech
Co-Chair: Oliveira, Tiago Roux	State Univ. of Rio De Janeiro

13:30-13:50	MoB11.1

Adaptive Hidden Mode Tracking Control with Input Constraints and Bounded Disturbances, pp. 1235-1242.

Yong, Sze Zheng	Univ. of Michigan
Frazzoli, Emilio	Massachusetts Inst. of Tech

13:50-14:10	MoB11.2

Adaptive Rejection of Periodic Disturbances Acting on Linear Systems with Unknown Dynamics, pp. 1243-1248.

Shahsavari, Behrooz	Univ. of California, Berkeley
Pan, Jinwen	Univ. of Science and Tech. of China
Horowitz, Roberto	Univ. of California at Berkeley

14:10-14:30	MoB11.3

Newton-Based Extremum Seeking for Higher Derivatives of Unknown Maps with Delays (I), pp. 1249-1254.

Rusiti, Damir	Tech. Univ. of Munich
Oliveira, Tiago Roux	State Univ. of Rio De Janeiro
Mills, Greg	Univ. of California, San Diego
Krstic, Miroslav	Univ. of California, San Diego

14:30-14:50	MoB11.4

Adaptive Control for a Class of Nonlinear Systems with Output Constraints and Actuator Faults, pp. 1255-1260.

Jin, Xu	Georgia Inst. of Tech

14:50-15:10	MoB11.5

Parameter Convergence Via a Novel PI-Like Composite Adaptive

Controller for Uncertain Euler-Lagrange Systems, pp. 1261-1266.

Basu Roy, Sayan	Indian Inst. of Tech. Delhi
Bhasin, Shubhendu	Indian Inst. of Tech
Kar, Indra Narayan	Indian Inst. of Tech. Delhi

15:10-15:30	MoB11.6

Fixed-Time Adaptive Observer for Linear Time-Invariant Systems, pp. 1267-1272.

Oliva-Fonseca, Pablo	Univ. Nacional Autonoma De Mexico
Rueda-Escobedo, Juan G.	Univ. Nacional Autónoma De México
Moreno, Jaime A.	Univ. Nacional Autonoma De Mexico-UNAM

MoB12	Starvine 12
Fault Detection and Tolerance I (Regular Session)	
Chair: Eun, Yongsoon	DGIST
Co-Chair: Ferrari-Trecate, Giancarlo	Univ. Degli Studi Di Pavia

13:30-13:50	MoB12.1

Identifying Covert Data-Manipulators in Power System Estimation Loops (I), pp. 1273-1278.

Liao, Mang	North Carolina State Univ
Chakrabortty, Aranya	North Carolina State Univ

13:50-14:10	MoB12.2

Stator Interturn Fault Diagnostics Relevant Modelling of Squirrel Cage Induction Motor, pp. 1279-1284.

Duvvuri, Sri Satya Sita Rama Sarath Babu	Indian Inst. of Tech. Hyderabad
Detroja, Ketan P.	Indian Inst. of Tech. Hyderabad

14:10-14:30	MoB12.3

Scalable Monitoring of Interconnected Stochastic Systems, pp. 1285-1290.

Boem, Francesca	Imperial Coll. London
Carli, Ruggero	Univ. of Padova
Farina, Marcello	Pol. Di Milano
Ferrari-Trecate, Giancarlo	Ec. Pol. Fédérale De Lausanne
Parisini, Thomas	Imperial Coll. & Univ. of Trieste

14:30-14:50	MoB12.4

Analysis of Set-Theoretic Unknown Input Observer and Interval Observer in Robust Fault Detection, pp. 1291-1296.

Xu, Feng	Tsinghua Univ
Tan, Junbo	Tsinghua Univ
Wang, Xueqian	Tsinghua Univ
Puig, Vicenc	Univ. Pol. De Catalunya
Liang, Bin	Tsinghua Univ
Yuan, Bo	Tsinghua Univ
Liu, Houde	Tsinghua Univ

14:50-15:10	MoB12.5

Detection of Sensor Attack and Resilient State Estimation for Uniformly Observable Nonlinear Systems, pp. 1297-1302.

Kim, Junsoo	Seoul National Univ
Lee, Chanhwa	Seoul National Univ
Shim, Hyungbo	Seoul National Univ
Eun, Yongsoon	DGIST
Seo, Jin H.	Seoul National Univ

15:10-15:30	MoB12.6

Characterization of a CUSUM Model-Based Sensor Attack Detector,
pp. 1303-1309.

| Murguia, Carlos | Singapore Univ. of Tech. and Design |
| Ruths, Justin | Univ. of Texas at Dallas |

MoB13	Starvine 13
Lyapunov Methods I (Regular Session)	
Chair: Bianchini, Gianni	Univ. Degli Studi Di Siena
Co-Chair: Gross, Dominic	ETH Zurich

| 13:30-13:50 | MoB13.1 |

A Constructive Stabilization Method Via System Immersion for Multi-Input Non-Affine Nonlinear Systems, pp. 1310-1315.

Wu, Chengshuai	Zhejiang Univ
Chen, Jian	Zhejiang Univ
Wu, Zhongle	Zhejiang Univ
Qu, Lisong	Zhejiang Univ
Zhang, Kaixiang	Zhejiang Univ

| 13:50-14:10 | MoB13.2 |

Nonlinear Orbit Control with Longitude Tracking, pp. 1316-1321.

Leomanni, Mirko	Univ. Di Siena
Bianchini, Gianni	Univ. Degli Studi Di Siena
Garulli, Andrea	Univ. Di Siena
Giannitrapani, Antonio	Univ. Di Siena

| 14:10-14:30 | MoB13.3 |

Sampled-Data Stabilisation of Feedforward Dynamics with Lyapunov Cross-Term, pp. 1322-1327.

Mattioni, Mattia	La Sapienza Univ. Di Roma
Monaco, Salvatore	Univ. Di Roma
Normand-Cyrot, Dorothée	CNRS-Supélec

| 14:30-14:50 | MoB13.4 |

Compensating for Changing Muscle Geometry of the Biceps Brachii During Neuromuscular Electrical Stimulation: A Switched Systems Approach, pp. 1328-1333.

Rouse, Courtney	Univ. of Florida
Parikh, Anup	Univ. of Florida
Duenas, Victor H	Univ. of Florida
Cousin, Christian	Univ. of Florida
Dixon, Warren E.	Univ. of Florida

| 14:50-15:10 | MoB13.5 |

Incremental L2-Gain Analysis of Piecewise-Affine Systems Using Piecewise Quadratic Storage Functions, pp. 1334-1339.

Waitman, Sérgio	Ec. Centrale De Lyon
Massioni, Paolo	INSA De Lyon
Bako, Laurent	Ec. Centrale De Lyon
Scorletti, Gerard	Ec. Centrale De Lyon
Fromion, Vincent	INRA

| 15:10-15:30 | MoB13.6 |

A Relaxed Lyapunov Condition for Input-To-State Stability of Discrete-Time Nonlinear Systems, pp. 1340-1345.

| Gross, Dominic | ETH Zurich |
| Stursberg, Olaf | Univ. of Kassel |

| **MoB14** | Ironwood 1 |
| **Event-Triggered and Self-Triggered Control for Linear Systems** (Invited Session) | |

Chair: Heemels, W.P.M.H.	Eindhoven Univ. of Tech
Co-Chair: Vamvoudakis, Kyriakos G.	Univ. of California, Santa Barbara
Organizer: Heemels, W.P.M.H.	Eindhoven Univ. of Tech
Organizer: Hirche, Sandra	Tech. Univ. München
Organizer: Johansson, Karl H.	Royal Inst. of Tech

| 13:30-13:50 | MoB14.1 |

γ -Invasive Event-Triggered and Self-Triggered Control for Perturbed Linear Systems (I), pp. 1346-1351.

Brunner, Florian David	Univ. of Stuttgart
Heemels, W.P.M.H.	Eindhoven Univ. of Tech
Allgöwer, Frank	Univ. of Stuttgart

| 13:50-14:10 | MoB14.2 |

Dynamic Event-Triggered Control with Time Regularization for Linear Systems (I), pp. 1352-1357.

Borgers, Dominicus Paulus	Eindhoven Univ. of Tech
Dolk, Victor Sebastiaan	Eindhoven Univ. of Tech
Heemels, W.P.M.H.	Eindhoven Univ. of Tech

| 14:10-14:30 | MoB14.3 |

Consistent Event-Triggered Methods for Linear Quadratic Control (I), pp. 1358-1363.

| Antunes, Duarte | Eindhoven Univ. of Tech. the Netherlands |
| Asadi Khashooei, Behnam | Eindhoven Univ. of Tech |

| 14:30-14:50 | MoB14.4 |

Timing Abstraction of Perturbed LTI Systems with L2-Based Event-Triggering Mechanism (I), pp. 1364-1369.

Sharifi Kolarijani, Arman	Delft Univ. of Tech
Mazo Jr., Manuel	Delft Univ. of Tech
Keviczky, Tamas	Delft Univ. of Tech

| 14:50-15:10 | MoB14.5 |

Periodic Asynchronous Event-Triggered Control, pp. 1370-1375.

| Fu, Anqi | Tech. Univ. of Delft |
| Mazo Jr., Manuel | Delft Univ. of Tech |

| 15:10-15:30 | MoB14.6 |

Event-Triggered H-Infinity Control for Unknown Continuous-Time Linear Systems Using Q-Learning, pp. 1376-1381.

| Vamvoudakis, Kyriakos G. | Virginia Tech |
| Ferraz, Henrique | Univ. of California, Santa Barbara |

| **MoB15** | Ironwood 2 |
| **Control Synthesis of Infinite Dimensional Systems** (Invited Session) | |

Chair: Motee, Nader	Lehigh Univ
Co-Chair: Bonnet, Catherine	INRIA Saclay-Ile-De-France
Organizer: Demetriou, Michael A.	Worcester Pol. Inst
Organizer: Fahroo, Fariba	DARPA
Organizer: Le Gorrec, Yann	Ensmm, Femto-St / As2m

| 13:30-13:50 | MoB15.1 |

Sub-Optimal Boundary Control of Semilinear PDEs Using a Dyadic Perturbation Observer (I), pp. 1382-1387.

| Paranjape, Aditya A. | Indian Inst. of Tech. Bombay |
| Chung, Soon-Jo | California Inst. of Tech |

| 13:50-14:10 | MoB15.2 |

Localized Stability Certificates for Spatially Distributed Systems (I),

pp. 1388-1393.

| Motee, Nader | Lehigh Univ |
| Sun, Qiyu | Univ. of Central Florida |

| 14:10-14:30 | MoB15.3 |

Fault Detection of Infinite Dimensional Systems in Presence of Disturbances (I), pp. 1394-1398.

Baniamerian, Amir	Concordia Univ
Meskin, Nader	Qatar Univ
Khorasani, Khashayar	Concordia Univ

| 14:30-14:50 | MoB15.4 |

Coprimeness of Fractional Representations (I), pp. 1399-1404.

| Bonnet, Catherine | INRIA Saclay-Ile-De-France |
| Yamamoto, Yutaka | Kyoto Univ |

| 14:50-15:10 | MoB15.5 |

Output Feedback Stabilization for One-Dimensional Heat Equation with General External Disturbance (I), pp. 1405-1410.

| Feng, Hongyinping | School of Mathmatical Sciences, Shanxi Univ |
| Guo, Bao-Zhu | Acad. of Mathematics and Systems Science |

| 15:10-15:30 | MoB15.6 |

Post-Processing Finite-Horizon Parameterizing Manifolds for Optimal Control of Nonlinear Parabolic PDEs, pp. 1411-1416.

| Chekroun, Mickael | Univ. of California, Los Angeles |
| Liu, Honghu | Virginia Pol. Inst. and State Univ |

| **MoB16** | Ironwood 3 |

Delay Systems II (Regular Session)

| Chair: Olgac, Nejat | Univ. of Connecticut |
| Co-Chair: Lamnabhi-Lagarrigue, Francoise | CNRS and EECI |

| 13:30-13:50 | MoB16.1 |

Thermoacoustic Instabilities Arising from Secondary Modes, an Analytical and Experimental Declaration, pp. 1417-1422.

| Zalluhoglu, Umut | Univ. of Connecticut |
| Olgac, Nejat | Univ. of Connecticut |

| 13:50-14:10 | MoB16.2 |

Quaternion-Based H∞ Attitude Tracking Control of Rigid Bodies with Time-Varying Delay in Attitude Measurements, pp. 1423-1428.

Vilela, João Vitor Cavalcanti	Univ. of Brasilia
Figueredo, Luis Felipe da Cruz	Univ. of Brasília
Ishihara, Joao Y.	Univ. of Brasília

| 14:10-14:30 | MoB16.3 |

Switching Time Domain Passivity Control for Multilateral Teleoperation Systems under Time Varying Delays, pp. 1429-1434.

| Ahmad, Usman | Dalhousie Univ |
| Pan, Ya-Jun | Dalhousie Univ |

| 14:30-14:50 | MoB16.4 |

Finite-Time Unknown Input Observer for Linear Time-Delay Systems, pp. 1435-1440.

Langueh, Kokou	CRISTAL Lille
Zheng, Gang	INRIA
Floquet, Thierry	CNRS

| 14:50-15:10 | MoB16.5 |

Robust Optimization of Delay Differential Equations with State and Parameter Dependent Delays, pp. 1441-1446.

| Otten, Jonas | Ruhr-Univ. Bochum |
| Monnigmann, Martin | Ruhr-Univ. Bochum |

| 15:10-15:30 | MoB16.6 |

Observer Design for Triangular Nonlinear Systems Using Delayed Sampled-Output Measurements, pp. 1447-1451.

Ahmed-Ali, Tarek	Greyc Cnrs
KAHELRAS, Mohamed	L2S
Folin, Théo	Univ. of Caen Basse-Normandie
Giri, Fouad	Univ. of Caen Normandie
Lamnabhi-Lagarrigue, Francoise	CNRS and EECI

| **MoB17** | Ironwood 6 |

Predictive Control for Linear Systems I (Regular Session)

| Chair: Keviczky, Tamas | Delft Univ. of Tech |
| Co-Chair: Muehlebach, Michael | ETH Zurich |

| 13:30-13:50 | MoB17.1 |

Verification of Model Predictive Control Laws Using Weispfenning's Quantifier Elimination by Virtual Substitution Algorithm, pp. 1452-1457.

| Siaulys, Kestutis | Univ. of Cambridge |
| Maciejowski, Jan M. | Univ. of Cambridge |

| 13:50-14:10 | MoB17.2 |

Tube-Based Anticipative Model Predictive Control for Linear Parameter-Varying Systems, pp. 1458-1463.

Hanema, Jurre	Eindhoven Univ. of Tech
Tóth, Roland	Eindhoven Univ. of Tech
Lazar, Mircea	Eindhoven Univ. of Tech

| 14:10-14:30 | MoB17.3 |

Approximation of Continuous-Time Infinite-Horizon Optimal Control Problems Arising in Model Predictive Control, pp. 1464-1470.

| Muehlebach, Michael | ETH Zurich |
| D'Andrea, Raffaello | ETH |

| 14:30-14:50 | MoB17.4 |

Real-Time FPGA Implementation of Direct MPC for Power Electronics, pp. 1471-1476.

| Stellato, Bartolomeo | Univ. of Oxford |
| Goulart, Paul | Univ. of Oxford |

| 14:50-15:10 | MoB17.5 |

Robust Output Feedback Model Predictive Control Based on Relaxed Barrier Functions, pp. 1477-1483.

Feller, Christian	Univ. of Stuttgart
Ouerghi, Meriam	Stuttgart Univ
Ebenbauer, Christian	Univ. of Stuttgart

| 15:10-15:30 | MoB17.6 |

Robust Stability Properties of MPC Iteration Schemes Based on Relaxed Barrier Functions, pp. 1484-1489.

| Feller, Christian | Univ. of Stuttgart |
| Ebenbauer, Christian | Univ. of Stuttgart |

| **MoB18** | Ironwood 7 |

Robust Control I (Regular Session)

| Chair: Garone, Emanuele | Univ. Libre De Bruxelles |
| Co-Chair: Kiner, Diego | Univ. of California, Berkeley |

13:30-13:50   MoB18.1

A Tractable Numerical Strategy for Robust MILP and Application to Energy Management, pp. 1490-1495.

Pauphilet, Jean	Ec. Pol
Kiner, Diego	Univ. of California, Berkeley
Faille, Damien	Electricité De France
El Ghaoui, Laurent	Univ. of California at Berkeley

13:50-14:10   MoB18.2

Parametric Robust Positively Invariant Sets for Linear Systems with Scaled Disturbances, pp. 1496-1501.

Schulze Darup, Moritz	Univ. of Oxford
Schaich, Rainer Manuel	Univ. of Oxford
Cannon, Mark	Univ. of Oxford

14:10-14:30   MoB18.3

An Explicit Reference Governor for the Robust Constrained Control of Nonlinear Systems, pp. 1502-1507.

Nicotra, Marco M	Univ. Libre De Bruxelles
Garone, Emanuele	Univ. Libre De Bruxelles

14:30-14:50   MoB18.4

Understanding Robust Control Theory Via Stick Balancing, pp. 1508-1514.

Leong, Yoke Peng	California Inst. of Tech
Doyle, John C.	California Inst. of Tech

14:50-15:10   MoB18.5

Robust Linear Quadratic Regulator for Uncertain Systems, pp. 1515-1520.

Tzortzis, Ioannis	Univ. of Cyprus
Charalambous, Charalambos D.	Univ. of Cyprus
Charalambous, Themistoklis	Chalmers Univ. of Tech
Kourtellaris, Christos K.	Univ. of Cyprus
Hadjicostis, Christoforos N.	Univ. of Cyprus

15:10-15:30   MoB18.6

A Passivity-Based Controller for Motion Tracking and Damping Assignment for Compliantly Actuated Robots, pp. 1521-1528.

Keppler, Manuel	German Aerospace Center (DLR)
Lakatos, Dominic	German Aerospace Center (DLR)
Ott, Christian	German Aerospace Center (DLR)
Albu-Schaeffer, Alin	German Aerospace Center (DLR)

MoB19	Ironwood 8
Power Systems II (Regular Session)	
Chair: Tanaka, Takashi	KTH Royal Inst. of Tech
Co-Chair: Bitar, Eilyan	Cornell Univ

13:30-13:50   MoB19.1

A Study on the Sensitivity Matrix in Power System State Estimation by Using Sparse Principal Component Analysis, pp. 1529-1535.

Molin, Adam	KTH Royal Inst. of Tech
Sandberg, Henrik	KTH Royal Inst. of Tech
Johansson, Magnus	Svenska Kraftnät

13:50-14:10   MoB19.2

Application of Sequential Testing Problem to Online Detection of Transient Stability Status for Power Systems, pp. 1536-1541.

Gonzalez, Jhonny	Univ. of Manchester
Kitapbayev, Yerkin	Boston Univ
Guo, Tingyan	Univ. of Manchester
Milanovic, Jovica V.	The Univ. of Tasmania
Peskir, Goran	Univ. of Manchester
Moriarty, John	Queen Mary Univ. of London

14:10-14:30   MoB19.3

Parameterized Supply Function Equilibrium in Power Networks, pp. 1542-1548.

Lin, Weixuan	Cornell Univ
Bitar, Eilyan	Cornell Univ

14:30-14:50   MoB19.4

Incentivizing Truth-Telling in MPC-Based Load Frequency Control, pp. 1549-1555.

Tanaka, Takashi	KTH Royal Inst. of Tech
Gupta, Vijay	Univ. of Notre Dame

14:50-15:10   MoB19.5

A Methodology for Generation Expansion Planning for Renewable Energy Economies, pp. 1556-1563.

Rasouli, Mohammad	Univ. of Michigan
Teneketzis, Demosthenis	Univ. of Michigan, Ann Arbor

15:10-15:30   MoB19.6

A Tool for Power Flow Analysis of a Generalized Class of Droop Controllers for High-Voltage Direct-Current Transmission Systems, pp. 1564-1569.

Zonetti, Daniele	Univ. De Paris Sud XI
Ortega, Romeo	LSS-SUPELEC
Schiffer, Johannes	Univ. of Leeds

MoB20	Coppearleaf 1
Automotive Control I (Regular Session)	
Chair: Gaspar, Peter	Mta Sztaki
Co-Chair: Siegel, Jason B.	Univ. of Michigan

13:30-13:50   MoB20.1

Trajectory Tracking Based on Independently Controlled Variable-Geometry Suspension for In-Wheel Electric Vehicles, pp. 1570-1575.

Nemeth, Balazs	Mta Sztaki
Fenyes, Daniel	Mta Sztaki
Gaspar, Peter	Mta Sztaki
Bokor, Jozsef	MTA SZTAKI Hungarian Acad. of Sciences

13:50-14:10   MoB20.2

The Impact of Suspension Control on the Controllability of the Lateral Vehicle Dynamics, pp. 1576-1581.

Gaspar, Peter	Mta Sztaki
Nemeth, Balazs	Mta Sztaki
Bokor, Jozsef	MTA SZTAKI Hungarian Acad. of Sciences
Sename, Olivier	Univ. Grenoble Alpes
Dugard, Luc	CNRS-Grenoble INP

14:10-14:30   MoB20.3

Multi-Automated Vehicle Coordination Using Decoupled Prioritized Path Planning for Multi-Lane One and Bi-Directional Traffic Flow Control, pp. 1582-1588.

Graf Plessen, Mogens	IMT Lucca
Bernardini, Daniele	ODYS Srl
Esen, Hasan	DENSO Automotive Deutschland GmbH
Bemporad, Alberto	IMT Inst. for Advanced Studies Lucca

14:30-14:50	MoB20.4

Synthesis of an Energy-Optimal Self-Heating Strategy for Li-Ion Batteries (I), pp. 1589-1594.

Mohan, Shankar	Univ. of Michigan
Siegel, Jason B.	Univ. of Michigan
Stefanopoulou, Anna G.	Univ. of Michigan
Castanier, Matthew	US Army Tank Automotive Res. Development, and Engineering C
Ding, Yi	U.S. Army Tank Automotive Res. Development, and Engineering

14:50-15:10	MoB20.5

Design of a Fuel Economy Oriented Vehicle Longitudinal Speed Controller with Optimal Gear Sequence, pp. 1595-1601.

Jing, Junbo	The Ohio State Univ
Ozatay, Engin	The Ohio State Univ
Kurt, Arda	The Ohio State Univ
Michelini, John	Ford Motor Company
Filev, Dimitre P.	Ford Motor Company
Ozguner, Umit	Ohio State Univ

15:10-15:30	MoB20.6

Towards ECU-Ready Nonlinear Model Predictive Control: Tip-In Maneuver Case Study (I), pp. 1602-1607.

Santin, Ondrej	Czech Tech. Univ. in Prague, Faculty of ElectricalEngineering
Mikuláš, Ondřej	Honeywell Spol. S R. O
Pachner, Daniel	Honeywell Lab
Herceg, Martin	Honeywell, Spol. S.r.o
Pekar, Jaroslav	Honeywell Spol S R.o

MoB21	Coppearleaf 2
Modeling, Control, and Estimation with Application to the Medical Science (Invited Session)	
Chair: Bonnard, Bernard	Inst. De Mathématiques De Bourgogne
Co-Chair: Chyba, Monique	Univ. of Hawaii
Organizer: Bonnard, Bernard	Inst. De Mathématiques De Bourgogne
Organizer: Chyba, Monique	Univ. of Hawaii

13:30-13:50	MoB21.1

Optimal Control of an Ensemble of Bloch Equations with Applications in MRI (I), pp. 1608-1613.

Bonnard, Bernard	Inst. De Mathématiques De Bourgogne
Rouot, Jérémy	INRIA Sophia Antipolis
Jacquemard, Alain	Univ. De Bourgogne

13:50-14:10	MoB21.2

Control of Reaction-Diffusion Equations on Time-Evolving Manifolds (I), pp. 1614-1619.

Rossi, Francesco	Aix-Marseille Univ
Pouradier Duteil, Nastassia	Rutgers Univ. Camden
Yakoby, Nir	Rutgers Univ
Piccoli, Benedetto	Rutgers Univ. - Camden

14:10-14:30	MoB21.3

An Optimal Control Approach to Photoacoustic Tomography (I), pp. 1620-1624.

Bergounioux, Maitine	Univ. D'orleans, FDP-MAPMO
Haberkorn, Thomas	FDP-MAPMO, Univ. of Orleans

Privat, Yannick	CNRS and Univ. Paris 6

14:30-14:50	MoB21.4

Cyclicity in Multivariate Time Series and Applications to Functional MRI Data (I), pp. 1625-1630.

Baryshnikov, Yuliy	UIUC
Schlafly, Emily	Univ. of Illinois Urbana Champaign

14:50-15:10	MoB21.5

Optimization of Prion Assemblies Fragmentation (I), pp. 1631-1636.

Chyba, Monique	Univ. of Hawaii
Coron, Jean-michel	Univ. Pierre Et Marie Curie
Mileyko, Yuriy	Univ. of Hawaii
Rezaei, Human	INRA

15:10-15:30	MoB21.6

Dynamic Tensor Time Series Modeling and Analysis (I), pp. 1637-1642.

Surana, Amit	United Tech. Res. Center
Patterson, Geoffrey	Univ. of Hawaii at Manoa
Rajapakse, Indika	Univ. of Michigan

MoB22	Coppearleaf 3
Control of Computing Systems (Invited Session)	
Chair: Papadopoulos, Alessandro Vittorio	Pol. Di Milano
Co-Chair: Kerrigan, Eric C.	Imperial Coll. London
Organizer: Papadopoulos, Alessandro Vittorio	Mälardalen Univ
Organizer: Kerrigan, Eric C.	Imperial Coll. London

13:30-13:50	MoB22.1

Feedback Scheduling for Energy-Efficient Real-Time Homogeneous Multiprocessor Systems (I), pp. 1643-1648.

Thammawichai, Mason	Imperial Coll. London
Kerrigan, Eric C.	Imperial Coll. London

13:50-14:10	MoB22.2

A Control Theoretical Approach to Non-Intrusive Geo-Replication for Cloud Services (I), pp. 1649-1656.

Dürango, Jonas	Lund Univ. Dept. Automatic Control
Tärneberg, William	Lund Univ
Tomás, Luis	Umeå Univ
Tordsson, Johan	Umeå Univ
Kihl, Maria	Lund Univ
Maggio, Martina	Lund Univ

14:10-14:30	MoB22.3

Cost Function Based Event Triggered Model Predictive Controllers Application to Big Data Cloud Services (I), pp. 1657-1662.

CERF, Sophie	GIPSA-Lab/cnrs
Berekmeri, Mihaly	GIPSA-Lab
ROBU, Bogdan	GIPSA-Lab/cnrs
Marchand, Nicolas	GIPSA-Lab
Bouchenak, Sara	INSA Lyon

14:30-14:50	MoB22.4

High-Speed Thermal Management for Power-Dense Microprocessors (I), pp. 1663-1668.

Leva, Alberto	Pol. Di Milano
Terraneo, Federico	Pol. Di Milano
seva, Silvano	Pol. Di Milano

giacomello, irene	Pol. Di Milano

14:50-15:10	MoB22.5

Perspectives of Data-Driven LPV Modeling of Cloud Computing Systems, pp. 1669-1674.

PENAMAKURI, SESHA SAI KRISHNA	Iit Madras
Singh, Durgesh	IIT Madras
Pasumarthy, Ramkrishna	Indian Inst. of Tech. Madras

15:10-15:30	MoB22.6

Neuromorphic-Computing-Based Feedback Control: A Cognitive Supervisory Control Framework, pp. 1675-1680.

Hui, Qing	Univ. of Nebraska-Lincoln
Qiao, Wei	Univ. of Nebraska-Lincoln
Peng, Chen	Univ. of Nebraska-Lincoln

MoB23	Coppearleaf 4
Multivehicle Systems I (Regular Session)	
Chair: Besselink, Bart	Univ. of Groningen
Co-Chair: GREGOIRE, Jean	Mines ParisTech

13:30-13:50	MoB23.1

Hierarchical Path Generation for Distributed Mission Planning of UAVs, pp. 1681-1686.

Yao, Weiran	Harbin Inst. of Tech
Wan, Neng	Univ. of Minnesota Duluth
Qi, Naiming	Harbin Inst. of Tech

13:50-14:10	MoB23.2

Gear Management for Fuel-Efficient Heavy-Duty Vehicle Platooning (I), pp. 1687-1694.

Turri, Valerio	KTH Royal Inst. of Tech
Besselink, Bart	Univ. of Groningen
Johansson, Karl H.	Royal Inst. of Tech

14:10-14:30	MoB23.3

Multi-Vehicle Collision Avoidance Via Hamilton-Jacobi Reachability and Mixed Integer Programming, pp. 1695-1700.

Chen, Mo	Univ. of California, Berkeley
Shih, Jennifer C.	UC Berkeley
Tomlin, Claire J.	UC Berkeley

14:30-14:50	MoB23.4

Some Novel Traffic Coordination Problems and Their Analytical Study Based on Lagrangian Duality Theory, pp. 1701-1708.

Daugherty, Stephen Greyson	ISyE, Georgia Tech
Reveliotis, Spyros	Georgia Inst. of Tech
Mohler, Greg	GTRI, Georgia Tech

14:50-15:10	MoB23.5

Vehicles Platoon Control in VANETs with Capacity Limitation and Packet Dropouts, pp. 1709-1714.

Wen, Shixi	Dalian Univ. of Tech
Guo, Ge	Dalian Maritime Univ
Wang, Wei	Dalian Univ. of Tech

15:10-15:30	MoB23.6

Adaptation of Spacing Policy of Autonomous Vehicles Based on an Unknown Input and State Observer for a Virtual Predecessor Vehicle, pp. 1715-1720.

Rödönyi, Gábor	Inst. for Computer Science and Control, Hungarian Acad. Of
Szabo, Zoltan	Mta Sztaki

MoC01	Starvine 1
Network Analysis and Control III (Regular Session)	
Chair: Ishizaki, Takayuki	Tokyo Inst. of Tech
Co-Chair: Pequito, Sergio	Univ. of Pennsylvania

16:00-16:20	MoC01.1

Convex Gradient Controller Design for Incrementally Passive Systems with Quadratic Storage Functions, pp. 1721-1726.

Ishizaki, Takayuki	Tokyo Inst. of Tech
Ueda, Asami	Tokyo Inst. of Tech
Imura, Jun-ichi	Tokyo Inst. of Tech

16:20-16:40	MoC01.2

A Networked Parallel Algorithm for Solving Linear Algebraic Equations, pp. 1727-1732.

You, Keyou	Tsinghua Univ
Song, Shiji	Tsinghua Univ
Tempo, Roberto	CNR-IEIIT, Pol. Di Torino

16:40-17:00	MoC01.3

Impacts of Network Topology on the Performance of a Distributed Algorithm Solving Linear Equations, pp. 1733-1738.

Cao, Hong-Tai	Univ. of Southern California
Gibson, Travis E.	Harvard Medical School
Mou, Shaoshuai	Purdue Univ
Liu, Yang-Yu	Harvard Medical School

17:00-17:20	MoC01.4

Continuous Opinions and Discrete Actions in Social Networks: A Multi-Agent System Approach (I), pp. 1739-1744.

Roy Chowdhury, Nilanjan	Indian Inst. of Tech. Bombay
Morarescu, Irinel-Constantin	Cran Cnrs Umr 7039 - Ul
Martin, Samuel	Univ. De Lorraine
Srikant, Sukumar	Indian Inst. of Tech. Bombay

17:20-17:40	MoC01.5

Sensor and Actuator Placement for Zero-Shaping in Dynamical Networks, pp. 1745-1750.

Roy, Sandip	Washington State Univ
Abad Torres, Jackeline	Escuela Pol. Nacional
Xue, Mengran	Washington State Univ

17:40-18:00	MoC01.6

Multi-Leader Selection in Complex Networks, pp. 1751-1756.

Wang, Dan	Hong Kong Univ. of Science and Tech
Chen, Wei	Univ. of California at Berkeley
Qiu, Li	Hong Kong Univ. of Sci. & Tech

MoC02	Starvine 2
Agents-Based Systems III (Regular Session)	
Chair: Dominguez-Garcia, Alejandro D.	Univ. of Illinois at Urbana-Champaign
Co-Chair: Hadjicostis, Christoforos N.	Univ. of Cyprus

16:00-16:20	MoC02.1

Semi-Global Bipartite Consensus for Linear Multi-Agent Systems Subject to Actuator Saturation, pp. 1757-1762.

Fu, Weiming	Univ. of Science and Tech. of China
Qin, Jiahu	Univ. of Science and Tech. of

	China
Zheng, Wei Xing	Western Sydney Univ
Gao, Huijun	Harbin Inst. of Tech
Shi, Guodong	The Australian National Univ

16:20-16:40	MoC02.2

A Hybrid Systems Approach to Splay State Stabilization of Pulse Coupled Oscillators, pp. 1763-1768.

Ferrante, Francesco	Clemson Univ
Wang, Yongqiang	Clemson Univ

16:40-17:00	MoC02.3

Distributed Balancing in Digraphs under Interval Constraints, pp. 1769-1774.

Hadjicostis, Christoforos N.	Univ. of Cyprus
Dominguez-Garcia, Alejandro D.	Univ. of Illinois at Urbana-Champaign

17:00-17:20	MoC02.4

Distributed Integer Weight Balancing within Interval Constraints, pp. 1775-1780.

Rikos, Apostolos I.	Univ. of Cyprus
Hadjicostis, Christoforos N.	Univ. of Cyprus

17:20-17:40	MoC02.5

State Observation and Parameter Estimation in Cyclic Pursuit Systems, pp. 1781-1786.

Galloway, Kevin	United States Naval Acad
DeVries, Levi	United States Naval Acad

17:40-18:00	MoC02.6

Multi-Owner Multi-User Privacy, pp. 1787-1793.

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

MoC03	Starvine 3
Cooperative Control III (Regular Session)	
Chair: Zavlanos, Michael M.	Duke Univ
Co-Chair: Dimarogonas, Dimos V.	Royal Inst. of Tech

16:00-16:20	MoC03.1

Simultaneous Intermittent Communication Control and Path Optimization in Networks of Mobile Robots, pp. 1794-1799.

Kantaros, Yiannis	Duke Univ
Zavlanos, Michael M.	Duke Univ

16:20-16:40	MoC03.2

Enforcing Biconnectivity in Multi-Robot Systems, pp. 1800-1805.

Zareh Eshghdoust, Mehran	Univ. of Modena and Reggio Emilia
Sabattini, Lorenzo	Univ. of Modena and Reggio Emilia
Secchi, Cristian	Univ. of Modena & Reggio Emilia

16:40-17:00	MoC03.3

Bearing-Only Formation Control with Auxiliary Distance Measurements, Leaders, and Collision Avoidance, pp. 1806-1813.

Tron, Roberto	Univ. of Pennsylvania
Thomas, Justin	Univ. of Pennsilvanya
Loianno, Giuseppe	Univ. of Pennsylvania
Daniilidis, Kostas	Univ. of Pennsylvania
Kumar, Vijay	Univ. of Pennsylvania

17:00-17:20	MoC03.4

Optimal Event-Driven Multi-Agent Persistent Monitoring of a Finite Set of Targets, pp. 1814-1819.

Zhou, Nan	Boston Univ
Yu, Xi	Boston Univ
Andersson, Sean B.	Boston Univ
Cassandras, Christos G.	Boston Univ

17:20-17:40	MoC03.5

Multi-Agent Swarm Control through Kuramoto Modeling, pp. 1820-1825.

Cenedese, Angelo	Univ. of Padova
Favaretto, Chiara	Department of Information Engineering, Univ. of Padova
OCCIONI, GUIDO	Department of Information Engineering, Univ. of Padova

17:40-18:00	MoC03.6

Decentralized Sliding Mode Control for Autonomous Collective Transport by Multi-Robot Systems, pp. 1826-1833.

Farivarnejad, Hamed	Arizona State Univ
Wilson, Sean	Arizona State Univ
Berman, Spring	Arizona State Univ

MoC04	Starvine 4
Input-Output Dynamics on Networks (Invited Session)	
Chair: Abad Torres, Jackeline	Escuela Pol. Nacional
Co-Chair: Roy, Sandip	Washington State Univ
Organizer: Abad Torres, Jackeline	Escuela Pol. Nacional
Organizer: Roy, Sandip	Washington State Univ

16:00-16:20	MoC04.1

Input-Output Control of Composite Systems (I), pp. 1834-1839.

Montenbruck, Jan Maximilian	Univ. of Stuttgart
Allgöwer, Frank	Univ. of Stuttgart

16:20-16:40	MoC04.2

Quadratic Performance of Primal-Dual Methods with Application to Secondary Frequency Control of Power Systems (I), pp. 1840-1845.

Simpson-Porco, John W.	Univ. of Waterloo
Poolla, Bala Kameshwar	ETH Zürich
Monshizadeh, Nima	Univ. of Groningen
Dörfler, Florian	Swiss Federal Inst. of Tech. (ETH) Zurich

16:40-17:00	MoC04.3

Input-Output Characteristics of the Power Transmission Network's Swing Dynamics (I), pp. 1846-1852.

Koorehdavoudi, Kasra	Washington State Univ
Hatami, Mohammadreza	Washington State Univ
Roy, Sandip	Washington State Univ
Venkatasubramanian, Vaithiananthan	Washington State Univ
Panciatici, Patrick	RTE
Xavier, Florent	RTE, French TSO
Abad Torres, Jackeline	Escuela Pol. Nacional

17:00-17:20	MoC04.4

Pattern Control for Networks of Ginzburg-Landau Oscillators Via Markov Decision Processes (I), pp. 1853-1858.

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

17:20-17:40	MoC04.5

Scheduling of Control Nodes for Improved Network Controllability (I), pp. 1859-1864.

Zhao, Yingbo	Univ. of California, San Diego
Pasqualetti, Fabio	Univ. of California, Riverside
Cortes, Jorge	Univ. of California, San Diego

17:40-18:00	MoC04.6

Information Efficiency of Communications for Networked Control in Cyber Physical Systems: When Carnot Meets Shannon, pp. 1865-1870.

| Li, Husheng | Univ. of Tennessee |

MoC05	Starvine 5
Distributed and Large-Scale Optimization III (Invited Session)	

Chair: Notarstefano, Giuseppe	Univ. Del Salento
Co-Chair: Gharesifard, Bahman	Queens Univ. Canada
Organizer: Nedich, Angelia	Arizona State Univ
Organizer: Notarstefano, Giuseppe	Univ. Del Salento
Organizer: Olshevsky, Alexander	Boston Univ

16:00-16:20	MoC05.1

Secure Local Filtering Algorithms for Distributed Optimization (I), pp. 1871-1876.

| Sundaram, Shreyas | Purdue Univ |
| Gharesifard, Bahman | Queens Univ. Canada |

16:20-16:40	MoC05.2

A Duality-Based Approach for Distributed Min-Max Optimization with Application to Demand Side Management (I), pp. 1877-1882.

Notarnicola, Ivano	Univ. Del Salento
Franceschelli, Mauro	Univ. of Cagliari
Notarstefano, Giuseppe	Univ. Del Salento

16:40-17:00	MoC05.3

Distributed Computation of the Perron-Frobenius Eigenvector (I), pp. 1883-1888.

| Yang, Mu | Univ. of Oklahoma |
| Tang, Choon Yik | Univ. of Oklahoma |

17:00-17:20	MoC05.4

Distributed Constrained Convex Optimization and Consensus Via Dual Decomposition and Proximal Minimization (I), pp. 1889-1894.

Falsone, Alessandro	Pol. Di Milano
Margellos, Kostas	Univ. of Oxford
Garatti, Simone	Pol. Di Milano
Prandini, Maria	Pol. Di Milano

17:20-17:40	MoC05.5

Using Big Steps in Coordinate Descent Primal-Dual Algorithms (I), pp. 1895-1899.

| Bianchi, Pascal | Telecom ParisTech - CNRS/LTCI |
| Fercoq, Olivier | Telecom ParisTech |

17:40-18:00	MoC05.6

A Primal Dual Type Algorithm with the $O(1/t)$ Convergence Rate for Large Scale Constrained Convex Programs, pp. 1900-1905.

| Yu, Hao | Univ. of Southern California |
| Neely, Michael J. | Univ. of Southern California |

MoC06	Starvine 6
Optimal Control III (Regular Session)	

| Chair: L'Afflitto, Andrea | The Univ. of Oklahoma |
| Co-Chair: Miao, Lei | Middle Tennessee State Univ |

16:00-16:20	MoC06.1

Budget-Constrained Infinite Horizon Optimal Control Problems with Linear Dynamics, pp. 1906-1911.

| Lykina, Valeriya | Brandenburg Univ. of Tech. at Cottbus-Senftenberg |
| Pickenhain, Sabine | Brandenburg Univ. of Tech. at Cottbus-Senftenberg |

16:20-16:40	MoC06.2

Optimal Decentralized Queuing System with Diversion: Using Incentives to Influence Behavior, pp. 1912-1919.

| Desfontaines, Lucie | Ec. Pol |
| Wynter, Laura | IBM Watson Res. Center |

16:40-17:00	MoC06.3

Maximum Torque-Per-Current Control of Induction Motors Via Semidefinite Programming, pp. 1920-1925.

| Moehle, Nicholas | Stanford Univ |
| Boyd, Stephen | Stanford Univ |

17:00-17:20	MoC06.4

Discrete-Time Inverse Optimal Control with Partial-State Information: A Soft-Optimality Approach with Constrained State Estimation, pp. 1926-1932.

Molloy, Timothy Liam	Queensland Univ. of Tech
Tsai, Dorian	Queensland Univ. of Tech
Ford, Jason	Queensland Univ. of Tech
Perez, Tristan	Queensland Univ. of Tech

17:20-17:40	MoC06.5

Differential Games, Asymptotic Stabilization, and Robust Optimal Control of Nonlinear Systems, pp. 1933-1938.

| L'Afflitto, Andrea | The Univ. of Oklahoma |

17:40-18:00	MoC06.6

Receding Horizon Control with Two Planning Horizons for a Class of Discrete Event Systems with Real-Time Constraints, pp. 1939-1944.

| Miao, Lei | Middle Tennessee State Univ |

MoC07	Starvine 7
Optimization Algorithms III (Regular Session)	

| Chair: Mesbahi, Mehran | Univ. of Washington |
| Co-Chair: Patrinos, Panagiotis | KU Leuven |

16:00-16:20	MoC07.1

Worst Case Competitive Analysis for Online Conic Optimizatio, pp. 1945-1950.

Eghbali, Reza	Univ. of Washington
Fazel, Maryam	Univ. of Washington
Mesbahi, Mehran	Univ. of Washington

16:20-16:40	MoC07.2

A Decentralized Quasi-Newton Method for Dual Formulations of Consensus Optimization, pp. 1951-1958.

Eisen, Mark	Univ. of Pennsylvania
Mokhtari, Aryan	Univ. of Pennsylvania
Ribeiro, Alejandro	Univ. of Pennsylvania

16:40-17:00	MoC07.3

New Primal-Dual Proximal Algorithms for Distributed Optimization,

pp. 1959-1964.

Latafat, Puya	IMT School for Advanced Studies Lucca
Stella, Lorenzo	IMT Inst. for Advanced Studies Lucca
Patrinos, Panagiotis	KU Leuven

17:00-17:20	MoC07.4

A Sequential Parametric Convex Approximation Method for Solving Bilinear Matrix Inequalities, pp. 1965-1970.

Lee, Donghwan	Purdue Univ
Hu, Jianghai	Purdue Univ

17:20-17:40	MoC07.5

Fast Incremental Method for Smooth Nonconvex Optimization, pp. 1971-1977.

Jakkam Reddi, Sashank	Carnegie Mellon Univ
Sra, Suvrit	MIT
Poczos, Barnabas	Carnegie Mellon Univ
Smola, Alex	Carnegie Mellon Univ

17:40-18:00	MoC07.6

The Use of the $r*$ Heuristic in Covariance Completion Problems, pp. 1978-1983.

Grussler, Christian	Lund Univ
Zare, Armin	Univ. of Minnesota
Jovanovic, Mihailo	Univ. of Minnesota
Rantzer, Anders	Lund Univ

MoC08	Starvine 8
Stochastic Optimal Control II (Regular Session)	
Chair: Lamperski, Andrew	Univ. of Minnesota
Co-Chair: Silva, Daniel F.	Auburn Univ

16:00-16:20	MoC08.1

Natural Gradients for State and Output Feedback Control, pp. 1984-1989.

Lamperski, Andrew	Univ. of Minnesota

16:20-16:40	MoC08.2

Stochastic Optimal Control Using Semidefinite Programming for Moment Dynamics, pp. 1990-1995.

Lamperski, Andrew	Univ. of Minnesota
Ghusinga, Khem Raj	Univ. of Delaware
Singh, Abhyudai	Univ. of Delaware

16:40-17:00	MoC08.3

Dynamic Control of Complex Authentication Systems, pp. 1996-2003.

Silva, Daniel F.	Auburn Univ
Ayhan, Hayriye	Georgia Inst. of Tech
Zhang, Bo	IBM Res

17:00-17:20	MoC08.4

Information Transfer in Stochastic Optimal Control with Randomized Strategies and Directed Information Criterion, pp. 2004-2009.

Charalambous, Charalambos D.	Univ. of Cyprus
Kourtellaris, Christos K.	Univ. of Cyprus
Tzortzis, Ioannis	Univ. of Cyprus

17:20-17:40	MoC08.5

Infinite Horizon Discounted Dynamic Programming Subject to Total Variation Ambiguity on Conditional Distribution (I), pp. 2010-2015.

Tzortzis, Ioannis	Univ. of Cyprus

Charalambous, Charalambos D.	Univ. of Cyprus
Charalambous, Themistoklis	Chalmers Univ. of Tech

17:40-18:00	MoC08.6

Spectral Variational Integrators for Trajectory Optimization under Parametric Uncertainties and Stochastic Disturbances, pp. 2016-2022.

Boutselis, George I.	Georgia Inst. of Tech
Theodorou, Evangelos A.	Georgia Inst. of Tech

MoC09	Starvine 9
Estimation III (Regular Session)	
Chair: Kerrigan, Eric C.	Imperial Coll. London
Co-Chair: Kulkarni, Ankur A.	Indian Inst. of Tech. Bombay

16:00-16:20	MoC09.1

Cross Approximation-Based Quadrature Filter, pp. 2023-2028.

Wang, Zhong	Northwestern Pol. Univ
Li, Yan	Northwestern Pol. Univ

16:20-16:40	MoC09.2

Mean-Square Estimation with High Dimensional Log-Concave Noise, pp. 2029-2034.

Kulkarni, Ankur A.	Indian Inst. of Tech. Bombay

16:40-17:00	MoC09.3

A Detection-Estimation Approach with Refinement to Filtering for Gaussian Systems with Intermittent Observations, pp. 2035-2040.

Fasano, Antonio	Univ. Campus Bio-Medico Di Roma
Longhi, Sauro	Univ. Pol. Delle Marche
Monteriù, Andrea	Univ. Pol. Delle Marche
Villani, Valeria	Univ. Degli Studi Di Modena E Reggio Emilia

17:00-17:20	MoC09.4

Relations between Full Information and Kalman-Based Estimation, pp. 2041-2046.

Ge, Ming	IMPERIAL Coll. LONDON
Kerrigan, Eric C.	Imperial Coll. London

17:20-17:40	MoC09.5

Riccati Observers for Position and Velocity Bias Estimation from Direction Measurements, pp. 2047-2053.

Samson, Claude	INRIA Sophia-Antipolis
Hamel, Tarek	Univ. De Nice Sophia Antipolis

17:40-18:00	MoC09.6

Boundary Parameter and State Estimation in 2 X 2 Linear Hyperbolic PDEs Using Adaptive Backstepping, pp. 2054-2060.

Anfinsen, Henrik	Norwegian Univ. of Science and Tech
Aamo, Ole Morten	NTNU

MoC10	Starvine 10
Identification III (Regular Session)	
Chair: Martin, Cesar A.	Arizona State Univ. (ASU), Escuela Superior Pol. Del Litoral (ESPOL)
Co-Chair: Maruta, Ichiro	Kyoto Univ

16:00-16:20	MoC10.1

Kernel-Based System Identification from Noisy and Incomplete Input-

Output Data, pp. 2061-2066.

Risuleo, Riccardo Sven	KTH Royal Inst. of Tech
Bottegal, Giulio	Ku Leuven
Hjalmarsson, Håkan	KTH Royal Inst. of Tech

16:20-16:40	MoC10.2

Fixed-Time Parameter Estimation in Polynomial Systems through Modulating Functions, pp. 2067-2072.

Noack, Matti	TU Ilmenau
Rueda-Escobedo, Juan G.	Univ. Nacional Autónoma De México
Reger, Johann	TU Ilmenau
Moreno, Jaime A.	Univ. Nacional Autonoma De Mexico-UNAM

16:40-17:00	MoC10.3

A New Relay Feedback Scheme for Identification of Non-Minimum Phase Processes with Time Delay, pp. 2073-2078.

GHORAI, PRASENJIT	National Inst. of Tech. Agartala, Tripura
Pandey, Saurabh	Indian Inst. of Tech. Guwahati, Assam
Majhi, Somanath	Indian Inst. of Tech. Guwahati

17:00-17:20	MoC10.4

System Identification under Lebesgue Sampling and Its Asymptotic Property, pp. 2079-2084.

Kawaguchi, Takahiro	Keio Univ
Hikono, Sosaburo	Keio Univ
Maruta, Ichiro	Kyoto Univ
Adachi, Shuichi	Keio Univ

17:20-17:40	MoC10.5

Particle-Based Gaussian Process Optimization for Input Design in Nonlinear Dynamical Models, pp. 2085-2090.

Valenzuela, Patricio E.	KTH Royal Inst. of Tech
Dahlin, Johan	Linköping Univ
Rojas, Cristian R.	KTH Royal Inst. of Tech
Schön, Thomas (Bo)	Uppsala Univ

17:40-18:00	MoC10.6

An Enhanced Identification Test Monitoring Procedure for MIMO Systems Relying on Uncertainty Estimates, pp. 2091-2096.

Martin, Cesar A.	Arizona State Univ. (ASU), Escuela Superior Pol. Del
Rivera, Daniel E.	Arizona State Univ
Hekler, Eric	Arizona State Univ

MoC11	Starvine 11
Adaptive Control III (Regular Session)	
Chair: saad, Mohamed Shawky	Cairo Univ. Faculty of Engineering
Co-Chair: Tao, Gang	Univ. of Virginia

16:00-16:20	MoC11.1

A Class of Adaptive Feedforward Control Using Multiplexed Extremum Seeking, pp. 2097-2102.

Sharafi, Jalil	Ford Motor Company
Moase, William H.	The Univ. of Melbourne
Manzie, Chris	The Univ. of Melbourne

16:20-16:40	MoC11.2

An Adaptive Actuator Failure Compensation Scheme for a Parallel Manipulator with Parameter Uncertainties, pp. 2103-2108.

Rugthum, Thummaros	Univ. of Virginia
Tao, Gang	Univ. of Virginia

16:40-17:00	MoC11.3

Adaptive Control for Robot Manipulator with Guaranteed Transient Performance, pp. 2109-2114.

Seo, Dongeun	Embry-Riddle Aeronautical Univ

17:00-17:20	MoC11.4

Discrete Time L1 Adaptive Control for Systems with Time-Varying Parameters and Disturbances, pp. 2115-2120.

Elnaggar, Mahmoud	Cairo Univ
saad, Mohamed Shawky	Cairo Univ. Faculty of Engineering
Abdel Fattah, Hossam A.	Cairo Univ
Elshafei, Abdel Latif	Faculty of Engineering

17:20-17:40	MoC11.5

Adaptive Output Feedback for Plants with Direct Feedthrough, pp. 2121-2127.

Menner, Marcel	Massachusetts Inst. of Tech
Annaswamy, Anuradha M.	Massachusetts Inst. of Tech
Zollitsch, Alexander Wolfgang	Tech. Univ. München

17:40-18:00	MoC11.6

Boundary Observer Design for Hyperbolic PDE in Rotary Drilling Systems, pp. 2128-2133.

TOUMI, Samir	Pol. School of Tunisia
Beji, Lotfi	Univ. of Evry
Mlayeh, Rhouma	Pol. School of Tunisia
Abichou, Azgal	Ec. Pol. De Tunis

MoC12	Starvine 12
Fault Detection and Tolerance II (Regular Session)	
Chair: Shames, Iman	The Univ. of Melbroune
Co-Chair: Kwan, Chi-Man	Applied Res. LLC

16:00-16:20	MoC12.1

Detection of Biasing Attacks on Distributed Estimation Networks, pp. 2134-2139.

Deghat, Mohammad	CSIRO
Ugrinovskii, Valery	Univ. of New South Wales
Shames, Iman	The Univ. of Melbroune
Langbort, Cedric	Univ. of Illinois, Urbana-Champaign

16:20-16:40	MoC12.2

A Novel Approach to Sensor and Actuator Integrity Monitoring, pp. 2140-2145.

Kwan, Chi-Man	Applied Res. LLC

16:40-17:00	MoC12.3

Optimal Active Fault Diagnosis by Temporal-Difference Learning, pp. 2146-2151.

Skach, Jan	Univ. of West Bohemia
Puncochar, Ivo	Univ. of West Bohemia
Lewis, Frank L.	Univ. of Texas at Arlington

17:00-17:20	MoC12.4

A Brief Survey of Different Statistics for Detecting Multiplicative Faults in Multivariate Statistical Process Monitoring, pp. 2152-2157.

Zhang, Kai	Univ. of Duisburg-Essen
Shardt, Yuri	Univ. of Duisburg-Essen
Chen, Zhiwen	Univ. of Duisburg-Essen
Ding, Steven X.	Univ. of Duisburg-Essen

Peng, Kaixiang	Univ. of Science and Tech. Beijing, Beijing, P.R. Chin

17:20-17:40   MoC12.5

A Fault-Tolerant Sensor Reconciliation Scheme Based on LPV Unknown Input Observers, pp. 2158-2163.

Behzad, Hamid	Shahrood Univ. of Tech
Casavola, Alessandro	Univ. Della Calabria
Tedesco, Francesco	Univ. Della Calabria
Sadrnia, M.A.	Shahrood Univ. of Tech

17:40-18:00   MoC12.6

A Decentralized Fault-Tolerant Control Scheme Based on Active Fault Diagnosis, pp. 2164-2169.

Raimondo, Davide Martino	Univ. Degli Studi Di Pavia
Boem, Francesca	Imperial Coll. London
Gallo, Alexander	Imperial Coll. London
Parisini, Thomas	Imperial Coll. & Univ. of Trieste

MoC13	Starvine 13
Lyapunov Methods II (Regular Session)	

Chair: Coogan, Samuel	Univ. of California, Los Angeles
Co-Chair: Lazar, Mircea	Eindhoven Univ. of Tech

16:00-16:20   MoC13.1

A Sampling Approach to Constructing Lyapunov Functions for Nonlinear Continuous-Time Systems, pp. 2170-2175.

Bobiti, Ruxandra	Tech. Univ. Eindhoven
Lazar, Mircea	Eindhoven Univ. of Tech

16:20-16:40   MoC13.2

On Estimating the Robust Domain of Attraction for Uncertain Non-Polynomial Systems: An LMI Approach, pp. 2176-2183.

HAN, Dongkun	Tech. Univ. of Munich
Althoff, Matthias	Tech. Univ. München

16:40-17:00   MoC13.3

Separability of Lyapunov Functions for Contractive Monotone Systems, pp. 2184-2189.

Coogan, Samuel	Univ. of California, Los Angeles

17:00-17:20   MoC13.4

Functional Electrical Stimulation Induced Cycling Using Repetitive Learning Control, pp. 2190-2195.

Duenas, Victor	Univ. of Florida
Cousin, Christian	Univ. of Florida
Parikh, Anup	Univ. of Florida
Dixon, Warren E.	Univ. of Florida

17:20-17:40   MoC13.5

Improved Slack-Matrix-Based Summation Inequality and Applications to Discrete-Time Systems with Time-Varying Delays, pp. 2196-2200.

Lee, Seok Young	POSTECH
Lee, Won Il	POSTECH
Park, PooGyeon	Pohang Univ. of Sci. & Tech

17:40-18:00   MoC13.6

A Unified Lyapunov Function for Finite Time Stabilization of Continuous and Variable Structure Systems with Resets, pp. 2201-2206.

Oza, Harshal B.	Ahmedabad Univ
Orlov, Yury	CICESE
Spurgeon, Sarah K.	Univ. Coll. London

MoC14	Ironwood 1
Event-Triggered and Self-Triggered Control for Multi-Agent and Networked Systems (Invited Session)	

Chair: Johansson, Karl H.	Royal Inst. of Tech
Co-Chair: Nowzari, Cameron	Univ. of Pennsylvania
Organizer: Heemels, W.P.M.H.	Eindhoven Univ. of Tech
Organizer: Hirche, Sandra	Tech. Univ. München
Organizer: Johansson, Karl H.	Royal Inst. of Tech

16:00-16:20   MoC14.1

Multi-Agent Trajectory Tracking with Self-Triggered Cloud Access (I), pp. 2207-2214.

Adaldo, Antonio	Royal Inst. of Tech. KTH
Liuzza, Davide	KTH Royal Inst. of Tech
Dimarogonas, Dimos V.	Royal Inst. of Tech
Johansson, Karl H.	Royal Inst. of Tech

16:20-16:40   MoC14.2

Coordination of Multi-Agent Systems Via Asynchronous Cloud Communication (I), pp. 2215-2220.

Bowman, Sean L.	Univ. of Pennsylvania
Nowzari, Cameron	Univ. of Pennsylvania
Pappas, George J.	Univ. of Pennsylvania

16:40-17:00   MoC14.3

Distributed Event Driven Optimization for Network Utility Maximization (I), pp. 2221-2226.

Meng, Xiangyu	Nanyang Tech. Univ
Xie, Lihua	Nanyang Tech. Univ
Soh, Yeng Chai	Nanyang Tech. Univ

17:00-17:20   MoC14.4

Self-Triggered Control for Multi-Agent Systems with Quantized Communication or Sensing (I), pp. 2227-2232.

Yi, Xinlei	KTH Royal Inst. of Tech
Wei, Jieqiang	KTH
Johansson, Karl H.	Royal Inst. of Tech

17:20-17:40   MoC14.5

Event-Based Multi-Agent Cooperative Control with Quantized Relative State Measurements, pp. 2233-2239.

Liu, Qingchen	Australian National Univ
Qin, Jiahu	Univ. of Science and Tech. of China
Yu, Changbin (Brad)	The Australian National Univ

17:40-18:00   MoC14.6

Event-Based Leader-Follower Consensus for Multiple Euler-Lagrange Systems with Parametric Uncertainties, pp. 2240-2246.

Liu, Qingchen	Australian National Univ
Ye, Mengbin (Ben)	Australian National Univ
Qin, Jiahu	Univ. of Science and Tech. of China
Yu, Changbin (Brad)	The Australian National Univ

MoC15	Ironwood 2
Distributed Parameter Systems I (Invited Session)	

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

Organizer: Le Gorrec, Yann	Ensmm, Femto-St / As2m

16:00-16:20	MoC15.1

Input-To State Stability with Respect to Boundary Disturbances for the 1-D Heat Equation (I), pp. 2247-2252.

Karafyllis, Iasson	National Tech. Univ. of Athens
Krstic, Miroslav	Univ. of California, San Diego

16:20-16:40	MoC15.2

Spreading Control of Sub-Diffusion Process (I), pp. 2253-2258.

Ge, Fudong	Donghua Univ
Chen, YangQuan	Univ. of California, Merced
Kou, Chunhai	Donghua Univ

16:40-17:00	MoC15.3

Sensor Location in a Controlled Thermal Fluid (I), pp. 2259-2264.

HU, WEIWEI	Univ. of Minnesota
Morris, Kirsten	Univ. of Waterloo
Zhang, Yangwen	Missouri Univ. of Science and Tech

17:00-17:20	MoC15.4

On Input-To-State-Stability and Integral Input-To-State-Stability for Parabolic Boundary Control Systems (I), pp. 2265-2269.

Jacob, Birgit	Univ. of Wuppertal
Nabiullin, Robert	Univ. of Wuppertal
Partington, Jonathan R.	Univ. of Leeds
Schwenninger, Felix	Univ. of Wuppertal

17:20-17:40	MoC15.5

Plume Estimation Using Static and Dynamic Formations of Unmanned Aerial Vehicles (I), pp. 2270-2275.

Egorova, Tatiana	Worcester Pol. Inst
Demetriou, Michael A.	Worcester Pol. Inst
Gatsonis, Nikolaos	Worcester Pol. Inst

17:40-18:00	MoC15.6

Error Estimates for Multi-Wavelet Approximations of a Class of History Dependent Operators, pp. 2276-2281.

Dadashi, Shirin	Virginia Tech
Bobade, Parag	Virginia Tech
Kurdila, Andrew J.	Virginia Tech

MoC16	Ironwood 3
Delay Systems III (Regular Session)	

Chair: Petit, Nicolas	MINES ParisTech
Co-Chair: Niculescu, Silviu-Iulian	CNRS-Supelec

16:00-16:20	MoC16.1

Optimization of Dynamical Systems with Time-Varying or Input-Varying Delays, pp. 2282-2289.

Clerget, Charles-Henri	MINES ParisTech
Grimaldi, Jean-Philippe	Total RC
Chèbre, Meriam	Total SA
Petit, Nicolas	MINES ParisTech

16:20-16:40	MoC16.2

Dynamic Predictor for Linear Time-Delay Systems with Disturbances, pp. 2290-2295.

Caballero-Barragán, Humberto	CINVESTAV Unidad Guadalajara
Osuna-Ibarra, Linda Patricia	CINVESTAV Unidad Guadalajara
Loukianov, Alexander G.	CINVESTAV IPN Unidad GDL

16:40-17:00	MoC16.3

A Semidiscrete Approximation Scheme for Linear Neutral Delay-Differential Equations Which Preserves Adjoint Semigroup Convergence (I), pp. 2296-2301.

Fabiano, Richard H.	Univ. of North Carolina at Greensboro
Payne, Catherine	Univ. of North Carolina at Greensboro

17:00-17:20	MoC16.4

Dynamic Observation-Prediction for LTI Systems with a Time-Varying Delay in the Input, pp. 2302-2307.

Lechappe, Vincent	Univ. of the South Pacific
Moulay, Emmanuel	Univ. De Poitiers
Plestan, Franck	Ec. Centrale De Nantes-IRCCyN

17:20-17:40	MoC16.5

Unknown Input Estimation Via Observers for Nonlinear Systems with Measurement Delays (I), pp. 2308-2313.

Chakrabarty, Ankush	Harvard Univ
Buzzard, Gregery T.	Purdue Univ
Fridman, Emilia	Tel-Aviv Univ
Zak, Stanislaw H.	Purdue Univ

17:40-18:00	MoC16.6

Orthogonal Functions Based Integral Inequalities and Their Applications to Time Delay Systems, pp. 2314-2319.

Feng, Qian	Univ. of Auckland
Nguang, Sing Kiong	The Univ. of Auckland

MoC17	Ironwood 6
Predictive Control for Linear Systems II (Regular Session)	

Chair: Keviczky, Tamas	Delft Univ. of Tech
Co-Chair: Ebenbauer, Christian	Univ. of Stuttgart

16:00-16:20	MoC17.1

On Degeneracy in Exploration of Combinatorial Tree in Multi-Parametric Quadratic Programming, pp. 2320-2326.

Ahmadi-Moshkenani, Parisa	Norwegian Univ. of Science and Tech
Johansen, Tor Arne	Norweigian Univ. of Science & Tech
Olaru, Sorin	CentraleSupélec

16:20-16:40	MoC17.2

Robustness Margin for Piecewise Affine Explicit Control Law, pp. 2327-2332.

Koduri, Rajesh	Centralesupelec
Rodriguez-Ayerbe, Pedro	Supelec
Olaru, Sorin	CentraleSupélec

16:40-17:00	MoC17.3

A Non-Conservative Robust Output Feedback MPC for Constrained Linear Systems, pp. 2333-2338.

Subramanian, Sankaranarayanan	TU Dortmund
Lucia, Sergio	OvG Univ. of Magdeburg
Engell, Sebastian	TU Dortmund

17:00-17:20	MoC17.4

Constrained LQR Using Online Decomposition Techniques, pp. 2339-2344.

Ferranti, Laura	Delft Univ. of Tech

Stathopoulos, Georgios	Ec. Pol. Federale De Lausanne
Jones, Colin N.	EPFL
Keviczky, Tamas	Delft Univ. of Tech

17:20-17:40	MoC17.5

Asynchronous Splitting Design for Model Predictive Control, pp. 2345-2350.

Ferranti, Laura	Delft Univ. of Tech
Pu, Ye	École Pol. Fédérale De Lausanne
Jones, Colin N.	EPFL
Keviczky, Tamas	Delft Univ. of Tech

17:40-18:00	MoC17.6

Parallel Model Predictive Control for Input Constrained Linear Systems, pp. 2351-2357.

Hara, Naoyuki	Osaka Prefecture Univ
Konishi, Keiji	Osaka Prefecture Univ

MoC18	Ironwood 7
Robust Control II (Regular Session)	
Chair: Possieri, Corrado	Univ. Di Roma Tor Vergata
Co-Chair: Hladowski, Lukasz	Univ. of Zielona Gora

16:00-16:20	MoC18.1

Multi-Objective Control for Discrete-Time Systems Over Lossy Actuating Channel, pp. 2358-2363.

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

16:20-16:40	MoC18.2

Robust Constrained Model Predictive Control with Persistent Model Adaptation, pp. 2364-2369.

Brüggemann, Sven	RWTH Aachen Univ
Possieri, Corrado	Univ. Di Roma Tor Vergata
Poveda, Jorge I.	Univ. of California at Santa Barbara
Teel, Andrew R.	Univ. of California at Santa Barbara

16:40-17:00	MoC18.3

Robust Iterative Learning Control Laws with Full Dynamics, pp. 2370-2375.

Hladowski, Lukasz	Univ. of Zielona Gora
Paszke, Wojciech	Univ. of Zielona Gora
Galkowski, Krzysztof	Univ. of Zielona Gora
Rogers, Eric	Univ. of Southampton

17:00-17:20	MoC18.4

Networked Robust Stabilization with Simultaneous Uncertainties in Plant, Controller and Communication Channels, pp. 2376-2381.

Zhao, Di	Hong Kong Univ. of Sci. and Tech
Qiu, Li	Hong Kong Univ. of Sci. & Tech

17:20-17:40	MoC18.5

LQ vs. L-Infinity in Controller Design for Systems with Delay and Quantization, pp. 2382-2389.

Nakahira, Yorie	California Inst. of Tech

17:40-18:00	MoC18.6

Robust Controller Synthesis with Unstable Weights, pp. 2390-2395.

Veenman, Joost	SENER
Lahr, Martin	Univ. Stuttgart
Scherer, Carsten W.	Univ. of Stuttgart

MoC19	Ironwood 8
Power Systems III (Regular Session)	
Chair: Mathieu, Johanna L.	Univ. of Michigan
Co-Chair: Louca, Raphael	Cornell Univ

16:00-16:20	MoC19.1

An Incremental Local Algorithm for Better Voltage Control in Distribution Networks, pp. 2396-2402.

Zhou, Xinyang	Univ. of Colorado, Boulder
Chen, Lijun	Univ. of Colorado at Boulder

16:20-16:40	MoC19.2

Power System State Estimation with Line Measurements, pp. 2403-2410.

Zhang, Yu	UC Berkeley
Madani, Ramtin	The Univ. of Texas at Arlington
Lavaei, Javad	UC Berkeley

16:40-17:00	MoC19.3

Error Bounds on the DC Power Flow Approximation: A Convex Relaxation Approach, pp. 2411-2418.

Dvijotham, Krishnamurthy	California Inst. of Tech
Molzahn, Daniel	Argonne National Lab

17:00-17:20	MoC19.4

Optimization-Based Residential Load Scheduling to Improve Reliability in the Distribution Grid, pp. 2419-2424.

HABIB, Abdulelah H.	UC San Diego
Ratnam, Elizabeth	UC San Diego
Vahid, Disfani	UC San Diego
Kleissl, Jan	Univ. of California, San Diego
de Callafon, Raymond A.	Univ. of California, San Diego

17:20-17:40	MoC19.5

Distributionally Robust Risk-Constrained Optimal Power Flow Using Moment and Unimodality Information, pp. 2425-2430.

Li, Bowen	Univ. of Michigan
Jiang, Ruiwei	Univ. of Michigan
Mathieu, Johanna L.	Univ. of Michigan

17:40-18:00	MoC19.6

Stochastic AC Optimal Power Flow with Affine Recourse, pp. 2431-2436.

Louca, Raphael	Cornell Univ
Bitar, Eilyan	Cornell Univ

MoC20	Coppearleaf 1
Automotive Control II (Regular Session)	
Chair: Di Cairano, Stefano	Mitsubishi Electric Res. Labs
Co-Chair: Chung, Chung Choo	Hanyang Univ

16:00-16:20	MoC20.1

Vehicle Speed Control by a Robotic Driver Considering Time Delay and Parametric Variations, pp. 2437-2442.

Mizutani, Naoto	Mie Univ
MATSUI, Hirokazu	Mie Univ
Yano, Kenichi	Mie Univ
Takahashi, Toshimichi	MEIDENSHA Corp

16:20-16:40	MoC20.2

Tire-Stiffness Estimation by Marginalized Adaptive Particle Filter, pp. 2443-2448.

Berntorp, Karl	Mitsubishi Electric Res. Labs
Di Cairano, Stefano	Mitsubishi Electric Res. Labs

16:40-17:00   MoC20.3

Vehicle Lateral Motion Estimation with Its Dynamic and Kinematic Models Based Interacting Multiple Model Filter, pp. 2449-2454.

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

17:00-17:20   MoC20.4

Path Following Control for a Reversing General 2-Trailer System, pp. 2455-2461.

Ljungqvist, Oskar	Linköping Univ
Axehill, Daniel	Linköping Univ
Helmersson, Anders	Linköpings Univ

17:20-17:40   MoC20.5

A Control Strategy for Reducing Traffic Waves in Delayed Vehicular Networks, pp. 2462-2467.

Fiengo, Giovanni	Univ. Degli Studi Del Sannio
Petrillo, Alberto	Univ. of Naples Federico II
Salvi, Alessandro	Media Motive Srl - NetcomGroup Spa
Santini, Stefania	Univ. Di Napoli Federico II
Tufo, Manuela	Univ. Del Sannio

17:40-18:00   MoC20.6

Design of a Lane Departure Driver-Assist System under Safety Specifications, pp. 2468-2474.

Hoehener, Daniel	Massachusetts Inst. of Tech
Huang, Geng	Univ. of Illinois Urbana Champaign
Del Vecchio, Domitilla	Massachusetts Inst. of Tech

MoC21	Coppearleaf 2
System Identification and Control in Cancer (Invited Session)	
Chair: Jonsson, Vanessa	California Inst. of Tech
Co-Chair: Giordano, Giulia	Lund Univ
Organizer: Jonsson, Vanessa	California Inst. of Tech
Organizer: Tomlin, Claire J.	UC Berkeley

16:00-16:20   MoC21.1

Some Remarks on Immune Control of Infections and Tumors (I), pp. 2475-2480.

Sontag, Eduardo D.	Rutgers Univ

16:20-16:40   MoC21.2

A Model of Phenotypic State Dynamics Initiates a Promising Approach to Control Heterogeneous Malignant Cell Populations (I), pp. 2481-2487.

Chapman, Margaret Pfeiffer	UC Berkeley
Risom, Tyler	Oregon Health and Science Univ
Aswani, Anil	UC Berkeley
Dobbe, Roel	Univ. of California at Berkeley
Sears, Rosalie	Oregon Health and Science Univ
Tomlin, Claire J.	UC Berkeley

16:40-17:00   MoC21.3

Modelling Drug Response and Resistance in Cancer: Opportunities and Challenges (I), pp. 2488-2493.

Challapalli, Niharika	1992
Ahsen, Mehmet Eren	IBM Res
Vidyasagar, Mathukumalli	The Univ. of Texas at Dallas

17:00-17:20   MoC21.4

A Convex Optimization Approach to Cancer Treatment to Address Tumor Heterogeneity and Imperfect Drug Penetration in Physiological Compartments (I), pp. 2494-2500.

Giordano, Giulia	Lund Univ
Rantzer, Anders	Lund Univ
Jonsson, Vanessa	California Inst. of Tech

17:20-17:40   MoC21.5

Geometry of Correlation Networks for Studying the Biology of Cancer (I), pp. 2501-2506.

Sandhu, Romeil	Georgia Inst. of Tech
Tannenbaum, Sarah	Columbia Univ
Georgiou, Tryphon T.	Univ. of California, Irvine
Tannenbaum, Allen	Stony Brook Univ

17:40-18:00   MoC21.6

Observer-Based Efficiency Enhancement in Cell-Cycle Specific Therapies (I), pp. 2507-2512.

Alamir, Mazen	CNRS / Univ. of Grenoble
Fiacchini, Mirko	GIPSA-Lab

MoC22	Coppearleaf 3
Estimation and Control Methods in Quantum Cybernetics (Invited Session)	
Chair: Dong, Daoyi	Univ. of New South Wales
Co-Chair: Yamamoto, Naoki	Keio Univ
Organizer: Dong, Daoyi	Univ. of New South Wales
Organizer: Li, Jr-Shin	Washington Univ. in St. Louis
Organizer: Yamamoto, Naoki	Keio Univ

16:00-16:20   MoC22.1

Perfect Absorber of Arbitrary Single Photon Fields with a Tunable Coupling Parameter: A QSDE Approach (I), pp. 2513-2518.

Nurdin, Hendra I	UNSW Australia
James, Matthew R.	Australian National Univ
Yamamoto, Naoki	Keio Univ

16:20-16:40   MoC22.2

Pure Gaussian Quantum States from Passive Hamiltonians and an Active Local Dissipative Process (I), pp. 2519-2522.

Ma, Shan	Univ. of New South Wales at Australian Defence Force Acad
Woolley, Matthew James	Univ. of New South Wales
Petersen, Ian R.	Univ. of New South Wales at the AustralianDefenceForceAcad
Yamamoto, Naoki	Keio Univ

16:40-17:00   MoC22.3

An Iterative Algorithm for Hamiltonian Identification of Quantum Systems (I), pp. 2523-2528.

Wang, Yuanlong	Univ. of New South Wales, Canberra
Qi, Bo	CAS
Dong, Daoyi	Univ. of New South Wales
Petersen, Ian R.	Univ. of New South Wales at the AustralianDefenceForceAcad

17:00-17:20   MoC22.4

Control of Ensemble Systems on Special Orthogonal Groups (I), pp. 2529-2534.

Zhang, Wei	Washington Univ. in St. Louis
Li, Jr-Shin	Washington Univ. in St. Louis

17:20-17:40	MoC22.5

Quantum State Transfer for Multi-Input Linear Quantum Systems (I), pp. 2535-2538.

Yamamoto, Naoki	Keio Univ
Nurdin, Hendra I	UNSW Australia
James, Matthew R.	Australian National Univ

17:40-18:00	MoC22.6

Quantum Back-Action Evasion Via Coherent Feedback Control: A Geometric Control Approach, pp. 2539-2542.

Yokotera, Yu	Keio Univ
Yamamoto, Naoki	Keio Univ

MoC23	Coppearleaf 4
Multivehicle Systems II (Regular Session)	

Chair: Milutinovic, Dejan	Univ. of California, Santa Cruz
Co-Chair: Reveliotis, Spyros	Georgia Inst. of Tech

16:00-16:20	MoC23.1

Scalable Value Approximation for Multiple Target Tail-Chase with Collision Avoidance, pp. 2543-2548.

Hashemi, Araz	Wayne State Univ
Casbeer, David W.	Air Force Res. Lab
Milutinovic, Dejan	Univ. of California, Santa Cruz

16:20-16:40	MoC23.2

Hybrid Centralized/Distributed Autonomous Intersection Control: Using a Job Scheduler As a Planner and Inheriting Its Efficiency Guarantees, pp. 2549-2554.

GREGOIRE, Jean	Mines ParisTech
Frazzoli, Emilio	Massachusetts Inst. of Tech

16:40-17:00	MoC23.3

3D Collision Avoidance Algorithm for Unmanned Aerial Vehicles with Limited Field of View Constraints, pp. 2555-2560.

Roelofsen, Steven	École Pol. Fédérale De Lausanne
Martinoli, Alcherio	Ec. Pol. Federale De Lausanne
Gillet, Denis	Ec. Pol. Fédérale De Lausanne (EPFL)

17:00-17:20	MoC23.4

Shapes of Cyclic Pursuit and Their Evolution, pp. 2561-2566.

Baryshnikov, Yuliy	UIUC
Chen, Cheng	Univ. of Illinois at Urbana-Champaign

17:20-17:40	MoC23.5

Primal Decomposition of the Optimal Coordination of Vehicles at Traffic Intersections, pp. 2567-2573.

Hult, Robert	Chalmers Univ. of Tech
Zanon, Mario	Chalmers Univ
Gros, Sebastien	Chalmers Univ. of Tech
Falcone, Paolo	Chalmers Univ. of Tech

17:40-18:00	MoC23.6

On the Optimal Location of Distribution Centers for a One-Dimensional Transportation System, pp. 2574-2580.

Terelius, Håkan	Royal Inst. of Tech
Johansson, Karl H.	Royal Inst. of Tech

Technical Program for Tuesday December 13, 2016

TuSP1	Juniper 4
Distributed Large-Scale Optimization (Semiplenary Session)	
Chair: Bullo, Francesco	Univ. California at Santa Barbara
Co-Chair: Pappas, George J.	Univ. of Pennsylvania

08:30-09:30	TuSP1.1

Distributed Large-Scale Optimization*.

Nedich, Angelia	Arizona State Univ.

TuSP2	Ironwood 5
Smart Cities As Cyber-Social-Physical Systems (Semiplenary Session)	
Chair: Giua, Alessandro	Aix-Marseille Univ. France / Univ. of Cagliari, Italy
Co-Chair: Jovanovic, Mihailo	Univ. of Minnesota

08:30-09:30	TuSP2.1

Smart Cities As Cyber-Social-Physical Systems*.

Cassandras, Christos G.	Boston Univ.

TuA01	Starvine 1
Network Analysis and Control IV (Regular Session)	
Chair: Monshizadeh, Nima	Univ. of Groningen
Co-Chair: Clark, Andrew	Worcester Pol. Inst

10:00-10:20	TuA01.1

Singular-Perturbations-Based Analysis of Synchronization in Heterogeneous Networks: A Case-Study, pp. 2581-2586.

Maghenem, Mohamed	L2S-Supelec
Panteley, Elena	Lab. Des Signaux Et Systemes, CNRS - SUPELEC
Loria, Antonio	CNRS

10:20-10:40	TuA01.2

Distributed Adaptive Patching Strategies against Malware Propagation: A Passivity Approach, pp. 2587-2594.

Lee, Phillip	Univ. of Washington
Clark, Andrew	Worcester Pol. Inst
Alomair, Basel	King Abdulaziz City for Science and Tech
Bushnell, Linda	Univ. of Washington
Poovendran, Radha	Univ. of Washington, Seattle

10:40-11:00	TuA01.3

A Lyapunov Approach to Control of Microgrids with a Network-Preserved Differential-Algebraic Model (I), pp. 2595-2600.

De Persis, Claudio	Univ. of Groningen
Monshizadeh, Nima	Univ. of Groningen
Schiffer, Johannes	Univ. of Leeds
Dörfler, Florian	Swiss Federal Inst. of Tech. (ETH) Zurich

11:00-11:20	TuA01.4

Stability of Networked Systems with Switching Topologies, pp. 2601-2608.

Gopalakrishnan, Karthik	Massachusetts Inst. of Tech
Balakrishnan, Hamsa	Massachusetts Inst. of Tech
Jordan, Richard	Sonde Health, Inc

11:20-11:40	TuA01.5

Consensus for Nonlinear Monotone Networks with Unilateral Interactions, pp. 2609-2614.

Manfredi, Sabato	Univ. of Naples Federico II
Angeli, David	Imperial Coll

11:40-12:00	TuA01.6

A New Proof of Reichert's Theorem, pp. 2615-2619.

Zhang, Sara Ying	Univ. of Bristol
Jiang, Jason Zheng	Univ. of Bristol
Smith, Malcolm C.	Univ. of Cambridge

TuA02	Starvine 2
Agents-Based Systems IV (Regular Session)	
Chair: Panagou, Dimitra	Univ. of Michigan, Ann Arbor
Co-Chair: Tan, Xiaobo	Michigan State Univ

10:00-10:20	TuA02.1

An Asynchronous Distributed Algorithm for Computing a Common Fixed Point of a Family of Paracontractions, pp. 2620-2625.

Fullmer, Daniel	Yale Univ
Liu, Ji	Univ. of Illinois at Urbana-Champaign
Morse, A. Stephen	Yale Univ

10:20-10:40	TuA02.2

Cluster Synchronization of Inter-Cluster Nonidentical Linear Systems under Directed Nonnegative Graphs, pp. 2626-2631.

Liu, Zhongchang	Sun Yat-Sen Univ
Wong, Wing Shing	Chinese Univ. of Hong Kong
Cheng, Hui	Sun Yat-Sen Univ

10:40-11:00	TuA02.3

Noisy Hegselmann-Krause Systems: Phase Transition and the 2R-Conjecture, pp. 2632-2637.

Wang, Chu	Nokia Bell Labs
Li, Qianxiao	Princeton Univ
E, Weinan	Princeton Univ
Chazelle, Bernard	Princeton

11:00-11:20	TuA02.4

An O(N^2) Algorithm for Computation of the Minimum Time Consensus, pp. 2638-2643.

Mulla, Ameer Kalandar	Indian Inst. of Tech. Bombay
Patil, Deepak U.	TU Kaiserslautern
Chakraborty, Debraj	Indian Inst. of Tech. Bombay

11:20-11:40	TuA02.5

An Energy-Aware Redistribution Method for Multi-Agent Dynamic Coverage Networks, pp. 2644-2651.

Bentz, William	Univ. of Michigan
Panagou, Dimitra	Univ. of Michigan, Ann Arbor

11:40-12:00	TuA02.6

Distributed Time-Difference-Of-Arrival (TDOA)-Based Localization of a Moving Target, pp. 2652-2658.

Ennasr, Osama N.	Michigan State Univ
Guoliang, Xing	Michigan State Univ
Tan, Xiaobo	Michigan State Univ

TuA03	Starvine 3
Cooperative Control IV (Regular Session)	
Chair: Dibaji, Seyed Mehran	Massachusetts Inst. of Tech

Co-Chair: Jaleel, Hassan	King Abdullah Univ. of Science & Tech

10:00-10:20	**TuA03.1**

Multi-Objective Compositions for Collision-Free Connectivity Maintenance in Teams of Mobile Robots, pp. 2659-2664.

Wang, Li	Georgia Inst. of Tech
Egerstedt, Magnus	Georgia Inst. of Tech
Ames, Aaron D.	Georgia Inst. of Tech

10:20-10:40	**TuA03.2**

Decentralized Energy Aware Co-Optimization of Mobility and Communication in Multiagent Systems, pp. 2665-2670.

Jaleel, Hassan	King Abdullah Univ. of Science & Tech
Shamma, Jeff S.	KAUST

10:40-11:00	**TuA03.3**

Leader-Following Consensus of Multi-Agent Systems Via Event-Triggered H_{∞} Control with Markovian Switching Topology, pp. 2671-2676.

Yang, Ruohan	Tongji Univ
Zhang, Hao	Tongji Univ
Yan, Huaicheng	East China Univ. of Science and Tech
Yang, Fuwen	Griffith Univ

11:00-11:20	**TuA03.4**

Output H_{∞} Synchronization of Heterogeneous Linear Multi-Agent Systems Via a Distributed Output-Feedback, pp. 2677-2682.

Adib Yaghmaie, Farnaz	Nanyang Tech. Univ
Hengster-Movric, Kristian	Czech Tech. Univ. in Prague, FEL
Lewis, Frank L.	Univ. of Texas at Arlington
Su, Rong	Nanyang Tech. Univ
Sebek, Michael	Czech Tech. Univ. in Prague

11:20-11:40	**TuA03.5**

Cooperative Control of Heterogeneous Multi-Agent Systems in Sampled-Data Setting, pp. 2683-2688.

Joo, Youngjun	Univ. of Central Florida
Qu, Zhihua	Univ. of Central Florida
Harvey, Roland	Univ. of Central Florida

11:40-12:00	**TuA03.6**

Decentralized Adaptive Control of Robotic Systems Using Uncalibrated Joint Torque Sensors, pp. 2689-2694.

Namvar, Mehrzad	Sharif Univ. of Tech
Mostafa, Almodaressi	Sharif Univ. of Tech

TuA04	**Starvine 4**
Quantifying Controllability in Complex Networks: Analysis and Design (Invited Session)	

Chair: Tzoumas, Vasileios	Univ. of Pennsylvania
Co-Chair: Summers, Tyler H.	Univ. of Texas at Dallas
Organizer: Tzoumas, Vasileios	Univ. of Pennsylvania
Organizer: Summers, Tyler H.	Univ. of Texas at Dallas

10:00-10:20	**TuA04.1**

Near-Optimal Sensor Scheduling for Batch State Estimation: Complexity, Algorithms, and Limits (I), pp. 2695-2702.

Tzoumas, Vasileios	Univ. of Pennsylvania
Jadbabaie, Ali	MIT
Pappas, George J.	Univ. of Pennsylvania

10:20-10:40	**TuA04.2**

Actuator Placement in Networks Using Optimal Control Performance Metrics (I), pp. 2703-2708.

Summers, Tyler H.	Univ. of Texas at Dallas

10:40-11:00	**TuA04.3**

Secure Distributed Observers for a Class of Linear Time Invariant Systems in the Presence of Byzantine Adversaries (I), pp. 2709-2714.

Mitra, Aritra	Purdue Univ
Sundaram, Shreyas	Purdue Univ

11:00-11:20	**TuA04.4**

Leader Selection in Directed Networks (I), pp. 2715-2720.

Dhingra, Neil K	Univ. of Minnesota
Colombino, Marcello	ETH Zurich
Jovanovic, Mihailo	Univ. of Minnesota

11:20-11:40	**TuA04.5**

Enhanced Stability Analysis for Networked Control Systems under Random and Malicious Packet Losses, pp. 2721-2726.

Cetinkaya, Ahmet	Tokyo Inst. of Tech
Ishii, Hideaki	Tokyo Inst. of Tech
Hayakawa, Tomohisa	Tokyo Inst. of Tech

11:40-12:00	**TuA04.6**

Energy Efficient Time-Triggered Control Over Wireless Sensor/Actuator Networks, pp. 2727-2732.

S Varma, Vineeth	Univ. De Lorraine
Postoyan, Romain	CNRS-CRAN

TuA05	**Starvine 5**
Optimization-Based Estimation and Predictive Control under Uncertainty (Invited Session)	

Chair: Mesbah, Ali	Univ. of California, Berkeley
Co-Chair: Muñoz de la Peña, David	Univ. De Sevilla
Organizer: Mesbah, Ali	Univ. of California, Berkeley
Organizer: Lucia, Sergio	OvG Univ. of Magdeburg
Organizer: Findeisen, Rolf	OVG Univ. Magdeburg

10:00-10:20	**TuA05.1**

Enhancing Output Feedback MPC for Linear Discrete-Time Systems with Set-Valued Moving Horizon Estimation (I), pp. 2733-2738.

Brunner, Florian David	Univ. of Stuttgart
Muller, Matthias A.	Univ. of Stuttgart
Allgöwer, Frank	Univ. of Stuttgart

10:20-10:40	**TuA05.2**

Robust Economic Model Predictive Control of a Community Micro-Grid (I), pp. 2739-2744.

Pereira, Mario	Univ. De Sevilla
Muñoz de la Peña, David	Univ. De Sevilla
Limon, Daniel	Univ. De Sevilla

10:40-11:00	**TuA05.3**

Stochastic Predictive Control with Adaptive Model Maintenance (I), pp. 2745-2750.

Bavdekar, Vinay Anil	Univ. of California Berkeley
Ehlinger, Victoria	Univ. of California at Berkeley
Gidon, Dogan	UC Berkeley
Mesbah, Ali	Univ. of California, Berkeley

11:00-11:20	**TuA05.4**

Model Predictive Control for Uncertain Nonlinear Systems Subject to

Chance Constraints (I), pp. 2751-2756.

Yu, Shuyou	Jilin Univ
Qu, Ting	Jilin Univ
Findeisen, Rolf	OVG Univ. Magdeburg
Chen, Hong	Jilin Univ. Campus NanLing

11:20-11:40	TuA05.5

Finite-Horizon Dynamic Compensation of Markov Jump Linear Systems without Mode Observation (I), pp. 2757-2762.

Dolgov, Maxim	Karlsruhe Inst. of Tech. (KIT)
Kurz, Gerhard	Karlsruhe Inst. of Tech. (KIT)
Hanebeck, Uwe D.	Karlsruhe Inst. of Tech. (KIT)

11:40-12:00	TuA05.6

Exploiting Models of Different Granularity in Robust Predictive Control (I), pp. 2763-2768.

Bäthge, Tobias	OvGU Magdeburg
Lucia, Sergio	OvG Univ. of Magdeburg
Findeisen, Rolf	OVG Univ. Magdeburg

TuA06	Starvine 6
Optimal Control IV (Regular Session)	
Chair: Zhang, Jing	Tsinghua Univ
Co-Chair: Wang, Yuh-Shyang	California Inst. of Tech

10:00-10:20	TuA06.1

Localized LQR with Adaptive Constraint and Performance Guarantee, pp. 2769-2776.

Wang, Yuh-Shyang	California Inst. of Tech

10:20-10:40	TuA06.2

Optimal Control Protocols Can Be Exponentially Accelerated by Quantum Algorithms, pp. 2777-2782.

Sun, He	Tsinghua Univ
Zhang, Jing	Tsinghua Univ
Wu, Re-Bing	Tsinghua Univ
Rabitz, Herschel	Princeton Univ
Tarn, Tzyh-Jong	Washington Univ

10:40-11:00	TuA06.3

On the Hughes Model and Numerical Aspects, pp. 2783-2788.

Gomes, Diogo	King Abdullah Univ. of Science and Tech
Machado Velho, Roberto	King Abdullah Univ. of Science and Tech

11:00-11:20	TuA06.4

Symbolic Method for Deriving Policy in Reinforcement Learning, pp. 2789-2795.

Alibekov, Eduard	Czech Tech. Univ. in Prague
Kubalik, Jiri	Czech Inst. of Informatics, Robotics, and Cybernetics, CTU I
Babuska, R.	Delft Univ. of Tech

11:20-11:40	TuA06.5

An Optimum Control-Based Approach for Dynamic Positioning of Vessels, pp. 2796-2801.

Jayasiri, Awantha	Memorial Univ. of Newfoundland
Nandan, Anirudh	Memorial Univ. of Newfoundland
Imtiaz, Syed	Memorial Univ. of Newfoundland
Ahmed, Salim	Qatar Univ

11:40-12:00	TuA06.6

Multi-Agent Coordination in Dynamic Networks, pp. 2802-2807.

Romvary, Jordan J.	Massachusetts Inst. of Tech
Annaswamy, Anuradha M.	Massachusetts Inst. of Tech

TuA07	Starvine 7
Optimization Algorithms IV (Regular Session)	
Chair: Cantoni, Michael	Univ. of Melbourne
Co-Chair: Mishra, Bamdev	Amazon Development Centre India

10:00-10:20	TuA07.1

A Hessian-Free Algorithm for Solving Quadratic Optimization Problems with Nonlinear Equality Constraints, pp. 2808-2813.

Nguyen, Tuan T.	Eindhoven Univ. of Tech
Lazar, Mircea	Eindhoven Univ. of Tech
Butler, Hans	ASML

10:20-10:40	TuA07.2

A Variant to Sequential Quadratic Programming for Nonlinear Model Predictive Control, pp. 2814-2819.

Torrisi, Giampaolo	ETH Zurich
Grammatico, Sergio	Eindhoven Univ. of Tech
Smith, Roy S.	ETH Zurich
Morari, Manfred	ETH Zurich

10:40-11:00	TuA07.3

Scaled Stochastic Gradient Descent for Low-Rank Matrix Completion, pp. 2820-2825.

Mishra, Bamdev	Amazon Development Centre India
Sepulchre, Rodolphe	Univ. of Cambridge

11:00-11:20	TuA07.4

On a Class of Multi-Parametric Quadratic Programming and Its Applications to Machine Learning, pp. 2826-2833.

Zhou, Yuxun	UC Berkeley
Spanos, Costas	UC Berkeley

11:20-11:40	TuA07.5

A Compressive Sensing-Based Pixel Sharing Algorithm for High-Speed Atomic Force Microscopy, pp. 2834-2839.

Luo, Yufan	Boston Univ
Andersson, Sean B.	Boston Univ

11:40-12:00	TuA07.6

Guaranteed Maximum Power Point Tracking by Scalar Iterations with Quadratic Convergence Rate, pp. 2840-2845.

Shames, Iman	The Univ. of Melbroune
Farokhi, Farhad	The Univ. of Melbourne
Cantoni, Michael	Univ. of Melbourne

TuA08	Starvine 8
Stochastic Systems I (Regular Session)	
Chair: Carravetta, Francesco	IASI-CNR
Co-Chair: Solo, Victor	Univ. of New South Wales

10:00-10:20	TuA08.1

Motion Camouflage in the Presence of Sensory Noise and Delay, pp. 2846-2852.

Raju, Vidya	Univ. of Maryland
Krishnaprasad, P. S.	Univ. of Maryland

10:20-10:40	TuA08.2

Numerical Methods for Stochastic Differential Equations in the Stiefel

Manifold Made Simple, pp. 2853-2860.

Marjanovic, Goran	Univ. of New South Wales
Piggott, Marc James	Univ. of New South Wales
Solo, Victor	Univ. of New South Wales

10:40-11:00	TuA08.3

All Stabilizing and Concealing Gaussian Type Controllers for Linear Scalar Systems, pp. 2861-2866.

Sato, Kazuhiro	Kyoto Univ
Azuma, Shun-ichi	Kyoto Univ

11:00-11:20	TuA08.4

Coverage and Field Estimation on Bounded Domains by Diffusive Swarms, pp. 2867-2874.

Elamvazhuthi, Karthik	Arizona State Univ
Adams, Chase	Arizona State Univ
Berman, Spring	Arizona State Univ

11:20-11:40	TuA08.5

Field Kalman Filter and Its Approximation, pp. 2875-2880.

Bania, Piotr	AGH Univ. OF SCIENCE AND Tech
Baranowski, Jerzy	AGH Univ. of Science and Tech

11:40-12:00	TuA08.6

On Stock Trading Using a Controller with Delay: The Robust Positive Expectation Property, pp. 2881-2887.

Malekpour, Shirzad	Univ. of Wisconsin-Madison
Barmish, B. Ross	Univ. of Wisconsin

TuA09	Starvine 9
Estimation IV (Regular Session)	
Chair: Arcak, Murat	Univ. of California, Berkeley
Co-Chair: Alessandri, Angelo	Univ. of Genoa

10:00-10:20	TuA09.1

Joint Order Identification and Estimation of the Discrete Relaxation Spectrum for Ground Penetrating Radars, pp. 2888-2893.

Masoud, Ahamd A.	KFUPM
Al-Shaikhi, Ali	King Fahad Univ. of Petroleum & Minerals, Dhahran, Saudi Ar

10:20-10:40	TuA09.2

Parallel Dynamic Programming for Optimal Experiment Design in Nonlinear Systems, pp. 2894-2899.

Maidens, John	Univ. of California, Berkeley
Packard, Andrew K.	Univ. of California at Berkeley
Arcak, Murat	Univ. of California, Berkeley

10:40-11:00	TuA09.3

Stability Analysis and Robustness Assessment of Deterministic and Stochastic Nonlinear Moving Horizon Estimators, pp. 2900-2905.

Suwantong, Rata	The Geo-Informatics and Space Tech. Development Agency (Pub
Bertrand, Sylvain	ONERA
Dumur, Didier	CentraleSupelec
Beauvois, Dominique	Ec. Superieure D'Electricite

11:00-11:20	TuA09.4

Moving-Horizon Estimation for Discrete-Time Linear and Nonlinear Systems Using the Gradient and Newton Methods (I), pp. 2906-2911.

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

11:20-11:40	TuA09.5

SLAM Pose-Graph Robustification Via Multi-Scale Heat-Kernel Analysis, pp. 2912-2919.

Datta, Sayantan	International Inst. of Information Tech. Hyderabad
Tourani, Siddharth	IIIT Hyderabad
Sharma, Avinash	IIIT Hyderabad
Krishna, K. Madhava	IIIT-Hyderabad

11:40-12:00	TuA09.6

Fully Distributed State Estimation with Multiple Model Approach, pp. 2920-2925.

Wang, Shaocheng	Univ. of California, Riverside
Ren, Wei	Univ. of California, Riverside
Chen, Jie	Beijing Inst. of Tech

TuA10	Starvine 10
Identification IV (Regular Session)	
Chair: Leong, Alex S.	Paderborn Univ
Co-Chair: Chiuso, Alessandro	Univ. Di Padova

10:00-10:20	TuA10.1

Leading Impulse Response Identification Via the Weighted Elastic Net Criterion, pp. 2926-2931.

Calafiore, Giuseppe C.	Pol. Di Torino
Novara, Carlo	Pol. Di Torino
Taragna, Michele	Pol. Di Torino

10:20-10:40	TuA10.2

On the Identification of FIR Systems with Binary Input and Output Observations, pp. 2932-2937.

Leong, Alex S.	Paderborn Univ
Weyer, Erik	Univ. of Melbourne
Nair, Girish N.	Univ. of Melbourne

10:40-11:00	TuA10.3

System Identification from Partial Samples: Non-Asymptotic Analysis, pp. 2938-2944.

Rao, Milind	Stanford Univ
Kipnis, Alon	Stanford Univ
Javidi, Tara	Univ. of California, San Diego
Eldar, Yonina	Tech. Israel Inst. of Tech
Goldsmith, Andrea	Stanford Univ

11:00-11:20	TuA10.4

Online Semi-Parametric Learning for Inverse Dynamics Modeling, pp. 2945-2950.

Romeres, Diego	Univ. of Padova
Zorzi, Mattia	Univ. Degli Studi Di Padova
Chiuso, Alessandro	Univ. Di Padova
Camoriano, Raffaello	Istituto Italiano Di Tecnologia and Univ. Degli Studi Di Ge

11:20-11:40	TuA10.5

Innovation-Based Subspace Identification in Open and Closed-Loop, pp. 2951-2956.

Mercère, Guillaume	Univ. of Poitiers
Markovsky, Ivan	Vrije Univ. Brussel
Ramos, Jose A.	Nova Southeastern Univ

11:40-12:00	TuA10.6

Convergence Analysis of a Real-Time Identification Algorithm for Switched Linear Systems with Bounded Noise, pp. 2957-2962.

GOUDJIL, Abdelhak	Univ. of Caen Normandy

Pouliquen, Mathieu	Univ. De Caen
Pigeon, Eric	Univ. of CAEN
Gehan, Olivier	ENSICAEN

Adaptive Systems (Regular Session)

| Chair: Ebenbauer, Christian | Univ. of Stuttgart |
| Co-Chair: Gibson, Travis E. | Harvard Medical School |

10:00-10:20   TuA11.1

Extremum Control of Linear Systems Based on Output Feedback, pp. 2963-2968.

| Michalowsky, Simon | Univ. of Stuttgart |
| Ebenbauer, Christian | Univ. of Stuttgart |

10:20-10:40   TuA11.2

Adaptation and Synchronization Over a Network: Asymptotic Error Convergence and Pinning, pp. 2969-2974.

| Gibson, Travis E. | Harvard Medical School |

10:40-11:00   TuA11.3

Adaptive Control Algorithm for Linear Systems with Matched and Unmatched Uncertainties, pp. 2975-2980.

| Yayla, Metehan | Middle East Tech. Univ |
| Kutay, Ali | Middle East Tech. Univ |

11:00-11:20   TuA11.4

Identification of Unknown Sinusoids in 2 X 2 Linear Hyperbolic PDEs, pp. 2981-2987.

Anfinsen, Henrik	Norwegian Univ. of Science and Tech
Strecker, Timm	Norwegian Univ. of Science and Tech
Aamo, Ole Morten	NTNU

11:20-11:40   TuA11.5

Adaptation and Synchronization Over a Network: Stabilization without a Reference Model, pp. 2988-2993.

| Gibson, Travis E. | Harvard Medical School |

11:40-12:00   TuA11.6

Noisy Subspace Tracking in Continuous Time, pp. 2994-2999.

| Solo, Victor | Univ. of New South Wales |

Hybrid Systems (Regular Session)

| Chair: Schoellig, Angela P | Univ. of Toronto |
| Co-Chair: Dullerud, Geir E. | Univ. of Illinois, Urbana-Champaign |

10:00-10:20   TuA12.1

On the Construction of Safe Controllable Regions for Affine Systems with Applications to Robotics, pp. 3000-3005.

| Helwa, Mohamed K. | Univ. of Toronto |
| Schoellig, Angela P | Univ. of Toronto |

10:20-10:40   TuA12.2

Tracking Control for Hybrid Systems with State Jumps Using Gluing Function, pp. 3006-3011.

Kim, Jisu	Seoul National Univ
Shim, Hyungbo	Seoul National Univ
Seo, Jin H.	Seoul National Univ

10:40-11:00   TuA12.3

Verifying Continuous-Time Stochastic Hybrid Systems Via Mori-Zwanzig Model Reduction, pp. 3012-3017.

Wang, Yu	Univ. of Illinois at Urbana-Champaign
Roohi, Nima	Univ. of Illinois at Urbana-Champaign
West, Matthew	Univ. of Illinois, Urbana-Champaign
Viswanathan, Mahesh	Univ. of Illinois
Dullerud, Geir E.	Univ. of Illinois, Urbana-Champaign

11:00-11:20   TuA12.4

System of Funnels Framework for Robust Global Non-Linear Control, pp. 3018-3023.

Shvartsman, Rina	Univ. of Melbourne
Teel, Andrew R.	Univ. of California at Santa Barbara
Oetomo, Denny Nurjanto	The Univ. of Melbourne
Nesic, Dragan	Univ. of Melbourne

11:20-11:40   TuA12.5

Causal Impact Modeling of State Dependent Impulsive Affine Systems Using Non-Standard Analysis, pp. 3024-3029.

| Hyun, Nak-seung Patrick | Georgia Inst. of Tech |
| Verriest, Erik I. | Georgia Inst. of Tech |

11:40-12:00   TuA12.6

Stabilization of Linear Continuous-Time Systems Using Neuromorphic Vision Sensors, pp. 3030-3036.

Singh, Prince	MIT
Yong, Sze Zheng	Univ. of Michigan
GREGOIRE, Jean	Mines ParisTech
Censi, Andrea	MIT
Frazzoli, Emilio	Massachusetts Inst. of Tech

Nonlinear Systems I (Regular Session)

| Chair: Sjoberg, Jonas E. | Chalmers Univ. of Tech |
| Co-Chair: Jorgensen, John Bagterp | Tech. Univ. of Denmark |

10:00-10:20   TuA13.1

Recognizing System Parameters in Stochastic Complex Networks Using Adaptive Synchronization, pp. 3037-3041.

Tang, Ze	Department of Electrical Engineering, Yeungnam Univ. 280 D
Park, Ju H.	Yeungnam Univ
Jung, Ho-Youl	Yeungnam Univ
Lee, Tae H.	Yeungnam Univ

10:20-10:40   TuA13.2

Consistency Aspects of Wiener-Hammerstein Model Identification in Presence of Process Noise, pp. 3042-3047.

| Giordano, Giuseppe | Chalmers Univ. of Tech |
| Sjoberg, Jonas E. | Chalmers Univ. of Tech |

10:40-11:00   TuA13.3

An Efficient UD-Based Algorithm for the Computation of Maximum Likelihood Sensitivity of Continuous-Discrete Systems, pp. 3048-3053.

| Boiroux, Dimitri | Tech. Univ. of Denmark |
| Juhl, Rune | Tech. Univ. of Denmark |

| Madsen, Henrik | Tech. Univ. of Denmark |
| Jorgensen, John Bagterp | Tech. Univ. of Denmark |

| 11:00-11:20 | TuA13.4 |

Combined State and Parameter Estimation and Identifiability of State Space Realizations, pp. 3054-3059.

| Yu, Ming-Jui | Univ. of Michigan - Ann Arbor |
| Bernstein, Dennis S. | Univ. of Michigan |

| 11:20-11:40 | TuA13.5 |

A Simulated Maximum Likelihood Method for Estimation of Stochastic Wiener Systems, pp. 3060-3065.

| Abdalmoaty, Mohamed | KTH |
| Hjalmarsson, Håkan | KTH Royal Inst. of Tech |

| 11:40-12:00 | TuA13.6 |

Consistent Variable Selection for High-Dimensional Nonparametric Additive Nonlinear Systems, pp. 3066-3071.

Mu, Biqiang	Chinese Acad. of Sciences
Zheng, Wei Xing	Western Sydney Univ
Bai, Er-Wei	Univ. of Iowa

| **TuA14** | Ironwood 1 |
| **Event-Triggered and Self-Triggered Estimation and Output-Feedback Control** (Invited Session) | |

Chair: Hirche, Sandra	Tech. Univ. München
Co-Chair: Xia, Meng	The MathWorks
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 |

A QSR-Dissipativity and Passivity Based Analysis of Event-Triggered Networked Control Systems (I), pp. 3072-3077.

Rahnama, Arash	Univ. of Notre Dame
Xia, Meng	The MathWorks
Antsaklis, Panos J.	Univ. of Notre Dame

| 10:20-10:40 | TuA14.2 |

Self-Triggered Model Predictive Control for Continuous-Time Systems: A Multiple Discretizations Approach, pp. 3078-3083.

Hashimoto, Kazumune	Keio Univ
Adachi, Shuichi	Keio Univ
Dimarogonas, Dimos V.	Royal Inst. of Tech

| 10:40-11:00 | TuA14.3 |

Optimal Stationary Self-Triggered Sampling for Estimation (I), pp. 3084-3089.

Soleymani, Touraj	Tech. Univ. München
Hirche, Sandra	Tech. Univ. München
Baras, John S.	Univ. of Maryland

| 11:00-11:20 | TuA14.4 |

Self-Triggered Time-Varying Convex Optimization (I), pp. 3090-3097.

Fazlyab, Mahyar	Univ. of Pennsylvania
Nowzari, Cameron	Univ. of Pennsylvania
Pappas, George J.	Univ. of Pennsylvania
Ribeiro, Alejandro	Univ. of Pennsylvania
Preciado, Victor M.	Univ. of Pennsylvania

| 11:20-11:40 | TuA14.5 |

Predictive and Self Triggering for Event-Based State Estimation (I), pp. 3098-3105.

| Trimpe, Sebastian | Max Planck Inst. for Intelligent |

| | Systems |

| 11:40-12:00 | TuA14.6 |

Output Memory-Based Event-Triggered Control (I), pp. 3106-3111.

Davo, Miguel Angel	Gipsa-Lab (CNRS)
Fiacchini, Mirko	CNRS, Univ. Grenoble Alpes
Prieur, Christophe	CNRS

| **TuA15** | Ironwood 2 |
| **Controller Design and Stabilization of PDEs** (Invited Session) | |

Chair: Demetriou, Michael A.	Worcester Pol. Inst
Co-Chair: Le Gorrec, Yann	Ensmm, Femto-St / As2m
Organizer: Demetriou, Michael A.	Worcester Pol. Inst
Organizer: Fahroo, Fariba	DARPA
Organizer: Le Gorrec, Yann	Ensmm, Femto-St / As2m

| 10:00-10:20 | TuA15.1 |

Input-To-State Stabilization in H^1-Norm for Boundary Controlled Linear Hyperbolic PDEs with Application to Quantized Control (I), pp. 3112-3117.

Tanwani, Aneel	Laas -- Cnrs
Prieur, Christophe	CNRS
Tarbouriech, Sophie	LAAS-CNRS

| 10:20-10:40 | TuA15.2 |

Two Sided Boundary Stabilization of Two Linear Hyperbolic PDEs in Minimum Time (I), pp. 3118-3124.

| AURIOL, Jean | MINES ParisTech, PSL Res. Univ |
| Di Meglio, Florent | MINES ParisTech |

| 10:40-11:00 | TuA15.3 |

Control of Transport PDE/Nonlinear ODE Cascades with State-Dependent Propagation Speed (I), pp. 3125-3130.

Diagne, Mamadou	Univ. of Michigan Ann Arbor
Bekiaris-Liberis, Nikolaos	Tech. Univ. of Crete
Otto, Andreas	Chemnitz Univ. of Tech
Krstic, Miroslav	Univ. of California, San Diego

| 11:00-11:20 | TuA15.4 |

Control of a Thermal Fluid Heat Exchanger with Actuator Dynamics (I), pp. 3131-3136.

| Burns, John A | Virginia Tech |
| Zietsman, Lizette | Virginia Tech |

| 11:20-11:40 | TuA15.5 |

On the Control by Interconnection and Exponential Stabilisation of Infinite Dimensional Port-Hamiltonian Systems, pp. 3137-3142.

| Macchelli, Alessandro | Univ. of Bologna - Italy |

| 11:40-12:00 | TuA15.6 |

On Finite-Time Stabilization of Evolution Equations: A Homogeneous Approach, pp. 3143-3148.

Polyakov, Andrey	Inria Lille Nord-Europe
Coron, Jean-michel	Univ. Pierre Et Marie Curie
Rosier, Lionel	Univ. Henri Poincare Nancy 1

| **TuA16** | Ironwood 3 |
| **Delay Systems IV** (Regular Session) | |

| Chair: Malisoff, Michael | Louisiana State Univ |
| Co-Chair: Egorov, Alexey V. | SPbSU |

| 10:00-10:20 | TuA16.1 |

Scanning the Space of Parameters for Stability Regions of Neutral Type Delay Systems: A Lyapunov Matrix Approach, pp. 3149-3154.

Gomez, Marco A.	CINVESTAV
Cuvas, Carlos	Centro De Investigación Y De Estudios Avanzados Del Inst. Po
Mondié, Sabine	CINVESTAV-IPN
Egorov, Alexey V.	SPbSU

10:20-10:40	TuA16.2

A Finite Necessary and Sufficient Stability Condition for Linear Retarded Type Systems, pp. 3155-3160.

Egorov, Alexey V.	SPbSU

10:40-11:00	TuA16.3

Towards More General Stability Analysis of Systems with Delay-Dependent Coefficients, pp. 3161-3166.

Gu, Keqin	Southern Illinois Univ. Edwardsville
JIN, Chi	Supelec & Univ. Paris Saclay
Boussaada, Islam	IPSA & L2S, CNRS-Supelec-Univ. Paris Sud
Niculescu, Silviu-Iulian	CNRS-Supelec

11:00-11:20	TuA16.4

New Bounded Backstepping Control Designs for Time-Varying Systems under Converging-Input-Converging-State Conditions, pp. 3167-3171.

Mazenc, Frederic	Epi Inria Disco
Malisoff, Michael	Louisiana State Univ
Weston, Jerome	Louisiana State Univ

11:20-11:40	TuA16.5

D-Stability and Delay-Independent Stability of Monotone Nonlinear Systems with Max-Separable Lyapunov Functions, pp. 3172-3177.

Besselink, Bart	Univ. of Groningen
Feyzmahdavian, Hamid Reza	Royal Inst. of Tech. (KTH)
Sandberg, Henrik	KTH Royal Inst. of Tech
Johansson, Mikael	KTH - Royal Inst. of Tech

11:40-12:00	TuA16.6

New Prediction Approach for Stabilizing Time-Varying Systems under Time-Varying Input Delay, pp. 3178-3182.

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

TuA17	Ironwood 6
Predictive Control for Nonlinear Systems I (Regular Session)	
Chair: Aguiar, A. Pedro	Faculty of Engineering, Univ. of Porto
Co-Chair: Muller, Matthias A.	Univ. of Stuttgart

10:00-10:20	TuA17.1

Integrated/Coordinated Control of Aircraft Gas Turbine Engine and Electrical Power System: Towards Large Electrical Load Handling, pp. 3183-3189.

Seok, Jinwoo	Univ. of Michigan
Kolmanovsky, Ilya V.	The Univ. of Michigan
Girard, Anouck	Univ. of Michigan, Ann Arbor

10:20-10:40	TuA17.2

Integrating Production Scheduling and Process Operation Via Economic Model Predictive Control, pp. 3190-3195.

Alanqar, Anas	Univ. of California, Los Angeles
Durand, Helen	UCLA
Albalawi, Fahad	UCLA
Christofides, Panagiotis D.	Univ. of California at Los Angeles

10:40-11:00	TuA17.3

On the Design of Discrete-Time Economic Model Predictive Controllers, pp. 3196-3201.

Alessandretti, Andrea	Faculty of Engineering, Univ. of Porto (FEUP)
Aguiar, A. Pedro	Faculty of Engineering, Univ. of Porto
Jones, Colin N.	EPFL

11:00-11:20	TuA17.4

Nonlinear Model Predictive Control for Large Angle Attitude Maneuver of Spacecraft with RW and RCS, pp. 3202-3209.

Sakamoto, Atsushi	The Univ. of Electro-Communications
Ikeda, Yuichi	Shonan Inst. of Tech
Yamaguchi, Isao	National Defense Acad
Kida, Takashi	Univ. of Electro-Communications

11:20-11:40	TuA17.5

Min-Max Economic Model Predictive Control Approaches with Guaranteed Performance, pp. 3210-3215.

Bayer, Florian Anton	Univ. of Stuttgart
Muller, Matthias A.	Univ. of Stuttgart
Allgöwer, Frank	Univ. of Stuttgart

11:40-12:00	TuA17.6

Efficient Nonlinear Model Predictive Control Via Quasi-LPV Representation, pp. 3216-3221.

Gonzalez Cisneros, Pablo Sebastian	Hamburg Univ. of Tech
Voss, Sophia	Hamburg Univ. of Tech
Werner, Herbert	Hamburg Univ. of Tech

TuA18	Ironwood 7
Linear Matrix Inequalities (Regular Session)	
Chair: Fridman, Emilia	Tel-Aviv Univ
Co-Chair: Chiu, Wei-Yu	Yuan Ze Univ

10:00-10:20	TuA18.1

LMI-Based Adaptive Control for Uncertain Polytopic Systems, pp. 3222-3227.

Campos, Victor	Federal Univ. of Ouro Preto
Nguyen, AnhTu	Univ. of Valenciennes
Palhares, Reinaldo Martinez	Federal Univ. of Minas Gerais

10:20-10:40	TuA18.2

Convex LMI Approach for Stability of Critically Stable Systems with Slope-Restricted Nonlinearities, pp. 3228-3233.

Ahmad, Nur Syazreen	Univ. Sains Malaysia
Carrasco, Joaquin	Univ. of Manchester

10:40-11:00	TuA18.3

Analysis of an H_infty Design for Dynamic Pricing in the Smart Grid, pp. 3234-3239.

Chiu, Wei-Yu	Yuan Ze Univ

11:00-11:20	TuA18.4

Simple LMIs for Stabilization by Using Delays, pp. 3240-3245.

Fridman, Emilia	Tel-Aviv Univ
Shaikhet, Leonid	Tel Aviv Univ

11:20-11:40	TuA18.5

Control of Linear Parameter-Varying Systems Using B-Splines, pp. 3246-3251.

Hilhorst, Gijs	KU Leuven
Lambrechts, Erik	KU Leuven
Pipeleers, Goele	Katholieke Univ. Leuven

11:40-12:00   TuA18.6

Feasibility Analysis of the Bilinear Matrix Inequalities with an Application to Multi-Objective Nonlinear Observer Design, pp. 3252-3257.

Wang, Yan	Univ. of Minnesota
Rajamani, Rajesh	Univ. of Minnesota

TuA19   Ironwood 8
Power Systems IV (Regular Session)

Chair: Lestas, Ioannis	Univ. of Cambridge
Co-Chair: Turitsyn, Konstantin	Massachusetts Inst. of Tech

10:00-10:20   TuA19.1

Optimal Placement of Energy Storage in Distribution Networks, pp. 3258-3264.

Tang, Yujie	California Inst. of Tech
Low, Steven	California Inst. of Tech

10:20-10:40   TuA19.2

Decomposition-Based Global Optimization for Optimal Design of Power Distribution Systems, pp. 3265-3270.

Li, Dan	Queen's Univ
Li, Xiang	Queen's Univ

10:40-11:00   TuA19.3

Stability and Control of Ad Hoc DC Microgrids, pp. 3271-3278.

Belk, Julia	MIT
Inam, Wardah	MIT
Perreault, David	Massachusetts Inst. of Tech
Turitsyn, Konstantin	Massachusetts Inst. of Tech

11:00-11:20   TuA19.4

Analytical Investigation of Poorly Damped Conditions in VSC-HVDC Systems, pp. 3279-3285.

Song, Yujiao	Chalmers Univ. of Tech
Breitholtz, Claes	Chalmers Univ. of Tech
Stamatiou, Georgios	Chalmers Univ. of Tech
Bongiorno, Massimo	Chalmers Univ. of Tech

11:20-11:40   TuA19.5

Kirchhoff-Braess Phenomena in DC Electric Networks, pp. 3286-3293.

Wang, Shuai	Boston Univ
Baillieul, John	Boston Univ

11:40-12:00   TuA19.6

Stability and Optimality of Distributed Schemes for Secondary Frequency Regulation in Power Networks, pp. 3294-3299.

Kasis, Andreas	Univ. of Cambridge
Devane, Eoin	Univ. of Cambridge
Lestas, Ioannis	Univ. of Cambridge

TuA20   Coppearleaf 1
A Spacecraft Benchmark Problem for Analysis & Control of Hybrid Systems (Invited Session)

Chair: Erwin, Richard Scott	Air Force Res. Lab
Co-Chair: L'Afflitto, Andrea	The Univ. of Oklahoma
Organizer: Erwin, Richard Scott	Air Force Res. Lab
Organizer: L'Afflitto, Andrea	The Univ. of Oklahoma

10:00-10:20   TuA20.1

A Spacecraft Benchmark Problem for Hybrid Control and Estimation (I), pp. 3300-3305.

Jewison, Christopher	Massachusetts Inst. of Tech
Erwin, Richard Scott	Air Force Res. Lab

10:20-10:40   TuA20.2

Constrained Autonomous Satellite Docking Via Differential Flatness and Model Predictive Control (I), pp. 3306-3311.

S. Farahani, Samira	Max Plus Inst. for Software Systems
Papusha, Ivan	California Inst. of Tech
McGhan, Catharine	California Inst. of Tech
Murray, Richard M.	California Inst. of Tech

10:40-11:00   TuA20.3

Computing Reach-Avoid Sets for Space Vehicle Docking under Continuous Thrust (I), pp. 3312-3318.

HomChaudhuri, Baisravan	Univ. of New Mexico
Oishi, Meeko	Univ. of New Mexico
Shubert, Matthew	Univ. of New Mexico
Baldwin, Morgan	Air Force Res. Lab
Erwin, Richard Scott	Air Force Res. Lab

11:00-11:20   TuA20.4

Filter-Based Stochastic Abstractions for Constrained Planning with Limited Sensing (I), pp. 3319-3324.

Poonawala, Hasan A.	Univ. of Texas at Austin
Topcu, Ufuk	The Univ. of Texas at Austin

11:20-11:40   TuA20.5

Robust Hybrid Supervisory Control for Rendezvous and Docking of a Spacecraft (I), pp. 3325-3330.

Malladi, Bharaniprabha	Univ. of Arizona
Sanfelice, Ricardo G.	Univ. of California at Santa Cruz
Butcher, Eric	Univ. of Arizona
Wang, Jingwei	Univ. of Arizona

11:40-12:00   TuA20.6

Optimal Hybrid Controls for Global Exponential Tracking on the Two-Sphere, pp. 3331-3337.

Lee, Taeyoung	George Washington Univ

TuA21   Coppearleaf 2
Biomolecular Systems (Regular Session)

Chair: Franco, Elisa	Univ. of California at Riverside
Co-Chair: Materassi, Donatello	Univ. of Tennessee, Knoxville

10:00-10:20   TuA21.1

Design of a Multicellular Feedback Control Strategy in a Synthetic Bacterial Consortium (I), pp. 3338-3343.

Fiore, Gianfranco	Univ. of Bristol
Matyjaszkiewicz, Antoni	Univ. of Bristol
Annunziata, Fabio	Univ. of Bristol
Grierson, Claire	Univ. of Bristol
Savery, Nigel	Univ. of Bristol
Marucci, Lucia	Univ. of Bristol
di Bernardo, Mario	Univ. of Bristol

10:20-10:40   TuA21.2

Modelling, Simulation and Control of Single Cell Expression Dynamics of the Galactose-Inducible Promoter in Yeast (I), pp. 3344-3349.

Perrino, Giansimone	Univ. of Naples Federico II
di Bernardo, Diego	Telethon Inst. of Genetics and Medicine

10:40-11:00	TuA21.3

Exploring the Impact of Resource Limitations on Gene Network Reconstruction (I), pp. 3350-3355.

Tyler, Quarton	Univ. of Texas at Dallas
Kang, Taek	Univ. of Texas at Dallas
Sontag, Eduardo D.	Rutgers Univ
Bleris, Leonidas	Univ. of Texas at Dallas

11:00-11:20	TuA21.4

Steady State Dynamics of Molecular Motors Reveals Load Dependent Cooperativity, pp. 3356-3362.

Talukdar, Saurav	Univ. of Minnesota - Twin Cities
Bhaban, Shreyas	Univ. of Minnesota
Materassi, Donatello	Univ. of Tennessee, Knoxville
Salapaka, Murti V.	Univ. of Minnesota, Minneapolis

11:20-11:40	TuA21.5

Quantifying Resource Competition and Its Effects in the TX-TL System, pp. 3363-3368.

Gyorgy, Andras	Univ. of California, Berkeley
Murray, Richard M.	California Inst. of Tech

11:40-12:00	TuA21.6

Negative Feedback Enables Structurally Signed Steady-State Influences in Artificial Biomolecular Networks, pp. 3369-3374.

Giordano, Giulia	Lund Univ
Franco, Elisa	Univ. of California at Riverside

TuA22	Coppearleaf 3
Neural Networks (Regular Session)	
Chair: Bian, Tao	Pol. School of Engineering, New York Univ
Co-Chair: Ferrari, Silvia	Cornell Univ

10:00-10:20	TuA22.1

Value Iteration, Adaptive Dynamic Programming, and Optimal Control of Nonlinear Systems, pp. 3375-3380.

Bian, Tao	Pol. School of Engineering, New York Univ
Jiang, Zhong-Ping	New York Univ

10:20-10:40	TuA22.2

Spiking Neural Network (SNN) Control of a Flapping Insect-Scale Robot, pp. 3381-3388.

Clawson, Taylor	Cornell Univ
Ferrari, Silvia	Cornell Univ
Fuller, Sawyer	Univ. of Washington
Wood, Robert	Harvard Univ

10:40-11:00	TuA22.3

An Adaptive Control Scheme for Non-Canonical Discrete-Time Neural Network Systems, pp. 3389-3394.

Zhang, Yanjun	Nanjing Univ. of Aeronautics and Astronautics
Tao, Gang	Univ. of Virginia
Chen, Mou	Nanjing Univ. of Aeronautics and Astronautics

11:00-11:20	TuA22.4

Event-Sampled Direct Adaptive NN State-Feedback Control of Uncertain Strict-Feedback System, pp. 3395-3400.

Szanto, Nathan	Missouri Univ. of Science and Tech
Narayanan, Vignesh	Missouri Univ. of Science and Tech
Jagannathan, Sarangapani	Missouri Univ. of Science & Tech

11:20-11:40	TuA22.5

Optimum Training Design for Neural Network in Synthesis of Robust Model Predictive Control, pp. 3401-3406.

Patan, Krzysztof	Univ. of Zielona Gora
Patan, Maciej	Univ. of Zielona Gora
Kowalów, Damian	Univ. of Zielona Góra

TuA23	Ironwood 5
Formal Synthesis of Control Strategies for Dynamical Systems (Tutorial Session)	
Chair: Belta, Calin	Boston Univ
Organizer: Belta, Calin	Boston Univ

10:00-12:00	TuA23.1

Formal Synthesis of Control Strategies for Dynamical Systems (I), pp. 3407-3431.

Belta, Calin	Boston Univ

TuB01	Starvine 1
Networked Control Systems I (Regular Session)	
Chair: Mukherjee, Dwaipayan	Tech. Israel Inst. of Tech
Co-Chair: Sun, Zhiyong	Australian National Univ

13:30-13:50	TuB01.1

Retrofitting State Feedback Control of Networked Nonlinear Systems Based on Hierarchical Expansion, pp. 3432-3437.

Sadamoto, Tomonori	Tokyo Inst. of Tech
Ishizaki, Takayuki	Tokyo Inst. of Tech
Imura, Jun-ichi	Tokyo Inst. of Tech
Sandberg, Henrik	KTH Royal Inst. of Tech
Johansson, Karl H.	Royal Inst. of Tech

13:50-14:10	TuB01.2

Consensus Over Weighted Digraphs: A Robustness Perspective, pp. 3438-3443.

Mukherjee, Dwaipayan	Tech. Israel Inst. of Tech
Zelazo, Daniel	Tech. - Israel Inst. of Tech

14:10-14:30	TuB01.3

A New Distributed Zeno-Free Event-Triggered Algorithm for Multi-Agent Consensus, pp. 3444-3449.

Sun, Zhiyong	Australian National Univ
Huang, Na	Peking Univ
Anderson, Brian D.O.	Australian National Univ
Duan, Zhisheng	Peking Univ

14:30-14:50	TuB01.4

A Fixed Structure Topology for Wireless Networked Control Systems, pp. 3450-3455.

Al-Dabbagh, Ahmad	Univ. of Alberta
Chen, Tongwen	Univ. of Alberta

14:50-15:10	TuB01.5

Adaptive Control of Networked Distributed Systems with Unknown Interconnections, pp. 3456-3461.

Lymperopoulos, Georgios	Univ. of Southern California
Ioannou, Petros A.	Univ. of Southern California

15:10-15:30	TuB01.6

Formation Feasibility on Coordination Control of Networked Heterogeneous Systems with Drift Terms, pp. 3462-3467.

Sun, Zhiyong	Australian National Univ
Anderson, Brian D.O.	Australian National Univ

TuB02	Starvine 2
Agents-Based Systems V (Regular Session)	
Chair: Markdahl, Johan	Univ. of Luxembourg
Co-Chair: Varagnolo, Damiano	LTU Luleå Univ. of Tech

13:30-13:50	TuB02.1

Output Consensus of Second-Order Multi-Agent Systems with Mismatched Disturbances Via SMC and GPIO, pp. 3468-3473.

Li, Guipu	School of Automation, Southeast Univ
Wang, Xiangyu	Southeast Univ
Li, Shihua	Southeast Univ
Yang, Jun	Southeast Univ
Chen, Xisong	Southeast Univ

13:50-14:10	TuB02.2

A Tight Bound on the Bernoulli Trials Network Size Estimator, pp. 3474-3480.

Lucchese, Riccardo	LTU Luleå Univ. of Tech
Varagnolo, Damiano	LTU Luleå Univ. of Tech

14:10-14:30	TuB02.3

Global Stabilization of Rigid Formations Via Sliding Mode Control, pp. 3481-3486.

Lin, Yanjun	Zhejiang Univ
Wang, Lili	Yale Univ
Han, Tingrui	Zhejang Univ
Lin, Zhiyun	Zhejiang Univ
Zheng, Ronghao	City Univ. of Hong Kong

14:30-14:50	TuB02.4

Global Converegence Properties of a Consensus Protocol on the N-Sphere, pp. 3487-3492.

Markdahl, Johan	Univ. of Luxembourg
Goncalves, Jorge	Univ. of Cambridge

14:50-15:10	TuB02.5

Formation Control of Heterogeneous Agents Over Directed Graphs, pp. 3493-3498.

Han, Tingrui	Zhejang Univ
Lin, Zhiyun	Zhejiang Univ
Xu, Yun	Coll. of Electrical Engineering, Zhejiang Univ
Zheng, Ronghao	City Univ. of Hong Kong
Zhang, Haitao	Univ. of Science and Tech. of China

15:10-15:30	TuB02.6

Attitude Synchronization of Rigid Bodies Via Distributed Control, pp. 3499-3504.

Dong, Yili	Kyoto Univ
Ohta, Yoshito	Kyoto Univ

TuB03	Starvine 3
Cooperative Control V (Regular Session)	
Chair: Ishii, Hideaki	Tokyo Inst. of Tech
Co-Chair: Montijano, Eduardo	Centro Univ. De La Defensa

13:30-13:50	TuB03.1

Resilient Randomized Quantized Consensus with Delayed Information, pp. 3505-3510.

Dibaji, Seyed Mehran	Massachusetts Inst. of Tech
Ishii, Hideaki	Tokyo Inst. of Tech
Tempo, Roberto	CNR-IEIIT, Pol. Di Torino

13:50-14:10	TuB03.2

Multi-Robot Persistent Coverage with Optimal Times, pp. 3511-3517.

Palacios-Gasos, Jose Manuel	Univ. De Zaragoza
Montijano, Eduardo	Centro Univ. De La Defensa
Sagues, Carlos	Univ. De Zaragoza
Llorente, Sergio	BSH Bosh Siemens Home Appliances

14:10-14:30	TuB03.3

Distributed Estimation and Control for Robotic Sensor Networks, pp. 3518-3523.

Freundlich, Charles	Duke Univ
Lee, Soomin	Georgia Inst. of Tech
Zavlanos, Michael M.	Duke Univ

14:30-14:50	TuB03.4

Partial Attitude Consensus for Underactuated Satellite Clusters, pp. 3524-3529.

Brewer, John Matthew	Georgia Inst. of Tech
Tsiotras, Panagiotis	Georgia Inst. of Tech

14:50-15:10	TuB03.5

A Common Framework for Attitude Synchronization of Unit Vectors in Networks with Switching Topology, pp. 3530-3536.

Ótão Pereira, Pedro Miguel	KTH, Royal Inst. of Tech
Boskos, Dimitris	KTH
Dimarogonas, Dimos V.	Royal Inst. of Tech

15:10-15:30	TuB03.6

Sign-Consensus of Linear Multi-Agent Systems Over Signed Graphs Using a Fully Distributed Protocol, pp. 3537-3541.

Jiang, Ye	Southwest Jiaotong Univ
Zhang, Hongwei	Southwest Jiaotong Univ
Chen, Jie	City Univ. of Hong Kong

TuB04	Starvine 4
Social and Economic Networks (Invited Session)	
Chair: Ajorlou, Amir	Massachusetts Inst. of Tech
Co-Chair: Jadbabaie, Ali	MIT
Organizer: Ajorlou, Amir	Massachusetts Inst. of Tech
Organizer: Jadbabaie, Ali	MIT

13:30-13:50	TuB04.1

Notions of Centrality in Consensus Protocols with Structured Uncertainties (I), pp. 3542-3547.

Siami, Milad	Lehigh Univ
Bamieh, Bassam	Univ. of California at Santa Barbara
Bolouki, Sadegh	Univ. of Illinois, Urbana-Champaign

Motee, Nader	Lehigh Univ

13:50-14:10	TuB04.2

When Helbing Meets Laumond: The Headed Social Force Model, pp. 3548-3553.

Farina, Francesco	Univ. Di Siena
Fontanelli, Daniele	Univ. of Trento
Garulli, Andrea	Univ. Di Siena
Giannitrapani, Antonio	Univ. Di Siena
Prattichizzo, Domenico	Univ. of Siena

14:10-14:30	TuB04.3

Dynamic Models of Appraisal Networks Explaining Collective Learning (I), pp. 3554-3559.

MEI, WENJUN	Univ. of California, Santa Barbara
Friedkin, Noah E.	Univ. of California at Santa Barbara
Lewis, Kyle	UC Santa Barbara
Bullo, Francesco	Univ. California at Santa Barbara

14:30-14:50	TuB04.4

Improved Bounds on the Epidemic Threshold of Exact SIS Models on Complex Networks (I), pp. 3560-3565.

Azizan Ruhi, Navid	Caltech
Thrampoulidis, Christos	California Inst. of Tech
Hassibi, Babak	Caltech

14:50-15:10	TuB04.5

Slopey Quantizers Are Locally Optimal for Witsenhausen's Counterexample (I), pp. 3566-3571.

Ajorlou, Amir	Massachusetts Inst. of Tech
Jadbabaie, Ali	MIT

15:10-15:30	TuB04.6

The Discrete-Time Altafini Model of Opinion Dynamics with Communication Delays and Quantization (I), pp. 3572-3577.

Liu, Ji	Univ. of Illinois at Urbana-Champaign
El Chamie, Mahmoud	Univ. of Washington
Basar, Tamer	Univ. of Illinois, Urbana-Champaign
Acikmese, Behcet	Univ. of Washington

TuB05	Starvine 5
Game-Theoretic Control and Incentive Design for Large-Scale Multi-Agent Systems (Invited Session)	
Chair: Grammatico, Sergio	Eindhoven Univ. of Tech
Co-Chair: Moon, Jun	Ulsan National Inst. of Science and Tech
Organizer: Grammatico, Sergio	Eindhoven Univ. of Tech
Organizer: Zhu, Minghui	Pennsylvania State Univ

13:30-13:50	TuB05.1

Discrete-Time Stochastic Stackelberg Dynamic Games with a Large Number of Followers (I), pp. 3578-3583.

Moon, Jun	Ulsan National Inst. of Science and Tech
Basar, Tamer	Univ. of Illinois, Urbana-Champaign

13:50-14:10	TuB05.2

On Social Optima of Non-Cooperative Mean Field Games (I), pp. 3584-3590.

Li, Sen	Ohio State Univ
Zhang, Wei	The Ohio State Univ
Zhao, Lin	The Ohio State Univ
Lian, Jianming	Pacific Northwest National Lab
Kalsi, Karan	Pacific Northwest National Lab

14:10-14:30	TuB05.3

Inexact Best-Response Schemes for Stochastic Nash Games: Linear Convergence and Iteration Complexity Analysis (I), pp. 3591-3596.

Shanbhag, Uday V.	Pennsylvania State Univ
Sen, Suvrajeet	Univ. of Southern California
Pang, Jong-Shi	Univ. of Illinois, Urbana-Champaign

14:30-14:50	TuB05.4

Aggregative Control of Competitive Agents with Coupled Quadratic Costs and Shared Constraints (I), pp. 3597-3602.

Grammatico, Sergio	Eindhoven Univ. of Tech

14:50-15:10	TuB05.5

Repeated Games for Power Control in Wireless Communications: Equilibrium and Regret, pp. 3603-3610.

Zhou, Zhengyuan	Stanford Univ
Glynn, Peter	Stanford Univ
Bambos, Nicholas	Stanford Univ

15:10-15:30	TuB05.6

Parameterization of Equilibrium Assessment in Bayesian Game with Its Application to Belief Computation, pp. 3611-3616.

Kogiso, Kiminao	The Univ. of Electro-Communications
Suzuki, Takashi	The Univ. of Electro-Communications

TuB06	Starvine 6
Optimal Control V (Regular Session)	
Chair: Acikmese, Behcet	Univ. of Washington
Co-Chair: Savla, Ketan	Univ. of Southern California

13:30-13:50	TuB06.1

On the Optimal Control of Systems Evolving with State Suprema, pp. 3617-3623.

Azhmyakov, Vadim	Univ. De Medellin
Ahmed, Aftab	Georgia Inst. of Tech
Verriest, Erik I.	Georgia Inst. of Tech

13:50-14:10	TuB06.2

Optimal Actuator/Sensor Selection through Dynamic Output Feedback, pp. 3624-3629.

Argha, Ahmadreza	Univ. of Tech. Sydney
Su, Steven W.	Univ. of Tech. Sydney
Savkin, Andrey V.	Univ. of New South Wales

14:10-14:30	TuB06.3

A Hamilton-Jacobi-Bellman Approach for the Optimal Control of an Abort Landing Problem, pp. 3630-3635.

Bokanowski, Olivier	Univ. Paris-Diderot
Desilles, Anna	ENSTA ParisTech
Zidani, Hasnaa	ENSTA ParisTech
Assellaou, Mohamed	ENSTA Paris-Tech

14:30-14:50	TuB06.4

Successive Convexification of Non-Convex Optimal Control Problems and Its Convergence Properties, pp. 3636-3641.

Mao, Yuanqi	Univ. of Washington
Szmuk, Michael	Univ. of Washington
Acikmese, Behcet	Univ. of Washington

| 14:50-15:10 | TuB06.5 |

Derivative-Free Trajectory Optimization with Unscented Dynamic Programming, pp. 3642-3647.

| Manchester, Zachary | Harvard Univ |
| Kuindersma, Scott | Harvard Univ |

| 15:10-15:30 | TuB06.6 |

A Dynamic Programming Approach to Optimal Load Shedding Control of Cascading Failure in DC Power Networks, pp. 3648-3653.

| Ba, Qin | Univ. of Southern California |
| Savla, Ketan | Univ. of Southern California |

TuB07	Starvine 7
Optimization Algorithms V (Regular Session)	
Chair: Nielsen, Isak	Linköping Univ
Co-Chair: Hale, Matthew T.	Georgia Inst. of Tech

| 13:30-13:50 | TuB07.1 |

Reduced Memory Footprint in Multiparametric Quadratic Programming by Exploiting Low Rank Structure, pp. 3654-3661.

| Nielsen, Isak | Linköping Univ |
| Axehill, Daniel | Linköping Univ |

| 13:50-14:10 | TuB07.2 |

ADMM Prescaling for Model Predictive Control, pp. 3662-3667.

Rey, Felix	ETH Zurich
Frick, Damian	ETH Zurich, Automatic Control Lab
Domahidi, Alexander	ETH Zurich
Jerez, Juan Luis	ETH Zurich
Morari, Manfred	ETH Zurich
Lygeros, John	ETH Zurich

| 14:10-14:30 | TuB07.3 |

3D Multi-Contact Gait Design for Prostheses: Hybrid System Models, Virtual Constraints and Two-Step Direct Collocation, pp. 3668-3674.

Zhao, Huihua	Georgia Inst. of Tech
Hereid, Ayonga	Georgia Inst. of Tech
Ambrose, Eric	Georgia Inst. of Tech
Ames, Aaron D.	Georgia Inst. of Tech

| 14:30-14:50 | TuB07.4 |

An Improved Dual Newton Strategy for Scenario-Tree MPC, pp. 3675-3681.

Klintberg, Emil	Chalmers Univ. of Tech
Dahl, John	Chalmers
Fredriksson, Jonas	Chalmers Univ. of Tech
Gros, Sebastien	Chalmers Univ. of Tech

| 14:50-15:10 | TuB07.5 |

Improved Hessian Estimation for Adaptive Random Directions Stochastic Approximation, pp. 3682-3687.

DANDA, SAI KOTI REDDY	INDIAN Inst. OF SCIENCE , BANGALORE
L.A., Prashanth	Univ. of Maryland, Coll. Park
Bhatnagar, Shalabh	Indian Inst. of Science

| 15:10-15:30 | TuB07.6 |

Differentially Private Objective Functions in Distributed Cloud-Based Optimization, pp. 3688-3694.

Wang, Yu	Univ. of Illinois at Urbana-Champaign
Hale, Matthew T.	Georgia Inst. of Tech
Egerstedt, Magnus	Georgia Inst. of Tech
Dullerud, Geir E.	Univ. of Illinois, Urbana-Champaign

TuB08	Starvine 8
Stochastic Systems II (Regular Session)	
Chair: Soltani, Mohammad	Univ. of Delaware
Co-Chair: Possieri, Corrado	Univ. Di Roma Tor Vergata

| 13:30-13:50 | TuB08.1 |

Kelly Betting Can Be Too Conservative, pp. 3695-3701.

Hsieh, Chung-Han	Univ. of Wisconsin-Madison
Barmish, B. Ross	Univ. of Wisconsin
Gubner, John A.	Univ. of Wisconsin-Madison

| 13:50-14:10 | TuB08.2 |

Moment Dynamics for Linear Time-Triggered Stochastic Hybrid Systems, pp. 3702-3707.

| Soltani, Mohammad | Univ. of Delaware |
| Singh, Abhyudai | Univ. of Delaware |

| 14:10-14:30 | TuB08.3 |

Stability of Continuous-Time Systems with Stochastic Delay, pp. 3708-3713.

| Sadeghpour, Mehdi | Univ. of Michigan |
| Orosz, Gabor | Univ. of Michigan |

| 14:30-14:50 | TuB08.4 |

Weak Reachability and Strong Recurrence for Stochastic Directed Graphs in Terms of Auxiliary Functions, pp. 3714-3719.

| Possieri, Corrado | Univ. Di Roma Tor Vergata |
| Teel, Andrew R. | Univ. of California at Santa Barbara |

| 14:50-15:10 | TuB08.5 |

Stability and Stabilization of Discrete-Time Semi-Markov Jump Linear Systems with Delay in Controller Mode Switching, pp. 3720-3725.

Ning, Zepeng	Harbin Inst. of Tech
Shen, Junnan	Harbin Inst. of Tech
Shi, Peng	Univ. of Adelaide
Zhang, Lixian	Harbin Inst. of Tech
Jiang, Zhe	Acad. of Mathematics and Systems Science

| 15:10-15:30 | TuB08.6 |

Finite-Time Partial Stability for Stochastic Dynamical Systems, pp. 3726-3731.

| Rajpurohit, Tanmay | Georgia Inst. of Tech |
| Haddad, Wassim M. | Georgia Inst. of Tech |

TuB09	Starvine 9
Estimation V (Regular Session)	
Chair: Karlsson, Niklas	AOL Platforms/Verizon
Co-Chair: Kim, Jongrae	Univ. of Leeds

| 13:30-13:50 | TuB09.1 |

Adaptive Estimation of Small Event Rates, pp. 3732-3737.

| Karlsson, Niklas | AOL Platforms/Verizon |

| 13:50-14:10 | TuB09.2 |

Negative-Free Approximation of Probability Density Function for Nonlinear Projection Filter, pp. 3738-3743.

Kim, Jongrae	Univ. of Leeds
Richardson, Robert	Univ. of Leeds

14:10-14:30	TuB09.3

Online Adaptive Bank of Recursive Least Square Estimators for Slowly Time-Varying and Abruptly Changing Systems, pp. 3744-3750.

Sakakura, Yoshiaki	DENSO IT Lab. INC
Yamano, Chiharu	DENSO IT Lab. INC

14:30-14:50	TuB09.4

A Self--Tuning Velocity Observer Formulation for a Class of Nonlinear Systems, pp. 3751-3756.

Bidikli, Baris	The Graduate School of Engineering and Applied Sciences, Dokuz E
Tatlicioglu, Enver	Izmir Inst. of Tech
Zergeroglu, Erkan	Gebze Inst. of Tech

14:50-15:10	TuB09.5

Computationally Tractable Robust Moving Horizon Estimation Using an Approximate Convex Hull (I), pp. 3757-3762.

Sartipizadeh, Hossein	Department of Electrical Engineering, Colorado School of Mines
Vincent, Tyrone L.	Colorado School of Mines

15:10-15:30	TuB09.6

Estimation of Multi-Sinusoidal Signals: A Deadbeat Methodology, pp. 3763-3768.

Chen, Boli	Imperial Coll. London
Li, Peng	Imperial Coll. London
Pin, Gilberto	Electrolux Professional S.p.A. (Italy)
Parisini, Thomas	Imperial Coll. & Univ. of Trieste

TuB10	Starvine 10
Identification V (Regular Session)	
Chair: Romeres, Diego	Univ. of Padova
Co-Chair: Gehan, Olivier	ENSICAEN

13:30-13:50	TuB10.1

Real-Time Identification of Linear Continuous-Time Systems with Slowly Time-Varying Parameters, pp. 3769-3774.

Padilla Bernedo, Arturo Andrés	Univ. De La Frontera
Garnier, Hugues	Univ. of Lorraine
Young, Peter C.	Lancaster Univ
Yuz, Juan I.	Univ. Tecnica Federico Santa Maria

13:50-14:10	TuB10.2

Online Identification of Time-Varying Systems: A Bayesian Approach, pp. 3775-3780.

Prando, Giulia	Univ. Di Padova
Romeres, Diego	Univ. of Padova
Chiuso, Alessandro	Univ. Di Padova

14:10-14:30	TuB10.3

Structural Properties of Affine LPV to LFR Transformation: Minimality, Input-Output Behavior and Identifiability, pp. 3781-3786.

Alkhoury, Ziad	Univ. of Poitiers
Petreczky, Mihaly	UMR CNRS 9189, Ec. Centrale De Lille
Mercère, Guillaume	Univ. of Poitiers

14:30-14:50	TuB10.4

Continuous-Time System Identification Using Binary Measurements, pp. 3787-3792.

Pouliquen, Mathieu	Univ. De Caen
GOUDJIL, Abdelhak	Univ. of Caen Normandy
Gehan, Olivier	ENSICAEN
Pigeon, Eric	Univ. of CAEN

14:50-15:10	TuB10.5

Bounded Error Identification Exploiting A-Priori Information on Noise Whiteness and Noise/output Correlation, pp. 3793-3799.

Cerone, Vito	Pol. Di Torino
Razza, Valentino	Pol. Di Torino
Regruto, Diego	Pol. Di Torino

15:10-15:30	TuB10.6

A Single Stage Algorithm for Set-Membership Identification of Nonlinear Systems in Lur'e Form, pp. 3800-3806.

Cerone, Vito	Pol. Di Torino
Razza, Valentino	Pol. Di Torino
Regruto, Diego	Pol. Di Torino

TuB11	Starvine 11
Robust Adaptive Control (Regular Session)	
Chair: Yucelen, Tansel	Missouri Univ. of Science and Tech
Co-Chair: Song, Yongduan	Chongqing Univ

13:30-13:50	TuB11.1

Model Reference Adaptive Control in the Presence of High-Order Actuator Dynamics, pp. 3807-3812.

Gruenwald, Benjamin	Univ. of South Florida
Yucelen, Tansel	Univ. of South Florida
Muse, Jonathan	Wright Patterson Air Force Base
Wagner, Daniel	Missouri Univ. of Science and Tech

13:50-14:10	TuB11.2

An Adaptive Controller to Provide Near Optimal LQR Performance, pp. 3813-3818.

Miller, Daniel E.	Univ. of Waterloo

14:10-14:30	TuB11.3

Decentralized Global Robust Output Regulation for Nonlinear Multi-Agent Systems in Output Feedback Form with Arbitrarily Large Uncertainty, pp. 3819-3824.

Liu, Wei	The Chinese Univ. of Hong Kong
Huang, Jie	The Chinese Univ. of Hong Kong
Lin, Zongli	Univ. of Virginia

14:30-14:50	TuB11.4

Robustness of Adaptive Control for Three-Dimensional Curve Tracking under State Constraints: Effects of Scaling Control Terms (I), pp. 3825-3830.

Malisoff, Michael	Louisiana State Univ
Sizemore, Robert	Louisiana State Univ
Zhang, Fumin	Georgia Inst. of Tech

14:50-15:10	TuB11.5

Order Determination and Robust Adaptive Control of Unknown Deterministic Input-Affine Systems: An Operational Controller, pp. 3831-3836.

Jahandari, Sina	Univ. of Tennessee
Kalhor, Ahmad	Univ. of Tehran
Araabi, Babak N.	Univ. of Tehran

| 15:10-15:30 | TuB11.6 |

Time-Varying Feedback for Finite-Time Robust Regulation of Normal-Form Nonlinear Systems, pp. 3837-3842.

Song, Yongduan	Chongqing Univ
Wang, Yujuan	Chongqing Univ
Holloway, John	Univ. of California, San Diego
Krstic, Miroslav	Univ. of California, San Diego

TuB12	Starvine 12
Algebraic and Geometric Methods I (Regular Session)	
Chair: NICOLAU, Florentina	INRIA
Co-Chair: Scarciotti, Giordano	Imperial Coll. London

| 13:30-13:50 | TuB12.1 |

A Geometric Characterisation of the Persistence of Excitation Condition for Sequences Generated by Discrete-Time Autonomous Systems, pp. 3843-3847.

Padoan, Alberto	Imperial Coll. London
Scarciotti, Giordano	Imperial Coll. London
Astolfi, Alessandro	Imperial Coll. & Univ. of Rome

| 13:50-14:10 | TuB12.2 |

Steering for Beacon Pursuit under Limited Sensing, pp. 3848-3855.

Halder, Udit	Univ. of Maryland, Coll. Park
Schlotfeldt, Brent	Univ. of Maryland
Krishnaprasad, P. S.	Univ. of Maryland

| 14:10-14:30 | TuB12.3 |

Some Geometric Ideas for Feature Enhancement of Diffusion Tensor Fields, pp. 3856-3861.

Farooq, Hamza	Univ. of Minnesota
Chen, Yongxin	Univ. of Minnesota
Georgiou, Tryphon T.	Univ. of California, Irvine
Lenglet, Christophe	Univ. of Minnesota

| 14:30-14:50 | TuB12.4 |

Flatness of Two-Input Control-Affine Systems Linearizable Via a Two-Fold Prolongation, pp. 3862-3867.

| NICOLAU, Florentina | INRIA |
| Respondek, Witold | INSA De Rouen |

| 14:50-15:10 | TuB12.5 |

Affine Systems on Lie Groups and Invariance Entropy (I), pp. 3868-3873.

| Da Silva, Adriano J. | Univ. of Campinas |

| 15:10-15:30 | TuB12.6 |

On Differential Input-To-State Stability, pp. 3874-3879.

| Kawano, Yu | Kyoto Univ |

TuB13	Starvine 13
Nonlinear Systems II (Regular Session)	
Chair: Baldi, Simone	Delft Univ. of Tech
Co-Chair: Wang, Yin	Northeastern Univ

| 13:30-13:50 | TuB13.1 |

Output Feedback Control of Rational Nonlinear Systems: A New Approach Based on Passivity Indices, pp. 3880-3885.

| Madeira, Diego de S. | Tech. Univ. Darmstadt |

| Adamy, Jürgen | Tech. Univ. Darmstadt |

| 13:50-14:10 | TuB13.2 |

Fixed-Time Output Stabilization of a Chain of Integrators, pp. 3886-3891.

Lopez-Ramirez, Francisco	INRIA Lille-Nord Europe
Efimov, Denis	Inria
Polyakov, Andrey	Inria Lille Nord-Europe
Perruquetti, Wilfrid	Ec. Centrale De Lille

| 14:10-14:30 | TuB13.3 |

An Iterative Sum-Of-Squares Optimization for Static Output Feedback of Polynomial Systems, pp. 3892-3897.

| Baldi, Simone | Delft Univ. of Tech |

| 14:30-14:50 | TuB13.4 |

An RKHS Approach to Systematic Kernel Selection in Nonlinear System Identification, pp. 3898-3903.

Bhujwalla, Yusuf	Univ. De Lorraine
Laurain, Vincent	Univ. De Lorraine
Gilson, Marion	Univ. of Lorraine

| 14:50-15:10 | TuB13.5 |

Identification of Switched Wiener Systems Based on Local Embedding, pp. 3904-3909.

Zhang, Xikang	Northeastern Univ
Cheng, Yongfang	Northeastern Univ
Wang, Yin	Northeastern Univ. / Avigilon
Sznaier, Mario	Northeastern Univ
Camps, Octavia I.	Northeastern Univ

| 15:10-15:30 | TuB13.6 |

Observer Design for a Class of Nonlinear Singular Systems, pp. 3910-3914.

Zheng, Gang	INRIA
Boutat, Driss	INSA Centre Val De Loire
WANG, Haoping	Nanjing Univ. of Science and Tech

TuB14	Ironwood 1
Discrete Event Systems (Regular Session)	
Chair: Lafortune, Stephane	Univ. of Michigan
Co-Chair: Warnick, Sean	Brigham Young Univ

| 13:30-13:50 | TuB14.1 |

Finding the Weakest Link(s): Coalition Games for Decentralized Discrete-Event Control, pp. 3915-3922.

| Ricker, S. Laurie | Mount Allison Univ |
| Marchand, Herve | INRIA Rennes - Bretagne Atlantique |

| 13:50-14:10 | TuB14.2 |

On the Maximally-Permissive Range Control Problem in Partially-Observed Discrete Event Systems, pp. 3923-3928.

| Yin, Xiang | Univ. of Michigan |
| Lafortune, Stephane | Univ. of Michigan |

| 14:10-14:30 | TuB14.3 |

Deadbeat-Like Approximations for Sequencing Non-Rigid Heaps, pp. 3929-3934.

| Grimsman, David | Brigham Young Univ |
| Warnick, Sean | Brigham Young Univ |

| 14:30-14:50 | TuB14.4 |

On Liveness Enforcement for DSSP Net Systems, pp. 3935-3941.

| Clavel Villagrasa, Daniel | Univ. of Zaragoza, Spain |

Mahulea, Cristian	Univ. of Zaragoza
Silva, Manuel	Univ. De Zaragoza

14:50-15:10	TuB14.5

Cycle Time Optimization for Deterministic Timed Weighted Marked Graphs under Infinite Server Semantics, pp. 3942-3947.

He, Zhou	Xidian Univ. & Aix-Marseille Univ
Li, Zhiwu	Xidian Univ
Giua, Alessandro	Aix-Marseille Univ. & Univ. of Cagliari

15:10-15:30	TuB14.6

Codiagnosability Verification of Bounded Petri Nets Using Basis Markings, pp. 3948-3953.

Ran, Ning	Zhejiang Univ
Su, Hongye	Zhejiang Univ
Giua, Alessandro	Aix-Marseille Univ. & Univ. of Cagliari
Seatzu, Carla	Univ. of Cagliari

TuB15	Ironwood 2
Novel Estimation Schemes for PDEs (Invited Session)	
Chair: Demetriou, Michael A.	Worcester Pol. Inst
Co-Chair: Alessandri, Angelo	Univ. of Genoa
Organizer: Demetriou, Michael A.	Worcester Pol. Inst
Organizer: Fahroo, Fariba	DARPA
Organizer: Le Gorrec, Yann	Ensmm, Femto-St / As2m

13:30-13:50	TuB15.1

Gradient-Based Schemes of Mobile Sensor Guidance for Estimating Spatially Distributed Systems in Hazardous Environments Using Value of Information (I), pp. 3954-3959.

Demetriou, Michael A.	Worcester Pol. Inst

13:50-14:10	TuB15.2

Sparse Kinetic Jurdjevic-Quinn Control for Mean-Field Equations (I), pp. 3960-3965.

Piccoli, Benedetto	Rutgers Univ. - Camden
Rossi, Francesco	Aix-Marseille Univ
Trelat, Emmanuel	Univ. Pierre Et Marie Curie (Paris 6)

14:10-14:30	TuB15.3

Extended Kalman Filtering to Design Optimal Controllers of Fronts Generated by Level Set Methods (I), pp. 3966-3971.

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

14:30-14:50	TuB15.4

Robust Iterative Observer for Source Localization for Poisson Equation (I), pp. 3972-3978.

Majeed, Muhammad Usman	King Abdullah Univ. of Science and Tech. KAUST
Laleg-Kirati, Taous-Meriem	King Abdullah Univ. of Science and Tech. (KAUST)

14:50-15:10	TuB15.5

Filter Comparison for Estimation on Discretized PDEs Modeling Traffic: Ensemble Kalman Filter and Minimax Filter (I), pp. 3979-3984.

Seo, Toru	Tokyo Inst. of Tech
Tchrakian, Tigran	IBM
Zhuk, Sergiy	IBM

Bayen, Alexandre	Univ. of California at Berkeley

15:10-15:30	TuB15.6

D-Optimal Spatio-Temporal Sampling Design for Identification of Distributed Parameter Systems (I), pp. 3985-3990.

Patan, Maciej	Univ. of Zielona Gora
Ucinski, Dariusz	Univ. of Zielona Gora

TuB16	Ironwood 3
Sampled-Data Control (Regular Session)	
Chair: Morarescu, Irinel-Constantin	Cran Cnrs Umr 7039 - Ul
Co-Chair: Yamamoto, Kaoru	Univ. of Minnesota

13:30-13:50	TuB16.1

Stability Analysis for Systems with Asynchronous Sensors and Actuators, pp. 3991-3996.

Fiacchini, Mirko	CNRS, Univ. Grenoble Alpes
Morarescu, Irinel-Constantin	Cran Cnrs Umr 7039 - Ul

13:50-14:10	TuB16.2

A General Sampled Observability Result and Its Applications, pp. 3997-4002.

Zeng, Shen	Univ. of Stuttgart
Allgöwer, Frank	Univ. of Stuttgart

14:10-14:30	TuB16.3

Tracking of Signals Beyond the Nyquist Frequency, pp. 4003-4008.

Yamamoto, Yutaka	Kyoto Univ
Yamamoto, Kaoru	Univ. of Minnesota
Nagahara, Masaaki	The Univ. of Kitakyushu

14:30-14:50	TuB16.4

The L_infty/L_2 Hankel Norm of Sampled-Data Systems, pp. 4009-4014.

Hagiwara, Tomomichi	Kyoto Univ
Inai, Akira	Kyoto Univ
Kim, Jung Hoon	Korea Inst. of Science and Tech

14:50-15:10	TuB16.5

Tracking Control Method for a Plant with Continuous Time Unstable Zeros: Finite Preactuation Based on State Trajectory Regeneration by Using Redundant Order Polynomial, pp. 4015-4020.

Ohnishi, Wataru	The Univ. of Tokyo
Fujimoto, Hiroshi	The Univ. of Tokyo

15:10-15:30	TuB16.6

A Study on Discretization Approach to the L-Infinity/l-2 Optimal Controller Synthesis Problem in Sampled-Data Systems, pp. 4021-4026.

Kim, Jung Hoon	Korea Inst. of Science and Tech
Hagiwara, Tomomichi	Kyoto Univ

TuB17	Ironwood 6
Predictive Control for Nonlinear Systems II (Regular Session)	
Chair: Lu, Qiugang	The Univ. of British Columbia
Co-Chair: TAHIROVIC, Adnan	Univ. of Sarajevo

13:30-13:50	TuB17.1

A Formulation of Advanced-Step Bilinear Carleman Approximation-Based Nonlinear Model Predictive Control, pp. 4027-4032.

Fang, Yizhou	The Pennsylvania State Univ
Armaou, Antonios	The Pennsylvania State Univ

13:50-14:10	TuB17.2

A Globally Stabilizing Nonlinear Model Predictive Control Framework, pp. 4033-4039.

TAHIROVIC, Adnan	Univ. of Sarajevo
Dzuzdanovic, Samir	Kv Team

14:10-14:30	TuB17.3

Multiobjective Economic Model Predictive Control of Mechanical Pulping Processes, pp. 4040-4045.

TIAN, HUI	The Univ. of British Columbia
Lu, Qiugang	The Univ. of British Columbia
Gopaluni, Bhushan	Univ. of British Columbia
Zavala, Victor	Univ. of Wisconsin-Madison

14:30-14:50	TuB17.4

A Linearized Robust Model Predictive Control Applied to Bioprocess, pp. 4046-4052.

BENATTIA, Seif Eddine	Supélec
Tebbani, Sihem	Supelec
Dumur, Didier	CentraleSupelec

14:50-15:10	TuB17.5

Optimal Charging of a Li-Ion Cell: A Hybrid Model Predictive Control Approach, pp. 4053-4058.

Torchio, Marcello	Univ. of Pavia
Magni, Lalo	Univ. of Pavia
Braatz, Richard D.	Massachusetts Inst. of Tech
Raimondo, Davide Martino	Univ. Degli Studi Di Pavia

15:10-15:30	TuB17.6

A Tube-Based Approach to Nonlinear Explicit MPC, pp. 4059-4064.

Bayer, Florian Anton	Univ. of Stuttgart
Brunner, Florian David	Univ. of Stuttgart
Lazar, Mircea	Eindhoven Univ. of Tech
Wijnand, Marc Gerard Albert	Alten
Allgöwer, Frank	Univ. of Stuttgart

TuB18	Ironwood 7
Uncertain Systems (Regular Session)	
Chair: Lin, Wei	Case Western Res. Univ
Co-Chair: Findeisen, Rolf	OVG Univ. Magdeburg

13:30-13:50	TuB18.1

Verifying Robust Forward Admissibility for Nonlinear Systems Using (Skewed) Structured Singular Values, pp. 4065-4071.

Kishida, Masako	National Inst. of Informatics
Koegel, Markus	OVG Univ. Magdeburg
Findeisen, Rolf	OVG Univ. Magdeburg

13:50-14:10	TuB18.2

Numerical Verification of Equilibrium Location Bounds and Local Stability for Nonlinear Systems with Parameter Uncertainty, pp. 4072-4077.

Spetzler, Max	Univ. of Washington
Narang-Siddarth, Anshu	Univ. of Washington

14:10-14:30	TuB18.3

Robust Stabilization of Nonminimum-Phase Systems with Uncertainty by Sampled-Data Output Feedback, pp. 4078-4083.

Lin, Wei	Case Western Res. Univ
Wei, Wei	Harbin Inst. of Tech. Shenzhen Graduate School

14:30-14:50	TuB18.4

Robust Steady State Optimization for Polytopic Systems, pp. 4084-4089.

Brunner, Florian David	Univ. of Stuttgart
Bayer, Florian Anton	Univ. of Stuttgart
Allgöwer, Frank	Univ. of Stuttgart

14:50-15:10	TuB18.5

Interval Observer for LPV Systems Based on Time-Variant Transformations, pp. 4090-4096.

Krebs, Stefan	Inst. of Control Systems, Karlsruhe Inst. of Tech
Pfeifer, Martin	Inst. of Control Systems, Karlsruhe Inst. of Tech
Fugel, Sebastian	KIT, Inst. of Control Systems
Weigold, Jörg	Daimler AG
Hohmann, Soeren	KIT

15:10-15:30	TuB18.6

Convex Estimation of the $alpha$-Confidence Reachable Sets of Systems with Parametric Uncertainty, pp. 4097-4103.

Holmes, Patrick	Univ. of Michigan
Kousik, Shreyas	Univ. of Michigan - Ann Arbor
Mohan, Shankar	Univ. of Michigan
Vasudevan, Ramanarayan	Univ. of Michigan

TuB19	Ironwood 8
Power Systems V (Regular Session)	
Chair: Lavaei, Javad	UC Berkeley
Co-Chair: Efimov, Denis	Inria - Lne

13:30-13:50	TuB19.1

Augmenting the Optimal Power Flow for Stability, pp. 4104-4109.

Bazrafshan, Mohammadhafez	The Univ. of Texas at San Antonio
Gatsis, Nikolaos	The Univ. of Texas at San Antonio
Taha, Ahmad	Univ. of Texas at San Antonio
Taylor, Joshua	Univ. of Toronto

13:50-14:10	TuB19.2

Optimal Power Dispatch in Networks of High-Dimensional Models of Synchronous Machines, pp. 4110-4115.

Stegink, Tjerk	Univ. of Groningen
De Persis, Claudio	Univ. of Groningen
van der Schaft, Arjan	Univ. of Groningen

14:10-14:30	TuB19.3

Nonlinear Analysis of an Improved Swing Equation, pp. 4116-4121.

Monshizadeh, Pooya	Univ. of Groningen
De Persis, Claudio	Univ. of Groningen
Monshizadeh, Nima	Univ. of Groningen
van der Schaft, Arjan	Univ. of Groningen

14:30-14:50	TuB19.4

MinGen: Minimal Generator Set Selection for Small Signal Stability in Power Systems: A Submodular Framework, pp. 4122-4129.

Liu, Zhipeng	Univ. of Washington
Clark, Andrew	Worcester Pol. Inst
Lee, Phillip	Univ. of Washington
Bushnell, Linda	Univ. of Washington
Kirschen, Daniel	Univ. of Washington
Poovendran, Radha	Univ. of Washington, Seattle

14:50-15:10	TuB19.5

Almost Global Attractivity of a Synchronous Generator Connected to an Infinite Bus, pp. 4130-4135.

Barabanov, Nikita	North Dakota State Univ
Schiffer, Johannes	Univ. of Leeds
Ortega, Romeo	LSS-SUPELEC
Efimov, Denis	Inria

15:10-15:30	TuB19.6

Stability Analysis of Power Systems with Photovoltaic Generators, pp. 4136-4141.

Izumi, Shinsaku	Okayama Prefectural Univ
Karakawa, Yuya	Okayama Prefectural Univ
Xin, Xin	Okayama Prefectural Univ
Yamasaki, Taiga	Okayama Prefectural Univ

TuB20	Coppearleaf 1
Aerospace Systems (Regular Session)	
Chair: Ghosh, Satadal	Naval Postgraduate School
Co-Chair: Milam, Mark	Northrop Grumman Aerospace Systems

13:30-13:50	TuB20.1

A Guidance Law for Avoiding Specific Approach Angles against Maneuvering Targets, pp. 4142-4147.

Ghosh, Satadal	Naval Postgraduate School
Davis, Duane	Naval Postgraduate School
Chung, Timothy H.	DARPA

13:50-14:10	TuB20.2

A Novel Guidance Law with Input Saturation, pp. 4148-4153.

Pattanaik, Anay	Univ. of Illinois, Urbana Champaign
Kothari, Mangal	Indian Inst. of Tech. Kanpur

14:10-14:30	TuB20.3

Global Exponential Angular Velocity Observer for Rigid Body Systems, pp. 4154-4159.

Berkane, Soulaimane	Western Univ
Abdessameud, Abdelkader	Univ. of Western Ontario
Tayebi, Abdelhamid	Lakehead Univ

14:30-14:50	TuB20.4

Impact Time Control Guidance Considering Seeker's Field-Of-View Limits, pp. 4160-4165.

Kim, Hyeonggeun	Seoul National Univ
Kim, H. Jin	Seoul National Univ

14:50-15:10	TuB20.5

Robust Acceleration Control of a Hexarotor UAV with a Disturbance Observer, pp. 4166-4171.

Lee, Seung Jae	Seoul National Univ
Suseong, Kim	Seoul National Univ
Kim, H. Jin	Seoul National Univ
Johansson, Karl H.	Royal Inst. of Tech

15:10-15:30	TuB20.6

Trajectory Generation for Constrained Differentially Flat Systems with Time and Frequency Domain Objectives, pp. 4172-4177.

Tsuei, Stephanie	Northrop Grumman Aerospace Systems
Milam, Mark	Northrop Grumman Aerospace Systems

TuB21	Coppearleaf 2
Biological Systems (Regular Session)	
Chair: Preciado, Victor M.	Univ. of Pennsylvania
Co-Chair: Bleris, Leonidas	Univ. of Texas at Dallas

13:30-13:50	TuB21.1

Dynamic Analysis of Bet-Hedging Strategies As a Protection Mechanism against Environmental Fluctuations, pp. 4178-4183.

Ogura, Masaki	Univ. of Pennsylvania
Wakaiki, Masashi	Chiba Univ
Preciado, Victor M.	Univ. of Pennsylvania

13:50-14:10	TuB21.2

Controlling the Ribosomal Density Profile in Mrna Translation, pp. 4184-4189.

Zarai, Yoram	Tel Aviv Univ
Margaliot, Michael	Tel Aviv Univ
Sontag, Eduardo D.	Rutgers Univ
Tuller, Tamir	School of Elec. Eng., Tel Aviv Univ

14:10-14:30	TuB21.3

On Brain Modeling in Resting-State As a Network of Coupled Oscillators, pp. 4190-4195.

Favaretto, Chiara	Department of Information Engineering, Univ. of Padova
Cenedese, Angelo	Univ. of Padova

14:30-14:50	TuB21.4

A Numerical Approach to the Optimal Control and Efficiency of the Copepod Swimmer, pp. 4196-4201.

Chyba, Monique	Univ. of Hawaii
Bonnard, Bernard	Inst. De Mathématiques De Bourgogne
Rouot, Jérémy	INRIA Sophia Antipolis
Takagi, Daisuke	Univ. of Hawaii

14:50-15:10	TuB21.5

Pattern Synthesis in a 3D Agent-Based Model of Stem Cell Differentiation, pp. 4202-4207.

Briers, Demarcus	Boston Univ
Haghighi, Iman	Boston Univ
White, Douglas	Georgia Inst. of Tech
Kemp, Melissa	Georgia Inst. of Tech
Belta, Calin	Boston Univ

15:10-15:30	TuB21.6

Point-Based Value Iteration for Partially-Observed Boolean Dynamical Systems with Finite Observation Space, pp. 4208-4213.

Imani, Mahdi	Texas A&M Univ
Braga-Neto, Ulisses	Texas A&M Univ

TuB22	Coppearleaf 3
Energy Systems (Regular Session)	
Chair: Dominguez-Garcia, Alejandro D.	Univ. of Illinois at Urbana-Champaign
Co-Chair: Roozbehani, Mardavij	Massachusetts Inst. of Tech

13:30-13:50	TuB22.1

Exploiting Phase Cohesiveness for Frequency Control of Islanded Inverter-Based Microgrids, pp. 4214-4219.

Zholbaryssov, Madi	Univ. of Illinois at Urbana-

	Champaign
Dominguez-Garcia, Alejandro D.	Univ. of Illinois at Urbana-Champaign

13:50-14:10	TuB22.2

Battery Capacity of Deferrable Energy Demand, pp. 4220-4225.

Madjidian, Daria	Massachusetts Inst. of Tech
Roozbehani, Mardavij	Massachusetts Inst. of Tech
Dahleh, Munther A.	Massachusetts Inst. of Tech

14:10-14:30	TuB22.3

Cooperative Management of a Lithium-Ion Battery Energy Storage Network: A Distributed MPC Approach, pp. 4226-4232.

Fang, Huazhen	Univ. of Kansas
Wu, Di	Pacific Northwest National Lab
Yang, Tao	Univ. of North Texas

14:30-14:50	TuB22.4

An Outer Approximation of the Minkowski Sum of Convex Conic Sets with Application to Demand Response, pp. 4233-4238.

Barot, Suhail	Univ. of Toronto
Taylor, Joshua	Univ. of Toronto

14:50-15:10	TuB22.5

Spatio-Temporal Optimization through Model Predictive Control: A Case Study in Airborne Wind Energy, pp. 4239-4244.

Bin-Karim, Shamir	Univ. of North Carolina at Charlotte
Bafandeh, Alireza	Univ. of North Carolina at Charlotte
Vermillion, Christopher	Univ. of North Carolina at Charlotte

15:10-15:30	TuB22.6

Optimal Operation of Energy Storage with Random Renewable Generation and AC/DC Loads, pp. 4245-4251.

Jin, Jiangliang	Singapore Univ. of Tech. and Design
Xu, Yunjian	Singapore Univ. of Tech. and Design
Khalid, Yawar	Singapore Univ. of Tech. and Design
Ul Hassan, Naveed	Lahore Univ. of Management Sciences

TuB23	Ironwood 5
Differential Privacy in Control and Network Systems (Tutorial Session)	
Chair: Cortes, Jorge	Univ. of California, San Diego
Co-Chair: Pappas, George J.	Univ. of Pennsylvania
Organizer: Cortes, Jorge	Univ. of California, San Diego

13:30-13:35	TuB23.1

Differential Privacy in Control and Network Systems (I), pp. 4252-4272.

Cortes, Jorge	Univ. of California, San Diego
Dullerud, Geir E.	Univ. of Illinois, Urbana-Champaign
Han, Shuo	Univ. of Pennsylvania
Le Ny, Jerome	Pol. Montreal
Mitra, Sayan	Univ. of Illinois
Pappas, George J.	Univ. of Pennsylvania

13:35-14:00	TuB23.2

Foundations of Differential Privacy (I).

Pappas, George J.	Univ. of Pennsylvania

14:00-14:30	TuB23.3

Differential Privacy Filtering (I).

Le Ny, Jerome	Pol. Montreal

14:30-15:00	TuB23.4

Differential Privacy, Entropy, and Consensus (I).

Dullerud, Geir E.	Univ. of Illinois, Urbana-Champaign

15:00-15:30	TuB23.5

Differential Privacy and Distributed Optimization (I).

Cortes, Jorge	Univ. of California, San Diego

TuC01	Starvine 1
Networked Control Systems II (Regular Session)	
Chair: El-Farra, Nael H.	Univ. of California, Davis
Co-Chair: Gharesifard, Bahman	Queens Univ. Canada

16:00-16:20	TuC01.1

Distributed Hybrid Consensus of Second-Order Dynamics Over Proximity Nets, pp. 4273-4277.

Liu, Zhixin	Acad. of Mathematics and Systems Science, ChineseAcademyof Scie
Wang, Lin	Shanghai Jiao Tong Univ
Baras, John S.	Univ. of Maryland

16:20-16:40	TuC01.2

Sparse Feedback Stabilization of Multi-Agent Dynamics (I), pp. 4278-4283.

Caponigro, Marco	Conservatoire National Des Arts Et Métiers
Piccoli, Benedetto	Rutgers Univ. - Camden
Rossi, Francesco	Aix-Marseille Univ
Trelat, Emmanuel	Univ. Pierre Et Marie Curie (Paris 6)

16:40-17:00	TuC01.3

Feedforward Estimators for the Distributed Average Tracking of Bandlimited Signals in Discrete Time with Switching Graph Topology, pp. 4284-4289.

Van Scoy, Bryan	Northwestern Univ
Freeman, Randy	Northwestern Univ
Lynch, Kevin M.	Northwestern Univ

17:00-17:20	TuC01.4

Distributed Power Sharing Control of Grid-Connected AC Microgrid, pp. 4290-4295.

Cai, He	Nanyang Tech. Univ
Hu, Guoqiang	Nanyang Tech. Univ

17:20-17:40	TuC01.5

Output Feedback-Based Event-Triggered Control of Distributed Processes with Communication Constraints (I), pp. 4296-4301.

Xue, Da	Univ. of California, Davis
El-Farra, Nael H.	Univ. of California, Davis

17:40-18:00	TuC01.6

A Subspace Consensus Approach for Distributed Connectivity Assessment of Asymmetric Networks, pp. 4302-4307.

Asadi, Mohammad Mehdi	Concordia Univ

Khosravi, Mohammad	Concordia Univ
Blouin, Stephane	DRDC Atlantic
Aghdam, Amir G.	Concordia Univ

TuC02 — Starvine 2
Advances in Cooperative Control of Networked Systems (Invited Session)

Chair: Cao, Yongcan	Univ. of Texas, San Antonio
Co-Chair: Casbeer, David W.	Air Force Res. Lab
Organizer: Cao, Yongcan	Univ. of Texas, San Antonio
Organizer: Garcia, Eloy	Infoscitex Corp
Organizer: Casbeer, David W.	Air Force Res. Lab

16:00-16:20 — TuC02.1

Towards Cost-Effective Distributed Information Fusion with Partially Active Sensors in Directed Networks (I), pp. 4308-4313.

Cao, Yongcan	Univ. of Texas, San Antonio
Casbeer, David W.	Air Force Res. Lab
Garcia, Eloy	Infoscitex Corp
Zhang, Xiaodong	Wright State Univ

16:20-16:40 — TuC02.2

Distributed Continuous-Time Online Optimization Using Saddle-Point Methods (I), pp. 4314-4319.

Lee, Soomin	Georgia Inst. of Tech
Ribeiro, Alejandro	Univ. of Pennsylvania
Zavlanos, Michael M.	Duke Univ

16:40-17:00 — TuC02.3

Cooperative Localisation of UAVs in a GPS-Denied Environment Using Bearing Measurements (I), pp. 4320-4326.

Zhang, Lvtianyang	Australian National Univ
Ye, Mengbin (Ben)	Australian National Univ
Anderson, Brian D.O.	Australian National Univ
Sarunic, Peter William	Defence Science and Tech. Group
Hmam, Hatem	Defence Science and Tech. Organisation

17:00-17:20 — TuC02.4

Cooperative Filtering for Parameter Identification of Diffusion Processes (I), pp. 4327-4333.

You, Jie	Rensselaer Pol. Inst
Zhang, Fumin	Georgia Inst. of Tech
Wu, Wencen	Rensselaer Pol. Inst

17:20-17:40 — TuC02.5

Bio-Inspired Source Seeking: A Hybrid Speeding up and Slowing down Algorithm (I), pp. 4334-4339.

Khan, Ayesha	Georgia Inst. of Tech
Mishra, Vivek	Georgia Inst. of Tech
Zhang, Fumin	Georgia Inst. of Tech

17:40-18:00 — TuC02.6

Optimal Distributed Control with Application to Asymmetric Vehicle Platoons, pp. 4340-4345.

Herman, Ivo	Czech Tech. Univ. in Prague
Sebek, Michael	Czech Tech. Univ. in Prague

TuC03 — Starvine 3
Control of Networks I (Regular Session)

Chair: Scardovi, Luca	Univ. of Toronto
Co-Chair: Dong, Zhe	Tsinghua Univ

16:00-16:20 — TuC03.1

Controllability Analysis of Networks through Their Topologies, pp. 4346-4351.

Mousavi, Shima Sadat	Sharif Univ. of Tech
Haeri, Mohammad	Sharif Univ. of Tech

16:20-16:40 — TuC03.2

A Passivity-Based Approach for Constrained Mobile Robotic Networks, pp. 4352-4357.

Nguyen, Tam	Univ. Libre De Bruxelles
Doi, Mamoru	Tokyo Inst. of Tech
Hatanaka, Takeshi	Tokyo Inst. of Tech
Garone, Emanuele	Univ. Libre De Bruxelles
Fujita, Masayuki	Tokyo Inst. of Tech

16:40-17:00 — TuC03.3

Formation Control of Teleoperating Cyber-Physical System Subject to Time Delay and Actuator Saturation Constrains, pp. 4358-4363.

Jing, Yan	Yanshan Univ
Wan, Yan	Univ. of North Texas
Chen, Cailian	Shanghai Jiao Tong Univ
Hua, Chang-Chun	Yanshan Univ
Guan, Xinping	Shanghai Jiao Tong Univ

17:00-17:20 — TuC03.4

Distributed Frequency Synchronization and Phase-Difference Tracking for Kuramoto Oscillators and Its Application to Islanded Microgrids, pp. 4364-4369.

Mao, Yanbing	Binghamton Univ
Zhang, Ziang	Binghamton Univ

17:20-17:40 — TuC03.5

Distributed Flowrate-Pressure Control of Fluid Flow Networks, pp. 4370-4375.

Dong, Zhe	Tsinghua Univ

17:40-18:00 — TuC03.6

Synchronization of Linear Time-Invariant Systems on Rooted Graphs, pp. 4376-4381.

Xia, Tian	Univ. of Toronto
Scardovi, Luca	Univ. of Toronto

TuC04 — Starvine 4
Communication Networks (Regular Session)

Chair: Melchor-Aguilar, Daniel Alejandro	IPICyT
Co-Chair: Hadjicostis, Christoforos N.	Univ. of Cyprus

16:00-16:20 — TuC04.1

Complete Stability Region of PD Controllers for TCP/AQM Networks, pp. 4382-4387.

Puerto-Piña, A. K.	Inst. Potosino De Investigación Científica Y Tecnológica (I
Melchor-Aguilar, Daniel Alejandro	IPICyT

16:20-16:40 — TuC04.2

From Ideal to Packet-Based Communication for Spatially Invariant Systems with Various Interconnection Structures, pp. 4388-4395.

Heijmans, Stefan H. J.	Eindhoven Univ. of Tech
Heemels, W.P.M.H.	Eindhoven Univ. of Tech

16:40-17:00 — TuC04.3

Distributed C-Means Data Clustering Algorithm, pp. 4396-4401.

Oliva, Gabriele	Univ. Campus Bio-Medico of Romke
Setola, Roberto	Univ. Campus Biomedico
Hadjicostis, Christoforos N.	Univ. of Cyprus

| 17:00-17:20 | TuC04.4 |

Stochastic Worst Case Analysis of Window Flow Controlled Systems, pp. 4402-4407.

| Beck, Michael Alexander | Univ. of Kaiserslautern |

| 17:20-17:40 | TuC04.5 |

Optimal Distributed Scheduling of Real-Time Traffic with Hard Deadlines, pp. 4408-4413.

Lu, Ning	Thompson Rivers Univ
Li, Bin	Univ. of Rhode Island
Srikant, R	Univ. of Illinois, Urbana-Champaign
Ying, Lei	Arizona State Univ

| 17:40-18:00 | TuC04.6 |

Distributed Asynchronous Cholesky Decomposition, pp. 4414-4419.

Oliva, Gabriele	Univ. Campus Bio-Medico of Rome
Setola, Roberto	Univ. Campus Biomedico
Hadjicostis, Christoforos N.	Univ. of Cyprus

| **TuC05** | Starvine 5 |

Game Theory for Large-Scale Systems and Complex Networks (Invited Session)

Chair: Grammatico, Sergio	Eindhoven Univ. of Tech
Co-Chair: Alpcan, Tansu	The Univ. of Melbourne
Organizer: Zhu, Quanyan	New York Univ
Organizer: Hayel, Yezekael	Univ. of Avignon

| 16:00-16:20 | TuC05.1 |

Large-Scale Strategic Games and Adversarial Machine Learning (I), pp. 4420-4426.

Alpcan, Tansu	The Univ. of Melbourne
Rubinstein, Benjamin	The Univ. of Melbourne
Leckie, Christopher Andrew	The Univ. of Melbourne

| 16:20-16:40 | TuC05.2 |

A Saturated Strategy Robustly Ensures Stability of the Cooperative Equilibrium for Prisoner's Dilemma (I), pp. 4427-4432.

Giordano, Giulia	Lund Univ
Bauso, Dario	The Univ. of Sheffield
Blanchini, Franco	Univ. Degli Studi Di Udine

| 16:40-17:00 | TuC05.3 |

Convergence of Approximate Best-Response Dynamics in Interference Games, pp. 4433-4438.

| Bistritz, Ilai | Tel-Aviv Univ |
| Leshem, Amir | Bar-Ilan Univ |

| 17:00-17:20 | TuC05.4 |

A Random Tree Search Algorithm for Nash Equilibrium in Capacitated Selfish Replication Games (I), pp. 4439-4444.

Ahmadyan, Seyed Nematollah	Univ. of Illinois at Urbana-Champaign
Etesami, Seyed Rasoul	Univ. of Illinois at Urbana-Champaign
Poor, H. Vincent	Princeton Univ

| 17:20-17:40 | TuC05.5 |

Aggregative Control of Large Populations of Noncooperative Agents, pp. 4445-4450.

| Grammatico, Sergio | Eindhoven Univ. of Tech |

| 17:40-18:00 | TuC05.6 |

Conformity versus Manipulation in Reputation Systems (I), pp. 4451-4456.

Etesami, Seyed Rasoul	Univ. of Illinois at Urbana-Champaign
Bolouki, Sadegh	Univ. of Illinois, Urbana-Champaign
Nedich, Angelia	Arizona State Univ
Basar, Tamer	Univ. of Illinois, Urbana-Champaign

| **TuC06** | Starvine 6 |

Optimal Control VI (Regular Session)

| Chair: Fujimoto, Kenji | Kyoto Univ |
| Co-Chair: Shvartsman, Ilya | Penn State Harrisburg |

| 16:00-16:20 | TuC06.1 |

Efficient Implementation of Partial Condensing for Nonlinear Model Predictive Control, pp. 4457-4462.

Frison, Gianluca	Tech. Univ. of Denmark
Kouzoupis, Dimitris	Univ. of Freiburg
Jorgensen, John Bagterp	Tech. Univ. of Denmark
Diehl, Moritz	Univ. of Freiburg

| 16:20-16:40 | TuC06.2 |

Using Optimal Control to Obtain Maximum Displacement Gait for Purcell's Three-Link Swimmer, pp. 4463-4468.

| Wiezel, Oren | Tech. Israel Istitute for Tech |
| Or, Yizhar | Tech. - Israel Inst. of Tech |

| 16:40-17:00 | TuC06.3 |

A Study on Robust Nonlinear Optimal Control for Parameter Variation, pp. 4469-4473.

| Okura, Yuki | Kyoto Univ |
| Fujimoto, Kenji | Kyoto Univ |

| 17:00-17:20 | TuC06.4 |

Optimal Control for Mean-Field System: Discrete-Time Case, pp. 4474-4480.

| Zhang, Huanshui | Shandong Univ |
| Qi, Qingyuan | Shandong Univ |

| 17:20-17:40 | TuC06.5 |

Linear Programming Formulation of a Discrete Time Infinite Horizon Optimal Control Problem with Time Discounting Criterion, pp. 4481-4483.

Gaitsgory, Vladimir	Macquarie Univ
Parkinson, Alex	Macquarie Univ
Shvartsman, Ilya	Penn State Harrisburg

| 17:40-18:00 | TuC06.6 |

On Near-Controllability of Discrete-Time Bilinear Systems Using a Minimum-Time Control, pp. 4484-4489.

| Tie, Lin | Beihang Univ. (Beijing Univ. of Aeronautics and Astron |

| **TuC07** | Starvine 7 |

Stochastic Optimization Methods (Invited Session)

Chair: Nedich, Angelia	Univ. of Illinois, Urbana-Champaign
Co-Chair: Yousefian, Farzad	Pennsylvania State Univ
Organizer: Nedich, Angelia	Arizona State Univ
Organizer: Yousefian, Farzad	Pennsylvania State Univ
Organizer: Shanbhag, Uday V.	Pennsylvania State Univ

16:00-16:20	TuC07.1

A Stochastic Proximal Point Algorithm for Total Variation Regularization Over Large Scale Graphs (I), pp. 4490-4495.

Salim, Adil	LTCI, CNRS, Télécom ParisTech, Univ. Paris-Saclay, 75013
Bianchi, Pascal	Telecom ParisTech - CNRS/LTCI
Hachem, Walid	CNRS LTCI; Telecom ParisTech
Jakubowicz, Jérémie	Telecom SudParis - CNRS

16:20-16:40	TuC07.2

Stochastic Quasi-Newton Methods for Non-Strongly Convex Problems: Convergence and Rate Analysis (I), pp. 4496-4503.

Yousefian, Farzad	Pennsylvania State Univ
Nedich, Angelia	Univ. of Illinois, Urbana-Champaign
Shanbhag, Uday V.	Pennsylvania State Univ

16:40-17:00	TuC07.3

A Dynamical Systems Framework for Stochastic Iterative Optimization (I), pp. 4504-4509.

Haskell, William B.	National Univ. of Singapore
Jain, Rahul	Univ. of Southern California
Sharma, Hiteshi	Univ. of Southern California

17:00-17:20	TuC07.4

On the Analysis of Reflected Gradient and Splitting Methods for Monotone Stochastic Variational Inequality Problems (I), pp. 4510-4515.

Cui, Shisheng	The Pennsylvania State Univ
Shanbhag, Uday V.	Pennsylvania State Univ

17:20-17:40	TuC07.5

An Online Primal-Dual Method for Discounted Markovian Decision Process (I), pp. 4516-4521.

Wang, Mengdi	Princeton Univ
Chen, Yichen	Princeton Univ

17:40-18:00	TuC07.6

Tracking Capability of Stochastic Gradient Algorithm with Constant Gain (I), pp. 4522-4527.

Zhu, Jingyi	Johns Hopkins Univ
Spall, James C.	Johns Hopkins Univ

TuC08	Starvine 8
Stochastic Systems III (Regular Session)	
Chair: Nurdin, Hendra I	UNSW Australia
Co-Chair: Ahmadi, Mohamadreza	Univ. of Oxford

16:00-16:20	TuC08.1

Mean Field Games for Stochastic Growth with Relative Consumption, pp. 4528-4533.

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

16:20-16:40	TuC08.2

Explicit Solutions of One-Dimensional, First-Order, Stationary Mean-Field Games with Congestion, pp. 4534-4539.

Gomes, Diogo	King Abdullah Univ. of Science and Tech
Nurbekyan, Levon	King Abdullah Univ. of Science and Tech
Prazeres, Mariana	King Abdullah Univ. of Science and Tech

16:40-17:00	TuC08.3

Cubification of Nonlinear Stochastic Differential Equations and Approximate Moments Calculation of the Langevin Equation, pp. 4540-4545.

Borri, Alessandro	IASI-CNR
Carravetta, Francesco	IASI-CNR
Palumbo, Pasquale	IASI-CNR

17:00-17:20	TuC08.4

Controller Synthesis for Stochastic Systems with Persistent Noise, pp. 4546-4551.

Ahmadi, Mohamadreza	Univ. of Oxford
Papachristodoulou, Antonis	Univ. of Oxford

17:20-17:40	TuC08.5

On Transfer Function Realizations for Linear Quantum Stochastic Systems, pp. 4552-4558.

Grivopoulos, Symeon	Univ. of New South Wales, Canberra
Nurdin, Hendra I	UNSW Australia
Petersen, Ian R.	Univ. of New South Wales at the AustralianDefenceForceAcad

17:40-18:00	TuC08.6

Adiabatic Elimination for Open Quantum Systems with Effective Lindblad Master Equations, pp. 4559-4565.

Azouit, Rémi	Mines ParisTech
Sarlette, Alain	INRIA Rocquencourt
Rouchon, Pierre	Mines ParisTech

TuC09	Starvine 9
Machine Learning (Regular Session)	
Chair: Carli, Francesca Paola	Univ. of Cambridge
Co-Chair: Farahmand, Amir-massoud	Mitsubishi Electric Res. Labs (MERL)

16:00-16:20	TuC09.1

A Joint Sparse Clustering and Classification Approach with Applications to Hospitalization Prediction, pp. 4566-4571.

Xu, Tingting	Boston Univ
Brisimi, Theodora	Boston Univ
WANG, TAIYAO	Boston Univ
Dai, Wuyang	Adobe Systems
Paschalidis, Ioannis Ch.	Boston Univ

16:20-16:40	TuC09.2

On the Geometry of Message Passing Algorithms for Gaussian Reciprocal Processes, pp. 4572-4577.

Carli, Francesca Paola	Univ. of Cambridge

16:40-17:00	TuC09.3

Learning to Control Partial Differential Equations: Regularized Fitted Q-Iteration Approach, pp. 4578-4585.

Farahmand, Amir-massoud	Mitsubishi Electric Res. Labs (MERL)
Nabi, Saleh	Mitsubishi Electric Res. Lab. (MERL)
Grover, Piyush	Mitsubishi Electric Res. Lab

Nikovski, Daniel	Mitsubishi Electric Res. Labs

17:00-17:20	TuC09.4

Active Learning Based Requirement Mining for Cyber-Physical Systems, pp. 4586-4593.

Chen, Gang	Univ. of California, Davis
Sabato, Zachary	Department of Mechanical and Aerospace Engineering, UC Davis
Kong, Zhaodan	Univ. of California, Davis

17:20-17:40	TuC09.5

Machine Learning Meets Kalman Filtering, pp. 4594-4599.

Carron, Andrea	Univ. of Padova
Todescato, Marco	Univ. of Padova
Carli, Ruggero	Univ. of Padova
Schenato, Luca	Univ. of Padova
Pillonetto, Gianluigi	Univ. of Padova

17:40-18:00	TuC09.6

Characterization of L1-Norm Statistic for Anomaly Detection in Erdos-Renyi Graphs, pp. 4600-4605.

Kadavankandy, Arun	INRIA
Cottatellucci, Laura	Eurecom
Avrachenkov, Konstantin E.	INRIA Sophia Antipolis

TuC10	Starvine 10
Dynamic Network Identification (Invited Session)	

Chair: Dankers, Arne	Univ. of Calgary
Co-Chair: Van den Hof, Paul M.J.	Eindhoven Univ. of Tech
Organizer: Dankers, Arne	Univ. of Calgary
Organizer: Van den Hof, Paul M.J.	Eindhoven Univ. of Tech

16:00-16:20	TuC10.1

Identification of Dynamic Networks Operating in the Presence of Algebraic Loops (I), pp. 4606-4611.

Weerts, Harm H. M.	Eindhoven Univ. of Tech
Van den Hof, Paul M.J.	Eindhoven Univ. of Tech
Dankers, Arne	Univ. of Calgary

16:20-16:40	TuC10.2

Identification of Modules in Dynamic Networks: An Empirical Bayes Approach (I), pp. 4612-4617.

Everitt, Niklas	KTH
Bottegal, Giulio	Ku Leuven
Rojas, Cristian R.	KTH Royal Inst. of Tech
Hjalmarsson, Håkan	KTH Royal Inst. of Tech

16:40-17:00	TuC10.3

Inferring the Structure of Polytree Networks of Dynamic Systems with Hidden Nodes (I), pp. 4618-4623.

Sepehr, Firoozeh	Univ. of Tennessee Knoxville
Materassi, Donatello	Univ. of Tennessee, Knoxville

17:00-17:20	TuC10.4

Topology Identification of Undirected Consensus Networks Via Sparse Inverse Covariance Estimation, pp. 4624-4629.

Hassan Moghaddam, Sepideh	Univ. of Minnesota
Dhingra, Neil K	Univ. of Minnesota
Jovanovic, Mihailo	Univ. of Minnesota

17:20-17:40	TuC10.5

Scalable Identification of Stable Positive Systems, pp. 4630-4635.

Umenberger, Jack	The Univ. of Sydney
Manchester, Ian R.	Univ. of Sydney

17:40-18:00	TuC10.6

Informative Input Design for Kernel-Based System Identification, pp. 4636-4639.

Fujimoto, Yusuke	Kyoto Univ
Sugie, Toshiharu	Kyoto Univ

TuC11	Starvine 11
Learning-Based Control (Invited Session)	

Chair: Schoellig, Angela P	Univ. of Toronto
Co-Chair: Kober, Jens	TU Delft
Organizer: Schoellig, Angela P	Univ. of Toronto
Organizer: Trimpe, Sebastian	Max Planck Inst. for Intelligent Systems
Organizer: Zeilinger, Melanie N.	ETH Zurich

16:00-16:20	TuC11.1

Distributed Iterative Learning Control for a Team of Quadrotors (I), pp. 4640-4646.

Hock, Andreas	Univ. of Toronto
Schoellig, Angela P	Univ. of Toronto

16:20-16:40	TuC11.2

Continuous-Time DC Kernel — a Stable Generalized First Order Spline Kernel (I), pp. 4647-4652.

Chen, Tianshi	Linköping Univ. Sweden
Pillonetto, Gianluigi	Univ. of Padova
Chiuso, Alessandro	Univ. Di Padova
Ljung, Lennart	Linkoping Univ

16:40-17:00	TuC11.3

Learning Quadrotor Dynamics Using Neural Network for Flight Control (I), pp. 4653-4660.

Bansal, Somil	UC Berkeley
Akametalu, Anayo K.	UC Berkeley
Tomlin, Claire J.	UC Berkeley
Laine, Forrest J.	Univ. of California, Berkeley

17:00-17:20	TuC11.4

Safe Learning of Regions of Attraction for Uncertain, Nonlinear Systems with Gaussian Processes (I), pp. 4661-4666.

Berkenkamp, Felix	ETH Zurich
Moriconi, Riccardo	ETH Zurich
Schoellig, Angela P	Univ. of Toronto
Krause, Andreas	ETH Zurich

17:20-17:40	TuC11.5

Learning State Representation for Deep Actor-Critic Control (I), pp. 4667-4673.

Munk, Jelle	Delft Univ. of Tech
Kober, Jens	Delft Univ. of Tech
Babuska, R.	Delft Univ. of Tech

17:40-18:00	TuC11.6

Relaxation of the EM Algorithm Via Quantum Annealing for Gaussian Mixture Models, pp. 4674-4679.

Miyahara, Hideyuki	The Univ. of Tokyo
Tsumura, Koji	The Univ. of Tokyo
Sughiyama, Yuki	Inst. of Industrial Science, the Univ. of Tokyo

TuC12 — Starvine 12

Algebraic and Geometric Methods II (Regular Session)

Chair: Violet, Grey	Univ. of Konstanz
Co-Chair: van der Schaft, Arjan	Univ. of Groningen

16:00-16:20 — TuC12.1

Singularly Perturbed Phase Response Curves for Relaxation Oscillators, pp. 4680-4685.

Sacré, Pierre	Johns Hopkins Univ
Franci, Alessio	Univ. Nacional Autónoma De Mexico (UNAM)

16:20-16:40 — TuC12.2

Interconnections of Input-Output Hamiltonian Systems with Dissipation, pp. 4686-4691.

van der Schaft, Arjan	Univ. of Groningen

16:40-17:00 — TuC12.3

Nonintegrable Discrete-Time Driftless Control Systems: Geometric Phases Beyond the Area Rule, pp. 4692-4697.

Altafini, Claudio	Linkoping Univ

17:00-17:20 — TuC12.4

Unscented State Estimation for Rigid Body Attitude Motion with a Finite-Time Stable Observer, pp. 4698-4703.

Bohn, Jan	Raytheon
Sanyal, Amit	Syracuse Univ
Butcher, Eric	Univ. of Arizona

17:20-17:40 — TuC12.5

The Topology of D-Stability, pp. 4704-4709.

Violet, Grey	Univ. of Konstanz

17:40-18:00 — TuC12.6

The Disturbance Decoupling Problem for Switched Discrete-Time Linear Systems Over Digraphs: A Stratified Geometric Approach, pp. 4710-4715.

Zhou, Junqiang	OSU
Serrani, Andrea	The Ohio State Univ

TuC13 — Starvine 13

Output Regulation (Regular Session)

Chair: Sundaram, Shreyas	Purdue Univ
Co-Chair: Marconi, Lorenzo	Univ. Di Bologna

16:00-16:20 — TuC13.1

Data-Driven Output Regulation by External Models of Linear Hybrid Systems with Periodic Jumps, pp. 4716-4721.

Carnevale, Daniele	Univ. Di Roma
Galeani, Sergio	Univ. Di Roma Tor Vergata
Sassano, Mario	Univ. of Rome, Tor Vergata

16:20-16:40 — TuC13.2

Sampling-Based Explicit Nonlinear Model Predictive Control for Output Tracking, pp. 4722-4727.

Zhang, Haotian	Univ. of Waterloo
Chakrabarty, Ankush	Harvard Univ
Ayoub, Raid	Strategic CAD Labs, Intel Corp
Buzzard, Gregery T.	Purdue Univ
Sundaram, Shreyas	Purdue Univ

16:40-17:00 — TuC13.3

Removing SPR-Like Conditions in Adaptive Feedforward Control of

Uncertain Systems, pp. 4728-4733.

Wang, Yang	Imperial Coll. London
Pin, Gilberto	Electrolux Professional S.p.A. (Italy)
Serrani, Andrea	The Ohio State Univ
Parisini, Thomas	Imperial Coll. & Univ. of Trieste

17:00-17:20 — TuC13.4

Output Regulation on the Special Euclidean Group SE(3), pp. 4734-4739.

De Marco, Simone	Univ. of Bologna
Marconi, Lorenzo	Univ. Di Bologna
Hamel, Tarek	Univ. De Nice Sophia Antipolis
Mahony, Robert	Australian National Univ

17:20-17:40 — TuC13.5

Robust Internal Model Design by Nonlinear Regression Via Low-Power High-Gain Observers, pp. 4740-4745.

Bin, Michelangelo	Univ. of Bologna
Astolfi, Daniele	Univ. Alma Mater of Bologna
Marconi, Lorenzo	Univ. Di Bologna

17:40-18:00 — TuC13.6

Cooperative Output Regulation of Linear Multi-Agent Systems with Communication Constraints, pp. 4746-4751.

Abdessameud, Abdelkader	Univ. of Western Ontarion
Tayebi, Abdelhamid	Lakehead Univ

TuC14 — Ironwood 1

Supervisory Control (Regular Session)

Chair: Cai, Kai	Osaka City Univ
Co-Chair: Hill, Rick	Univ. of Detroit Mercy

16:00-16:20 — TuC14.1

Supervisor Localization of Timed Discrete-Event Systems under Partial Observation, pp. 4752-4757.

Zhang, Renyuan	Northwestern Pol. Univ
Cai, Kai	Osaka City Univ

16:20-16:40 — TuC14.2

Towards Cooperative Sequential Composition Control, pp. 4758-4763.

Najafi, Esmaeil	Eindhoven Univ. of Tech. Delft Univ. of Tech
Lopes, Gabriel A. D.	Delft Univ. of Tech

16:40-17:00 — TuC14.3

Directed Controller Synthesis of Discrete Event Systems: Taming Composition with Heuristics, pp. 4764-4769.

Ciolek, Daniel Alfredo	Univ. De Buenos Aires
Braberman, Victor	Univ. De Buenos Aires
D'Ippolito, Nicolás	Univ. De Buenos Aires
Uchitel, Sebastián	Univ. De Buenos Aires

17:00-17:20 — TuC14.4

Planning under Abstraction within a Supervisory Control Context, pp. 4770-4777.

Hill, Rick	Univ. of Detroit Mercy
Lafortune, Stephane	Univ. of Michigan

17:20-17:40 — TuC14.5

Robust Control of Mono-T-Semiflow Processes with Resources Using Petri Nets, pp. 4778-4784.

Du, Nan	Xidian Univ

Hu, Hesuan	Xidian Univ

17:40-18:00	TuC14.6

Robust Control of Automated Manufacturing Systems with Flexible Routes and Assembly Operations Using Petri Nets, pp. 4785-4790.

Du, Nan	Xidian Univ
Hu, Hesuan	Xidian Univ

TuC15	Ironwood 2
Distributed Parameter Systems II (Regular Session)	
Chair: Fridman, Emilia	Tel-Aviv Univ
Co-Chair: Dubljevic, Stevan	Univ. of Alberta

16:00-16:20	TuC15.1

Deformation Control of an Euler-Bernoulli Beam Based on Zero-Dynamics Inverse Design and Flatness, pp. 4791-4796.

Yang, Kaijun	Pol. Montreal
Zheng, Jun	Southwest Jiaotong Univ
Zhu, Guchuan	Ec. Pol. De Montreal

16:20-16:40	TuC15.2

Vibration Suppression of the Finite-Dimensional Approximation of the Non-Uniform SCOLE Model Using Multiple Tuned Mass Dampers, pp. 4797-4802.

Tong, Xin	Univ. of Warwick
Zhao, Xiaowei	Univ. of Warwick

16:40-17:00	TuC15.3

Null Boundary Controllability of a 1-Dimensional Heat Equation with an Internal Point Mass, pp. 4803-4808.

Hansen, Scott	Iowa State Univ
Martinez, Jose de Jesus	Mercy Coll. of Health Sciences

17:00-17:20	TuC15.4

Coupled Actuator Placement and Controller Design for Electromagnetic Heating by Means of Dynamic Optimization, pp. 4809-4814.

Rhein, Sönke	Univ. of Ulm
Graichen, Knut	Univ. of Ulm

17:20-17:40	TuC15.5

Model Predictive Control of Coupled Hyperbolic PDEs and ODEs, pp. 4815-4820.

Xu, Qingqing	Univ. of Alberta
Dubljevic, Stevan	Univ. of Alberta

17:40-18:00	TuC15.6

Sampled-Data Relay Control of Semilinear Diffusion PDEs (I), pp. 4821-4826.

Selivanov, Anton	Tel Aviv Univ
Fridman, Emilia	Tel-Aviv Univ

TuC16	Ironwood 3
Quantized Systems (Regular Session)	
Chair: Tarraf, Danielle C.	Massachusetts Inst. of Tech
Co-Chair: Ling, Qiang	Univ. of Science and Tech. of China

16:00-16:20	TuC16.1

Distributed Averaging with Quantized Communication Over Dynamic Graphs, pp. 4827-4832.

El Chamie, Mahmoud	Univ. of Washington
Liu, Ji	Univ. of Illinois at Urbana-Champaign

Basar, Tamer	Univ. of Illinois, Urbana-Champaign
Acikmese, Behcet	Univ. of Washington

16:20-16:40	TuC16.2

Structural Bistability Analysis of Boolean Networks, pp. 4833-4836.

Azuma, Shun-ichi	Kyoto Univ
Kure, Toshimitsu	Kyoto Univ
Sugie, Toshiharu	Kyoto Univ

16:40-17:00	TuC16.3

A Finite State Output-Feedback Controller for Constrained Linear Systems with Quantized Output, pp. 4837-4842.

Fan, Donglei	Hughes Network Systems
Tarraf, Danielle C.	Massachusetts Inst. of Tech

17:00-17:20	TuC16.4

Quantized Control of Nonlinear Quadratic Discrete-Time Systems, pp. 4843-4848.

Maestrelli, Rafael	UFSC
Coutinho, Daniel	Univ. Federal De Santa Catarina
de Souza, Carlos E.	LNCC
Xie, Lihua	Nanyang Tech. Univ

17:20-17:40	TuC16.5

Stabilizing Bit Rate Conditions for a Scalar Continuous Time Linear System with Bounded Processing Delay and Bounded Process Noise, pp. 4849-4854.

Ling, Qiang	Univ. of Science and Tech. of China

17:40-18:00	TuC16.6

Hybrid Feedback Path Following for Robotic Walkers Via Bang-Bang Control Actions, pp. 4855-4860.

Andreetto, Marco	Univ. of Trento
Divan, Stefano	Univ. of Trento
Fontanelli, Daniele	Univ. of Trento
Palopoli, Luigi	Univ. of Trento

TuC17	Ironwood 6
Constrained Control (Regular Session)	
Chair: Xu, Xiangru	Univ. of Michigan
Co-Chair: Sznaier, Mario	Northeastern Univ

16:00-16:20	TuC17.1

Mean Field Game Based Control of Dispersed Energy Storage Devices with Constrained Inputs, pp. 4861-4866.

Li, Feng	Pol. Montreal
Malhame, Roland P.	Ec. Pol. De Montreal
Le Ny, Jerome	Pol. Montreal

16:20-16:40	TuC17.2

Augmented Invariance Control for Systems with Smoothness Constraints, pp. 4867-4873.

Kimmel, Melanie	Tech. Univ. München
Jähne, Christoph	Tech. Univ. of Munich, Chair of Information-Oriented Co
Hirche, Sandra	Tech. Univ. München

16:40-17:00	TuC17.3

Safety Control of Monotone Systems with Bounded Uncertainties, pp. 4874-4879.

Sadraddini, Sadra	Boston Univ
Belta, Calin	Boston Univ

17:00-17:20	TuC17.4

Control Sharing Barrier Functions with Application to Constrained Control, pp. 4880-4885.

Xu, Xiangru	Univ. of Michigan

17:20-17:40	TuC17.5

A General Framework for Constrained Optimal Control Based on Stable Manifold Method, pp. 4886-4893.

TRAN, Anh Tuan	Nagoya Univ
Sakamoto, Noboru	Nanzan Univ

17:40-18:00	TuC17.6

Fast Optimizing Control for Non-Convex State Constraints Using Homotopy Properties (I), pp. 4894-4900.

Kontny, Damian	Univ. of Kassel
Stursberg, Olaf	Univ. of Kassel

TuC18	Ironwood 7
Linear Systems (Regular Session)	
Chair: Allgöwer, Frank	Univ. of Stuttgart
Co-Chair: Ntogramatzidis, Lorenzo	Curtin Univ

16:00-16:20	TuC18.1

On the Moment Dynamics of Discrete Measures, pp. 4901-4906.

Zeng, Shen	Univ. of Stuttgart
Allgöwer, Frank	Univ. of Stuttgart

16:20-16:40	TuC18.2

On the Convergence of Time-Varying Fusion Algorithms: Application to Localization in Dynamic Networks, pp. 4907-4912.

Safavi, Sam	Tufts Univ
Khan, Usman A.	Tufts Univ

16:40-17:00	TuC18.3

A Tutorial on the Globally Monotonic Tracking Control Problem with Geometric Techniques, pp. 4913-4918.

Ntogramatzidis, Lorenzo	Curtin Univ
Tregouet, Jean-Francois	Ampère Lab. / INSA-Lyon
Schmid, Robert	The Univ. of Melbourne
Ferrante, Augusto	Univ. Di Padova

17:00-17:20	TuC18.4

PI Controller Design in the Achievable Gain-Phase Margin Plane, pp. 4919-4924.

Diaz-Rodriguez, Ivan	Texas A&M Univ
Bhattacharyya, Shankar P.	Texas a & M Univ

17:20-17:40	TuC18.5

New Conditions for Annular Finite-Time Stability of Linear Systems, pp. 4925-4930.

Amato, Francesco	Univ. Magna Graecia Di Catanzaro
De Tommasi, Gianmaria	Univ. Degli Studi Di Napoli Federico II
Mele, Adriano	Univ. Degli Studi Di Napoli Federico II
Pironti, Alfredo	Univ. Degli Studi Di Napoli Federico II

17:40-18:00	TuC18.6

Connections between Discrete and Continuous-Time Results for Positive Real and Negative Imaginary Systems, pp. 4931-4936.

Liu, Mei	Univ. of Science and Tech. of China
Xiong, Junlin	Univ. of Science and Tech. of China

TuC19	Ironwood 8
Smart Grid I (Regular Session)	
Chair: Mallada, Enrique	Johns Hopkins Univ
Co-Chair: De Paola, Antonio	Imperial Coll. London

16:00-16:20	TuC19.1

Decentralized Coordination of Large Populations of Flexible Electrical Appliances through Demand Saturation, pp. 4937-4943.

De Paola, Antonio	Imperial Coll. London
Angeli, David	Imperial Coll
Strbac, Goran	Imperial Coll. London

16:20-16:40	TuC19.2

Voltage Stabilization in DC Microgrids through Coupling-Independent Plug-And-Play Controllers, pp. 4944-4949.

Tucci, Michele	Univ. Degli Studi Di Pavia
Riverso, Stefano	United Tech. Res. Center Ireland
Ferrari-Trecate, Giancarlo	Ec. Pol. Fédérale De Lausanne

16:40-17:00	TuC19.3

On Exact and Near Optimal Power Flow Solutions for Microgrid Applications (I), pp. 4950-4956.

Chang, Chin-Yao	The Ohio State Univ
Zhang, Wei	The Ohio State Univ

17:00-17:20	TuC19.4

Idroop: A Dynamic Droop Controller to Decouple Power Grid's Steady-State and Dynamic Performance (I), pp. 4957-4964.

Mallada, Enrique	Johns Hopkins Univ

17:20-17:40	TuC19.5

Stochastic Games of End-User Energy Storage Sharing, pp. 4965-4972.

Yao, Jiyun	Lehigh Univ
Venkitasubramaniam, Parv	Lehigh Univ

17:40-18:00	TuC19.6

Robust Distributed Averaging Frequency Control of Inverter-Based Microgrids, pp. 4973-4978.

Kammer, Christoph	EPFL
Karimi, Alireza	EPFL

TuC20	Coppearleaf 1
Autonomous Systems (Regular Session)	
Chair: Karaman, Sertac	Massachusetts Inst. of Tech
Co-Chair: Kobilarov, Marin	Johns Hopkins Univ

16:00-16:20	TuC20.1

Range Based Control Law to Generate Patterns with a Unicycle, pp. 4979-4984.

Tripathy, Twinkle	IIT Bombay
Sinha, Arpita	Indian Inst. of Tech. Bombay
Arya, Hemendra	Indian Inst. of Tech. Bombay
Borkar, Aseem	Indian Inst. of Tech. Bombay

16:20-16:40	TuC20.2

A Stochastically Verifiable Autonomous Control Architecture with Reasoning, pp. 4985-4991.

Izzo, Paolo	Univ. of Sheffield
Qu, Hongyang	Univ. of Sheffield

Veres, Sandor M.	Univ. of Sheffield

16:40-17:00	TuC20.3

Appropriate Overtaking Motion Generating Method Using Predictive Control with Suitable Car Dynamics, pp. 4992-4997.

Obayashi, Makoto	DENSO IT Lab
Uto, Keisuke	DENSO IT Lab
Takano, Gaku	DENSO IT Lab

17:00-17:20	TuC20.4

Speed Limits in Autonomous Vehicular Networks Due to Communication Constraints, pp. 4998-5003.

Talak, Rajat	MIT
Karaman, Sertac	Massachusetts Inst. of Tech
Modiano, Eytan	MIT

17:20-17:40	TuC20.5

Incremental Sampling-Based Motion Planners Using Policy Iteration Methods, pp. 5004-5009.

Arslan, Oktay	California Inst. of Tech
Tsiotras, Panagiotis	Georgia Inst. of Tech

17:40-18:00	TuC20.6

A Stabilizing Gyroscopic Obstacle Avoidance Controller for Underactuated Systems, pp. 5010-5016.

Garimella, Gowtham	Johns Hopkins Univ
Sheckells, Matthew	Johns Hopkins Univ
Kobilarov, Marin	Johns Hopkins Univ

TuC21	Coppearleaf 2
Biomedical Systems (Regular Session)	
Chair: Novara, Carlo	Pol. Di Torino
Co-Chair: Giarré, Laura	Univ. Di Palermo

16:00-16:20	TuC21.1

A Performance Limitation for Blood Glucose Regulation in Type 1 Diabetes Accounting for Insulin Delivery Delays, pp. 5017-5022.

Phan, Hieu Vinh	Univ. of Newcastle
Carrasco, Diego S.	Univ. of Newcastle
Goodwin, Graham C.	Univ. of Newcastle
Medioli, Adrian Mark	The Univ. of Newcastle
King, Bruce, R	John Hunter Childrens Hospital and Hunter Medical Res. Inst
Smart, Carmel	John Hunter Childrens Hospital and Hunter Medical Res. Inst
Stephen, Carly	The Univ. of Newcastle

16:20-16:40	TuC21.2

Pulse-Modulated Model of Testosterone Regulation Subject to Exogenous Signals (I), pp. 5023-5028.

Mattsson, Per	Uppsala Univ
Medvedev, Alexander V.	Uppsala Univ
Zhusubaliyev, Zhanybai	South West State Univ. (Kursk State Tech. Univ

16:40-17:00	TuC21.3

Regularized LMS Methods for Baseline Wandering Removal in Wearable ECG Devices, pp. 5029-5034.

Argenti, Fabrizio	Univ. of Florence
Giarré, Laura	Univ. Di Palermo
Bamieh, Bassam	Univ. of California at Santa Barbara

17:00-17:20	TuC21.4

CPG Control for Assisting Human with Periodic Motion Tasks, pp. 5035-5040.

Zhao, Jinxin	Univ. of California, Los Angeles
Iwasaki, Tetsuya	UCLA

17:20-17:40	TuC21.5

Personalized Cancer Therapy Design: Robustness vs. Optimality, pp. 5041-5046.

Lima Fleck, Julia	Boston Univ
Cassandras, Christos G.	Boston Univ

17:40-18:00	TuC21.6

A Data-Driven Model Inversion Approach to Cancer Immunotherapy Control (I), pp. 5047-5052.

Novara, Carlo	Pol. Di Torino
Karimshoushtari, Milad	Pol. Di Torino

TuC22	Coppearleaf 3
Security and Privacy in Cyber-Physical Systems (Invited Session)	
Chair: Mo, Yilin	Nanyang Tech. Univ
Co-Chair: Sinopoli, Bruno	Carnegie Mellon Univ
Organizer: Mo, Yilin	Nanyang Tech. Univ
Organizer: Sinopoli, Bruno	Carnegie Mellon Univ

16:00-16:20	TuC22.1

Privacy-Aware Quadratic Optimization Using Partially Homomorphic Encryption (I), pp. 5053-5058.

Shoukry, Yasser	UC Berkeley/UCLA
Gatsis, Konstantinos	Univ. of Pennsylvania
Alanwar, Amr	Univ. of California, Los Angeles
Pappas, George J.	Univ. of Pennsylvania
Seshia, Sanjit A.	UC Berkeley
Srivastava, Mani	UCLA
Tabuada, Paulo	Univ. of California at Los Angeles

16:20-16:40	TuC22.2

Secure Estimation for Unstable Systems (I), pp. 5059-5064.

Wiese, Moritz	KTH Royal Inst. of Tech
Johansson, Karl H.	Royal Inst. of Tech
Oechtering, Tobias J.	Royal Inst. of Tech. (KTH)
Papadimitratos, Panos	KTH Royal Insitute of Tech
Sandberg, Henrik	KTH Royal Inst. of Tech
Skoglund, Mikael	Royal Inst. of Tech

16:40-17:00	TuC22.3

Information Flow for Security in Control Systems (I), pp. 5065-5072.

Weerakkody, Sean	Carnegie Mellon Univ
Sinopoli, Bruno	Carnegie Mellon Univ
Kar, Soummya	Carnegie Mellon Univ
Datta, Anupam	Carnegie Mellon Univ

17:00-17:20	TuC22.4

Secure Dynamic State Estimation Via Local Estimators (I), pp. 5073-5078.

Mo, Yilin	Nanyang Tech. Univ
Garone, Emanuele	Univ. Libre De Bruxelles

17:20-17:40	TuC22.5

Periodic Coordinated Attacks against Cyber-Physical Systems: Detectability and Performance Bounds (I), pp. 5079-5084.

Anguluri, Rajasekhar	Univ. of California, Riverside
Gupta, Vijay	Univ. of Notre Dame

| Pasqualetti, Fabio | Univ. of California, Riverside |

| 17:40-18:00 | TuC22.6 |

When Adversary Encounters Uncertain Cyber-Physical Systems: Robust Zero-Dynamics Attack with Disclosure Resources, pp. 5085-5090.

Park, Gyunghoon	Seoul National Univ
Shim, Hyungbo	Seoul National Univ
Lee, Chanhwa	Seoul National Univ
Eun, Yongsoon	DGIST
Johansson, Karl H.	Royal Inst. of Tech

| **TuC23** | Ironwood 5 |

An Overview of Compressed Sensing (Tutorial Session)

| Chair: Vidyasagar, Mathukumalli | The Univ. of Texas at Dallas |
| Organizer: Vidyasagar, Mathukumalli | The Univ. of Texas at Dallas |

| 16:00-18:00 | TuC23.1 |

A Tutorial Introduction to Compressed Sensing, pp. 5091-5104.

| Vidyasagar, Mathukumalli | The Univ. of Texas at Dallas |

WeP1	Ironwood 4

Future Directions in Control: A Look Backwards and Forwards
(Plenary Session)

Chair: Valcher, Maria Elena	Univ. Di Padova
Co-Chair: Doyle III, Francis J.	Harvard Univ

08:30-09:30	WeP1.1

Future Directions in Control: A Look Backwards and Forwards*.

Murray, Richard M.	California Inst. of Tech.

WeA01	Starvine 1

Networked Control Systems III (Regular Session)

Chair: Franze', Giuseppe	Univ. Della Calabria
Co-Chair: Islam, Shafiqul	Carleton Univ

10:00-10:20	WeA01.1

Output Feedback Impedance Reflection Based Bilateral Shared Autonomous System without Input Force Measurement, pp. 5105-5109.

Islam, Shafiqul	Carleton Univ
Liu, Peter X.	Carleton Univ

10:20-10:40	WeA01.2

Optimal Control/Observation Points Problem and Separation Principle of Weakly Controlled Large-Scaled Multi-Agent Systems, pp. 5110-5115.

Tsumura, Koji	The Univ. of Tokyo
Kawasaki, Issei	The Univ. of Tokyo

10:40-11:00	WeA01.3

H2-Clustering of Closed-Loop Consensus Networks under Generalized LQR Designs, pp. 5116-5121.

Xue, Nan	North Carolina State Univ
Chakrabortty, Aranya	North Carolina State Univ

11:00-11:20	WeA01.4

Dynamically Event-Triggered State Estimation of Hidden Markov Models through a Lossy Communication Channel, pp. 5122-5127.

Huang, Jiarao	Univ. of Alberta
Shi, Dawei	Beijing Inst. of Tech
Chen, Tongwen	Univ. of Alberta

11:20-11:40	WeA01.5

A Leader-Follower Architecture for Load Frequency Control Purposes against Cyber Attacks in Power Grids - Part I, pp. 5128-5133.

Franze', Giuseppe	Univ. Della Calabria
Tedesco, Francesco	Univ. Della Calabria
Casavola, Alessandro	Univ. Della Calabria

11:40-12:00	WeA01.6

A Leader-Follower Architecture for Load Frequency Control Purposes against Cyber Attacks in Power Grids - Part II, pp. 5134-5139.

Franze', Giuseppe	Univ. Della Calabria
Tedesco, Francesco	Univ. Della Calabria
Casavola, Alessandro	Univ. Della Calabria
Garone, Emanuele	Univ. Libre De Bruxelles

WeA02	Starvine 2

Autonomous Robots I (Regular Session)

Chair: Jayawardhana, Bayu	Univ. of Groningen
Co-Chair: Chowdhary, Girish	Univ. of Illinois at Urbana Champaign

10:00-10:20	WeA02.1

Distributed Scaling Control of Rigid Formations, pp. 5140-5145.

Garcia de Marina, Hector	Univ. of Groningen
Jayawardhana, Bayu	Univ. of Groningen
Cao, Ming	Univ. of Groningen

10:20-10:40	WeA02.2

Harmonic Potential-Based Communication-Aware Navigation of Mobile Agents in Cluttered Spaces, pp. 5146-5151.

Afzal, Waqas	King Fahd Univ. of Petroleum and Minerals
Masoud, Ahamd A.	KFUPM

10:40-11:00	WeA02.3

A Dynamical Systems Approach to Obstacle Navigation for a Series-Elastic Hexapod Robot, pp. 5152-5157.

Travers, Matthew	Carnegie Mellon
Ansari, Alexander	Northwestern Univ
Choset, Howie	Carnegie Mellon Univ

11:00-11:20	WeA02.4

Collision Avoidance Laws for Objects with Arbitrary Shapes, pp. 5158-5164.

Sunkara, Vishwamithra Reddy	Wichita State Univ
Chakravarthy, Animesh	Wichita State Univ

11:20-11:40	WeA02.5

Shape-Based Compliant Control with Variable Coordination Centralization on a Snake Robot, pp. 5165-5170.

Whitman, Julian	Carnegie Mellon Univ
Ruscelli, Francesco	Univ. of Bologna
Travers, Matthew	Carnegie Mellon
Choset, Howie	Carnegie Mellon Univ

11:40-12:00	WeA02.6

Intent Aware Shared Control in Off-Nominal Situations, pp. 5171-5176.

Maske, Harshal	Univ. of Illinois Urbana Champaign
Chowdhary, Girish	Univ. of Illinois at Urbana Champaign
Pagilla, Prabhakar R.	Texas A&M Univ

WeA03	Starvine 3

Control of Networks II (Regular Session)

Chair: Touri, Behrouz	Univ. of Colorado Boulder
Co-Chair: Yucelen, Tansel	Missouri Univ. of Science and Tech

10:00-10:20	WeA03.1

On Control of Multiagent Formations through Local Interactions, pp. 5177-5182.

Tran, Dzung	Univ. of South Florida
Yucelen, Tansel	Univ. of South Florida

10:20-10:40	WeA03.2

Resilient and Decentralized Control of Multi-Level Cooperative Mobile Networks to Maintain Connectivity under Adversarial Environment, pp. 5183-5188.

Chen, Juntao	New York Univ
Zhu, Quanyan	New York Univ

10:40-11:00	WeA03.3

Finite Model Approximations and Asymptotic Optimality of Quantized Policies in Decentralized Stochastic Control, pp. 5189-5194.

Saldi, Naci	Univ. of Illinois at Urbana-Champaign
Yuksel, Serdar	Queen's Univ
Linder, Tamas	Queen's Univ

11:00-11:20	WeA03.4

Littlewood--Offord Theory and Controllability of Random Structures, pp. 5195-5200.

O'Rourke, Sean	Univ. of Colorado Boulder
Touri, Behrouz	Univ. of Colorado Boulder

11:20-11:40	WeA03.5

Synchronization for Heterogeneous Time-Varying Networks with Non-Introspective, Non-Minimum-Phase Agents in the Presence of External Disturbances with Known Frequencies, pp. 5201-5206.

Zhang, Meirong	Washington State Univ
Saberi, Ali	Washington State Univ
Stoorvogel, Anton A.	Univ. of Twente

11:40-12:00	WeA03.6

Towards a Complete Characterization of Vulnerability of Networked Synchronization Processes, pp. 5207-5212.

Dhal, Rahul	EPIS Inc
Lafferriere, Gerardo A.	Portland State Univ
caughman, John	Portland State Univ

WeA04	Starvine 4
Distributed Control I (Regular Session)	
Chair: Ren, Wei	Univ. of California, Riverside
Co-Chair: Stefanovic, Margareta	Univ. of Denver

10:00-10:20	WeA04.1

Distributed Sliding Mode Control for Multi-Vehicle Systems with Positive Definite Topologies (I), pp. 5213-5219.

Wu, Yujia	Univ. of California, Berkeley
Li, Shengbo	Tsinghua Univ
Zheng, Yang	Univ. of Oxford
Hedrick, J. Karl	Univ. of California at Berkeley

10:20-10:40	WeA04.2

Distributed Minimum Weighted Norm Solution to Linear Equations Associated with Weighted Inner Product, pp. 5220-5225.

Wang, Peng	Univ. of California, Riverside
Ren, Wei	Univ. of California, Riverside
Duan, Zhisheng	Peking Univ

10:40-11:00	WeA04.3

Distributed Model Predictive Control of Linear Discrete-Time Systems with Coupled Constraints, pp. 5226-5231.

Wang, Zheming	National Univ. of Singapore
Ong, Chong-Jin	National Univ. of Singapore
Hong, Geok Soon	Associate Professor

11:00-11:20	WeA04.4

Distributed Decoupling of Linear Multiagent Systems with Interconnected Nonlinear Uncertainties, pp. 5232-5237.

Rezaei, Vahid	Univ. of Denver
Stefanovic, Margareta	Univ. of Denver

11:20-11:40	WeA04.5

Controller Synthesis for Distributed Systems Over Undirected Graphs

(I), pp. 5238-5244.

Holicki, Tobias	Univ. of Stuttgart
Scherer, Carsten W.	Univ. of Stuttgart

11:40-12:00	WeA04.6

Distributed Formation Control of Multiple Unmanned Aerial Vehicles Over Time-Varying Graphs Using Population Games, pp. 5245-5250.

Barreiro-Gomez, Julian	Univ. De Los Andes - Univ. Pol. De Catalunya
Mas, Ignacio	CONICET
Ocampo-Martinez, Carlos	Tech. Univ. of Catalonia (UPC)
Sánchez-Peña, Ricardo S.	Buenos Aires Inst. of Tech. (ITBA)
Quijano, Nicanor	Univ. De Los Andes

WeA05	Starvine 5
Control of Monotone Systems (Invited Session)	
Chair: Rantzer, Anders	Lund Univ
Co-Chair: Altafini, Claudio	Linkoping Univ
Organizer: Rantzer, Anders	Lund Univ

10:00-10:20	WeA05.1

New Results on the Solution of the Positive Consensus Problem (I), pp. 5251-5256.

Valcher, Maria Elena	Univ. Di Padova
Zorzan, Irene	Univ. of Padova

10:20-10:40	WeA05.2

An Infinitesimal Characterization of Nonlinear Contracting Interference Functions (I), pp. 5257-5262.

Ugo Abara, Precious	Tech. Univ. of Munich
Ticozzi, Francesco	Univ. Di Padova
Altafini, Claudio	Linkoping Univ

10:40-11:00	WeA05.3

Convex Reformulation of a Robust Optimal Control Problem for a Class of Positive Systems (I), pp. 5263-5268.

Colombino, Marcello	ETH Zurich
Dhingra, Neil K	Univ. of Minnesota
Jovanovic, Mihailo	Univ. of Minnesota
Smith, Roy S.	ETH Zurich

11:00-11:20	WeA05.4

Diagonal Lyapunov Functions for Positive Linear Time-Varying Systems (I), pp. 5269-5274.

Khong, Sei Zhen	Univ. of Minnesota
Rantzer, Anders	Lund Univ

11:20-11:40	WeA05.5

H-Infinity Optimal Control for Infinite-Dimensional Systems with Strictly Negative Generator (I), pp. 5275-5280.

Lidström, Carolina	Lund Univ
Rantzer, Anders	Lund Univ
Morris, Kirsten	Univ. of Waterloo

11:40-12:00	WeA05.6

Exchange Economics As an Alternative to Distributed Optimization (I), pp. 5281-5285.

Rantzer, Anders	Lund Univ

WeA06	Starvine 6
Game Theory I (Regular Session)	
Chair: Nayyar, Ashutosh	Univ. of Southern California

Co-Chair: Kar, Soummya	Carnegie Mellon Univ

10:00-10:20	WeA06.1

To Observe or Not to Observe: Queuing Game Framework for Urban Parking, pp. 5286-5291.

Ratliff, Lillian J.	Univ. of Washington
Dowling, Chase	Univ. of Washington
Mazumdar, Eric	UC Berkeley
Zhang, Baosen	Univ. of Washington

10:20-10:40	WeA06.2

Learning Pure-Strategy Nash Equilibria in Networked Multi-Agent Systems with Uncertainty, pp. 5292-5297.

Eksin, Ceyhun	Georgia Inst. of Tech
Swenson, Brian	Carnegie Mellon Univ
Kar, Soummya	Carnegie Mellon Univ
Ribeiro, Alejandro	Univ. of Pennsylvania

10:40-11:00	WeA06.3

Stochastic Payoff-Based Learning in Multi-Agent Systems Modeled by Means of Potential Games, pp. 5298-5303.

Tatarenko, Tatiana	TU Darmstadt

11:00-11:20	WeA06.4

Optimal Nonlinear Solutions for Reverse Stackelberg Games with Incomplete Information, pp. 5304-5309.

Su, Zhou	Delft Univ. of Tech
Baldi, Simone	Delft Univ. of Tech
De Schutter, Bart	Delft Univ. of Tech

11:20-11:40	WeA06.5

Finite Stage Asymmetric Repeated Games: Both Players' Viewpoints, pp. 5310-5315.

Li, Lichun	Georgia Inst. of Tech
Feron, Eric	Georgia Tech
Shamma, Jeff S.	KAUST

11:40-12:00	WeA06.6

Optimal Auction Design for Flexible Consumers, pp. 5316-5321.

Navabi, Shiva	Univ. of Southern California
Nayyar, Ashutosh	Univ. of Southern California

WeA07	Starvine 7
Optimization I (Regular Session)	
Chair: Peet, Matthew M.	Arizona State Univ
Co-Chair: Wynn, Andrew	Imperial Coll. London

10:00-10:20	WeA07.1

Multi-Objective Optimization of Tracking/Impedance Control for a Prosthetic Leg with Energy Regeneration, pp. 5322-5327.

Khademi, Gholamreza	Cleveland State Univ
Richter, Hanz	Cleveland State Univ
Simon, Dan	Cleveland State Univ

10:20-10:40	WeA07.2

A New Method to Compute Generalized Inverses for Control Allocation, pp. 5328-5334.

Kirchengast, Martin	Graz Univ. of Tech
Steinberger, Martin	Graz Univ. of Tech
Horn, Martin	Graz Univ. of Tech

10:40-11:00	WeA07.3

A Convex Optimization Approach to Design of Information Structured Linear Constrained Controllers, pp. 5335-5341.

Wang, Yin	Northeastern Univ. / Avigilon
Ozbay, Bengisu	Northeastern Univ
Sharif, Mohammadreza	Northeastern Univ
Sznaier, Mario	Northeastern Univ

11:00-11:20	WeA07.4

An Optimization-Based Method for Bounding State Functionals of Nonlinear Stochastic Systems, pp. 5342-5347.

Ahmadi, Mohamadreza	Univ. of Oxford
Harris, Andreas William Kisling	Univ. of Oxford
Papachristodoulou, Antonis	Univ. of Oxford

11:20-11:40	WeA07.5

Multi-Objective Dynamic Programming for Constrained Optimization of Non-Separable Objective Functions with Application in Energy Storage, pp. 5348-5353.

Kamyar, Reza	Arizona State Univ
Peet, Matthew M.	Arizona State Univ

11:40-12:00	WeA07.6

H2/Hinfty Based Sliding Mode Control: A Partial Eigenstructure Assignment Method, pp. 5354-5359.

Argha, Ahmadreza	Univ. of Tech. Sydney
Su, Steven W.	Univ. of Tech. Sydney
Savkin, Andrey V.	Univ. of New South Wales
Celler, Branko G.	CSIRO ICT Centre

WeA08	Starvine 8
Stochastic Systems IV (Regular Session)	
Chair: Li, Jian	Texas A&M Univ
Co-Chair: Master, Neal	Stanford Univ

10:00-10:20	WeA08.1

Infinite Server Queueing Networks with Deadline Based Routing, pp. 5360-5366.

Master, Neal	Stanford Univ
Bambos, Nicholas	Stanford Univ

10:20-10:40	WeA08.2

Backstepping Design for Incremental Stability of Stochastic Hamiltonian Systems, pp. 5367-5372.

Jagtap, Pushpak	Tech. Univ. of Munich
Zamani, Majid	Tech. Univ. of Munich

10:40-11:00	WeA08.3

Lyapunov and Converse Lyapunov Theorems for Stochastic Semistability, pp. 5373-5378.

Rajpurohit, Tanmay	Georgia Inst. of Tech
Haddad, Wassim M.	Georgia Inst. of Tech

11:00-11:20	WeA08.4

Asymptotic Stability in Probability of a Square Root Stochastic Process, pp. 5379-5383.

Khalifa, Tahar	Inst. Supérieur Des Sciences Appliquées Et De Tech. De
Barbata, Asma	Univ. De Lorraine
Zasadzinski, Michel	Univ. De Lorraine & CRAN
Souley Ali, Harouna	Univ. De Lorraine, CRAN UMR 7039 CNRS

11:20-11:40	WeA08.5

Optimal Resource Capacity Management in Stochastic Loss Network Systems with Applications in Clouds and Data Centers, pp. 5384-5389.

Li, Jian	Texas A&M Univ

11:40-12:00 WeA08.6

On Stochastic Optimal Control for Linear Systems with Robust Stability, pp. 5390-5395.

Ito, Yuji	Toyota Central R&d Labs., Inc
Fujimoto, Kenji	Kyoto Univ
Tadokoro, Yukihiro	TOYOTA Central R&D Lab., Inc
Yoshimura, Takayoshi	TOYOTA Central R&D Lab., Inc

WeA09	Starvine 9

Observers for Linear Systems (Regular Session)

Chair: Zaccarian, Luca	Univ. of Trento, VAT 00340520220
Co-Chair: Efimov, Denis	Inria - Lne

10:00-10:20 WeA09.1

On the Convergence of Sensitivity-Driven Partition-Based Moving Horizon Estimators, pp. 5396-5401.

Schneider, René	RWTH Aachen Univ

10:20-10:40 WeA09.2

An Adaptive Pseudo-Inverse Method for the Fault-Tolerant Output Allocation in Linear Observers with Redundant Sensors, pp. 5402-5407.

Cristofaro, Andrea	NTNU
Zaccarian, Luca	LAAS-CNRS and Univ. of Trento

10:40-11:00 WeA09.3

A Hybrid Observer for Fixed-Time State Estimation of Linear Systems, pp. 5408-5413.

Ríos, Héctor	Coll. of Engineering, UCSB
Teel, Andrew R.	Univ. of California at Santa Barbara

11:00-11:20 WeA09.4

Sensor Placement for Reliable Observability: A Structured Systems Approach, pp. 5414-5421.

Liu, Xiaofei	Carnegie Mellon Univ
Weerakkody, Sean	Carnegie Mellon Univ
Sinopoli, Bruno	Carnegie Mellon Univ

11:20-11:40 WeA09.5

Optimal Control of Parallel Buffers by Using Output Feedback Based on Practical Observers, pp. 5422-5427.

Alessandri, Angelo	Univ. of Genoa
Percivale, Danilo	Univ. of Genoa
Van der Putten, Robertus	Univ. of Genoa

11:40-12:00 WeA09.6

Observer-Based Control for Linear Sampled-Data Systems: An Impulsive System Approach, pp. 5428-5433.

Ríos, Héctor	Coll. of Engineering, UCSB
Hetel, Laurentiu	CNRS
Efimov, Denis	Inria

WeA10	Starvine 10

Filtering (Regular Session)

Chair: Taghvaei, Amirhossein	Univ. of Illinois at Urbana-Champaign
Co-Chair: Berntorp, Karl	Mitsubishi Electric Res. Labs

10:00-10:20 WeA10.1

Process-Noise Adaptive Particle Filtering with Dependent Process and Measurement Noise, pp. 5434-5439.

Berntorp, Karl	Mitsubishi Electric Res. Labs
Di Cairano, Stefano	Mitsubishi Electric Res. Labs

10:20-10:40 WeA10.2

Attitude Estimation with Feedback Particle Filter, pp. 5440-5445.

Zhang, Chi	Univ. of Illinois at Urbana-Champaign
Taghvaei, Amirhossein	Univ. of Illinois at Urbana-Champaign
Mehta, Prashant G.	Univ. of Illinois, Urbana-Champaign

10:40-11:00 WeA10.3

Gain Function Approximation in the Feedback Particle Filter, pp. 5446-5452.

Taghvaei, Amirhossein	Univ. of Illinois at Urbana-Champaign
Mehta, Prashant G.	Univ. of Illinois, Urbana-Champaign

11:00-11:20 WeA10.4

Learning Techniques for Feedback Particle Filter Design, pp. 5453-5459.

Radhakrishnan, Anand	Univ. of Florida
Devraj, Adithya M.	Univ. of Florida
Meyn, Sean P.	Univ. of Florida

11:20-11:40 WeA10.5

The Feedback Theorem for Sub-Optimal Filters, pp. 5460-5464.

Cacace, Filippo	Univ. Campus Biomedico Di Roma
Germani, Alfredo	Univ. Dell'aquila
Manes, Costanzo	Univ. Dell'aquila

11:40-12:00 WeA10.6

Filtering with Fidelity for Time-Varying Gauss-Markov Processes, pp. 5465-5470.

Stavrou, Photios A.	Univ. of Cyprus
Charalambous, Themistoklis	Chalmers Univ. of Tech
Charalambous, Charalambos D.	Univ. of Cyprus

WeA11	Starvine 11

Iterative Learning Control (Regular Session)

Chair: Ferrari, Silvia	Cornell Univ
Co-Chair: Rogers, Eric	Univ. of Southampton

10:00-10:20 WeA11.1

Value Function Approximation for the Control of Multiscale Dynamical Systems, pp. 5471-5477.

Zhu, Pingping	Cornell Univ
Morelli, Julian	Cornell Univ
Ferrari, Silvia	Cornell Univ

10:20-10:40 WeA11.2

Iterative Learning Control Design Based on Feedback Linearization and Nonlinear Repetitive Process Stability Theory, pp. 5478-5483.

Pakshin, Pavel	Arzamas Pol. Inst. of R.E. Alekseev Nizhny Novgorod S
Emelianova, Julia	Arzamas Pol. Inst. of R.E. Alekseev NizhnyNovgorod St
Emelianov, Mikhail	Arzamas Pol. Inst. of R.E. Alekseev NizhnyNovgorod St
Galkowski, Krzysztof	Univ. of Zielona Gora

Rogers, Eric	Univ. of Southampton

10:40-11:00	WeA11.3

Adapting Strategies to Dynamic Environments in Controllable Stackelberg Security Games, pp. 5484-5489.

Trejo, Kristal	CINVESTAV
Clempner, Julio	National Pol. Inst
Poznyak, Alexander	CINVESTAV-IPN

11:00-11:20	WeA11.4

Non-Repetitive Trajectory Tracking for Joint Position Constrained Robot Manipulators Using Iterative Learning Control, pp. 5490-5495.

Jin, Xu	Georgia Inst. of Tech

11:20-11:40	WeA11.5

Repetitive Control of Non-Minimum Phase Systems Along B-Spline Trajectories, pp. 5496-5501.

Biagiotti, Luigi	Univ. of Modena and Reggio Emilia
Califano, Federico	Univ. of Bologna
Melchiorri, Claudio	Univ. of Bologna

11:40-12:00	WeA11.6

Design and Modeling Aspects in Multivariable Iterative Learning Control, pp. 5502-5507.

Blanken, Lennart	Eindhoven Univ. of Tech
Koekebakker, Sjirk Holger	Océ Tech. B.V
Oomen, Tom	Eindhoven Univ. of Tech

WeA12	Starvine 12
Stability of Hybrid Systems (Regular Session)	
Chair: Dullerud, Geir E.	Univ. of Illinois, Urbana-Champaign
Co-Chair: D'Innocenzo, Alessandro	Univ

10:00-10:20	WeA12.1

New Stability Results for Switched Discrete-Time Systems with Application to Consensus Problems, pp. 5508-5514.

Lee, Ti-Chung	Univ. of Science and Tech
Xia, Weiguo	Dalian Univ. of Tech
Su, Youfeng	Fuzhou Univ
Huang, Jie	The Chinese Univ. of Hong Kong

10:20-10:40	WeA12.2

Bisimulations for Input-Output Stability of Hybrid Systems, pp. 5515-5520.

Prabhakar, Pavithra	Kansas State Univ
Liu, Jun	Univ. of Waterloo

10:40-11:00	WeA12.3

Stability Analysis of Singularly Perturbed Switched and Impulsive Linear Systems, pp. 5521-5526.

Ben Rejeb, Jihene	Univ. De Lorraine -- CRAN
Morarescu, Irinel-Constantin	Cran Cnrs Umr 7039 - Ul
Girard, Antoine	CNRS
Daafouz, Jamal	Univ. De Lorraine, CRAN, CNRS

11:00-11:20	WeA12.4

On Stability of Time-Inhomogeneous Markov Jump Linear Systems, pp. 5527-5532.

Zacchia Lun, Yuriy	Gran Sasso Science Inst. (GSSI)
D'Innocenzo, Alessandro	Univ
Di Benedetto, M. Domenica	Univ. of L'Aquila

11:20-11:40	WeA12.5

Extremal Storage Functions and Minimal Realizations of Discrete-Time Linear Switching Systems, pp. 5533-5538.

Philippe, Matthew	Univ. Catholique De Louvain
Essick, Ray	Univ. of Illinois, Urbana-Champaign
Dullerud, Geir E.	Univ. of Illinois, Urbana-Champaign
Jungers, Raphaël M.	Univ. of Louvain

11:40-12:00	WeA12.6

Language Constrained Stabilization of Discrete-Time Switched Linear Systems: A Lyapunov-Metzler Inequalities Approach, pp. 5539-5544.

Jungers, Marc	CNRS - Univ. De Lorraine
Girard, Antoine	CNRS
Fiacchini, Mirko	CNRS, Univ. Grenoble Alpes

WeA13	Starvine 13
Stability of Nonlinear Systems I (Regular Session)	
Chair: Manchester, Ian R.	Univ. of Sydney
Co-Chair: Althoff, Matthias	Tech. Univ. München

10:00-10:20	WeA13.1

Discretization of Asymptotically Stable Homogeneous Systems by Explicit and Implicit Euler Methods, pp. 5545-5550.

Efimov, Denis	Inria
Polyakov, Andrey	Inria Lille Nord-Europe
Levant, Arie	Tel - Aviv Univ
Perruquetti, Wilfrid	Ec. Centrale De Lille

10:20-10:40	WeA13.2

Decentralized Nonlinear Feedback Design with Separable Control Contraction Metrics, pp. 5551-5556.

Stein Shiromoto, Humberto	The Univ. of Sydney
Manchester, Ian R.	Univ. of Sydney

10:40-11:00	WeA13.3

On Almost Lyapunov Functions for Non-Vanishing Vector Fields, pp. 5557-5562.

Liu, Shenyu	Coordinated Science Lab. Univ. of Illinois at Urbana
Liberzon, Daniel	Univ. of Illinois, Urbana-Champaign
Zharnitsky, Vadim	Univ. of Illinois at Urbana-Champaign

11:00-11:20	WeA13.4

Weak Stability of Nonlinear Repetitive Processes, pp. 5563-5568.

Pakshin, Pavel	Arzamas Pol. Inst. of R.E. Alekseev Nizhny Novgorod S
Emelianova, Julia	Arzamas Pol. Inst. of R.E. Alekseev NizhnyNovgorod St
Emelianov, Mikhail	Arzamas Pol. Inst. of R.E. Alekseev NizhnyNovgorod St
Galkowski, Krzysztof	Univ. of Zielona Gora
Rogers, Eric	Univ. of Southampton

11:20-11:40	WeA13.5

Estimating the Domain of Attraction Based on the Invariance Principle, pp. 5569-5576.

HAN, Dongkun	Tech. Univ. of Munich
Elguindy, Ahmed	Tech. Univ. of Munich
Althoff, Matthias	Tech. Univ. München

11:40-12:00	WeA13.6

Boundary Stabilization of Hyperbolic Conservation Laws Using Conservative Finite Volume Schemes, pp. 5577-5582.

Herty, Michael	RWTH Aachen Univ
Yu, Hui	RWTH Aachen Univ

WeA14	Ironwood 1
Information Theory and Control (Regular Session)	
Chair: Karaman, Sertac	Massachusetts Inst. of Tech
Co-Chair: Fox, Roy	Hebrew Univ

10:00-10:20	WeA14.1

Information-Based Active SLAM Via Topological Feature Graphs, pp. 5583-5590.

Mu, Beipeng	MIT
Giamou, Matthew	MIT
Paull, Liam	MIT
Agha-mohammadi, Ali-akbar	Texas A&M Univ
Leonard, John J.	Massachusetts Inst. of Tech
How, Jonathan P.	MIT

10:20-10:40	WeA14.2

Non-Myopic Target Tracking Strategies for Non-Linear Systems, pp. 5591-5596.

Zhang, Zhongshun	Virginia Tech
Tokekar, Pratap	Virginia Tech

10:40-11:00	WeA14.3

Order Preservation of Expected Information Content Using Unscented Transform Approximation of Multivariate Prior Distributions in HIV 2-LTR Experiment Design, pp. 5597-5602.

Abraham, George	Swarthmore Coll
Jagarapu, Aditya	Univ. of Delaware
Cannon, LaMont	Univ. of Delaware
Zurakowski, Ryan	Univ. of Delaware

11:00-11:20	WeA14.4

Minimum-Information LQG Control — Part II: Retentive Controllers, pp. 5603-5609.

Fox, Roy	Hebrew Univ
Tishby, Naftali	Hebrew Uni

11:20-11:40	WeA14.5

Minimum-Information LQG Control — Part I: Memoryless Controllers, pp. 5610-5616.

Fox, Roy	Hebrew Univ
Tishby, Naftali	Hebrew Uni

11:40-12:00	WeA14.6

Control with Actuation Anticipation, pp. 5617-5622.

Hariyoshi, Ena	UC Berkeley
Ranade, Gireeja	Microsoft Res
Sahai, Anant	UC Berkeley

WeA15	Ironwood 2
Estimation and Control of PDE Systems (Invited Session)	
Chair: Demetriou, Michael A.	Worcester Pol. Inst
Co-Chair: Le Gorrec, Yann	Ensmm, Femto-St / As2m
Organizer: Demetriou, Michael A.	Worcester Pol. Inst
Organizer: Fahroo, Fariba	DARPA

Organizer: Le Gorrec, Yann	Ensmm, Femto-St / As2m

10:00-10:20	WeA15.1

Backstepping PDE-Based Adaptive Observer for a Single Particle Model of Lithium-Ion Batteries (I), pp. 5623-5628.

Ascencio, Pedro	Imperial Coll. London
Astolfi, Alessandro	Imperial Coll. & Univ. of Rome
Parisini, Thomas	Imperial Coll. & Univ. of Trieste

10:20-10:40	WeA15.2

Robustness to Diffusion of Prediction-Based Control for Convection Processes (I), pp. 5629-5634.

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

10:40-11:00	WeA15.3

Desynchronization and Resynchronization of Interconnected Finite and Infinite Dimensional Systems: Interpretation of Attack and Accommodation Using FDI Framework (I), pp. 5635-5642.

Demetriou, Michael A.	Worcester Pol. Inst

11:00-11:20	WeA15.4

A Constructive Solution to the Sub-Optimal Hankel Norm Approximation Problem for a Class of Infinite-Dimensional Systems (I), pp. 5643-5648.

Iftime, Orest V.	Univ. of Groningen

11:20-11:40	WeA15.5

Vibration Regulation of a Flexible Hose for Aerial Refueling System, pp. 5649-5653.

Zhang, Shuang	Univ. of Electronic Science and Tech. of China
He, Wei	Univ. of Science and Tech. Beijing
Zou, Mingfo	Univ. of Electronic Science and Tech. of China
He, Xiuyu	School of Automation and Electrical Engineering, Univ. of S

11:40-12:00	WeA15.6

Multivariable PI Controller Design for 2 X 2 Systems Governed by Hyperbolic Partial Differential Equations with Lyapunov Techniques, pp. 5654-5659.

TRINH, Ngoc-Tu	Univ. of Lyon, Univ. Lyon 1, Lab. LAGEP
Andrieu, Vincent	Univ. De Lyon
Xu, Chengzhong	Univ. Claude Bernard - Lyon1

WeA16	Ironwood 3
Feedback Linearization (Regular Session)	
Chair: Paliotta, Claudio	Norwegian Univ. of Science and Tech. - NTNU
Co-Chair: Schuster, Eugenio	Lehigh Univ

10:00-10:20	WeA16.1

Trajectory Tracking of Under-Actuated Marine Vehicles, pp. 5660-5667.

Paliotta, Claudio	Norwegian Univ. of Science and Tech. - NTNU
Lefeber, Erjen	Eindhoven Univ. of Tech
Pettersen, Kristin Y.	Norwegian Univ. of Science and Tech

10:20-10:40	WeA16.2

Safety Factor Profile Control in Tokamaks Via Feedback Linearization (I), pp. 5668-5673.

Pajares, Andres	Lehigh Univ

Schuster, Eugenio	Lehigh Univ

10:40-11:00	**WeA16.3**

Spin-Axis Stabilization of a Rigid Body about an Arbitrary Direction Using Two Reaction Wheels, pp. 5674-5681.

Kim, Kyunam	UC Berkeley
Agogino, Alice	Univ. of California at Berkeley

11:00-11:20	**WeA16.4**

Pre-Action and Stable Inversion Based Precise Tracking for Non-Minimum Phase System, pp. 5682-5687.

Zhang, Youling	Coll. of Control Science and Engineering, Zhejiang Univ
Zhu, Qiuguo	Coll. of Control Science and Engineering, Zhejiang Univ
Xiong, Rong	Zhejiang Univ

11:20-11:40	**WeA16.5**

Approximate Dynamic Tracking and Feedback Linearization, pp. 5688-5693.

Sassano, Mario	Univ. of Rome, Tor Vergata
Astolfi, Alessandro	Imperial Coll. & Univ. of Rome

11:40-12:00	**WeA16.6**

Robust Model Predictive Control for Non-Linear Systems with Input and State Constraints Via Feedback Linearization, pp. 5694-5699.

Pant, Yash Vardhan	Univ. of Pennsylvania
Abbas, Houssam	Univ. of Pennsylvania
Mangharam, Rahul	Univ. of Pennsylvania

WeA17	Ironwood 6
Formal Verification/Synthesis I (Regular Session)	
Chair: Belta, Calin	Boston Univ
Co-Chair: Ozay, Necmiye	Univ. of Michigan

10:00-10:20	**WeA17.1**

Interdependence Quantification for Compositional Control Synthesis with an Application in Vehicle Safety Systems, pp. 5700-5707.

Smith, Stanley W.	Univ. of Michigan, Ann Arbor
Nilsson, Petter	Univ. of Michigan
Ozay, Necmiye	Univ. of Michigan

10:20-10:40	**WeA17.2**

Robotic Swarm Control from Spatio-Temporal Specifications, pp. 5708-5713.

Haghighi, Iman	Boston Univ
Sadraddini, Sadra	Boston Univ
Belta, Calin	Boston Univ

10:40-11:00	**WeA17.3**

Synthesizing Least-Limiting Guidelines for Safety of Semi-Autonomous Systems, pp. 5714-5719.

Tumova, Jana	Royal Inst. of Tech
Dimarogonas, Dimos V.	Royal Inst. of Tech

11:00-11:20	**WeA17.4**

Decomposing Controller Synthesis for Safety Specifications, pp. 5720-5725.

Dallal, Eric	Univ. of California in Los Angeles
Tabuada, Paulo	Univ. of California at Los Angeles

11:20-11:40	**WeA17.5**

Symbolic Control of Systems with Dead Times Using Symbolic Smith Predictors, pp. 5726-5731.

Mizoguchi, Masashi	Osaka Univ

Ushio, Toshimitsu	Osaka Univ

11:40-12:00	**WeA17.6**

Feasibility Envelopes for Metric Temporal Logic Specifications, pp. 5732-5737.

Sadraddini, Sadra	Boston Univ
Belta, Calin	Boston Univ

WeA18	Ironwood 7
Model and Controller Reduction (Regular Session)	
Chair: Scherpen, Jacquelien M.A.	Univ. of Groningen
Co-Chair: Sato, Kazuhiro	Kyoto Univ

10:00-10:20	**WeA18.1**

Observability Reduction Algorithm for Rational Systems, pp. 5738-5743.

Nemcova, Jana	Univ. of Chemistry and Tech. Prague
Petreczky, Mihaly	UMR CNRS 9189, Ec. Centrale De Lille
van Schuppen, Jan H.	Van Schuppen Control Res

10:20-10:40	**WeA18.2**

Eigenstructure Analysis from Symmetrical Graph Motives with Application to Aggregated Controller Design, pp. 5744-5749.

Ishizaki, Takayuki	Tokyo Inst. of Tech
Ku, Risong	Tokyo Inst. of Tech
Imura, Jun-ichi	Tokyo Inst. of Tech

10:40-11:00	**WeA18.3**

Nonlinear Model Reduction by Deep Autoencoder of Noise Response Data, pp. 5750-5755.

Kashima, Kenji	Kyoto Univ

11:00-11:20	**WeA18.4**

Introducing Network Gramians to Undirected Network Systems for Structure-Preserving Model Reduction, pp. 5756-5761.

Cheng, Xiaodong	Univ. of Groningen
Scherpen, Jacquelien M.A.	Univ. of Groningen

11:20-11:40	**WeA18.5**

A New H^2 Optimal Model Reduction Method Based on Riemannian Conjugate Gradient Method, pp. 5762-5768.

Sato, Hiroyuki	Tokyo Univ. of Science
Sato, Kazuhiro	Kyoto Univ

11:40-12:00	**WeA18.6**

Complexity Reduction for Uncertain Systems: A Projection-Based Approach, pp. 5769-5774.

Bachnas, Ahmad Alrianes	TU Eindhoven
Yan, Xiaowei	Eindhoven Univ. of Tech
Weiland, Siep	Eindhoven Univ. of Tech

WeA19	Ironwood 8
Smart Grid II (Regular Session)	
Chair: Grammatico, Sergio	Eindhoven Univ. of Tech
Co-Chair: Bolognani, Saverio	ETH

10:00-10:20	**WeA19.1**

Exponentially Convergent Decentralized Charging Control for Large Populations of Plug-In Electric Vehicles (I), pp. 5775-5780.

Grammatico, Sergio	Eindhoven Univ. of Tech

10:20-10:40	WeA19.2

The Value of Communication in the Voltage Regulation Problem, pp. 5781-5786.

Cavraro, Guido	Univ. of Padova
Bolognani, Saverio	ETH
Carli, Ruggero	Univ. of Padova
Zampieri, Sandro	Univ. Di Padova

10:40-11:00	WeA19.3

A Distributed Command Governor Approach for the Online Management of Reactive Power in Smart Grids with Distributed Generation, pp. 5787-5792.

Casavola, Alessandro	Univ. Della Calabria
Tedesco, Francesco	Univ. Della Calabria
VIZZA, Maurizio	UNICAL

11:00-11:20	WeA19.4

Load Aggregation Effect in Power Grid, pp. 5793-5798.

Jonckheere, Edmond	Univ. of Southern California
Shalalfeh, Laith	Univ. of Southern California

11:20-11:40	WeA19.5

On Resilience Analysis and Quantification for Wide-Area Control of Power Systems (I), pp. 5799-5804.

Lu, Yueyun	The Ohio State Univ
Chang, Chin-Yao	The Ohio State Univ
Zhang, Wei	The Ohio State Univ
Marinovici, Laurentiu Dan	Pacific Northwest National Lab
Conejo, Antonio	The Ohio State Univ

11:40-12:00	WeA19.6

A Cooperative Game for the Realized Profit of an Aggregation of Renewable Energy Producers, pp. 5805-5812.

Chakraborty, Pratyush	Univ. of Florida
Baeyens, Enrique	Univ. of Valladolid
Khargonekar, Pramod P.	Univ. of Florida
Poolla, Kameshwar	Univ. of California at Berkeley

WeA20	Coppearleaf 1
Learning and Adaptation (Regular Session)	
Chair: Herrmann, Guido	Univ. of Bristol
Co-Chair: Dani, Ashwin P	Univ. of Connecticut

10:00-10:20	WeA20.1

Adaptive-Critic-Based Event-Driven Nonlinear Robust State Feedback (I), pp. 5813-5818.

Wang, Ding	Chinese Acad. of Sciences
Mu, Chaoxu	Univ. of Rhode Island
He, Haibo	Univ. of Rhode Island
Derong, Liu	State Key Lab. of Management and Control for Complex Syste

10:20-10:40	WeA20.2

Actor-Critic Reinforcement Learning for Tracking Control in Robotics (I), pp. 5819-5826.

Pane, Yudha Prawira	KU Leuven
Nageshrao, Subramanya P.	TU Delft
Babuska, R.	Delft Univ. of Tech

10:40-11:00	WeA20.3

Approximate Optimal Distributed Control of Uncertain Nonlinear Interconnected Systems with Event-Sampled Feedback (I), pp. 5827-5832.

Narayanan, Vignesh	Missouri Univ. of Science and Tech
Jagannathan, Sarangapani	Missouri Univ. of Science & Tech

11:00-11:20	WeA20.4

Data-Driven Prediction of EVAR with Confidence in Time-Varying Datasets (I), pp. 5833-5838.

Axelrod, Allan	Univ. of Illinois
Carlone, Luca	MIT
Chowdhary, Girish	Univ. of Illinois at Urbana Champaign
Karaman, Sertac	Massachusetts Inst. of Tech

11:20-11:40	WeA20.5

Distributed Adaptive Optimization and Control of Network Structures, pp. 5839-5844.

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

11:40-12:00	WeA20.6

Adaptive Optimal Output Regulation Via Output-Feedback: An Adaptive Dynamic Programing Approach (I), pp. 5845-5850.

Gao, Weinan	New York Univ
Jiang, Zhong-Ping	New York Univ

WeA21	Coppearleaf 2
Stochastic Analysis and Design Methods in Biological Systems (Invited Session)	
Chair: Borri, Alessandro	IASI-CNR
Co-Chair: Del Vecchio, Domitilla	Massachusetts Inst. of Tech
Organizer: Singh, Abhyudai	Univ. of Delaware
Organizer: Del Vecchio, Domitilla	Massachusetts Inst. of Tech

10:00-10:20	WeA21.1

Noise Reduction for Enzymatic Reactions: A Case Study for Stochastic Product Clearance (I), pp. 5851-5856.

Borri, Alessandro	IASI-CNR
Palumbo, Pasquale	IASI-CNR
Singh, Abhyudai	Univ. of Delaware

10:20-10:40	WeA21.2

A Diagram Technique for Cumulant Equations in Biomolecular Reaction Networks with Mass-Action Kinetics (I), pp. 5857-5862.

Bronstein, Leo	Tech. Univ. Darmstadt
Koeppl, Heinz	Tech. Univ. Darmstadt

10:40-11:00	WeA21.3

Stochastic Hybrid Systems Approach to Modeling Dynamics of Cell Size (I), pp. 5863-5868.

Vargas-Garcia, Cesar A.	Univ. of Delaware
Soltani, Mohammad	Univ. of Delaware
Singh, Abhyudai	Univ. of Delaware

11:00-11:20	WeA21.4

A Molecular Implementation of the Least Mean Squares Estimator (I), pp. 5869-5874.

Zechner, Christoph	ETH Zuerich
Khammash, Mustafa H.	ETH Zurich

11:20-11:40	WeA21.5

Model Order Reduction for Linear Noise Approximation Using Time-Scale Separation (I), pp. 5875-5880.

| Herath, Narmada | Massachusetts Inst. of Tech |
| Del Vecchio, Domitilla | Massachusetts Inst. of Tech |

| 11:40-12:00 | WeA21.6 |

Optimizing Phage λ Survival in a Changing Environment: Stochastic Model Predictions, pp. 5881-5887.

Conway, Jessica M.	Pennsylvania State Univ
Dennehy, John J	Queens Coll. and the Graduate Center CUNY
Singh, Abhyudai	Univ. of Delaware

| **WeA22** | Coppearleaf 3 |
| **Sensor Networks** (Regular Session) | |

| Chair: Akyol, Emrah | Univ. of Illinois at Urbana-Champaign |
| Co-Chair: Chong, Michelle S. | Lund Univ |

| 10:00-10:20 | WeA22.1 |

Self-Rating in a Community of Peers, pp. 5888-5893.

Li, Wenjie	Lab. Des Signaux Et Systemes, CNRS-CentraleSupelec-Univ
Bassi, Francesca	ESME-Sudria and L2S (UMR CNRS 8506) CNRS-CentraleSupelec-Univ
Galluccio, Laura	Univ. Di Catania
Kieffer, Michel	CNRS-Supelec

| 10:20-10:40 | WeA22.2 |

Efficient Graph-Based Informative Path Planning Using Cross Entropy, pp. 5894-5899.

Suh, Junghun	Seoul National Univ
Cho, Kyunghoon	Seoul National Univ
Oh, Songhwai	Seoul National Univ

| 10:40-11:00 | WeA22.3 |

On Remote Estimation with Communication Scheduling and Power Allocation, pp. 5900-5905.

Gao, Xiaobin	Univ. of Illinois, Urbana-Champaign
Akyol, Emrah	Univ. of Illinois at Urbana-Champaign
Basar, Tamer	Univ. of Illinois, Urbana-Champaign

| 11:00-11:20 | WeA22.4 |

Characterising the Vulnerability of Linear Control Systems under Sensor Attacks Using a System's Security Index, pp. 5906-5911.

| Chong, Michelle S. | Lund Univ |
| Kuijper, Margreta | Univ. of Melbourne |

| 11:20-11:40 | WeA22.5 |

Distributed Partitioning Strategies with Visual Optimization for Camera Network Perimeter Patrolling, pp. 5912-5917.

Belgioioso, Giuseppe	Eindhoven Univ. of Tech
Cenedese, Angelo	Univ. of Padova
Michieletto, Giulia	Univ. of Padova

| 11:40-12:00 | WeA22.6 |

Environmental Estimation with Distributed Finite Element Agents, pp. 5918-5924.

Elwin, Matthew L.	Northwestern Univ
Freeman, Randy	Northwestern Univ
Lynch, Kevin M.	Northwestern Univ

| **WeA23** | Juniper 4 |
| **Teaching Control Theory in High School** (Tutorial Session) | |

| Chair: Doyle, John C. | California Inst. of Tech |
| Organizer: Doyle, John C. | Caltech |

| 10:00-12:00 | WeA23.1 |

Teaching Control Theory in High School (I), pp. 5925-5949.

| Doyle, John C. | California Inst. of Tech |

| **WeB01** | Starvine 1 |
| **Networked Control Systems IV** (Regular Session) | |

| Chair: Hespanha, Joao P. | Univ. of California, Santa Barbara |
| Co-Chair: Cenedese, Angelo | Univ. of Padova |

| 13:30-13:50 | WeB01.1 |

Bearing Rigidity Theory in SE(3), pp. 5950-5955.

Michieletto, Giulia	Univ. of Padova
Cenedese, Angelo	Univ. of Padova
Franchi, Antonio	LAAS-CNRS

| 13:50-14:10 | WeB01.2 |

Zero-Stealthy Attack for Sampled-Data Control Systems: The Case of Faster Actuation Than Sensing, pp. 5956-5961.

Kim, Jihan	Seoul National Univ
Park, Gyunghoon	Seoul National Univ
Shim, Hyungbo	Seoul National Univ
Eun, Yongsoon	DGIST

| 14:10-14:30 | WeB01.3 |

Robust Stability under Asynchronous Sensing and Control, pp. 5962-5967.

Wakaiki, Masashi	Chiba Univ
Ogura, Masaki	Univ. of Pennsylvania
Hespanha, Joao P.	Univ. of California, Santa Barbara

| 14:30-14:50 | WeB01.4 |

Multi-Rate Control Over AWGN Channels Via Analog Joint Source-Channel Coding, pp. 5968-5973.

Khina, Anatoly	California Inst. of Tech
Pettersson, Gustav M.	KTH Royal Inst. of Tech
Kostina, Victoria	California Inst. of Tech
Hassibi, Babak	Caltech

| 14:50-15:10 | WeB01.5 |

Stability Analysis of Networked Control Systems with Direct-Feedthrough Terms: Part II - the Linear Case, pp. 5974-5979.

Heijmans, Stefan H. J.	Eindhoven Univ. of Tech
Postoyan, Romain	CNRS-CRAN
Noroozi, Navid	Sheikh Bahaei Univ
Nesic, Dragan	Univ. of Melbourne
Heemels, W.P.M.H.	Eindhoven Univ. of Tech

| 15:10-15:30 | WeB01.6 |

Conservation-Dissipation Structure of Linear Stochastic Systems, pp. 5980-5985.

| Xue, Dong | Tech. Univ. München |

| **WeB02** | Starvine 2 |
| **Autonomous Robots II** (Regular Session) | |

| Chair: Smith, Stephen L. | Univ. of Waterloo |
| Co-Chair: Mitchell, Ian M. | Univ. of British Columbia |

13:30-13:50	WeB02.1

Path Planning Using Positive Invariant Sets, pp. 5986-5991.

Danielson, Claus	Mitsubishi Electric Res. Labs
Weiss, Avishai	Mitsubishi Electric Res. Labs
Berntorp, Karl	Mitsubishi Electric Res. Labs
Di Cairano, Stefano	Mitsubishi Electric Res. Labs

13:50-14:10	WeB02.2

Y6 Tricopter Autonomous Evacuation in an Indoor Environment Using Q-Learning Algorithm, pp. 5992-5997.

Sarabakha, Andriy	Nanyang Tech. Univ
Kayacan, Erdal	Nanyang Tech. Univ

14:10-14:30	WeB02.3

Nonlinear Model Predictive Control for Trajectory Tracking of an AUV: A Distributed Implementation, pp. 5998-6003.

Shen, Chao	Univ. of Victoria
Shi, Yang	Univ. of Victoria
Buckham, Brad	Univ. of Victoria

14:30-14:50	WeB02.4

Orthogonal Vector Field-Based Control for a Multi-Robot System Circumnavigating a Moving Target in 3D, pp. 6004-6009.

Miao, Zhiqiang	Hunan Univ
Thakur, Divya	Air Force Res. Lab
Erwin, Richard Scott	Air Force Res. Lab
Pierre, Jean	Air Force Res. Lab
Wang, Yaonan	Hunan Univ
Fierro, Rafael	Univ. of New Mexico

14:50-15:10	WeB02.5

On Efficient Computation of Shortest Dubins Paths through Three Consecutive Points, pp. 6010-6015.

Sadeghi Yengejeh, Armin	Univ. of Waterloo
Smith, Stephen L.	Univ. of Waterloo

15:10-15:30	WeB02.6

Improved Action and Path Synthesis Using Gradient Sampling, pp. 6016-6023.

Traft, Neil	Univ. of British Columbia
Mitchell, Ian M.	Univ. of British Columbia

WeB03	Starvine 3
Decentralized Control I (Regular Session)	
Chair: Zemouche, Ali	Univ. of Lorraine
Co-Chair: Yuksel, Serdar	Queen's Univ

13:30-13:50	WeB03.1

Optimal Local and Remote Controllers with Unreliable Communication, pp. 6024-6029.

Ouyang, Yi	Univ. of Southern California
Asghari, Seyed Mohammad	Univ. of Southern California
Nayyar, Ashutosh	Univ. of Southern California

13:50-14:10	WeB03.2

New Decentralized Control Design for Interconnected Nonlinear Discrete-Time Systems with Nonlinear Interconnections, pp. 6030-6035.

Kheloufi, Houria	Univ. of Mouloud Mammeri
Cherifa, Bennani	Univ. of Tizi-Ouzou
Zemouche, Ali	Univ. of Lorraine
Bedouhene, Fazia	Univ. of Mouloud Mammeri, Tizi-Ouzou

Trinh, Hieu	Deakin Univ

14:10-14:30	WeB03.3

A Decentralized Second-Order Method for Dynamic Optimization, pp. 6036-6043.

Mokhtari, Aryan	Univ. of Pennsylvania
Shi, Wei	Boston Univ
Ling, Qing	Michigan Tech. Univ
Ribeiro, Alejandro	Univ. of Pennsylvania

14:30-14:50	WeB03.4

On Decentralized Convex Optimization in a Multi-Agent Setting with Separable Constraints and Its Application to Optimal Charging of Electric Vehicles (I), pp. 6044-6049.

Deori, Luca	Pol. Di Milano
Margellos, Kostas	Univ. of Oxford
Prandini, Maria	Pol. Di Milano

14:50-15:10	WeB03.5

Convex Analysis in Decentralized Stochastic Control and Strategic Measures, pp. 6050-6055.

Yuksel, Serdar	Queen's Univ
Saldi, Naci	Univ. of Illinois at Urbana-Champaign

15:10-15:30	WeB03.6

Mean Field Social Control with Decentralized Strategies and Optimality Characterization, pp. 6056-6061.

Sen, Nevroz	Harvard Univ
Huang, Minyi	Carleton Univ
Malhame, Roland P.	Ec. Pol. De Montreal

WeB04	Starvine 4
Distributed Control II (Regular Session)	
Chair: Kulcsar, Balazs	Chalmers Univ. of Tech
Co-Chair: Yu, Changbin (Brad)	The Australian National Univ

13:30-13:50	WeB04.1

Efficient and Dynamic Double Auctions for Resource Allocation, pp. 6062-6067.

Zou, Suli	Beijing Inst. of Tech
Ma, Zhongjing	Beijing Inst. of Tech
Shao, Yunfeng	State Grid Lvliang Power Supply Company
Ran, Long	Beijing Inst. of Tech
Liu, Xiangdong	Beijing Inst. of Tech

13:50-14:10	WeB04.2

Distributed MPC with Time-Varying Communication Network: A Density-Dependent Population Games Approach, pp. 6068-6073.

Barreiro-Gomez, Julian	Univ. De Los Andes - Univ. Pol. De Catalunya
Quijano, Nicanor	Univ. De Los Andes
Ocampo-Martinez, Carlos	Tech. Univ. of Catalonia (UPC)

14:10-14:30	WeB04.3

Event-Based Distributed Control of Dynamically Coupled and Constrained Linear Systems, pp. 6074-6079.

Watkins, Benjamin	Univ. of Kaiserslautern
Berkel, Felix	Univ. of Kaiserslautern
Al-Areqi, Sanad	Univ. of Kaiserslautern
Liu, Steven	Univ. of Kaiserslautern

14:30-14:50	WeB04.4

Distributed Dynamic Output Feedback Control for Discrete-Time Linear Parameter Varying Systems, pp. 6080-6085.

Dabiri, Azita	Chalmers Univ. of Tech
Kulcsar, Balazs	Chalmers Univ. of Tech

14:50-15:10	WeB04.5

Robust Finite-Time Consensus Tracking for Second-Order Multi-Agent Systems with Reduced Communication, pp. 6086-6091.

Fu, Junjie	Peking Univ
Wang, Qi	Peking Univ
Wang, Jinzhi	Peking Univ

15:10-15:30	WeB04.6

On the Connectivity of 2-Hop Neighbor Graph, pp. 6092-6097.

Hou, Yun	The Australian National Univ
Yu, Changbin (Brad)	The Australian National Univ
Qin, Jiahu	Univ. of Science and Tech. of China

WeB05	Starvine 5

Distributed Control for Large-Populations of Rational Agents I (Invited Session)

Chair: Parise, Francesca	ETH Zurich
Co-Chair: Le Ny, Jerome	Pol. Montreal
Organizer: Parise, Francesca	ETH Zurich
Organizer: Nedich, Angelia	Arizona State Univ
Organizer: Bauso, Dario	The Univ. of Sheffield
Organizer: Lygeros, John	ETH Zurich

13:30-13:50	WeB05.1

A Dynamic Collective Choice Model with an Advertiser (I), pp. 6098-6104.

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

13:50-14:10	WeB05.2

Mean Field Game Theory for Agents with Individual-State Partial Observations (I), pp. 6105-6110.

Sen, Nevroz	Harvard Univ
Caines, Peter E.	McGill Univ

14:10-14:30	WeB05.3

Distributed Nash Equilibrium Seeking by Gossip in Games on Graphs (I), pp. 6111-6116.

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

14:30-14:50	WeB05.4

The Importance of Budget in Efficient Utility Design (I), pp. 6117-6122.

Phillips, Matthew	Univ. of Colorado at Boulder
Shalaby, Yasmin	Univ. of Colorado at Boulder
Marden, Jason R.	Univ. of California, Santa Barbara

14:50-15:10	WeB05.5

Distributed Computation of Generalized Nash Equilibria in Quadratic Aggregative Games with Affine Coupling Constraints (I), pp. 6123-6128.

Paccagnan, Dario	ETH Zurich
Gentile, Basilio	ETH Zürich
Parise, Francesca	ETH Zurich
Kamgarpour, Maryam	Swiss Federal Inst. of Tech

Lygeros, John	ETH Zurich

15:10-15:30	WeB05.6

Passivity Analysis of Higher Order Evolutionary Dynamics and Population Games (I), pp. 6129-6134.

Mabrok, Mohamed	King Abdullah Univ. of Science and Tech. (KAUST)
Shamma, Jeff S.	KAUST

WeB06	Starvine 6

Game Theory II (Regular Session)

Chair: Ratliff, Lillian J.	Univ. of Washington
Co-Chair: Li, Na	Harvard Univ

13:30-13:50	WeB06.1

Development of a Visibility Augmented Proportional Navigation Guidance: A Game-Theoretic Approach, pp. 6135-6140.

Tardioli, Luca	Univ. of Pisa
Franzini, Giovanni	Univ. of Pisa
Pollini, Lorenzo	Univ. of Pisa
Innocenti, Mario	Univ. of Pisa

13:50-14:10	WeB06.2

An Incentive-Based Approach to Distributed Estimation with Strategic Sensors, pp. 6141-6146.

Ghavidel Dobakhshari, Donya	Univ. of Notre Dame
Li, Na	Harvard Univ
Gupta, Vijay	Univ. of Notre Dame

14:10-14:30	WeB06.3

Strategic Control of a Tracking System, pp. 6147-6153.

Sayin, Muhammed Omer	Univ. of Illinois at Urbana-Champaign
Akyol, Emrah	Univ. of Illinois at Urbana-Champaign
Basar, Tamer	Univ. of Illinois, Urbana-Champaign

14:30-14:50	WeB06.4

Game-Theoretic and Risk-Sensitive Stochastic Optimal Control Via Forward and Backward Stochastic Differential Equations, pp. 6154-6160.

Exarchos, Ioannis	Georgia Inst. of Tech
Theodorou, Evangelos A.	Georgia Inst. of Tech
Tsiotras, Panagiotis	Georgia Inst. of Tech

14:50-15:10	WeB06.5

Decentralized Sufficient and Necessary Optimality Conditions for Cooperative Stochastic Differential Decision Problems, pp. 6161-6166.

Charalambous, Charalambos D.	Univ. of Cyprus

15:10-15:30	WeB06.6

Stochastic Game Theoretic Trajectory Optimization in Continuous Time, pp. 6167-6172.

Sun, Wei	Georgia Inst. of Tech
Theodorou, Evangelos A.	Georgia Inst. of Tech
Tsiotras, Panagiotis	Georgia Inst. of Tech

WeB07	Starvine 7

Optimization II (Regular Session)

Chair: Lagoa, Constantino M.	Pennsylvania State Univ

Co-Chair: Zare, Armin	Univ. of Minnesota

13:30-13:50	WeB07.1

Online Optimal Gait Generation for Bipedal Walking Robots Using Legendre Pseudospectral Optimization, pp. 6173-6179.

Hereid, Ayonga	Georgia Inst. of Tech
Kolathaya, Shishir	Georgia Inst. of Tech
Ames, Aaron D.	Georgia Inst. of Tech

13:50-14:10	WeB07.2

Data-Driven Robust MILP Model for Scheduling of Multipurpose Batch Processes under Uncertainty, pp. 6180-6185.

Ning, Chao	Northwestern Univ
You, Fengqi	Cornell Univ

14:10-14:30	WeB07.3

Stochastic Subgradient Methods with Approximate Lagrange Multipliers, pp. 6186-6191.

Valls, Victor	Trinity Coll. Dublin
Leith, Douglas J.	NUI Maynooth

14:30-14:50	WeB07.4

Semidefinite Relaxation of a Class of Quadratic Integral Inequalities, pp. 6192-6197.

Fantuzzi, Giovanni	Imperial Coll. London
Wynn, Andrew	Imperial Coll. London

14:50-15:10	WeB07.5

Self-Dual Approximations to Fully Convex Impulsive Systems, pp. 6198-6203.

Hermosilla, Cristopher	Louisiana State Univ
Wolenski, Peter R.	Louisiana State Univ

15:10-15:30	WeB07.6

Convex Chance Constrained Model Predictive Control, pp. 6204-6209.

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

WeB08	Starvine 8
Randomized Algorithms (Regular Session)	

Chair: Bitar, Eilyan	Cornell Univ
Co-Chair: Calafiore, Giuseppe C.	Pol. Di Torino

13:30-13:50	WeB08.1

Random Convex Approximations of Ambiguous Chance Constrained Programs, pp. 6210-6215.

Tseng, Shih-Hao	Cornell Univ
Bitar, Eilyan	Cornell Univ
Tang, A. Kevin	Cornell Univ

13:50-14:10	WeB08.2

A Randomised Approach to Multiple Chance-Constrained Problems: An Application to Flood Avoidance, pp. 6216-6221.

Nasir, Hasan	The Univ. of Melbourne
Carè, Algo	Hungarian Acad. of Sciences (MTA), Budapest
Weyer, Erik	Univ. of Melbourne

14:10-14:30	WeB08.3

Randomized Algorithms with Adaptive Tuning of Parameters for Detecting Communities in Graphs, pp. 6222-6227.

Amelina, Natalia	Saint Petersburg State Univ
Granichin, Oleg	Saint Petersburg State Univ

Granichina, Olga	Herzen State Pedagogical Univ
Kirianovskii, Ilia	St. Petersburg State Univ
Prodanov, Timofey	Saint Petersburg State Univ

14:30-14:50	WeB08.4

Repetitive Scenario Design, pp. 6228-6233.

Calafiore, Giuseppe C.	Pol. Di Torino

14:50-15:10	WeB08.5

Sample-Average Model Predictive Control of Uncertain Linear Systems, pp. 6234-6239.

Kircher, Kevin J.	Cornell Univ
Zhang, K. Max	Cornell Univ

15:10-15:30	WeB08.6

An Optimal Randomized Policy for Controlling Stochastic Growth Processes on Lattices, pp. 6240-6245.

Somanath, Amith	Masachusetts Inst. of Tech
Karaman, Sertac	Massachusetts Inst. of Tech

WeB09	Starvine 9
Observers for Nonlinear Systems I (Regular Session)	

Chair: Menini, Laura	Univ. Di Roma 'Tor Vergata'
Co-Chair: Petreczky, Mihaly	UMR CNRS 9189, Ec. Centrale De Lille

13:30-13:50	WeB09.1

Robust Sliding Mode Observer Design for Interconnected Systems, pp. 6246-6251.

Mohamed, Mokhtar S Khalifa	Univ. of Kent
Yan, Xing-Gang	Univ. of Kent
Spurgeon, Sarah K.	Univ. Coll. London
Jiang, Bin	Nanjing Univ. of Aeronautics & Astronautics

13:50-14:10	WeB09.2

Rational Observers of Rational Systems, pp. 6252-6257.

Nemcova, Jana	Univ. of Chemistry and Tech. Prague
Petreczky, Mihaly	UMR CNRS 9189, Ec. Centrale De Lille
van Schuppen, Jan H.	Van Schuppen Control Res

14:10-14:30	WeB09.3

Nonlinear Adaptive Observer for Side Slip Angle and Road Friction Estimation, pp. 6258-6265.

Shao, Liang	Graz Univ. of Tech
JIN, Chi	Supelec & Univ. Paris Saclay
Lex, Cornelia	Graz Univ. of Tech
Eichberger, Arno	Graz Univ. of Tech

14:30-14:50	WeB09.4

Relative Attitude Observers for Three-Platform Formations with Inertial Spread Observations, pp. 6266-6271.

Batista, Pedro	IST-ID - Associação Do Inst. Superior Técnico Para a Investi
Silvestre, Carlos	Univ. of Macau
Oliveira, Paulo	Inst. Superior Técnico

14:50-15:10	WeB09.5

Observer Design for Boolean Control Networks, pp. 6272-6277.

Zhang, Zhihua	Univ. of Kaiserslautern
Leifeld, Thomas	Univ. of Kaiserslautern

| Zhang, Ping | Univ. of Kaiserslautern |

| 15:10-15:30 | WeB09.6 |

On the Enhancement of High-Gain Observers for State Estimation of Nonlinear Systems, pp. 6278-6283.

| Alessandri, Angelo | Univ. of Genoa |
| Zemouche, Ali | Univ. of Lorraine |

Kalman Filtering (Regular Session)

| Chair: Isaacs, Jason T. | California State Univ. Channel Islands |
| Co-Chair: Shi, Ling | Hong Kong Univ. of Science and Tech |

| 13:30-13:50 | WeB10.1 |

Local Carrier-Based Precision Approach and Landing System, pp. 6284-6290.

Isaacs, Jason T.	California State Univ. Channel Islands
Ezal, Kenan O.	Toyon Res. Corp
Hespanha, Joao P.	Univ. of California, Santa Barbara

| 13:50-14:10 | WeB10.2 |

Stochastic Detector against Linear Deception Attacks on Remote State Estimation (I), pp. 6291-6296.

| Li, Yuzhe | Univ. of Alberta |
| Chen, Tongwen | Univ. of Alberta |

| 14:10-14:30 | WeB10.3 |

A Secure Cross-Layer Design for Remote Estimation under DoS Attack (I), pp. 6297-6302.

Ding, Kemi	Hong Kong Univ. of Science and Tech
Quevedo, Daniel E.	Paderborn Univ
Dey, Subhrakanti	Uppsala Univ
Shi, Ling	Hong Kong Univ. of Science and Tech

| 14:30-14:50 | WeB10.4 |

Worst-Case Analysis of Innovation-Based Linear Attack on Remote State Estimation with Resource Constraint, pp. 6303-6308.

Guo, Ziyang	Hong Kong Univ. of Science and Tech
Shi, Dawei	Beijing Inst. of Tech
Johansson, Karl H.	Royal Inst. of Tech
Shi, Ling	Hong Kong Univ. of Science and Tech

| 14:50-15:10 | WeB10.5 |

On Distributed Optimal Kalman-Bucy Filtering by Averaging Dynamics of Heterogeneous Agents, pp. 6309-6314.

Kim, Jaeyong	Seoul National Univ
Shim, Hyungbo	Seoul National Univ
Wu, Jingbo	Univ. of Stuttgart

| 15:10-15:30 | WeB10.6 |

Stochastic Sensor Scheduling for Multiple Dynamical Processes Over a Shared Channel (I), pp. 6315-6320.

Han, Duo	Nanyang Tech. Univ
Wu, Junfeng	Royal Inst. of Tech. (KTH)
Mo, Yilin	Nanyang Tech. Univ
Xie, Lihua	Nanyang Tech. Univ

Statistical Learning (Regular Session)

| Chair: Nedich, Angelia | Univ. of Illinois, Urbana-Champaign |
| Co-Chair: Olshevsky, Alexander | Univ. of Illinois at Urbana-Champaign |

| 13:30-13:50 | WeB11.1 |

Distributed Learning with Infinitely Many Hypotheses, pp. 6321-6326.

Uribe, César A.	Univ. of Illinois at Urbana-Champaign
Nedich, Angelia	Univ. of Illinois, Urbana-Champaign
Olshevsky, Alexander	Boston Univ

| 13:50-14:10 | WeB11.2 |

Inverse Modeling of Non-Cooperative Agents Via Mixture of Utilities, pp. 6327-6334.

Konstantakopoulos, Ioannis	Univ. of California, Berkeley
Ratliff, Lillian J.	Univ. of Washington
JIN, MING	UC Berkeley
Spanos, Costas J.	Univ. of California at Berkeley
Sastry, Shankar	Univ. of California at Berkeley

| 14:10-14:30 | WeB11.3 |

Online Learning of Contextual Hidden Markov Models for Temporal-Spatial Data Analysis, pp. 6335-6341.

Zhou, Yuxun	UC Berkeley
Arghandeh, Reza	Florida State Univ
Spanos, Costas	UC Berkeley

| 14:30-14:50 | WeB11.4 |

A Combined AR-Knn Model for Short-Term Wind Speed Forecasting, pp. 6342-6346.

WEN, YI	TONGJI Univ
Song, Mengxuan	Tongji Univ
Wang, Jun	Tongji Univ

| 14:50-15:10 | WeB11.5 |

Differential TD Learning for Value Function Approximation, pp. 6347-6354.

| Devraj, Adithya M. | Univ. of Florida |
| Meyn, Sean P. | Univ. of Florida |

| 15:10-15:30 | WeB11.6 |

Equilibrium Distributions and Stability Analysis of Gaussian Process State Space Models, pp. 6355-6361.

| Beckers, Thomas | Tech. Univ. of Munich |
| Hirche, Sandra | Tech. Univ. München |

Switched Systems I (Regular Session)

| Chair: Danielson, Claus | Mitsubishi Electric Res. Labs |
| Co-Chair: Suyama, Koichi | Tokyo Univ. of Marine Science & Tech |

| 13:30-13:50 | WeB12.1 |

Safety and Invariance for Constrained Switching Systems, pp. 6362-6367.

Athanasopoulos, Nikolaos	Univ. Catholique De Louvain
Smpoukis, Konstantinos	Univ. of Patras
Jungers, Raphaël M.	Univ. of Louvain

| 13:50-14:10 | WeB12.2 |

Composing Limit Cycles for Motion Planning of 3D Bipedal Walkers, pp. 6368-6374.

Shafiee Motahar, Mohamad	Univ. of Delaware
Veer, Sushant	Univ. of Delaware
Poulakakis, Ioannis	Univ. of Delaware

14:10-14:30	WeB12.3

Direct Adaptive-Q Control for Online Performance Enhancement of Switching Linear Systems, pp. 6375-6381.

Friedrich, Stefan Roland	Tech. Univ. Muenchen
Buss, Martin	Tech. Univ. Muenchen

14:30-14:50	WeB12.4

Reliable Finite-Time H_{∞} Filtering for Switched Linear Systems with Persistent Dwell-Time, pp. 6382-6387.

Zhang, Lixian	Harbin Inst. of Tech
Basin, Michael	Autonomous Univ. of Nuevo Leon
Wang, Shun	Science and Tech. on Space Physics Lab
Xiao, Zhen	Science and Tech. on Space Physics Lab
Zeng, Ming	Harbin Inst. of Tech

14:50-15:10	WeB12.5

An Interval Analysis Approach to Invariance Control Synthesis for Discrete-Time Switched Nonlinear Systems, pp. 6388-6394.

Li, Yinan	Univ. of Waterloo
Liu, Jun	Univ. of Waterloo

15:10-15:30	WeB12.6

Switching L2 Gain for Analyzing the Magnitude of a System Switch, pp. 6395-6402.

Suyama, Koichi	Tokyo Univ. of Marine Science & Tech
Sebe, Noboru	Kyushu Inst. of Tech

WeB13	Starvine 13
Stability of Nonlinear Systems II (Regular Session)	
Chair: Liu, Zhitao	Zhejiang Univ
Co-Chair: Solis-Daun, Julio	Univ. Autonoma Metropolitana-Iztapalapa

13:30-13:50	WeB13.1

On the New Notion of Input-To-State Safety, pp. 6403-6409.

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

13:50-14:10	WeB13.2

Towards a Constructive Interconnection and Damping Assignment Stabilization Methodology, pp. 6410-6415.

Zhang, Meng	Zhejiang Univ
Ortega, Romeo	LSS-SUPELEC
Liu, Zhitao	Zhejiang Univ
Su, Hongye	Zhejiang Univ
Cai, Jianping	Zhejiang Univ. of Water Res. and Electric Power

14:10-14:30	WeB13.3

Lyapunov Descriptions of Robust Output Stability for Systems with Delays, pp. 6416-6421.

Gallolu Kankanamalage, Hasala Senpathy	Florida Atlantic Univ
Wang, Yuan	Florida Atlantic Univ

14:30-14:50	WeB13.4

Results on Optimal Stabilization of a Continuum of Equilibria, pp. 6422-6426.

Goebel, Rafal	Loyola Univ. Chicago

14:50-15:10	WeB13.5

Cascade Control for Compliant Joint Robots with Redundant Position Sensors, pp. 6427-6433.

Huang, Yuan Can	Beijing Inst. of Tech
Li, Zeguo	Beijing Inst. of Tech
Duan, Xingguang	Beijing Inst. of Tech

15:10-15:30	WeB13.6

Global CLF Stabilization of Systems Allowing the Null-Control Input in the Boundary of Compact Control Value Sets: An Approximation Approach (I), pp. 6434-6439.

Solis-Daun, Julio	Univ. Autonoma Metropolitana-Iztapalapa

WeB14	Ironwood 1
Sliding-Mode Control I (Regular Session)	
Chair: Edwards, Christopher	Univ. of Exeter
Co-Chair: Berman, Spring	Arizona State Univ

13:30-13:50	WeB14.1

Continuous Fixed-Time Control for Cart Inverted Pendulum Stabilization, pp. 6440-6445.

Basin, Michael	Autonomous Univ. of Nuevo Leon
Rodriguez-Ramirez, Pablo Cesar	Autonomous Univ. of Nuevo Leon
Ding, Steven X.	Univ. of Duisburg-Essen
Daszenies, Tim	Univ. of Duisburg-Essen
Shtessel, Yuri	Univ. of Alabama at Huntsville

13:50-14:10	WeB14.2

Predictive Oceanic Features Tracking with Formations of Autonomous Vehicles, pp. 6446-6451.

Mellucci, Chiara	Univ. of Exeter
Menon, Prathyush P	Univ. of Exeter
Edwards, Christopher	Univ. of Exeter

14:10-14:30	WeB14.3

Decentralised Sliding Mode Control for Nonlinear Interconnected Systems in the Regular Form, pp. 6452-6457.

Mu, Jianqiu	Univ. of Kent
Yan, Xing-Gang	Univ. of Kent
Spurgeon, Sarah K.	Univ. Coll. London
Mao, Zehui	Nanjing Univ. of Aeronautics and Astronautics

14:30-14:50	WeB14.4

On the Discrete-Time Modeling and Control of Synchronous Generators by Means of Variational Integrators and Sliding Modes, pp. 6458-6463.

Zapata-Zuluaga, Cristian Camilo	CINVESTAV IPN Unidad GDL
Loukianov, Alexander G.	CINVESTAV IPN Unidad GDL
Canedo, Jose M.	CINVESTAV
Rivera, Jorge	Cátedras Conacyt En Cinvestav Guadalajara

14:50-15:10	WeB14.5

Strategies for Control, Fault Detection and Isolation Via Sliding Mode Techniques for a 3-DOF Helicopter, pp. 6464-6469.

Capello, Elisa	Pol. Di Torino, CNR-IEIIT
Punta, Elisabetta	CNR-IEIIT, Pol. Di Torino
Fridman, Leonid	National Autonomous Univ. of Mexico

| 15:10-15:30 | WeB14.6 |

Robust Fault Detection for Positive Systems, pp. 6470-6476.

Shafai, Bahram	Northeastern Univ
Oghbaee, Amirreza	Northeastern Univ
Nazari, Sam	Northeastern Univ

| **WeB15** | Ironwood 2 |

Koopman Operator Techniques for Decision and Control (Invited Session)

Chair: Mauroy, Alexandre	Univ. of Luxembourg
Co-Chair: Susuki, Yoshihiko	Osaka Prefecture Univ
Organizer: Mauroy, Alexandre	Univ. of Luxembourg
Organizer: Susuki, Yoshihiko	Osaka Prefecture Univ
Organizer: Mezic, Igor	Univ. of California, Santa Barbara

| 13:30-13:50 | WeB15.1 |

An Operator-Theoretic Viewpoint to Non-Smooth Dynamical Systems: Koopman Analysis of a Hybrid Pendulum (I), pp. 6477-6484.

Govindarajan, Nithin	Univ. of California, Santa Barbara
Tegling, Emma	KTH Royal Inst. of Tech
Mezic, Igor	Univ. of California, Santa Barbara

| 13:50-14:10 | WeB15.2 |

On Koopman and Dynamic Mode Decompositions for Application to Dynamic Data with Low Spatial Dimension (I), pp. 6485-6491.

Raak, Fredrik	Kyoto Univ
Susuki, Yoshihiko	Osaka Prefecture Univ
Mezic, Igor	Univ. of California, Santa Barbara
Hikihara, Takashi	Kyoto Univ

| 14:10-14:30 | WeB15.3 |

Koopman Operator Based Observer Synthesis for Control-Affine Nonlinear Systems (I), pp. 6492-6499.

| Surana, Amit | United Tech. Res. Center |

| 14:30-14:50 | WeB15.4 |

Linear Identification of Nonlinear Systems: A Lifting Technique Based on the Koopman Operator (I), pp. 6500-6505.

| Mauroy, Alexandre | Univ. of Luxembourg |
| Goncalves, Jorge | Univ. of Cambridge |

| 14:50-15:10 | WeB15.5 |

Sparsity-Promoting Dynamic Mode Decomposition for Systems with Inputs (I), pp. 6506-6511.

Annoni, Jennifer	Univ. of Minnesota
Seiler, Peter	Univ. of Minnesota
Jovanovic, Mihailo	Univ. of Minnesota

| 15:10-15:30 | WeB15.6 |

Construction of Max-Separable Lyapunov Functions for Monotone Systems Using the Koopman Operator (I), pp. 6512-6517.

| Sootla, Aivar | Univ. of Liege |

| **WeB16** | Ironwood 3 |

Computational Methods (Regular Session)

| Chair: Zhang, Fumin | Georgia Inst. of Tech |
| Co-Chair: Lavaei, Javad | UC Berkeley |

| 13:30-13:50 | WeB16.1 |

Discretized Boundary Methods for Computing Smallest Forward Invariant Sets, pp. 6518-6524.

Varnell, Paul	Georgia Inst. of Tech
Mukhopadhyay, Shayok	American Univ. of Sharjah
Zhang, Fumin	Georgia Inst. of Tech

| 13:50-14:10 | WeB16.2 |

Some Problems Arising in Controller Design from Big Data Via Input-Output Methods, pp. 6525-6530.

| Montenbruck, Jan Maximilian | Univ. of Stuttgart |
| Allgöwer, Frank | Univ. of Stuttgart |

| 14:10-14:30 | WeB16.3 |

A Brief and Some Further Insight on the Exact Quadratization of Nonlinear Control Systems (I), pp. 6531-6536.

| Carravetta, Francesco | IASI-CNR |

| 14:30-14:50 | WeB16.4 |

An Adaptive K -Opt Method for Solving Traveling Salesman Problem, pp. 6537-6543.

Ma, Zhibei	1992
Liu, Lantao	Univ. of Southern California
Sukhatme, Gaurav	USC

| 14:50-15:10 | WeB16.5 |

Characterization of Rank-Constrained Feasibility Problems Via a Finite Number of Convex Programs, pp. 6544-6550.

Ashraphijuo, Morteza	Univ. of California, Berkeley
Madani, Ramtin	The Univ. of Texas at Arlington
Lavaei, Javad	UC Berkeley

| 15:10-15:30 | WeB16.6 |

Implicit Numerical Integration for the Simulation and Control of a Non-Smooth System with Resets, pp. 6551-6556.

| Huber, Olivier | UW-Madison |
| Oza, Harshal B. | Ahmedabad Univ |

| **WeB17** | Ironwood 6 |

Formal Verification/Synthesis II (Regular Session)

| Chair: Kong, Zhaodan | Univ. of California, Davis |
| Co-Chair: Sentis, Luis | The Univ. of Texas at Austin |

| 13:30-13:50 | WeB17.1 |

High-Level Planner Synthesis for Whole-Body Locomotion in Unstructured Environments, pp. 6557-6564.

Zhao, Ye	The Univ. of Texas at Austin
Topcu, Ufuk	The Univ. of Texas at Austin
Sentis, Luis	The Univ. of Texas at Austin

| 13:50-14:10 | WeB17.2 |

Q-Learning for Robust Satisfaction of Signal Temporal Logic Specifications, pp. 6565-6570.

Aksaray, Derya	Massachusetts Inst. of Tech
Jones, Austin	Massachusetts Inst. of Tech. Lincoln Lab
Kong, Zhaodan	Univ. of California, Davis
Schwager, Mac	Stanford Univ
Belta, Calin	Boston Univ

| 14:10-14:30 | WeB17.3 |

On Symbolic Control Design of Discrete–Time Nonlinear Systems with State Quantized Measurements, pp. 6571-6576.

| Pola, Giordano | Univ. of L'Aquila |

Borri, Alessandro	IASI-CNR
Di Benedetto, M. Domenica	Univ. of L'Aquila

14:30-14:50	WeB17.4

Model Reduction of Continuous–Time Stochastic Linear Control Systems Via Bisimulation Equivalence, pp. 6577-6582.

Pola, Giordano	Univ. of L'Aquila
Manes, Costanzo	Univ. Dell'aquila
van der Schaft, Arjan	Univ. of Groningen
Di Benedetto, M. Domenica	Univ. of L'Aquila

14:50-15:10	WeB17.5

On External Behavior Equivalence of Continuous–Time Stochastic Linear Control Systems, pp. 6583-6588.

Pola, Giordano	Univ. of L'Aquila
Manes, Costanzo	Univ. Dell'aquila
Di Benedetto, M. Domenica	Univ. of L'Aquila

15:10-15:30	WeB17.6

Formal Design of Robot Integrated Task and Motion Planning, pp. 6589-6594.

Rodrigues da Silva, Rafael	Univ. of Notre Dame
Wu, Bo	Univ. of Notre Dame
Lin, Hai	Univ. of Notre Dame

WeB18	Ironwood 7
Modeling (Regular Session)	
Chair: Tanovic, Omer	Massachusetts Inst. of Tech
Co-Chair: De Cicco, Luca	Pol. Di Bari

13:30-13:50	WeB18.1

Modeling Pointing Tasks in Mouse-Based Human-Computer Interactions, pp. 6595-6600.

Aranovskiy, Stanislav	Inria Lille-Nord Europe
Ushirobira, Rosane	Inria Lille - Nord Europe & Univ. De Bourgogne
Efimov, Denis	Inria
Casiez, Géry	Univ. Lille I

13:50-14:10	WeB18.2

A Hybrid Model of Adaptive Video Streaming Control Systems, pp. 6601-6606.

Cofano, Giuseppe	Pol. Di Bari
De Cicco, Luca	Pol. Di Bari
Mascolo, Saverio	Pol. Di Bari

14:10-14:30	WeB18.3

On the Exploitation of Automated Planning for Efficient Decision Making in Road Traffic Accident Management, pp. 6607-6612.

Chrpa, Lukas	Univ. of Huddersfield
Vallati, Mauro	Univ. of Huddersfield

14:30-14:50	WeB18.4

Projected Spectrahedral Cone-Invariant Realization of an LTI System with Nonnegative Impulse Response, pp. 6613-6618.

Zheng, Jianying	Nanyang Tech. Univ
Zhang, Yanqiong	The Hong Kong Univ. of Science and Tech
Qiu, Li	Hong Kong Univ. of Sci. & Tech

14:50-15:10	WeB18.5

Discrete-Time Models Resulting from Dynamic Continuous-Time Perturbations in Phase-Amplitude Modulation-Demodulation Schemes, pp. 6619-6624.

Tanovic, Omer	Massachusetts Inst. of Tech
Megretski, Alexandre	Massachusetts Inst. of Tech
Li, Yan	Massachusetts Inst. of Tech
Stojanovic, Vladimir	Univ. of California Berkeley
Osqui, Mitra	Massachusetts Inst. of Tech

15:10-15:30	WeB18.6

Bouncing Behaviour in the Kapitsa Pendulum, pp. 6625-6630.

Gutierrez Carmona, Irandi	Cinvestav
Collado, Joaquin	CINVESTAV

WeB19	Ironwood 8
Smart Grid III (Regular Session)	
Chair: Vincent, Tyrone L.	Colorado School of Mines
Co-Chair: Kammer, Christoph	EPFL

13:30-13:50	WeB19.1

Tractable Structure Learning in Radial Physical Flow Networks, pp. 6631-6638.

Deka, Deepjyoti	Los Alamos National Lab
Backhaus, Scott	Los Alamos National Lab
Chertkov, Michael	Los Alamos National Lab

13:50-14:10	WeB19.2

Effect of Bonus Payments in Cost Sharing Mechanism Design for Renewable Energy Aggregation, pp. 6639-6644.

Harirchi, Farshad	Univ. of Michigan
Vincent, Tyrone L.	Colorado School of Mines
Yang, Dejun	Colorado School of Mines

14:10-14:30	WeB19.3

Model and Data Analysis of Two-Settlement Electricity Market with Virtual Bidding, pp. 6645-6650.

Tang, Wenyuan	Univ. of California, Berkeley
Rajagopal, Ram	Stanford Univ
Poolla, Kameshwar	Univ. of California at Berkeley
Varaiya, Pravin P.	Univ. of California at Berkeley

14:30-14:50	WeB19.4

Extracting Flexibility of Heterogeneous Deferrable Loads Via Polytopic Projection Approximation, pp. 6651-6656.

Zhao, Lin	The Ohio State Univ
Hao, He	Pacific Northwest National Lab
Zhang, Wei	The Ohio State Univ

14:50-15:10	WeB19.5

Distributed Dynamic State Estimation Over a Lossy Communication Network with an Application to Smart Grids, pp. 6657-6662.

RANA, MD	UTS
Li, Li	Univ. of Tech. Sydney
Su, Steven W.	Univ. of Tech. Sydney

15:10-15:30	WeB19.6

Residential Demand Response Targeting Using Machine Learning with Observational Data, pp. 6663-6668.

Zhou, Datong Paul	Univ. of California, Berkeley
Balandat, Maximilian	Univ. of California, Berkeley
Tomlin, Claire J.	UC Berkeley

WeB20	Coppearleaf 1
Robotics I (Regular Session)	
Chair: Vela, Patricio A.	Georgia Inst. of Tech

Co-Chair: Poulakakis, Ioannis	Univ. of Delaware

13:30-13:50	WeB20.1

Towards Precise Control of Hoppers: Using High Order Partial Feedback Linearization to Control the Hopping Robot FRANK, pp. 6669-6675.

Terry, Patrick	Univ. of California Santa Barbara
Piovan, Giulia	Univ. of California, Santa Barbara
Byl, Katie	Univ. of California at Santa Barbara

13:50-14:10	WeB20.2

Shape-Centric Modeling of Lateral Undulation and Sidewinding Gaits for Snake Robots, pp. 6676-6682.

CHANG, ALEXANDER	GEORGIA Inst. OF Tech
Serrano, Miguel	Georgia Inst. of Tech
Vela, Patricio A.	Georgia Inst. of Tech

14:10-14:30	WeB20.3

Scalable Lazy SMT-Based Motion Planning, pp. 6683-6688.

Shoukry, Yasser	UC Berkeley/UCLA
Nuzzo, Pierluigi	Univ. of Southern California
Saha, Indranil	Univ. of California Berkeley
Sangiovanni-Vincentelli, Alberto L.	Univ. of California at Berkeley
Seshia, Sanjit A.	UC Berkeley
Pappas, George J.	Univ. of Pennsylvania
Tabuada, Paulo	Univ. of California at Los Angeles

14:30-14:50	WeB20.4

Inferring and Assisting with Constraints in Shared Autonomy, pp. 6689-6696.

Mehr, Negar	Univ. of California, Berkeley
Horowitz, Roberto	Univ. of California at Berkeley
Dragan, Anca	Univ. of California at Berkeley

14:50-15:10	WeB20.5

Controllability and Observability of N-Link Underactuated Planar Robot with Multiple Active Intermediate Links, pp. 6697-6702.

Xin, Xin	Okayama Prefectural Univ

15:10-15:30	WeB20.6

Softly-Actuated Swimmers in Drag-Dominant Oscillatory Flows, pp. 6703-6708.

Jo, Ikhee	Univ. of Southern California
Huang, Yangyang	Univ. of Southern California - Park Campus
Zimmermann, Walter	Physikalisches Inst. LS Theoretische Physik I, Univ. Ba
Kanso, Eva	Univ. of Southern California

WeB21	Coppearleaf 2
Control Applications I (Regular Session)	
Chair: Chopra, Nikhil	Univ. of Maryland, Coll. Park
Co-Chair: Chen, Jian	Zhejiang Univ

13:30-13:50	WeB21.1

Confidentiality in Distributed Average Information Consensus, pp. 6709-6714.

Gupta, Nirupam	Univ. of Maryland
Chopra, Nikhil	Univ. of Maryland, Coll. Park

13:50-14:10	WeB21.2

Improved Cell Equalizing Topology for Serially Connected Lithium-Ion Battery Packs, pp. 6715-6720.

Ouyang, Quan	Zhejiang Univ
Chen, Jian	Zhejiang Univ
Liu, Hao	Zhejiang Univ
Fang, Huazhen	Univ. of Kansas

14:10-14:30	WeB21.3

State Estimation of Wastewater Treatment Processes Using Distributed Extended Kalman Filters, pp. 6721-6726.

Zeng, Jing	Shenyang Univ. of Chemical Tech
Liu, Jinfeng	Univ. of Alberta
Zou, Tao	Chinese Acad. of Sciences
Yuan, Decheng	Shenyang Inst. of Chemical Tech

14:30-14:50	WeB21.4

Robust Nonlinear Estimation and Control of Fluid Flow Velocity Fields, pp. 6727-6732.

Kidambi, Krishna Bhavithavya	Embry-Riddle Aeronautical Univ
Ramos-Pedroza, Natalie	Embry-Riddle Aeronautical Univ
MacKunis, William	Embry-Riddle Aeronautical Univ
Drakunov, Sergey V.	Embry-Riddle Aeronautical Univ

14:50-15:10	WeB21.5

A Physics-Based Control-Oriented Model for Compressor Mass Flow Rate (I), pp. 6733-6738.

Song, Kang	Tianjin Univ
upadhyay, devesh	Ford
Sun, Harold	Ford Motor Company
Xie, Hui	Tianjin Univ
Zhu, Guoming	Michigan State Univ

15:10-15:30	WeB21.6

Preserving Privacy of Agents in Participatory-Sensing Schemes for Traffic Estimation, pp. 6739-6744.

Farokhi, Farhad	The Univ. of Melbourne
Shames, Iman	The Univ. of Melbroune

WeB22	Coppearleaf 3
Traffic Control (Regular Session)	
Chair: Savla, Ketan	Univ. of Southern California
Co-Chair: Ferrara, Antonella	Univ. of Pavia

13:30-13:50	WeB22.1

A Variable-Length Cell Road Traffic Model: Application to Ring Road Speed Limit Optimization (I), pp. 6745-6752.

Canudas de Wit, Carlos	CNRS, GIPSA-Lab
Ferrara, Antonella	Univ. of Pavia

13:50-14:10	WeB22.2

Back-Pressure Traffic Signal Control with Partial Routing Control (I), pp. 6753-6758.

GREGOIRE, Jean	Mines ParisTech
Samaranayake, Samitha	Univ. of California, Berkeley
Frazzoli, Emilio	Massachusetts Inst. of Tech

14:10-14:30	WeB22.3

Convex Optimization for Energy-Efficient Traffic Control, pp. 6759-6764.

Zu, Yue	Iowa State Univ
Dai, Ran	Iowa State Univ
Dong, Jing	Iowa State Univ

14:30-14:50	WeB22.4

Model Predictive Control of Large-Scale Urban Networks Via Perimeter Control and Route Guidance Actuation, pp. 6765-6770.

Sirmatel, Isik Ilber	Urban Transport Systems Lab. EPFL
Geroliminis, Nikolas	Urban Transport Systems Lab. EPFL

14:50-15:10	WeB22.5

Throughput Analysis of a Horizontal Traffic Queue under Safe Car Following Models, pp. 6771-6776.

Motie, Mohammad	Univ. of Southern California
Savla, Ketan	Univ. of Southern California

15:10-15:30	WeB22.6

Switched Observer-Based Ramp Metering Controllers for Freeway Systems (I), pp. 6777-6782.

Ferrara, Antonella	Univ. of Pavia
Sacone, Simona	Univ. of Genova
Siri, Silvia	Univ. of Genova
Vivas, Carlos	Univ. De Sevilla
Rubio, Francisco R.	Univ. of Sevilla

WeB23	Juniper 4
Distributed Learning (Tutorial Session)	

Chair: Rahimian, Mohammad Amin	Univ. of Pennsylvania
Co-Chair: Jadbabaie, Ali	MIT
Organizer: Rahimian, Mohammad Amin	Univ. of Pennsylvania
Organizer: Jadbabaie, Ali	MIT

13:30-14:10	WeB23.1

Group Decision Making and Social Learning (I), pp. 6783-6794.

Rahimian, Mohammad Amin	Univ. of Pennsylvania
Jadbabaie, Ali	MIT

14:10-14:50	WeB23.2

A Tutorial on Distributed (Non-Bayesian) Learning: Problem, Algorithms and Results (I), pp. 6795-6801.

Nedich, Angelia	Univ. of Illinois, Urbana-Champaign
Olshevsky, Alexander	Boston Univ
Uribe, César A.	Univ. of Illinois at Urbana-Champaign

14:50-15:30	WeB23.3

Fast Algorithms for Distributed Optimization and Hypothesis Testing: A Tutorial (I), pp. 6802-6807.

Olshevsky, Alexander	Boston Univ

WeC01	Starvine 1
Networked Control Systems V (Regular Session)	

Chair: Lunze, Jan	Ruhr-Univ. Bochum
Co-Chair: Postoyan, Romain	CNRS-CRAN

16:00-16:20	WeC01.1

Stabilization of Nonlinear Systems Using State-Feedback Periodic Event-Triggered Controllers, pp. 6808-6813.

Wang, Wei	The Univ. of Melbourne
Postoyan, Romain	CNRS-CRAN
Nesic, Dragan	Univ. of Melbourne
Heemels, W.P.M.H.	Eindhoven Univ. of Tech

16:20-16:40	WeC01.2

Time-Triggered Control of Nonlinear Discrete-Time Systems, pp. 6814-6819.

Postoyan, Romain	CNRS-CRAN
Nesic, Dragan	Univ. of Melbourne

16:40-17:00	WeC01.3

Stability Analysis of Networked Control Systems with Direct-Feedthrough Terms: Part I - the Nonlinear Case, pp. 6820-6825.

Noroozi, Navid	Sheikh Bahaei Univ
Postoyan, Romain	CNRS-CRAN
Nesic, Dragan	Univ. of Melbourne
Heijmans, Stefan H. J.	Eindhoven Univ. of Tech
Heemels, W.P.M.H.	Eindhoven Univ. of Tech

17:00-17:20	WeC01.4

H2-Based Optimal Sparse Sliding Mode Control for Networked Control Systems, pp. 6826-6831.

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

17:20-17:40	WeC01.5

Unified Approach to Controller and MMSE Estimator Design with Intermittent Communications, pp. 6832-6837.

Peters, Edwin G.W.	Univ. of Newcastle
Marelli, Damian	Univ. of Newcastle
Fu, Minyue	Univ. of Newcastle
Quevedo, Daniel E.	Paderborn Univ

17:40-18:00	WeC01.6

Six Degrees of Separation in Multi-Agent Systems, pp. 6838-6844.

Lunze, Jan	Ruhr-Univ. Bochum

WeC02	Starvine 2
Autonomous Robots III (Regular Session)	

Chair: Speranzon, Alberto	Honeywell Aerospace - Advanced Tech
Co-Chair: Zhang, Fumin	Georgia Inst. of Tech

16:00-16:20	WeC02.1

A Stochastic Optimization Framework for Source Seeking with Infotaxis-Like Algorithms, pp. 6845-6850.

Mishra, Vivek	Georgia Inst. of Tech
Zhang, Fumin	Georgia Inst. of Tech

16:20-16:40	WeC02.2

Constrained Source Seeking for Mobile Robots Via Simultaneous Perturbation Stochastic Approximation, pp. 6851-6856.

Ramirez-Llanos, Eduardo	Univ. of California, San Diego
Martinez, Sonia	Univ. of California at San Diego

16:40-17:00	WeC02.3

Time Varying Control Set Design for UAV Collision Avoidance Using Reachable Tubes, pp. 6857-6862.

Zhou, Yuchen	Univ. of Maryland
Raghavan, Aneesh	Univ. of Maryland
Baras, John S.	Univ. of Maryland

17:00-17:20	WeC02.4

Sampling-Based Min-Max Uncertainty Path Planning, pp. 6863-6870.

Englot, Brendan	Stevens Inst. of Tech

Shan, Tixiao	Stevens Inst. of Tech
Bopardikar, Shaunak D.	United Tech. Res. Center, Inc
Speranzon, Alberto	Honeywell Aerospace - Advanced Tech

17:20-17:40	WeC02.5

Stochastic Behavior of Robots That Navigate by Interacting with Their Environment, pp. 6871-6876.

| Stager, Adam | Univ. of Delaware |
| Tanner, Herbert G. | Univ. of Delaware |

17:40-18:00	WeC02.6

Ensuring Communication Connectivity in Multi-Agent Systems in the Presence of Uncooperative Clients, pp. 6877-6882.

Ju, Zhiyang	Univ. of Melbourne
Shames, Iman	The Univ. of Melbroune
Nesic, Dragan	Univ. of Melbourne

WeC03	Starvine 3

Decentralized Control II (Regular Session)

| Chair: Pates, Richard | Lund Univ |
| Co-Chair: D'Eleuterio, Gabriele M. T. | Univ. of Toronto |

16:00-16:20	WeC03.1

Adaptive Decentralized Control with Nonminimum-Phase Closed-Loop Channel Zeros, pp. 6883-6888.

Islam, Syed Aseem Ul	Univ. of Michigan
Rahman, Yousaf	Univ. of Michigan
Bernstein, Dennis S.	Univ. of Michigan

16:20-16:40	WeC03.2

Characterisating Stability Implying Properties That Are Preserved under Feedback, pp. 6889-6894.

| Pates, Richard | Lund Univ |

16:40-17:00	WeC03.3

Pattern Identification in Distributed Systems, pp. 6895-6900.

Ornik, Melkior	Univ. of Toronto
Sniderman, Adam C.	Univ. of Toronto
Broucke, Mireille E.	Univ. of Toronto
D'Eleuterio, Gabriele M. T.	Univ. of Toronto

17:00-17:20	WeC03.4

Signaling Equilibria for Dynamic LQG Games with Asymmetric Information, pp. 6901-6908.

| Vasal, Deepanshu | Univ. of Michigan, Ann Arbor |
| Anastasopoulos, Achilleas | Univ. of Michigan |

17:20-17:40	WeC03.5

A Chordal Decomposition Approach to Scalable Design of Structured Feedback Gains Over Directed Graphs, pp. 6909-6914.

Zheng, Yang	Univ. of Oxford
Mason, Richard Paul	Univ. of Oxford
Papachristodoulou, Antonis	Univ. of Oxford

17:40-18:00	WeC03.6

Polarization in Coopetitive Networks of Heterogeneous Nonlinear Agents, pp. 6915-6920.

| Proskurnikov, Anton V. | Delft Univ. of Tech |
| Cao, Ming | Univ. of Groningen |

WeC04	Starvine 4

Distributed Control III (Regular Session)

| Chair: Yu, Changbin (Brad) | The Australian National Univ |
| Co-Chair: Turitsyn, Konstantin | Massachusetts Inst. of Tech |

16:00-16:20	WeC04.1

Model-Independent Trajectory Tracking of Euler-Lagrange Agents on Directed Networks, pp. 6921-6927.

Ye, Mengbin (Ben)	Australian National Univ
Anderson, Brian D.O.	Australian National Univ
Yu, Changbin (Brad)	The Australian National Univ

16:20-16:40	WeC04.2

Distributed Luenberger Observer Design, pp. 6928-6933.

Kim, Taekyoo	ASRI, Seoul National Univ
Shim, Hyungbo	Seoul National Univ
Cho, Dong-il	Seoul National Univ

16:40-17:00	WeC04.3

Distributed Control for Economic Dispatch Via Saddle Point Dynamics and Consensus Algorithms, pp. 6934-6939.

Bai, Lu	Nanyang Tech. Univ
Ye, Maojiao	Nanyang Tech. Univ. Singapore
Sun, Chao	NTU
Hu, Guoqiang	Nanyang Tech. Univ

17:00-17:20	WeC04.4

Distributed Frequency Control in Power Grids under Limited Communication, pp. 6940-6945.

Parandehgheibi, Marzieh	MIT
Turitsyn, Konstantin	Massachusetts Inst. of Tech
Modiano, Eytan	MIT

17:20-17:40	WeC04.5

Asynchronous Cooperative Method for Distributed Model Predictive Control, pp. 6946-6951.

Maffei, Alessio	Univ. of Sannio
Iannelli, Luigi	Univ. of Sannio in Benevento
Glielmo, Luigi	Univ. of Sannio
Borrelli, Francesco	Unversity of California at Berkeley

17:40-18:00	WeC04.6

Robust Distributed Consensus on the Median Value for Networks of Heterogeneously Perturbed Agents, pp. 6952-6957.

Pilloni, Alessandro	Univ. of Cagliari
Pisano, Alessandro	Univ. of Cagliari
Franceschelli, Mauro	Univ. of Cagliari
Usai, Elio	Univ. Degli Studi Di Cagliari

WeC05	Starvine 5

Distributed Control for Large-Populations of Rational Agents II (Invited Session)

Chair: Parise, Francesca	ETH Zurich
Co-Chair: Nedich, Angelia	Arizona State Univ
Organizer: Parise, Francesca	ETH Zurich
Organizer: Nedich, Angelia	Univ. of Illinois, Urbana-Champaign
Organizer: Bauso, Dario	The Univ. of Sheffield
Organizer: Lygeros, John	ETH Zurich

16:00-16:20	WeC05.1

Linear-Quadratic Mean Field Teams with a Major Agent, pp. 6958-6963.

| Huang, Minyi | Carleton Univ |

Nguyen, Son	Univ. of Puerto Rico, Rio Piedras

16:20-16:40	WeC05.2

Distributed Randomized Control for Demand Dispatch (I), pp. 6964-6971.

Busic, Ana	Inria
Meyn, Sean P.	Univ. of Florida

16:40-17:00	WeC05.3

Controlled Link Shedding for Maximizing Supportable Demand of a Disrupted Power Network (I), pp. 6972-6977.

Kesavareddigari, Himaja	The Ohio State Univ
Eryilmaz, Atilla	Ohio State Univ
Srikant, R	Univ. of Illinois, Urbana-Champaign

17:00-17:20	WeC05.4

Input-Output Stability of Linear Consensus Processes (I), pp. 6978-6983.

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

17:20-17:40	WeC05.5

Controlling Human Utilization of Shared Resources Via Taxes, pp. 6984-6989.

Hota, Ashish	Purdue Univ
Sundaram, Shreyas	Purdue Univ

17:40-18:00	WeC05.6

Quantifying the Utility of Imperfect Reviews in Stopping Information Cascades, pp. 6990-6995.

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

WeC06	Starvine 6
Game Theory III (Regular Session)	
Chair: Marden, Jason R.	Univ. of California, Santa Barbara
Co-Chair: Brown, Philip N.	Univ. of California, Santa Barbara

16:00-16:20	WeC06.1

Stochastic Generalized Reactivity (1) Games, pp. 6996-7001.

Rodriguez, Natalia	Univ. De Buenos Aires
Braberman, Victor	Univ. De Buenos Aires
D'Ippolito, Nicolás	Univ. De Buenos Aires
Uchitel, Sebastián	Univ. De Buenos Aires

16:20-16:40	WeC06.2

On Stochastic Dynamic Games with Delayed Sharing Information Structure, pp. 7002-7009.

Tavafoghi, Hamidreza	Univ. of Michigan
Ouyang, Yi	Univ. of Southern California
Teneketzis, Demosthenis	Univ. of Michigan, Ann Arbor

16:40-17:00	WeC06.3

Avoiding Perverse Incentives in Affine Congestion Games, pp. 7010-7015.

Brown, Philip N.	Univ. of California, Santa Barbara
Marden, Jason R.	Univ. of California, Santa Barbara

17:00-17:20	WeC06.4

Market Share Analysis with Brand Effect, pp. 7016-7023.

Fang, Zhixuan	Tsinghua Univ
Huang, Longbo	Tsinghua Univ

17:20-17:40	WeC06.5

On Finite Harmonic Games, pp. 7024-7029.

Li, Changxi	Harbin Inst. of Tech
Liu, Ting	Chinese Acad. of Sciences
He, Fenghua	Harbin Inst. of Tech
Cheng, Daizhan	Chinese Acad. of Sciences
Qi, Hongsheng	AMSS, Chinese Acad. of Sciences
Hong, Yiguang	Chinese Acad. of Sciences

17:40-18:00	WeC06.6

Editing Network Topologies by Playing Potential Games, pp. 7030-7035.

Pal, Siddharth	Univ. of Maryland Coll. Park
Basu, Prithwish	Raytheon BBN Tech
Ciftcioglu, Ertugrul	IBM Res
Chan, Kevin	Army Res. Lab
Swami, Ananthram	Army Res. Lab
Cansever, Derya	Army CERDEC, Aberdeen Proving Ground

WeC07	Starvine 7
Optimization III (Regular Session)	
Chair: Bitar, Eilyan	Cornell Univ
Co-Chair: Sojoudi, Somayeh	UC Berkeley

16:00-16:20	WeC07.1

Perturbation of System Dynamics and the Covariance Completion Problem, pp. 7036-7041.

Zare, Armin	Univ. of Minnesota
Jovanovic, Mihailo	Univ. of Minnesota
Georgiou, Tryphon T.	Univ. of California, Irvine

16:20-16:40	WeC07.2

Graphical Lasso and Thresholding: Conditions for Equivalence, pp. 7042-7048.

Sojoudi, Somayeh	UC Berkeley

16:40-17:00	WeC07.3

Viable Set Approximation for Linear-Gaussian Systems with Unknown, Bounded Variance, pp. 7049-7055.

Gleason, Joseph	Univ. of New Mexico
Vinod, Abraham	Univ. of New Mexico
Oishi, Meeko	Univ. of New Mexico
Erwin, Richard Scott	Air Force Res. Lab

17:00-17:20	WeC07.4

A Hierarchy of Polyhedral Approximations of Robust Semidefinite Programs, pp. 7056-7062.

Louca, Raphael	Cornell Univ
Bitar, Eilyan	Cornell Univ

17:20-17:40	WeC07.5

Optimal Allocation of Metabolic Functions among Organisms in a Microbial Ecosystem, pp. 7063-7068.

Zhao, Qi	Boston Univ
Segre, Daniel	Boston Univ
Paschalidis, Ioannis Ch.	Boston Univ

17:40-18:00	WeC07.6

Phasor Extremum Seeking Control with Adaptive Perturbation Amplitude, pp. 7069-7074.

Atta, Khalid	Luleå Univ. of Tech
Hostettler, Roland	Aalto Univ
Birk, Wolfgang	Luleå Univ. of Tech
Johansson, Andreas	Lulea Univ. of Tech

WeC08	Starvine 8
Markov Processes (Regular Session)	
Chair: Zois, Daphney-Stavroula	Univ. of Illinois, Urbana-Champaign
Co-Chair: Fu, Jie	Worcester Pol. Inst

16:00-16:20	WeC08.1

Regret Minimization Algorithms for Single-Controller Zero-Sum Stochastic Games, pp. 7075-7080.

Guan, Peng	Duke Univ
Raginsky, Maxim	Univ. of Illinois at Urbana-Champaign
Willett, Rebecca	Univ. of Wisconsin - Madison
Zois, Daphney-Stavroula	Univ. of Illinois, Urbana-Champaign

16:20-16:40	WeC08.2

Robust Optimal Policies for Markov Decision Processes with Safety-Threshold Constraints, pp. 7081-7086.

Dimitrova, Rayna	Max Planck Inst. for Software Systems
Fu, Jie	Worcester Pol. Inst
Topcu, Ufuk	The Univ. of Texas at Austin

16:40-17:00	WeC08.3

Learning Parameterized Policies for Markov Decision Processes through Demonstrations, pp. 7087-7092.

Hanawal, Manjesh Kumar	Indian Inst. of Tech. Bombay
Liu, Hao	Zhejiang Univ
Zhu, Henghui	Boston Univ
Paschalidis, Ioannis Ch.	Boston Univ

17:00-17:20	WeC08.4

Solving the Chemical Master Equation by Aggregation and Krylov Approximations, pp. 7093-7098.

Vo, Huy	Univ. of Alabama
Sidje, Roger	Univ. of Alabama

17:20-17:40	WeC08.5

Stochastic Optimization with Value Function Approximation for Micro-Grid Operation, pp. 7099-7104.

Shin, Joohyun	Korea Advanced Inst. of Science and Tech
Lee, Jay H.	Korea Advanced Inst. of Science and Tech
Realff, Matthew	Georgia Tech

17:40-18:00	WeC08.6

Mean Field Stochastic Games: Monotone Costs and Threshold Policies, pp. 7105-7110.

Huang, Minyi	Carleton Univ
Ma, Yan	Zhengzhou Univ

WeC09	Starvine 9
Observers for Nonlinear Systems II (Regular Session)	
Chair: Chakrabarty, Ankush	Harvard Univ

Co-Chair: Chen, Jian	Zhejiang Univ

16:00-16:20	WeC09.1

State and Unknown Input Observers for Discrete-Time Nonlinear Systems, pp. 7111-7116.

Chakrabarty, Ankush	Harvard Univ
Zak, Stanislaw H.	Purdue Univ
Sundaram, Shreyas	Purdue Univ

16:20-16:40	WeC09.2

State Immersion Observers for Mechanical Systems with Impacts, pp. 7117-7122.

Menini, Laura	Univ. Di Roma 'Tor Vergata'
Tornambe, Antonio	Univ. Di Roma Tor Vergata

16:40-17:00	WeC09.3

A Semi-Global Model-Based State Observer for the Quadrotor Using Only Inertial Measurements, pp. 7123-7128.

Martin, Philippe	MINES ParisTech, PSL Res. Univ
Sarras, Ioannis	-

17:00-17:20	WeC09.4

Design of Unknown Input Observers for Nonlinear Systems with Full and Partial Information, pp. 7129-7134.

Cristofaro, Andrea	NTNU
Sassano, Mario	Univ. of Rome, Tor Vergata

17:20-17:40	WeC09.5

Velocity and Range Identification of a Moving Object Using a Static-Moving Camera System, pp. 7135-7140.

Zhang, Kaixiang	Zhejiang Univ
Chen, Jian	Zhejiang Univ
Jia, Bingxi	Zhejiang Univ
Gao, Yanyan	Zhejiang Univ

17:40-18:00	WeC09.6

Cascade High-Gain Observer for High-Dimensional Systems, pp. 7141-7146.

Khalil, Hassan K.	Michigan State Univ

WeC10	Starvine 10
Identification for Control (Regular Session)	
Chair: Werner, Herbert	Hamburg Univ. of Tech
Co-Chair: Formentin, Simone	Pol. Di Milano

16:00-16:20	WeC10.1

Identification of Linear Parameter-Varying Systems Via IO and Subspace Identification - a Comparison, pp. 7147-7152.

Schulz, Erik	IAV GmbH
Bussa, Ashish	Tech. Univ. Hamburg
Werner, Herbert	Hamburg Univ. of Tech

16:20-16:40	WeC10.2

Approximated Stochastic Model Predictive Control Using Statistical Linearization of Nonlinear Dynamical System in Latent Space, pp. 7153-7158.

Oyama, Hiroyuki	Tokyo Inst. of Tech
Yamakita, Masaki	Tokyo Inst. of Tech
Asada, H. Harry	Massachusetts Inst. of Tech

16:40-17:00	WeC10.3

On Data-Driven Control Design for Non-Minimum-Phase Plants: A Comparative View, pp. 7159-7164.

Rallo, Gianmarco	Pol. Di Milano

| Formentin, Simone | Pol. Di Milano |
| Savaresi, Sergio M. | Pol. Di Milano |

| 17:00-17:20 | WeC10.4 |

Vehicle Stability Control Via VRFT with Probabilistic Robustness Guarantees, pp. 7165-7170.

Rallo, Gianmarco	Pol. Di Milano
Formentin, Simone	Pol. Di Milano
Garatti, Simone	Pol. Di Milano
Savaresi, Sergio M.	Pol. Di Milano

| 17:20-17:40 | WeC10.5 |

Developments towards Formalizing a Benchmark for Continuous-Time Model Identification, pp. 7171-7176.

Pascu, Valentin	ONERA - the French Aerospace Lab
Garnier, Hugues	Univ. of Lorraine
Ljung, Lennart	Linkoping Univ
Janot, Alexandre	ONERA

| 17:40-18:00 | WeC10.6 |

System Identification in the Presence of Adversarial Outputs, pp. 7177-7182.

Showkatbakhsh, Mehrdad	Univ. of California at Los Angeles
Tabuada, Paulo	Univ. of California at Los Angeles
Diggavi, Suhas	UCLA

WeC11	Starvine 11
Learning (Regular Session)	
Chair: Wang, Yu	Yale Univ
Co-Chair: Jadbabaie, Ali	MIT

| 16:00-16:20 | WeC11.1 |

Fast Reinforcement Learning Using Multiple Models, pp. 7183-7188.

Narendra, Kumpati S.	Yale Univ
Wang, Yu	Yale Univ
Mukhopadhyay, Snehasis	Indiana-Purdue Univ

| 16:20-16:40 | WeC11.2 |

Spatial Path Tracking Using Iterative Learning Control, pp. 7189-7194.

Chen, Yiyang	Univ. of Southampton
Chu, Bing	Univ. of Southampton
Freeman, Christopher T.	Univ. of Southampton

| 16:40-17:00 | WeC11.3 |

Online Optimization in Dynamic Environments: Improved Regret Rates for Strongly Convex Problems, pp. 7195-7201.

Mokhtari, Aryan	Univ. of Pennsylvania
Shahrampour, Shahin	Harvard Univ
Jadbabaie, Ali	MIT
Ribeiro, Alejandro	Univ. of Pennsylvania

| 17:00-17:20 | WeC11.4 |

Learning Control for Task Specific Industrial Robots, pp. 7202-7209.

Lin, Chung-Yen	Univ. of California, Berkeley
Chen, Wenjie	FANUC Corp
Tomizuka, Masayoshi	Univ. of California, Berkeley

| 17:20-17:40 | WeC11.5 |

Optimal Recommendation to Users That React: Online Learning for a Class of POMDPs, pp. 7210-7215.

Meshram, Rahul	INDIAN Inst. Tech. BOMBAY
Gopalan, Aditya	Indian Inst. of Science
Manjunath, D	IIT Bombay, India

| 17:40-18:00 | WeC11.6 |

Event-Based Fault Diagnosis for an Unknown Plant, pp. 7216-7221.

Karimi, Mohammad Mahdi	North Carolina A&T State Univ
Karimoddini, Ali	North Carolina A&T State Univ
White, Alejandro	NC A&T State Univ
Bates, II, Ira Wendell	North Carolina A&T State Univ

WeC12	Starvine 12
Switched Systems II (Regular Session)	
Chair: Colaneri, Patrizio	Pol. Di Milano
Co-Chair: Xiang, Weiming	Univ. of Texas at Arlington

| 16:00-16:20 | WeC12.1 |

Hamiltonian-Based Algorithm for Relaxed Optimal Control, pp. 7222-7227.

Wardi, Yorai	Georgia Inst. of Tech
Egerstedt, Magnus	Georgia Inst. of Tech
Qureshi, Muhammad Umer	Georgia Inst. of Tech

| 16:20-16:40 | WeC12.2 |

Optimal Control of Switching Times in Switched Linear Systems, pp. 7228-7233.

Stellato, Bartolomeo	Univ. of Oxford
Ober-Blöbaum, Sina	Univ. of Paderborn
Goulart, Paul	Univ. of Oxford

| 16:40-17:00 | WeC12.3 |

Observer-Based Control Design Via LMIs for a Class of Switched Discrete-Time Linear Systems with Parameter Uncertainties, pp. 7234-7239.

Bibi, Hamza	Univ. of Tizi-Ouzou
Bedouhene, Fazia	Univ. of Mouloud Mammeri, Tizi-Ouzou
Kheloufi, Houria	Univ. of Mouloud Mammeri
Zemouche, Ali	Univ. of Lorraine
Trinh, Hieu	Deakin Univ

| 17:00-17:20 | WeC12.4 |

On the RMS Gain of Switched Systems Via Homogeneous Rational Lyapunov Functions, pp. 7240-7245.

| Chesi, Graziano | The Univ. of Hong Kong |
| Colaneri, Patrizio | Pol. Di Milano |

| 17:20-17:40 | WeC12.5 |

Reachable Set Estimation and Control for Switched Linear Systems with Dwell-Time Restriction, pp. 7246-7251.

Xiang, Weiming	Vanderbilt Univ
Tran, Dung	Vanderbilt Univ
Johnson, Taylor T	Vanderbilt Univ

| 17:40-18:00 | WeC12.6 |

Robust Stabilization of Discrete-Time Piecewise Affine Systems Subject to Bounded Disturbances, pp. 7252-7257.

Bardakci, Ibrahim Ekrem	Penn State Univ
Lee, Ji-Woong	Pennsylvania State Univ
Lagoa, Constantino M.	Pennsylvania State Univ

| **WeC13** | Starvine 13 |
| **Stability of Nonlinear Systems III** (Regular Session) | |

Chair: Scherer, Carsten W.	Univ. of Stuttgart
Co-Chair: Levant, Arie	Tel - Aviv Univ

16:00-16:20	WeC13.1

Interval Homogeneous Domination Approach for Global Stabilization of Nonlinear Systems with Time-Varying Powers, pp. 7258-7263.

Chen, Chih-Chiang	National Chiao Tung Univ
Qian, Chunjiang	Univ. of Texas at San Antonio
Liang, Yew-Wen	National Chiao Tung Univ
Li, Shihua	Southeast Univ

16:20-16:40	WeC13.2

Stability and Performance Analysis on Sobolev Spaces, pp. 7264-7269.

Fetzer, Matthias	Univ. of Stuttgart
Scherer, Carsten W.	Univ. of Stuttgart

16:40-17:00	WeC13.3

Stability Analysis of Model Predictive Controllers Using Mixed Integer Linear Programming, pp. 7270-7275.

Simon, Daniel	Linkoping Univ
Löfberg, Johan	Linköpings Univ

17:00-17:20	WeC13.4

Noise-To-State Stability of Nonlinear Systems with Random Disturbances and Impulses, pp. 7276-7281.

Jiao, Ticao	Nanjing Univ. of Science and Tech
Zheng, Wei Xing	Western Sydney Univ

17:20-17:40	WeC13.5

A Lyapunov Analysis for the Robust Stability of an Adaptive Bellman-Ford Algorithm, pp. 7282-7287.

Dasgupta, Soura	Univ. of Iowa
Beal, Jacob	Raytheon BBN Tech

17:40-18:00	WeC13.6

Stability and Robustness of Homogeneous Differential Inclusions, pp. 7288-7293.

Levant, Arie	Tel - Aviv Univ
Efimov, Denis	Inria - Lne
Polyakov, Andrey	Inria Lille Nord-Europe
Perruquetti, Wilfrid	Ec. Centrale De Lille

WeC14	Ironwood 1
Sliding-Mode Control II (Regular Session)	
Chair: Fridman, Leonid	National Autonomous Univ. of Mexico
Co-Chair: Ferrara, Antonella	Univ. of Pavia

16:00-16:20	WeC14.1

Sliding Mode Control for Maximum Power Point Tracking of Photovoltaic Inverters in Microgrids, pp. 7294-7299.

Cucuzzella, Michele	Univ. of Pavia
Incremona, Gian Paolo	Univ. of Pavia
Guastalli, Mauro	Univ. of Pavia
Ferrara, Antonella	Univ. of Pavia

16:20-16:40	WeC14.2

Robustness Metrics for Nonlinear Uniform Fixed-Time Convergent Second Order Sliding Mode Control, pp. 7300-7305.

Panathula, Chandrasekhara Bharath	Univ. of Alabama in Huntsville
Rosales, Antonio	Inst. Tecnologico Y De Estudios Superiores De Monterrey, CCM

Shtessel, Yuri	Univ. of Alabama at Huntsville
Basin, Michael	Autonomous Univ. of Nuevo Leon

16:40-17:00	WeC14.3

Iss-Lyapunov Functions for Output Feedback Sliding Modes, pp. 7306-7311.

Aparicio, Andrea	Engineering Faculty, UNAM
Efimov, Denis	Inria
Fridman, Leonid	National Autonomous Univ. of Mexico

17:00-17:20	WeC14.4

On Acceleration of a Class of Asymptotically Stable Homogeneous Systems, pp. 7312-7317.

Efimov, Denis	Inria
Levant, Arie	Tel - Aviv Univ
Polyakov, Andrey	Inria Lille Nord-Europe
Perruquetti, Wilfrid	Ec. Centrale De Lille

17:20-17:40	WeC14.5

Sampled Describing Function Analysis of Second Order Sliding Modes, pp. 7318-7324.

Koch, Stefan	Graz Univ. of Tech
Reichhartinger, Markus	Graz Univ. of Tech
Horn, Martin	Graz Univ. of Tech
Fridman, Leonid	National Autonomous Univ. of Mexico

17:40-18:00	WeC14.6

Saturated Super-Twisting Algorithm Based on Perturbation Estimator, pp. 7325-7328.

Castillo Lopez, Alberto Ismael	National Autonomous Univ. of Mexico
Steinberger, Martin	Graz Univ. of Tech
Fridman, Leonid	National Autonomous Univ. of Mexico
Moreno, Jaime A.	Univ. Nacional Autonoma De Mexico-UNAM
Horn, Martin	Graz Univ. of Tech

WeC15	Ironwood 2
Entropy in Information and Control (Invited Session)	
Chair: Kawan, Christoph	Univ. of Passau
Co-Chair: Yuksel, Serdar	Queen's Univ
Organizer: Kawan, Christoph	Univ. of Passau
Organizer: Yuksel, Serdar	Queen's Univ

16:00-16:20	WeC15.1

Causality Preserving Information Transfer Measure for Control Dynamical System (I), pp. 7329-7334.

Sinha, Subhrajit	Iowa State Univ
Vaidya, Umesh	Iowa State Univ

16:20-16:40	WeC15.2

Entropy Notions for State Estimation and Model Detection with Finite-Data-Rate Measurements (I), pp. 7335-7340.

Liberzon, Daniel	Univ. of Illinois, Urbana-Champaign
Mitra, Sayan	Univ. of Illinois

16:40-17:00	WeC15.3

Metric Invariance Entropy and Relatively Invariant Control Sets (I), pp. 7341-7346.

Colonius, Fritz	Univ. of Augsburg

17:00-17:20	WeC15.4

Sequential Empirical Coordination under an Output Entropy Constraint (I), pp. 7347-7352.

Shafieepoorfard, Ehsan	Univ. of Illinois Urbana Champaign
Raginsky, Maxim	Univ. of Illinois at Urbana-Champaign

17:20-17:40	WeC15.5

Invariance and Stationarity in Non-Linear Networked Control: Deterministic and Stochastic Formulations (I), pp. 7353-7358.

Kawan, Christoph	Univ. of Passau
Yuksel, Serdar	Queen's Univ

17:40-18:00	WeC15.6

LQG Control with Minimum Directed Information (I), pp. 7359-7364.

Tanaka, Takashi	KTH Royal Inst. of Tech
Mohajerin Esfahani, Peyman	ETH Zurich
Mitter, Sanjoy K.	Massachusetts Inst. of Tech

WeC16	Ironwood 3
Numerical Algorithms (Regular Session)	
Chair: De La Torre, Gerardo	Northwestern Univ
Co-Chair: De Lellis, Pietro	Univ. of Naples Federico II

16:00-16:20	WeC16.1

Linear-Quadratic-Gaussian Problem for a New Class of Singularly Perturbed Stochastic Systems, pp. 7365-7370.

Kodra, Kliti	Rutgers Univ
Gajic, Zoran	Rutgers Univ

16:20-16:40	WeC16.2

A Jacobi-Like Acceleration for Dynamic Programming, pp. 7371-7376.

Laurini, Mattia	Univ. of Parma
Micelli, Piero	Univ. of Parma
Consolini, Luca	Univ. of Parma
Locatelli, Marco	Univ. of Parma

16:40-17:00	WeC16.3

Numerical Treatment of the Optimal Energy Control Problem of Hybrid Vehicles, pp. 7377-7383.

Burtchen, Angie	Brandenburg Univ. of Tech. at Cottbus-Senftenberg
Maurer, Helmut	Univ. Münster
Pickenhain, Sabine	Brandenburg Univ. of Tech. at Cottbus-Senftenberg

17:00-17:20	WeC16.4

On the Benefits of Surrogate Lagrangians in Optimal Control and Planning Algorithms, pp. 7384-7391.

De La Torre, Gerardo	Northwestern Univ
Murphey, Todd D.	Northwestern Univ

17:20-17:40	WeC16.5

A Probabilistic Max-Plus Numerical Method for Solving Stochastic Control Problems, pp. 7392-7397.

Akian, Marianne	INRIA and CMAP, Ec. Pol. CNRS
Fodjo, Eric	INRIA and CMAP, Ec. Pol. CNRS

17:40-18:00	WeC16.6

Partial Pinning Control of Complex Networks, pp. 7398-7403.

De Lellis, Pietro	Univ. of Naples Federico II
Garofalo, Franco	Univ. of Naples
Lo Iudice, Francesco	Univ. Di Napoli Federico II

WeC17	Ironwood 6
Formal Verification/Synthesis III (Regular Session)	
Chair: Zamani, Majid	Tech. Univ. München
Co-Chair: Althoff, Matthias	Tech. Univ. München

16:00-16:20	WeC17.1

Symbolic Synthesis with Average Performance Guarantees, pp. 7404-7410.

Rungger, Matthias	TUM
Reissig, Gunther	Univ. of the Federal Armed Forces Munich
Zamani, Majid	Tech. Univ. of Munich

16:20-16:40	WeC17.2

Specification Revision for Markov Decision Processes with Optimal Trade-Off, pp. 7411-7418.

Lahijanian, Morteza	Univ. of Oxford
Kwiatkowska, Marta Zofia	Univ. of Oxford

16:40-17:00	WeC17.3

Control in Belief Space with Temporal Logic Specifications, pp. 7419-7424.

Vasile, Cristian Ioan	Massachusetts Inst. of Tech
Leahy, Kevin	Boston Univ
Cristofalo, Eric	Stanford Univ
Jones, Austin	Massachusetts Inst. of Tech. Lincoln Lab
Schwager, Mac	Stanford Univ
Belta, Calin	Boston Univ

17:00-17:20	WeC17.4

Synthesis of Safety Controllers Robust to Unmodeled Intermittent Disturbances, pp. 7425-7430.

Dallal, Eric	Univ. of California in Los Angeles
Tabuada, Paulo	Univ. of California at Los Angeles
Neider, Hermann Daniel	Univ. of California, Los Angeles

17:20-17:40	WeC17.5

Ensuring Safety for Sampled Data Systems: An Efficient Algorithm for Filtering Potentially Unsafe Input Signals, pp. 7431-7438.

Mitchell, Ian M.	Univ. of British Columbia
Yeh, Jeffrey	Google Inc
Laine, Forrest J.	Univ. of California, Berkeley
Tomlin, Claire J.	UC Berkeley

17:40-18:00	WeC17.6

Combining Zonotopes and Support Functions for Efficient Reachability Analysis of Linear Systems, pp. 7439-7446.

Althoff, Matthias	Tech. Univ. München
Frehse, Goran	VERIMAG

WeC18	Ironwood 7
Reduced Order Modeling (Regular Session)	
Chair: Scarciotti, Giordano	Imperial Coll. London
Co-Chair: Mohseni, Kamran	Univ. of Florida

16:00-16:20	WeC18.1

Moment Matching for Nonlinear Differential-Algebraic Equations, pp. 7447-7452.

Scarciotti, Giordano	Imperial Coll. London

16:20-16:40	WeC18.2

Constrained Optimal Reduced-Order Models from Input/output Data, pp. 7453-7458.

Scarciotti, Giordano	Imperial Coll. London
Jiang, Zhong-Ping	New York Univ
Astolfi, Alessandro	Imperial Coll. & Univ. of Rome

16:40-17:00	WeC18.3

Model Order Reduction of LPV Systems Based on Parameter Varying Modal Decomposition, pp. 7459-7464.

Gozse, Istvan	Mta Sztaki
Luspay, Tamás	Inst. for Computer Science and Control
Peni, Tamas	MTA-SZTAKI
Szabo, Zoltan	Mta Sztaki
Vanek, Balint	Mta Sztaki

17:00-17:20	WeC18.4

Geometric Model Reduction of Forced and Dissipative Hamiltonian Systems, pp. 7465-7470.

Peng, Liqian	Sandia National Lab
Mohseni, Kamran	Univ. of Florida

17:20-17:40	WeC18.5

Model Reduction of Second-Order Network Systems Using Graph Clustering, pp. 7471-7476.

Cheng, Xiaodong	Univ. of Groningen
Scherpen, Jacquelien M.A.	Univ. of Groningen
Kawano, Yu	Kyoto Univ

17:40-18:00	WeC18.6

Higher-Order Averaging Analysis of the Nonlinear Time-Periodic Dynamics of Hovering Insects/Flapping-Wing Micro-Air-Vehicles, pp. 7477-7482.

Hassan, Ahmed	Univ. of California, Irvine
Taha, Haithem	Virginia Tech

WeC19	Ironwood 8
Smart Grid IV (Regular Session)	
Chair: Dhople, Sairaj	Univ. of Minnesota
Co-Chair: Simpson-Porco, John W.	Univ. of Waterloo

16:00-16:20	WeC19.1

Strictly Convex Loss Functions for Port-Hamiltonian Based Optimization Algorithm for MTDC Networks, pp. 7483-7488.

del Puerto-Flores, Dunstano	Univ. of Guadalajara (UdeG)
Dòria-Cerezo, Arnau	Tech. Univ. of Catalonia (UPC)
Scherpen, Jacquelien M.A.	Univ. of Groningen
Benedito, Ernest	Univ. Pol. De Catalunya
van der Feltz, Olivier	Univ. of Groningen

16:20-16:40	WeC19.2

Design of Distributed Controllers Seeking Optimal Power Flow Solutions under Communication Constraints (I), pp. 7489-7495.

Dall'Anese, Emiliano	National Renewable Energy Lab
Simonetto, Andrea	Univ. Catholique Louvain
Dhople, Sairaj	Univ. of Minnesota

16:40-17:00	WeC19.3

Receding Horizon Voltage Control in LV Networks with Energy Storage, pp. 7496-7501.

Zarrilli, Donato	Univ. Di Siena
Giannitrapani, Antonio	Univ. Di Siena
Paoletti, Simone	Univ. Di Siena

Vicino, Antonio	Univ. Di Siena

17:00-17:20	WeC19.4

Optimal Power Flow for Distribution Systems under Uncertain Forecasts, pp. 7502-7507.

Dall'Anese, Emiliano	National Renewable Energy Lab
Baker, Kyri	National Renewable Energy Lab
Summers, Tyler H.	Univ. of Texas at Dallas

17:20-17:40	WeC19.5

Model-Free Wide-Area Monitoring of Power Grids Via Cutset Voltages, pp. 7508-7513.

Simpson-Porco, John W.	Univ. of Waterloo
Monshizadeh, Nima	Univ. of Groningen

17:40-18:00	WeC19.6

Duration-Differentiated Energy Services with Peer-To-Peer Charging, pp. 7514-7519.

Mo, Yanfang	The Hong Kong Univ. of Science and Tech
Chen, Wei	KTH Royal Inst. of Tech
Qiu, Li	Hong Kong Univ. of Sci. & Tech

WeC20	Coppearleaf 1
Robotics II (Regular Session)	
Chair: Kelly, Scott	Univ. of North Carolina at Charlotte
Co-Chair: Vela, Patricio A.	Georgia Inst. of Tech

16:00-16:20	WeC20.1

Symmetric Virtual Constraints for Periodic Walking of Legged Robots, pp. 7520-7526.

Razavi, Hamed	EPFL
Bloch, Anthony M.	Univ. of Michigan
Da, Xingye	Univ. of Michigan, Ann Arbor
Ijspeert, Auke Jan	School of Computer and Communication Sciences, EPFL

16:20-16:40	WeC20.2

Dynamics and Control of a Free-Floating Space Robot in Presence of Nonzero Linear and Angular Momenta, pp. 7527-7534.

Giordano, Alessandro Massimo	Tech. Univ. of Munich (TUM)
Garofalo, Gianluca	German Aerospace Center (DLR)
De Stefano, Marco	German Aerospace Center (DLR)
Ott, Christian	German Aerospace Center (DLR)
Albu-Schaeffer, Alin	German Aerospace Center (DLR)

16:40-17:00	WeC20.3

Shape-Centric Modeling of Traveling Wave Rectilinear Locomotion for Snake-Like Robots, pp. 7535-7541.

CHANG, ALEXANDER	GEORGIA Inst. OF Tech
Serrano, Miguel	Georgia Inst. of Tech
Vela, Patricio A.	Georgia Inst. of Tech

17:00-17:20	WeC20.4

Locomotive Analysis of a Single-Input Three-Link Snake Robot, pp. 7542-7547.

Dear, Tony	Carnegie Mellon Univ
Kelly, Scott	Univ. of North Carolina at Charlotte
Travers, Matthew	Carnegie Mellon
Choset, Howie	Carnegie Mellon Univ

17:20-17:40	WeC20.5

MPC-Based Admittance Control for Robotic Manipulators, pp. 7548-7554.

Wahrburg, Arne	Abb Ag
Listmann, Kim Daniel	Abb Ag

17:40-18:00	WeC20.6

A Physical Parameter-Based Skidding Model for the Snakeboard, pp. 7555-7560.

Salman, Hadi	Carnegie Mellon Univ
Dear, Tony	Carnegie Mellon Univ
Babikian, Sevag	American Univ. of Beirut
Shammas, Elie	American Univ. of Beirut
Choset, Howie	Carnegie Mellon Univ

WeC21	Coppearleaf 2
Control Applications II (Regular Session)	
Chair: Zietsman, Lizette	Virginia Tech
Co-Chair: Serrani, Andrea	The Ohio State Univ

16:00-16:20	WeC21.1

MatTrader: An Automated Trading and Financial Data Analysis Framework for Matlab and Java, pp. 7561-7566.

Calafiore, Giuseppe C.	Pol. Di Torino
Poletti, Luca	Pol. Di Torino
Preziosi, Alessandro	Pol. Di Torino

16:20-16:40	WeC21.2

Addressing Limits of Operability of the Scramjet Engine in Adaptive Control of a Generic Hypersonic Vehicle, pp. 7567-7572.

Serrani, Andrea	The Ohio State Univ
Bolender, Michael	Air Force Res. Lab

16:40-17:00	WeC21.3

Applying Simple PID Tuning Rules with Extended Frequency Response Knowledge, pp. 7573-7578.

Brankovic, Aida	Pol. Di Milano
Guanetti, Jacopo	Univ. of California at Berkeley
Selmanaj, Donald	Pol. Di Milano
Leva, Alberto	Pol. Di Milano

17:00-17:20	WeC21.4

Feedback Stabilization of Fluids Using Reduced-Order Models for Control and Compensator Design (I), pp. 7579-7585.

Borggaard, Jeff	Virginia Tech
Gugercin, Serkan	Virginia Tech
Zietsman, Lizette	Virginia Tech

17:20-17:40	WeC21.5

Location-Dependent Privacy, pp. 7586-7591.

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

17:40-18:00	WeC21.6

Large-Scale Multi-Agent Reinforcement Learning Using Image-Based State Representation, pp. 7592-7597.

Chu, Tianshu	Stanford Univ
Qu, Shuhui	Stanford Univ
Wang, Jie	Stanford

WeC22	Coppearleaf 3
Transportation Networks (Regular Session)	

Chair: Langbort, Cedric	Univ. of Illinois, Urbana-Champaign
Co-Chair: Coogan, Samuel	Univ. of California, Los Angeles

16:00-16:20	WeC22.1

A Model of Informational Nudging in Transportation Networks, pp. 7598-7604.

Cheng, Yijie	Univ. of Illinois at Urbana-Champaign
Langbort, Cedric	Univ. of Illinois, Urbana-Champaign

16:20-16:40	WeC22.2

Understanding the Impact of Parking on Urban Mobility Via Routing Games on Queue–Flow Networks, pp. 7605-7610.

Calderone, Daniel Joseph	Univ. of California, Berkeley
Mazumdar, Eric	UC Berkeley
Ratliff, Lillian J.	Univ. of Washington
Sastry, Shankar	Univ. of California at Berkeley

16:40-17:00	WeC22.3

Mixed Monotonicity of Partial First-In-First-Out Traffic Flow Models, pp. 7611-7616.

Coogan, Samuel	Univ. of California, Los Angeles
Arcak, Murat	Univ. of California, Berkeley
Kurzhanskiy, Alex A.	Univ. of California, Berkeley

17:00-17:20	WeC22.4

Multi-Player Minimum Cost Flow Problems with Nonconvex Costs and Integer Flows, pp. 7617-7622.

Das Gupta, Shuvomoy	Univ. of Toronto
Pavel, Lacra	Univ. of Toronto

17:20-17:40	WeC22.5

A New Approach to Robust Transportation Over Networks (I), pp. 7623-7628.

Chen, Yongxin	Univ. of Minnesota
Georgiou, Tryphon T.	Univ. of California, Irvine
Pavon, Michele	Univ. Di Padova
Tannenbaum, Allen	Stony Brook Univ

17:40-18:00	WeC22.6

Data Driven Exploration of Traffic Network System Dynamics Using High Resolution Probe Data, pp. 7629-7634.

Liu, Chao	Iowa State Univ
Huang, Bowen	Iowa State Univ
Zhao, Mo	Iowa State Univ
Sarkar, Soumik	Iowa State Univ
Vaidya, Umesh	Iowa State Univ
sharma, anuj	Iowa State Univ

WeC23	Juniper 4
Information Acquisition, Controlled Sensing, and Sequential Refinement of Belief (Tutorial Session)	
Chair: Javidi, Tara	Univ. of California, San Diego
Organizer: Javidi, Tara	Univ. of California, San Diego

16:00-18:00	WeC23.1

Information Acquisition, Controlled Sensing, and Sequential Refinement of Belief (I), pp. 7635-7654.

Javidi, Tara	Univ. of California, San Diego