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Co-Chair: Moreau, Didier — CEA
Organizer: Schuster, Eugenio — Lehigh Univ.
Organizer: Mazon, Didier — CEA Cadarache

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Co-Chair: Mirrahimi, Mazyar — INRIA Rocquencourt
Organizer: James, Matthew R. — Australian National Univ.
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Organizer: Hjalmarsson, HÍkan — Royal Inst. of Tech.
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Chair: Gu, Danying — Shanghai Jiaotong Univ.
Co-Chair: Bao, Lei — Royal Inst. of Tech. (KTH)

10:10-10:30 WeA17.1

Optimized Rate Allocation for State Feedback Control Over Noisy Channels, pp. 573-578.

Bao, Lei — Royal Inst. of Tech. (KTH)
Skoglund, Mikael — Royal Inst. of Tech.
Fischione, Carlo — Royal Inst. of Tech.
Johansson, Karl H. — Royal Inst. of Tech.

10:30-10:50 WeA17.2

Leader-Following Formation Control of Multiple Vision-Based Autonomous Robotic Fish, pp. 579-584.

Zhao, Wei — Peking Univ.
Hu, Yonghui — Peking Univ.
Wang, Long — Peking Univ.

10:50-11:10 WeA17.3

Fair Resource Allocation Using Bargaining Over OFDMA Relay Networks, pp. 585-590.

Yang, Bo — City Univ. of Hong Kong
Feng, Gang — City Univ. of Hong Kong
Guan, Xinping — Yanshan Univ.

11:10-11:30 WeA17.4

Optimization of Postal Express Mail Network Based on Swarm Intelligence, pp. 591-596.

Song, Qing — Shanghai Jiao Tong Univ.
Wang, Xiaofan — Shanghai Jiao Tong Univ.
Li, Xiao-Lei — Shandong Univ.
Zhang, Cheng-Jin — Shandong Univ.

11:30-11:50 WeA17.5

A {0, 1} Linear Program for Fixed-Profile Load Scheduling and Demand Management in Automated Irrigation Channels, pp. 597-602.

Alende, Julien — Rubicon System Australia
Li, Yuping — Univ. of Melbourne
Cantoni, Michael — Univ. of Melbourne

11:50-12:10 WeA17.6

Design of an Hinf Based PI Controller for AQM Routers Supporting TCP Flows, pp. 603-608.

Gu, Danying — Shanghai Nuclear Engineering Res. and Design Inst.
Zhang, Weidong — Shanghai Jiaotong Univ.

WeA18 — 5I

Synchronization and Interconnected Systems (Regular Session)

Chair: Arcak, Murat — Univ. of California, Berkeley
Co-Chair: Liu, Derong — Univ. of Illinois at Chicago

10:10-10:30 WeA18.1

Synchronization of Interconnected Systems with an Input-Output Approach. Part I: Main Results, pp. 609-614.

Scardovi, Luca — Princeton Univ.
Arcak, Murat — Univ. of California, Berkeley
Sontag, Eduardo D. — Rutgers Univ.

10:30-10:50 WeA18.2

Synchronization of Interconnected Systems with an Input-Output Approach. Part II: State-Space Result and Application to Biochemical Networks, pp. 615-620.

Scardovi, Luca — Princeton Univ.
Arcak, Murat — Univ. of California, Berkeley
Sontag, Eduardo D. — Rutgers Univ.

10:50-11:10 WeA18.3

Synchronization Stability of Complex Dynamical Networks with Probabilistic Time-Varying Delays, pp. 621-625.

Li, Hongjie — Donghua
Yue, Dong — Nanjing Normal Univ.
Gu, Zhou — Nanjing Univ. of Aeronautics Astronautics

11:10-11:30 WeA18.4

A Novel LMI Approach to Global Impulsive Exponential Synchronization of Chaotic Delayed Neural Networks, pp. 626-631.

Ma, Tiedong — Northeastern Univ.
Zhang, Huaguang — Northeastern Univ.

Liu, Derong — Univ. of Illinois at Chicago
Wang, Zhiliang — Northeastern Univ.

11:30-11:50 WeA18.5
Interconnection of Subsystems in Closed-Loop Systems, pp. 632-637.
Niemann, Henrik — Tech. Univ. of Denmark
Poulsen, Niels Kjřlstad — Tech. Univ. of Denmark

11:50-12:10 WeA18.6
Integral Input-To-State Stability of Interconnected IISS Systems by Means of a Lower-Dimensional Comparison System, pp. 638-643.
Rüffer, Björn Sebastian — Univ. of Melbourne
Kellett, Christopher — Univ. of Newcastle
Weller, Steven R. — Univ. of Newcastle

WeTATu — Yellow River
Standardization of Control Design Methodologies in the Automotive Industry (Tutorial Session)

Chair: Kolmanovsky, Ilya V. — Ford Motor Co.
Co-Chair: Ohata, Akira — Toyota Motor Corp.

10:10-10:50 WeTATu.1
*Control Design in Model-Based Development (MBD) Framework (I)**.
Ohata, Akira — Toyota Motor Corp.

10:50-11:10 WeTATu.2
*Model Predictive Control (I)**.
Allgower, Frank — Univ. of Stuttgart

11:10-11:30 WeTATu.3
*Model Predictive Control and MBD Framework for Gasoline Engines (I)**.
Kolmanovsky, Ilya V. — Ford Motor Co.

11:30-11:50 WeTATu.4
*Model Predictive Control and MBD Framework for Diesel Engines (I)**.
Del Re, Luigi — Johannes Kepler Univ. Linz

11:50-12:10 WeTATu.5
*Panel Discussion (I)**.
Kolmanovsky, Ilya V. — Ford Motor Co.
Ohata, Akira — Toyota Motor Corp.

WeAIn1 — Mandarin Hall
Robust Control I (Interactive Session)

10:30-11:50 WeAIn1.1
Robust H_inf Synchronization of Chaotic Pendulum-Like Systems, pp. 644-649.
Xu, Shiyun — Peking Univ.
Yang, Ying — Peking Univ.

10:30-11:50 WeAIn1.2
Neo-Robust Control Theory for Factorized Uncertainty, pp. 650-655.
Liu, Kang-Zhi — Chiba Univ.
Shirnen, Buyanjargal — Chiba Univ.

10:30-11:50 WeAIn1.3
Synthesis of Positive Controls for the Global CLF Stabilization of Systems, pp. 656-660.
Leyva, Horacio — Sonora Univ.

10:30-11:50 WeAIn1.4
A Control Framework for Robust Practical Tracking of Hybrid Automata, pp. 661-666.
Marconi, Lorenzo — Univ. di Bologna
Naldi, Roberto — Univ. di Bologna
Gentili, Luca — Univ. of Bologna

10:30-11:50 WeAIn1.5
Design of a Modified Repetitive Control System Using State Feedback Based on Two-Dimensional Hybrid Model, pp. 667-672.
Zhang, Jie — Central South Univ.
Wu, Min — Central South Univ.
Chen, Shihuan — Central South Univ.
She, Jin-Hua — Tokyo Univ. of Tech.
He, Yong — Central South Univ.

10:30-11:50 WeAIn1.6
Robust Moving Horizon Estimation for System with Uncertain Measurement Output, pp. 673-677.
Zhao, Haiyan — JiLin Univ. campus Nan Ling
Chen, Hong — Jilin Univ. Campus NanLing
Ma, Yan — JiLin Univ.

10:30-11:50 WeAIn1.7
Performance Oriented High Gain Redesigns for FACTS-Controlled SMIB Power Systems, pp. 678-683.
Chakrabortty, Aranya — Texas Tech. Univ.
Mesbahi, Mehran — Univ. of Washington

10:30-11:50 WeAIn1.8

On the Model-Based Networked Control for Singularly Perturbed Systems with Nonlinear Uncertainties, pp. 684-689.

Yu, Hongwang — Nanjing Audit Univ.
Zhang, Xiaomei — Nantong Univ.
Lu, Guoping — Nantong Univ.
Zheng, Yu Fan — East China Normal Univ.

10:30-11:50 WeAIn1.9

Tuning of Dynamical Controllers by a Data-Driven Loop-Shaping Method for a Single Input Plant, pp. 690-695.

Saeki, Masami — Hiroshima Univ.
Sugitani, Yosuke — Hiroshima Univ.

10:30-11:50 WeAIn1.10

Lateral Flight Control Design for a Highly Flexible Aircraft Using a Nonsmooth Method, pp. 696-701.

Simoes, Alberto — ONERA
Alazard, Daniel — ISAE
Tuan, Hoang Duong — The Univ. of New South Wales
Apkarian, Pierre — UPS

10:30-11:50 WeAIn1.11

Further Results on Periodically Time-Varying Memory State-Feedback Controller Synthesis for Discrete-Time Linear Systems, pp. 702-707.

Ebihara, Yoshio — Kyoto Univ.
Kuboyama, Yuki — Kyoto Univ.
Hagiwara, Tomomichi — Kyoto Univ.
Peaucelle, Dimitri — LAAS-CNRS, Univ. de Toulouse
Arzelier, Denis — LAAS-CNRS

10:30-11:50 WeAIn1.12

A New Perspective on Control of Uncertain Complex Systems, pp. 708-713.

Li, Jr-Shin — Washington Univ. in St. Louis

10:30-11:50 WeAIn1.13

Two Degree of Freedom Robust Optimal Control Design Using a Linear Matrix Inequality Optimization, pp. 714-719.

Lee, Chibum — Univ. of Illinois, Urbana-Champaign
Salapaka, Srinivasa — Univ. of Illinois
Voulgaris, Petros G. — Univ. of Illinois, Urbana-Champaign

10:30-11:50 WeAIn1.14

Robust Minimax Optimal Control of Nonlinear Uncertain Systems Using Feedback Linearization with Application to Hypersonic Flight Vehicles, pp. 720-726.

Rehman, Obaid Ur — Univ. of New South Wales at Australian Defence Force Acad.
Fidan, Baris — National ICT Australia
Petersen, Ian R. — UNSW at Australian Def. Force Acad.

WeAIn2 — Mandarin Hall

Precision Manufacturing Systems and Aerospace Applications (Interactive Session)

10:30-11:50 WeAIn2.1

Neural Modeling of Rate-Dependent and Asymmetric Hysteresis in Ultrasonic Motors, pp. 727-732.

Tan, Yonghong — Shanghai Normal Univ.
Zhang, Xinlian — Shanghai Normal Univ.
Su, Chun-Yi — Concordia Univ.

10:30-11:50 WeAIn2.2

Ito Stochastic Modeling for Attitude Quaternion Filtering, pp. 733-738.

Choukroun, Daniel — Ben-Gurion Univ. of the Negev

10:30-11:50 WeAIn2.3

Neural Networks Based Model for Sandwich System with Hysteresis, pp. 739-743.

Tan, Yonghong — Shanghai Normal Univ.
Dong, Ruili — Shanghai Normal Univ.
Tan, Qingyuan — Shanghai Jiaotong Univ.

10:30-11:50 WeAIn2.4

Adaptive Control for Plants in the Presence of Actuator and Sensor Hysteresis Nonlinearities, pp. 744-749.

Chen, Xinkai — Shibaura Inst. of Tech.
Ozaki, Toshikuni — Shibaura Inst. of Tech.

10:30-11:50 WeAIn2.5

A Novel Learning Control Strategy for Hysteresis and Vibration of Piezo-Scanners, pp. 750-755.

Zhang, Yudong — Nankai Univ.
Fang, Yongchun — Nankai Univ.
Dong, Xiaokun — Nankai Univ.
Zhou, Xianwei — Nankai Univ.

10:30-11:50 WeAIn2.6

Model Validation for an AMB-Based Compressor Surge Control Test Rig, pp. 756-761.

Yoon, Se Young (Pablo) — Univ. of Virginia
Lin, Zongli — Univ. of Virginia
Lim, Kien Tien — Univ. of Virginia
Goyne, Chris — Univ. of Virginia
Allaire, Paul — Univ. of Virginia

10:30-11:50 WeAIn2.7
Capture Region of a 3D PPN Guidance Law for Intercepting High Speed Targets, pp. 762-767.
Tyan, Feng — Tamkang Univ.

10:30-11:50 WeAIn2.8
Stability and Noises Evaluation of Fuzzy/Kalman UAV Navigation System, pp. 768-775.
Raimondi, Francesco Maria — Univ. of Palermo
Melluso, Maurizio — Univ. of Palermo

10:30-11:50 WeAIn2.9
Standoff Tracking Control of Moving Target in Unknown Wind, pp. 776-781.
Zhu, Sen Qiang — NANYANG Tech. Univ.
Wang, Danwei — Nanyang Tech. Univ.

10:30-11:50 WeAIn2.10
Active Flutter Suppression Using Robust Adaptive Switching Control, pp. 782-787.
Li, Guang — Beihang Univ. School of AutomationScienceandElectrical Eng
Dong, Chaoyang — Beihang Univ. School of Automation Science andElectrical E
Hou, Yanze — Beihang Univ. School of Automation ScienceandElectrical En
Wang, Qing — Beihang Univ. School of Automation Science and Electrical

WeAIn3 — Mandarin Hall
Adaptive Control I (Interactive Session)

10:30-11:50 WeAIn3.1
Nonlinear-Proportional-Derivative-Type Fault-Tolerant Control for Flexible Spacecraft Attitude Maneuvers, pp. 788-793.
Hu, Qinglei — Harbin Inst. of Tech.

10:30-11:50 WeAIn3.2
Methodologies for the Adaptive Compression of Video Sequences, pp. 794-799.
Cenedese, Angelo — Univ. of Padova
Marcon, Riccardo — Univ. of Padova

10:30-11:50 WeAIn3.3
Temperature Regulation Using Supervised Adaptive Control, pp. 800-804.
Chang, Yau-Zen — Chang Gung Univ.
Tsai, Zhi-Ren — Asia Univ.

10:30-11:50 WeAIn3.4
Unfalsified Adaptive Switching Supervisory Control of Time Varying Systems, pp. 805-810.
Battistelli, Giorgio — Univ. of Firenze
Hespanha, Joao P. — Univ. of California, Santa Barbara
Mosca, Edoardo — Univ. of Florence
Tesi, Pietro — Univ. of Florence

10:30-11:50 WeAIn3.5
Implicit Control of Mobile Under-Actuated Manipulators Using Support Vector Machine, pp. 811-816.
Zhang, Jingjing — Shanghai Jiaotong Univ.
Li, Zhijun — Shanghai Jiao Tong Univ.
Luo, Jun — shanghai Univ.

10:30-11:50 WeAIn3.6
Additive Decomposition and Its Applications to Internal-Model-Based Tracking, pp. 817-822.
Quan, Quan — Beijing Univ. of Aeronautics and Astronautics
Cai, Kai-Yuan — School of Automation, Beijing Univ. of Aeronautics and Astr

10:30-11:50 WeAIn3.7
Discrete-Time MRAC Schemes Using Sensor Uncertainty Compensation with Application to Artificial Pancreas, pp. 823-828.
Li, Shanshan — Univ. of Virginia
Tao, Gang — Univ. of Virginia
Liu, Yu — Univ. of Virginia

10:30-11:50 WeAIn3.8
Indirect Self-Tuning Control of a Nonlinear Non-Minimum Phase System, pp. 829-834.
Fu, Yue — Northeastern Univ.
Chai, Tianyou — Northeastern Univ.

10:30-11:50 WeAIn3.9
Algorithms for Turbulence Compensation in Large Adaptive Optics Systems, pp. 835-840.
Beghi, Alessandro — Univ. di Padova
Cenedese, Angelo — Univ. of Padova
Masiero, Andrea — Univ. di Padova

10:30-11:50 WeAIn3.10
Approximation-Based Adaptive Tracking Control of Pure-Feedback Nonlinear Systems with Multiple Unknown Time-Varying Delays, pp. 841-846.
Wang, Min — South China Univ. of Tech.
Ge, Shuzhi Sam — National Univ. of Singapore

10:30-11:50 WeAIn3.12
Set-Membership Identification Based Adaptive Robust Control of Systems with Unknown Parameter Bounds, pp. 847-852.
Lu, Lu — Purdue Univ. West Lafayette

Yao, Bin — Purdue Univ.

WeAIn4 — Mandarin Hall
Cooperative Control and Sensor Networks (Interactive Session)

10:30-11:50 — WeAIn4.1
Decentralized Cooperative Attitude Tracking Using Modified Rodriguez Parameters, pp. 853-858.
Meng, Ziyang — Tsinghua Univ.
Ren, Wei — Utah State Univ.
You, Zheng — Tsinghua Univ.

10:30-11:50 — WeAIn4.2
Splitting Rigid Formations, pp. 859-864.
Ong, Wilson — The Univ. of Western Australia
Yu, CHANGBIN (Brad) — The Australian National Univ.
Anderson, Brian D.O. — Australian National Univ.

10:30-11:50 — WeAIn4.3
Analyzing Error Propagation in Range-Based Multihop Sensor Localization, pp. 865-870.
Huang, Baoqi — Austrailian National Univ.
Yu, CHANGBIN (Brad) — The Australian National Univ.
Anderson, Brian D.O. — Australian National Univ.

10:30-11:50 — WeAIn4.4
Analysis of Accelerated Gossip Algorithms, pp. 871-876.
Liu, Ji — Yale Univ.
Anderson, Brian D.O. — Australian National Univ.
Cao, Ming — Univ. of Groningen
Morse, A. Stephen — Yale Univ.

10:30-11:50 — WeAIn4.5
Cooperative Gain Output Feedback Stabilization for Multi-Agent Dynamical Systems, pp. 877-882.
Hara, Shinji — The Univ. of Tokyo
Kanno, Masaaki — Niigata Univ.
Tanaka, Hideaki — The Univ. of Tokyo

10:30-11:50 — WeAIn4.6
Second-Order Consensus for Networks of Agents with Fixed and Switching Topology, pp. 883-888.
Qin, Jiahu — Harbin Inst. of Tech. Harbin, P.R.China
Gao, Huijun — Harbin Inst. of Tech.
Zheng, Wei Xing — Univ. of Western Sydney

10:30-11:50 — WeAIn4.7
Aggregation of Multiple Agents with First-Order Dynamics and Finite Size Body, pp. 889-894.
Cao, Li — East China Normal Univ.
Zheng, Yu Fan — East China Normal Univ.
Zhou, Qing — East China Normal Univ.
Zhang, Xiaomei — Nantong Univ.

10:30-11:50 — WeAIn4.8
Distributed Coordination of Multi-Agent Systems with Switching Structure and Input Saturation, pp. 895-900.
Shi, Guodong — Chinese Acad. of Sciences
Hong, Yiguang — Chinese Acad. of Sciences

10:30-11:50 — WeAIn4.9
Distributed Image-Based 3-D Localization in Camera Sensor Networks, pp. 901-908.
Tron, Roberto — Johns Hopkins Univ.
Vidal, Rene — Johns Hopkins Univ.

10:30-11:50 — WeAIn4.10
Aggregation and Compression of Distributed Binary Decisions in a Wireless Sensor Network, pp. 909-913.
Gubner, John A. — Univ. of Wisconsin-Madison
Chong, Edwin K. P. — Colorado State Univ.
Scharf, Louis L. — Colorado State Univ.

10:30-11:50 — WeAIn4.11
Perturbation Analysis and Optimization of Multiclass Multiobjective Stochastic Flow Models, pp. 914-919.
Yao, Chen — Boston Univ.
Cassandras, Christos G. — Boston Univ.

10:30-11:50 — WeAIn4.12
Power Constrained Dynamic Quantizer Design for Multisensor Estimation of HMMs with Unknown Parameters, pp. 920-927.
Ghasemi, Nader — Univ. of Melbourne
Dey, Subhrakanti — Univ. of Melbourne

10:30-11:50 — WeAIn4.13
Input-To-State Stability of Self-Triggered Control Systems, pp. 928-933.
Mazo Jr., Manuel — Univ. of California at Los Angeles
Tabuada, Paulo — Univ. of California at Los Angeles

WeAIn5 — Mandarin Hall
Decentralized Control and Large Scale Systems (Interactive Session)

10:30-11:50 WeAIn5.1
Design of Decentralized Supervisory Based Switching QFT Controller for Uncertain Multivariable Plants, pp. 934-939.
Namaki-Shoushtari, Omid K.N. Toosi Univ. of Tech. Tehran, Iran
Khaki Sedigh, Ali K.N. Toosi Univ. of Tech.

10:30-11:50 WeAIn5.2
Multivariable Three-Term Optimal Controller Design for Large-Scale Systems, pp. 940-945.
Davison, Edward J. Univ. of Toronto
Davison, Daniel E. Univ. of Waterloo
Lam, Simon Univ. of Toronto

10:30-11:50 WeAIn5.3
Bilevel Programming for Analysis of Low-Complexity Control of Linear Systems with Constraints, pp. 946-951.
Manum, Henrik Norwegian Univ. of Sci & Tech.
Jones, Colin Neil ETH Zurich
Löfberg, Johan Linköpings Univ.
Morari, Manfred ETH Zurich
Skogestad, Sigurd Norwegian Univ. of Science & Tech.

10:30-11:50 WeAIn5.4
Dynamic Basis Pursuit Regularization for Complex Biochemical Pathway Identification, pp. 952-957.
Brown, Martin Univ. of Manchester
He, Fei Manchester
Papadopoulos, George Univ. of Manchester

10:30-11:50 WeAIn5.5
A New Decentralization Technique for Interconnected Systems, pp. 958-965.
Lavaei, Javad California Inst. of Tech.

10:30-11:50 WeAIn5.6
A Practical PID-Based Scheme for the Collaborative Driving of Automated Vehicles, pp. 966-971.
Xavier, Packiaraj Dalhousie Univ.
Pan, Ya-Jun Dalhousie Univ.

10:30-11:50 WeAIn5.7
A Poset Framework to Model Decentralized Control Problems, pp. 972-977.
Shah, Parikshit Massachusetts Inst. of Tech.
Parrilo, Pablo A. Massachusetts Inst. of Tech.

10:30-11:50 WeAIn5.8
On the Optimal Design of Structured Feedback Gains for Interconnected Systems, pp. 978-983.
Fardad, Makan Syracuse Univ.
Lin, Fu Univ. of Minnesota
Jovanovic, Mihailo Univ. of Minnesota

10:30-11:50 WeAIn5.9
Decentralized Formation Flocking and Stabilization for Networks of Unicycles, pp. 984-989.
Savkin, Andrey V. Univ. of New South Wales
Teimoori Sangani, Hamid Univ. of New South Wales

WeAIn6 Mandarin Hall
Fault Diagnosis I (Interactive Session)

10:30-11:50 WeAIn6.1
Fault Detection for Linear Discrete-Time Invariant Systems with Decoupling and Optimization, pp. 990-995.
Li, Xiaobo LSU
Zhou, Kemin Lousiana State Univ.

10:30-11:50 WeAIn6.2
Optimal H_{i}/H_{infty} Fault Detection Filter Design: An Iterative LMI Approach, pp. 996-1001.
Li, Wei China Univ. of Mining and Tech.
Ding, Steven X. Univ. of Duisburg-Essen
Zhu, Zhencai China Univ. of Mining and Tech.

10:30-11:50 WeAIn6.3
Robust Fault Detection for LPV Systems Using Interval Observers and Zonotopes, pp. 1002-1007.
Nejjari, Fatiha Univ. Pol. de Catalunya
Puig, Vicenc Univ. Pol. de Catalunya
Montes de Oca, Saúl Univ. Pol. de Catalunya
Sadeghzadeh, Atefeh Univ. del Pais Vasco

10:30-11:50 WeAIn6.4
An Extended Qualitative Multi-Faults Diagnosis from First Principles I: Theory and Modelling, pp. 1008-1013.
Hu, He-xuan Univ. des Sci et Tech. Lille
Gehin, Anne-Lise Univ. of Lille
Bayart, Mireille Pol.

10:30-11:50 WeAIn6.5
Least Order Fault and Model Detection Using Multi-Models, pp. 1014-1019.
Varga, Andras German Aerospace Center (DLR)

10:30-11:50 WeAIn6.6

Suboptimal Partitioning of Time-Series Data for Anomaly Detection, pp. 1020-1025.

Jin, Xin — The Pennsylvania State Univ.
Sarkar, Soumik — Pennsylvania State Univ.
Mukherjee, Kushal — Pennsylvania State Univ.
Ray, Asok — Pennsylvania State Univ.

10:30-11:50 WeAIn6.7

Asymptotic Behavior and Solution Approximation of Active Robust Fault Detection for Closed-Loop Systems, pp. 1026-1031.

Esna Ashari, Alireza — INRIA, France
Nikoukhah, Ramine — INRIA, Rocquencourt
Campbell, Stephen L — North Carolina State Univ.

10:30-11:50 WeAIn6.8

On Optimal Fault Detection of Nonlinear Systems, pp. 1032-1037.

Khan, Abdul Qayyum — Univ. of Duisburg-Essen
Abid, Muhammad — Univ. of Duisburg-Essen
Chen, Wei — Univ. of Duisburg-Essen, Duisburg, Germany
Ding, Steven X. — Univ. of Duisburg-Essen

10:30-11:50 WeAIn6.9

Robust Fault Detection Filter Design for a Class of Linear Systems with Mixed Time-Varying Delays and Nonlinear Perturbations, pp. 1038-1043.

Karimi, Hamid Reza — Univ. of Agder
Zapateiro, Mauricio — Univ. of Girona
Luo, Ningsu — Univ. of Girona

10:30-11:50 WeAIn6.10

Adaptive Observer-Based Fault Diagnosis for a Class of MIMO Nonlinear Uncertain Systems, pp. 1044-1049.

Ma, Hong-jun — Northeastern Univ.
Yang, Guang-hong — Northeastern Univ.
Lin, Wei — Case Western Res. Univ.

WeB01 — 3D
Nonlinear Control (SIAM Session)

Chair: Cao, Ming — Univ. of Groningen
Co-Chair: Andrieu, Vincent — Univ. de Toulouse

14:10-14:30 WeB01.1

Homogeneity in the Bi-Limit As a Tool for Observer and Feedback Design, pp. 1050-1055.

Andrieu, Vincent — Univ. de Toulouse
Praly, Laurent — Mines Paris-Tech.
Astolfi, Alessandro — Imperial Coll. & Univ. of Rome

14:30-14:50 WeB01.2

Controllability for Systems with Almost Periodic Excitations, pp. 1056-1061.

Wichtrey, Tobias — Univ. Augsburg
Colonius, Fritz — Univ. of Augsburg

14:50-15:10 WeB01.3

Minimization of Length and Curvature on Planar Curves, pp. 1062-1067.

Boscain, Ugo V. — CNRS
Charlot, Gregoire — Inst. Fourier, UMR 5582
Rossi, Francesco — SISSA

15:10-15:30 WeB01.4

Partial Stability for a Class of Nonlinear Systems, pp. 1068-1073.

Costa, Eduardo F. — Univ. de São Paulo
Astolfi, Alessandro — Imperial Coll. & Univ. of Rome

15:30-15:50 WeB01.5

Merging Globally Rigid Graphs and Sensor Network Localization, pp. 1074-1079.

Fang, Jia — Yale Univ.
Morse, A. Stephen — Yale Univ.

15:50-16:10 WeB01.6

A Geometric Optimization Approach to Tracking Maneuvering Targets Using a Heterogeneous Mobile Sensor Network, pp. 1080-1087.

Ferrari, Silvia — Duke Univ.
Fierro, Rafael — Univ. of New Mexico
Tolic, Domagoj — Univ. of New Mexico

WeB02 — 3E
Stabilizabilization of Hybrid Systems (Regular Session)

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

14:10-14:30 WeB02.1

On Piecewise Quadratic Control-Lyapunov Functions for Switched Linear Systems, pp. 1088-1093.

Zhang, Wei — Purdue Univ.
Abate, Alessandro — Stanford Univ.
Vitus, Michael P. — Stanford Univ.

Hu, Jianghai — Purdue Univ.

14:30-14:50 WeB02.2

Robust Global Asymptotic Stabilization of a 6-DOF Rigid Body by Quaternion-Based Hybrid Feedback, pp. 1094-1099.

Mayhew, Christopher G. — Univ. of California, Santa Barbara
Sanfelice, Ricardo G. — Univ. of Arizona
Teel, Andrew R. — Univ. of California at Santa Barbara

14:50-15:10 WeB02.3

On the Stabilization of Permanently Excited Linear Systems, pp. 1100-1105.

Chitour, Yacine — Univ. Paris-Sud, CNRS, Supelec
Sigalotti, Mario — INRIA Nancy - Grand Est

15:10-15:30 WeB02.4

A Computational Stability Analysis of Discrete-Time Piecewise Linear Systems, pp. 1106-1111.

Arivukkodi Krishnamurthy, Satyajit — The Pennsylvania State Univ.
Lee, Ji-Woong — Pennsylvania State Univ.

15:30-15:50 WeB02.5

Modal and Transition Dwell Time Computation in Switching Systems: A Set-Theoretic Approach, pp. 1112-1117.

Blanchini, Franco — Univ. degli Studi di Udine
Miani, Stefano — Univ. degli Studi di Udine
Casagrande, Daniele — Univ. of Udine

15:50-16:10 WeB02.6

On Feedback Stabilisation of Switched Discrete-Time Systems Via Lie-Algebraic Techniques, pp. 1118-1123.

Haimovich, Hernan — Univ. Nacional de Rosario, Argentina
Braslavsky, Julio H. — The Univ. of Newcastle
Felicioni, Flavia Eleonora — Facultad de Cs. Exactas, Ingenieria y Agrimensura,Univ. Na

WeB03 — 3C
Robust Control II (Regular Session)

Chair: Duan, Guang-Ren — Harbin Inst. of Tech.
Co-Chair: Guan, Zhi-Hong — Huazhong Univ. of Science & Tech.

14:10-14:30 WeB03.1

IQC Robustness Analysis for Feedback Interconnections of Unstable Distributed Parameter Systems, pp. 1124-1130.

Cantoni, Michael — Univ. of Melbourne
Jonsson, Ulf T. — Royal Inst. of Tech. (KTH)
Kao, Chung-Yao — National Sun Yat-Sen Univ.

14:30-14:50 WeB03.2

Optimality of Affine Policies in Multi-Stage Robust Optimization, pp. 1131-1138.

Bertsimas, Dimitris — Massachusetts Inst. of Tech.
Iancu, Dan Andrei — Massachusetts Inst. of Tech.
Parrilo, Pablo A. — Massachusetts Inst. of Tech.

14:50-15:10 WeB03.3

Parameter-Dependent Lyapunov Function Approach to Robust Stability Analysis for Discrete-Time Descriptor Polytopic Systems, pp. 1139-1144.

Gao, Xiangyu — Harbin Inst. of Tech.
Duan, Guang-Ren — Harbin Inst. of Tech.
Zhang, Xian — Heilongjiang Univ.

15:10-15:30 WeB03.4

Restricted Real Perturbation Values with Applications to the Structured Real Controllability Radius of LTI Systems, pp. 1145-1150.

Lam, Simon — Univ. of Toronto
Davison, Edward J. — Univ. of Toronto

15:30-15:50 WeB03.5

Distributional Robustness Analysis for Polynomial Uncertainty, pp. 1151-1156.

Feng, Chao — Pennsylvania State Univ.
Lagoa, Constantino M. — Pennsylvania State Univ.

15:50-16:10 WeB03.6

LQR Parametrization of Static Output Feedback Gains for Linear Systems with Markovian Switching and Related Robust Stabilization and Passification Problems, pp. 1157-1162.

Pakshin, Pavel — Nizhny Novgorod State Tech. Univ.
Peaucelle, Dimitri — LAAS-CNRS, Univ. de Toulouse

WeB04 — 3A
Numerical Methods II (Regular Session)

Chair: Fujisaki, Yasumasa — Kobe Univ.
Co-Chair: Topcu, Ufuk — California Inst. of Tech.

14:10-14:30 WeB04.1

Nonlinear Receding Horizon Control Via Singular Value Decomposition with Error Correction Method for Singular Vectors and Singular Values, pp. 1163-1168.

Matoba, Shunsuke — Nara Inst. of Science and Tech.
Nakamura, Hisakazu — Nara Inst. of Science &Tech.
Nishitani, Hirokazu — Nara Inst. of Sci. & Tech.

14:30-14:50 WeB04.2
Probabilistic Cutting Plane Technique Based on Maximum Volume Ellipsoid Center, pp. 1169-1174.
Wada, Takayuki — Kobe Univ.
Fujisaki, Yasumasa — Kobe Univ.

14:50-15:10 WeB04.3
Compositional Stability Analysis Based on Dual Decomposition, pp. 1175-1180.
Topcu, Ufuk — California Inst. of Tech.
Packard, Andrew K. — Univ. of California at Berkeley
Murray, Richard M. — California Inst. of Tech.

15:10-15:30 WeB04.4
LMS-2: Towards an Algorithm That Is As Cheap As LMS and Almost As Efficient As RLS, pp. 1181-1188.
Yao, Hengshuai — Athabasca Hall, Univ. of alberta
Bhatnagar, Shalabh — Indian Inst. of Science
Szepesvári, Csaba — Univ. of Alberta

15:30-15:50 WeB04.5
A Fast Geometric Algorithm for Finding the Minimum Distance between Two Convex Hulls, pp. 1189-1194.
Liu, Jianguo — Univ. of North Texas
Kaown, Dougsoo — Univ. of North Texas

15:50-16:10 WeB04.6
A Positive Definite Polynomial Hessian That Does Not Factor, pp. 1195-1200.
Ahmadi, Amir Ali — MIT
Parrilo, Pablo A. — Massachusetts Inst. of Tech.

WeB05 — 3J
Optimal Control I (SIAM Session)
Chair: Schattler, Heinz M. — Washington Univ.
Co-Chair: Bayen, Térence — Univ. de Montpellier

14:10-14:30 WeB05.1
Optimal Controlled Trajectories for a Mathematical Model of Anti-Angiogenic Therapy in Cancer, pp. 1201-1206.
Ledzewicz, Urszula — Southern Illinois Univ. at Edwardsville
Schattler, Heinz M. — Washington Univ.

14:30-14:50 WeB05.2
Duality in Linear Programming Problems Related to Deterministic Long Run Average Problems of Optimal Control with Applications to Periodic Optimization, pp. 1207-1211.
Finlay, Luke — DSTO
Gaitsgory, Vladimir — Univ. of South Australia
Lebedev, Ivan — WorkCover Corp. of SA

14:50-15:10 WeB05.3
Existence Results for Optimal Control Problems with Some Special Non-Linear Dependence on State and Control, pp. 1212-1217.
Tiago, Jorge — Univ. of Castilla La Mancha/ Lisbon Univ.
Pedregal, Pablo — Univ. de Castilla - La Mancha

15:10-15:30 WeB05.4
Dirichlet Problems for Some Hamilton-Jacobi Equations with Inequality Constraints, pp. 1218-1222.
Aubin, Jean-pierre — Univ. Paris Ix - Dauphine
Bayen, Alexandre M. — Univ. of California at Berkeley
Saint-Pierre, Patrick — Univ. Paris Dauphine

15:30-15:50 WeB05.5
Parametrization of a Convex Optimization Problem by Optimal Control Theory and Proof of a Goldberg Conjecture, pp. 1223-1228.
Bayen, Térence — Univ. de Montpellier

15:50-16:10 WeB05.6
Nonsymmetric Algebraic Riccati Theory: A Matrix Pencil Approach, pp. 1229-1234.
Jungers, Marc — CNRS - Nancy Univ. ENSEM
Oara, Cristian — Univ. Pol. Bucharest

WeB06 — 3G
Diagnosis and Prognosis of Discrete-Event Systems (Invited Session)
Chair: Rakoto-Ravalontsalama, Naly — Ec. des Mines de Nantes
Co-Chair: Takai, Shigemasa — Osaka Univ.
Organizer: Takai, Shigemasa — Osaka Univ.
Organizer: Rakoto-Ravalontsalama, Naly — Ec. des Mines de Nantes

14:10-14:30 WeB06.1
Distributed Prognosis of Discrete Event Systems under Bounded-Delay Communications (I), pp. 1235-1240.
Takai, Shigemasa — Osaka Univ.
Kumar, Ratnesh — Iowa State Univ.

14:30-14:50 WeB06.2
Hardware Realization of Discrete Event System Diagnosers (I), pp. 1241-1247.
Huang, Samuel Tien-Chieh — Univ. of Toronto
Kwong, Raymond H. — Univ. of Toronto
Davison, Edward J. — Univ. of Toronto

14:50-15:10 WeB06.3
Qualitative Diagnosability of Labeled Petri Nets Revisited (I), pp. 1248-1253.
Haar, Stefan — INRIA

15:10-15:30 WeB06.4
Diagnosability of Bounded Petri Nets (I), pp. 1254-1260.
Cabasino, Maria Paola — Univ. of Cagliari
Giua, Alessandro — Univ. di Cagliari
Seatzu, Carla — Univ. of Cagliari

15:30-15:50 WeB06.5
Reachability Analysis for a Class of Petri Nets (I), pp. 1261-1266.
Ru, Yu — Univ. of Illinois, Urbana-Champaign
Hadjicostis, Christoforos — Univ. of Cyprus

15:50-16:10 WeB06.6
Diagnosability Analysis of Unbounded Petri Nets, pp. 1267-1272.
Cabasino, Maria Paola — Univ. of Cagliari
Giua, Alessandro — Univ. di Cagliari
Lafortune, Stephane — Univ. of Michigan
Seatzu, Carla — Univ. of Cagliari

WeB07 — 5C
Filtering II (Regular Session)

Chair: Terra, Marco Henrique — Univ. of São Paulo at São Carlos
Co-Chair: Yamakita, Masaki — Tokyo Inst. of Tech.

14:10-14:30 WeB07.1
A Structure Exploiting Interior-Point Method for Moving Horizon Estimation, pp. 1273-1278.
Haverbeke, Niels — Katholieke Univ. Leuven
Diehl, Moritz — Katholieke Univ. Leuve
De Moor, Bart L.R. — Katholieke Univ. Leuven

14:30-14:50 WeB07.2
Constrained State Estimation for Nonlinear Systems with Non-Gaussian Noise, pp. 1279-1284.
Ishihara, Shinji — Tokyo Inst. of Tech.
Yamakita, Masaki — Tokyo Inst. of Tech.

14:50-15:10 WeB07.3
The Entropy Penalized Minimum Energy Estimator, pp. 1285-1290.
Pequito, Sergio Daniel — Tech. Univ. of Lisbon
Aguiar, A. Pedro — Tech. Univ. of Lisbon
Gomes, Diogo — Inst. Superior Tecnico

15:10-15:30 WeB07.4
H_infty Filter Design for Discrete-Time Linear Systems with Sector-Bounded Nonlinearities: An LMI Approach, pp. 1291-1296.
Shen, Mouquan — Northeastern Univ.
Wang, Mingshun — northeastern Univ.
Yang, Guang-hong — Northeastern Univ.

15:30-15:50 WeB07.5
Invariant Extended Kalman Filter: Theory and Application to a Velocity-Aided Attitude Estimation Problem, pp. 1297-1304.
Bonnabel, Silvere — Mines ParisTech
Martin, Philippe — MINES ParisTech
Salaün, Erwan — Georgia Inst. of Tech.

15:50-16:10 WeB07.6
Robust Estimate for Discrete-Time Markovian Jump Linear Systems, pp. 1305-1309.
Terra, Marco Henrique — Univ. of São Paulo at São Carlos
Ishihara, João Yoshiyuki — Univ. of Brasília
Jesus, Gildson — Univ. of São Paulo

WeB08 — 3I
Delay Systems II (Regular Session)

Chair: Kojima, Akira — Tokyo Metropolitan Univ.
Co-Chair: Fridman, Emilia — Tel-Aviv Univ.

14:10-14:30 WeB08.1
Construction of Lyapunov-Krasovskii Functionals for Interconnection of Retarded Dynamic and Static Systems Via a Small-Gain Condition, pp. 1310-1316.
Ito, Hiroshi — Kyushu Inst. of Tech.
Pepe, Pierdomenico — Univ. of L' Aquila
Jiang, Zhong-Ping — Pol. Inst. NYU

14:30-14:50 WeB08.2
Stability Analysis of State-Delay Systems Based on the Characterization of State-Transition Operator, pp. 1317-1323.
Kojima, Akira — Tokyo Metropolitan Univ.
Tsuchiya, Taro — Tokyo Metropolitan Univ.

14:50-15:10 WeB08.3
Model Predictive Control of Constrained Nonlinear Time-Delay Systems, pp. 1324-1329.

Mahboobi Esfanjani, Reza — Amirkabir Univ. of Tech.
Reble, Marcus — Univ. of Stuttgart
Muenz, Ulrich — Univ. of Stuttgart
Nikravesh, Kamaleddin — Amirkabir Univ. of Tech.
Allgower, Frank — Univ. of Stuttgart

15:10-15:30 WeB08.4
Stability Analysis of Networked Control Systems: A Discontiuous Lyapunov Functional Approach, pp. 1330-1335.
Liu, Kun — Tel Aviv Univ.
Fridman, Emilia — Tel-Aviv Univ.

15:30-15:50 WeB08.5
Lyapunov Stability of Linear Predictor Feedback for Time-Varying Input Delay, pp. 1336-1341.
Krstic, Miroslav — Univ. of California at San Diego

15:50-16:10 WeB08.6
New Stability Criterion for Discrete-Time Systems with Interval Time-Varying State Delay, pp. 1342-1347.
Guo, Yafeng — Shanghai Jiao Tong Univ.
Li, Shaoyuan — Shanghai Jiao Tong Univ.

WeB09 — 3H
Control of Fusion Plasmas in Tokamaks II (Invited Session)

Chair: Schuster, Eugenio — Lehigh Univ.
Co-Chair: Moreau, Didier — CEA
Organizer: Schuster, Eugenio — Lehigh Univ.
Organizer: Mazon, Didier — CEA Cadarache

14:10-14:30 WeB09.1
Vector Dither Experiment Design and Direct Parametric Identification of Reversed-Field Pinch Normal Modes (I), pp. 1348-1353.
Olofsson, Erik — Royal Inst. of Tech.
Hjalmarsson, HÍkan — Royal Inst. of Tech.
Rojas, Cristian R. — ACCESS Linnaeus Center, KTH
Brunsell, Per — Royal Inst. of Tech.
Drake, James — Royal Inst. of Tech.

14:30-14:50 WeB09.2
Design and Modeling of ITER Plasma Magnetic Control System in Plasma Current Ramp-Up Phase on DINA Code (I), pp. 1354-1359.
Mitrishkin, Yuri — Bauman Moscow State Tech. Univ.
Korostelev, Alexander — Bauman Moscow State Tech. Univ.
Dokuka, Vladimir — Troitsk Inst. for Innovation & Fusion Res.
Khayrutdinov, Rustam — Troitsk Inst. for Innovation & Fusion Res.

14:50-15:10 WeB09.3
Control Oriented Modeling and Simulation of the Sawtooth Instability in Nuclear Fusion Tokamak Plasmas (I), pp. 1360-1366.
Witvoet, Gert — Eindhoven Univ. of Tech.
Westerhof, Egbert — FOM
Steinbuch, Maarten — Eindhoven Univ. of Tech.
Doelman, Niek — TNO Science and Industry
De Baar, Marco — FOM

15:10-15:30 WeB09.4
Control of Ramp-Up Current Profile Dynamics in Tokamak Plasmas Via the Minimal-Surface Theory (I), pp. 1367-1372.
Xu, Chao — Lehigh Univ.
Schuster, Eugenio — Lehigh Univ.

15:30-15:50 WeB09.5
A Command Governor Approach to Plasma Shape Control (I), pp. 1373-1378.
Mattei, Massimiliano — Seconda Univ. di Napoli
Famularo, Domenico — Univ. degli Studi Mediterranea di Reggio Calabria
Labate, Carmelo Vincenzo — Univ. di Reggio Calabria

15:50-16:10 WeB09.6
Identification of the Magneto-Thermal Plasma Response for Plasma State Control in Advanced Tokamaks (I), pp. 1379-1386.
Moreau, Didier — CEA
Mazon, Didier — CEA Cadarache
Adachi, Yuuki — The Univ. of Tokyo
Takase, Yuichi — The Univ. of Tokyo
Sakamoto, Yoshiteru — JAEA
Ide, Shunsuke — JAEA
Suzuki, Takihiro — JAEA

WeB10 — 5D
Robust and Adaptive Control (Regular Session)

Chair: Nesic, Dragan — Univ. of Melbourne
Co-Chair: Bian, Wenming — Univ. of Southampton

14:10-14:30 WeB10.1
Nonlinear Adaptive Control Method Based on ANFIS and Multiple Models, pp. 1387-1392.
Zhang, Yajun — Northeastern Univ.
Chai, Tianyou — Northeastern Univ.

Fu, Yue — Northeastern Univ.
Niu, Hong — Northeastern Univ.

14:30-14:50 WeB10.2
A Biased Approach to Nonlinear Robust Stability with Applications in Adaptive Control, pp. 1393-1398.
French, Mark — Univ. of Southampton
Bian, Wenming — Univ. of Southampton

14:50-15:10 WeB10.3
Input-To-State Stability Analysis Via Averaging for Parameterized Discrete-Time Systems, pp. 1399-1404.
Wang, Wei — The Univ. of Melbourne
Nesic, Dragan — Univ. of Melbourne

15:10-15:30 WeB10.4
Nonlinear Adaptive Control Design for Non-Minimum Phase Hypersonic Vehicle Models with Minimal Control Authority, pp. 1405-1410.
Fiorentini, Lisa — The Ohio State Univ.
Serrani, Andrea — The Ohio State Univ.

15:30-15:50 WeB10.5
Input-To-State Dynamical Stability of Interconnected Systems, pp. 1411-1416.
Dashkovskiy, Sergey — Univ. of Bremen
Naujok, Lars — Univ. of Bremen

15:50-16:10 WeB10.6
Stabilization of a Class of Sandwich Nonlinear Systems Via State Feedback, pp. 1417-1421.
Wang, Xu — Washington State Univ.
Stoorvogel, Anton A. — Univ. of Twente
Saberi, Ali — Washington State Univ.
Grip, HÍvard Fjćr — NTNU
Roy, Sandip — Washington State Univ.
Sannuti, Peddapullaiah — Rutgers Univ.

WeB11 — 5J
Quantum Systems II: Real-Time Feedback Control (Invited Session)

Chair: James, Matthew R. — Australian National Univ.
Co-Chair: Mirrahimi, Mazyar — INRIA Rocquencourt
Organizer: James, Matthew R. — Australian National Univ.
Organizer: Mirrahimi, Mazyar — INRIA Rocquencourt

14:10-14:30 WeB11.1
On the Physical Realizability of General Linear Quantum Stochastic Differential Equations with Complex Coefficients (I), pp. 1422-1427.
A. J., Shaiju — INDIAN Inst. OF Tech. MADRAS
Petersen, Ian R. — UNSW at Australian Def. Force Acad.

14:30-14:50 WeB11.2
Quantum Feedback Control for the Deterministic Generation of Schrodinger-Cat States (I), pp. 1428-1432.
Yanagisawa, Masahiro — The Australian National Univ.

14:50-15:10 WeB11.3
Exact Solution for the Max-Min Quantum Error Recovery Problem (I), pp. 1433-1438.
Yamamoto, Naoki — Keio Univ.

15:10-15:30 WeB11.4
A Network Synthesis Theorem for Linear Dynamical Quantum Stochastic Systems (I), pp. 1439-1444.
Nurdin, Hendra Ishwara — Australian National Univ.
James, Matthew R. — Australian National Univ.
Doherty, Andrew — The Univ. of Queensland

15:30-15:50 WeB11.5
Feedback Schemes for Radiation Damping Suppression in NMR: A Control-Theoretical Perspective (I), pp. 1445-1450.
Altafini, Claudio — SISSA
Cappellaro, Paola — Harvard Univ.
Cory, David G. — MIT

15:50-16:10 WeB11.6
Feedback Generation of Quantum Fock States by Discrete QND Measures (I), pp. 1451-1456.
Mirrahimi, Mazyar — INRIA Paris-Rocquencourt
Dotsenko, Igor — Ec. Normale Superieure
Rouchon, Pierre — Mines ParisTech

WeB12 — 5E
Aerospace I (Regular Session)

Chair: Tayebi, Abdelhamid — Lakehead Univ.
Co-Chair: Chen, Zeng-Qiang — Nankai Univ.

14:10-14:30 WeB12.1
Continuous Low-Thrust Time-Optimal Orbital Maneuver, pp. 1457-1462.
Yue, XinCheng — Peking Univ.
Yang, Ying — Peking Univ.
Geng, Zhiyong — Peking Univ.

14:30-14:50 WeB12.2

On the Attitude Recovery of an Underactuated Spacecraft Using Two Control Moment Gyroscopes, pp. 1463-1470.
Mehrabian, Ali Reza — Concordia Univ.
Tafazoli, Siamak — Canadian Space Agency
Khorasani, Khashayar — Concordia Univ.

14:50-15:10 WeB12.3
A Novel Algorithm for SINS/CNS/GPS Integrated Navigation System, pp. 1471-1475.
Hu, Haidong — Univ. of Harbin Inst. of Tech.
Huang, Xianlin — Univ. of Harbin Inst.
Song, Zhuoyue — Univ. of Manchester

15:10-15:30 WeB12.4
On the Coordinated Attitude Alignment of a Group of Spacecraft without Velocity Measurements, pp. 1476-1481.
Abdessameud, Abdelkader — Univ. of Western Ontarion
Tayebi, Abdelhamid — Lakehead Univ.

15:30-15:50 WeB12.5
A Practical Solution to Some Problems in Flight Control, pp. 1482-1487.
Sun, Mingwei — Nankai Univ.
Chen, Zeng-Qiang — Nankai Univ.
Yuan, Zhuzhi — Nankai Univ.

15:50-16:10 WeB12.6
Consistent Estimation of Pulse Delay for X-Ray Pulsar Based Relative Navigation, pp. 1488-1493.
Emadzadeh, Amir A. — Univ. of California, Los angeles
Golshan, A. Robert — JHU
Speyer, Jason L. — Univ. of California at Los Angeles

WeB13 — 5A
Statistical Learning (Regular Session)
Chair: Jia, Yingmin — Beihang Univ.
Co-Chair: Meyn, Sean — Univ. of Illinois

14:10-14:30 WeB13.1
A Sensor-Utility-Network Method for Estimation of Occupancy Distribution in Buildings, pp. 1494-1500.
Meyn, Sean — Univ. of Illinois
Surana, Amit — United Tech. Res. Center
Lin, Yiqing — United Tech. Res. Center
Oggianu, Stella Maris — United Tech. Res. Center
Narayanan, Satish — United Tech. Res. Center
Frewen, Thomas — United Tech. Res. Center

14:30-14:50 WeB13.2
Mixed Linear System Estimation and Identification, pp. 1501-1506.
Zymnis, Argyrios — Stanford Univ.
Boyd, Stephen P. — Stanford Univ.
Gorinevsky, Dimitry — Stanford Univ.

14:50-15:10 WeB13.3
Improved Independent Component Regression Modeling, pp. 1507-1512.
Zhao, Chunhui — The Hong Kong Univ. of Science and Tech.
Gao, Furong — Hong Kong Univ. of Science & Tech.
Liu, Tao — Hong Kong Univ. of Science & Tech.
Wang, Fuli — Northeastern Univ.

15:10-15:30 WeB13.4
Learning under Social Influence, pp. 1513-1519.
Tahbaz-Salehi, Alireza — Univ. of Pennsylvania
Sandroni, Alvaro — Univ. of Pennsylvania
Jadbabaie, Ali — Univ. of Pennsylvania

15:30-15:50 WeB13.5
Gene Selection of Multiple Cancer Types Via Huberized Multi-Class Support Vector Machine, pp. 1520-1525.
Li, Juntao — Beihang Univ.
Jia, Yingmin — Beihang Univ.
Du, Junping — Beijing Univ. of Posts and Telecommunications
Yu, Fashan — Henan Pol. Univ.

15:50-16:10 WeB13.6
Could Feedback-Based Self-Learning Help Solve Networked Prisoner's Dilemma?, pp. 1526-1531.
Chen, Xiaojie — Peking Univ.
Fu, Feng — Harvard Univ.
Wang, Long — Peking Univ.

WeB14 — 5B
Identification Accuracy with Applications (Regular Session)
Chair: Weyer, Erik — Univ. of Melbourne
Co-Chair: Manchester, Ian — Umea Univ.

14:10-14:30 WeB14.1

Finite Sample Properties of System Identification with Quantized Output Data, pp. 1532-1537.
Weyer, Erik — Univ. of Melbourne
Ko, Sangho — Korea Aerospace Univ.
Campi, M. C. — Univ. di Brescia

14:30-14:50 WeB14.2
Preliminary Results on Relative Performance of Expected and Observed Fisher Information, pp. 1538-1543.
Cao, Xumeng — Johns Hopkins Univ.
Spall, James C. — Johns Hopkins Univ.

14:50-15:10 WeB14.3
Parametrization Invariant Covariance Quantification in Identification of Transfer Functions for Linear Systems, pp. 1544-1550.
Ivanov, Tzvetan — Univ. Catholique de Louvain
Gevers, Michel — Univ. Catholique de Louvain

15:10-15:30 WeB14.4
An Algorithm for Amplitude-Constrained Input Design for System Identification, pp. 1551-1556.
Manchester, Ian — Massachusetts Inst. of Tech.

15:30-15:50 WeB14.5
Input Design Using Markov Chains for System Identification, pp. 1557-1562.
Brighenti, Chiara — Univ. of Padova
Wahlberg, Bo — Royal Inst. of Tech.
Rojas, Cristian R. — ACCESS Linnaeus Center, KTH

15:50-16:10 WeB14.6
An Algorithm for Time-Varying Commodity Price Models, pp. 1563-1568.
Godoy, Boris I. — The Univ. of Newcastle
Goodwin, Graham C. — Univ. of Newcastle
Agüero, Juan C. — Univ. of Newcastle
Rojas, Alejandro J. — Univ. of Newcastle

WeB15 — 3B
Stochastic Control II (Regular Session)
Chair: McEneaney, William — Univ. of California, San Diego
Co-Chair: Lin, Zhongwei — Beijing Univ. of Aeronautics and Astronautics

14:10-14:30 WeB15.1
Idempotent Algorithms for Discrete-Time Stochastic Control through Distributed Dynamic Programming, pp. 1569-1574.
McEneaney, William — Univ. of California, San Diego

14:30-14:50 WeB15.2
Passivity and Feedback Design of Nonlinear Stochastic Systems, pp. 1575-1580.
Lin, Zhongwei — Beijing Univ. of Aeronautics and Astronautics
Yan, Lin — Beijing Univ. of Aeronautics and Astronautics

14:50-15:10 WeB15.3
Stochastic Averaging on Infinite Time Interval for a Class of Nonlinear Systems with Stochastic Perturbation, pp. 1581-1586.
Liu, Shu-Jun — Southeast Univ.
Krstic, Miroslav — Univ. of California at San Diego

15:10-15:30 WeB15.4
Stochastic Optimal Control Subject to Variational Norm Uncertainty: Viscosity Subsolutions for Generalized HJB Inequality, pp. 1587-1592.
Rezaei, Farzad — Univ. of Ottawa
Charalambous, Charalambos D. — Univ. of Cyprus
Ahmed, Nasir Uddin — Univ. of Ottawa

15:30-15:50 WeB15.5
Stochastic Control of Continuous-Time and Continuous-State Systems Via Direct Comparison, pp. 1593-1598.
Cao, Xi-Ren — Hong Kong Univ. of Sci. & Tech.

15:50-16:10 WeB15.6
An Elementary Derivation of the Large Deviation Rate Function for Finite State Markov Chains, pp. 1599-1606.
Vidyasagar, Mathukumalli — The Univ. of Texas at Dallas

WeB16 — 5F
Decentralized Control (Regular Session)
Chair: Stoorvogel, Anton A. — Univ. of Twente
Co-Chair: Martins, Nuno C. — Univ. of Maryland

14:10-14:30 WeB16.1
On the Closest Quadratically Invariant Constraint, pp. 1607-1612.
Rotkowitz, Michael C. — The Univ. of Melbourne
Martins, Nuno C. — Univ. of Maryland

14:30-14:50 WeB16.2
A Multiple-Derivative and Multiple-Delay Paradigm for Decentralized Controller Design: Uniform-Rank Systems, pp. 1613-1620.
Wan, Yan — Washington State Univ.
Roy, Sandip — Washington State Univ.
Saberi, Ali — Washington State Univ.
Stoorvogel, Anton A. — Univ. of Twente

14:50-15:10 WeB16.3
Reduction of Decentralized Control Problems to Tractable Representations, pp. 1621-1626.
Lessard, Laurent — Stanford Univ.
Lall, Sanjay — Stanford Univ.

15:10-15:30 WeB16.4
Time Varying Controllers in Discrete-Time Decentralized Control, pp. 1627-1631.
Deliu, Ciprian — Eindhoven Univ. of Tech.
Stoorvogel, Anton A. — Univ. of Twente
Saberi, Ali — Washington State Univ.
Roy, Sandip — Washington State Univ.
Malek, Babak — Washington State Univ.

15:30-15:50 WeB16.5
On the Use of the Generalized Structured Singular Value for Decentralized Control Problems, pp. 1632-1637.
Tanaka, Takashi — Univ. of Illinois, Urbana-Champaign
Langbort, Cedric — Univ. of Illinois, Urbana-Champaign

15:50-16:10 WeB16.6
Nonlinear Robust H^infty Control Via a Stable Decentralized Nonlinear Output Feedback Controller, pp. 1638-1644.
Harno, Hendra G. — Univ. of New South Wales @ ADFA
Petersen, Ian R. — UNSW at Australian Def. Force Acad.

WeB17 5H
Networks II (Regular Session)
Chair: Qu, Zhihua — Univ. of Central Florida
Co-Chair: Sinopoli, Bruno — Carnegie Mellon Univ.

14:10-14:30 WeB17.1
Optimal Sampling for State Change Detection with Application to the Control of Sleep Mode, pp. 1645-1650.
Azad, Amar Prakash — INRIA, Sophia Antipolis
Alouf, Sara — INRIA Sophia Antipolis
Altman, Eitan — INRIA
Borkar, Vivek S. — Tata Inst. of Fundamental Res.
Paschos, George — Univ. uth, greece

14:30-14:50 WeB17.2
Inverse Optimality of Cooperative Control for Networked Systems, pp. 1651-1658.
Qu, Zhihua — Univ. of Central Florida
Simaan, Marwan A. — Univ. of Central Florida

14:50-15:10 WeB17.3
Sensor Selection for Hypothesis Testing in Wireless Sensor Networks: A Kullback-Leibler Based Approach, pp. 1659-1664.
Bajovic, Dragana — Carnegie Mellon Univ.
Sinopoli, Bruno — Carnegie Mellon Univ.
Xavier, Joao — Inst. Sistemas e Robotica - Inst. Superior Tecnico

15:10-15:30 WeB17.4
Discrete Invasive Weed Optimization Algorithm: Application to Cooperative Multiple Task Assignment of UAVs, pp. 1665-1670.
Ramezani Ghalenoei, Mohsen — Univ. of Tehran
Hajimirsadeghi, Hossein — Univ. of Tehran
Lucas, Caro — Prof.

15:30-15:50 WeB17.5
Computation of Safety Control for Uncertain Piecewise Continuous Systems on a Partial Order, pp. 1671-1677.
Hafner, Michael R. — Univ. of Michigan
Del Vecchio, Domitilla — Univ. of Michigan

15:50-16:10 WeB17.6
Distributed Non-Smooth Resource Allocation Over a Network, pp. 1678-1683.
Johansson, Bjorn — Royal Inst. of Tech.
Johansson, Mikael — Royal Inst. of Tech.

WeB18 5I
Network Synchronization (Regular Session)
Chair: Sarlette, Alain — Univ. of Liege (Belgium)
Co-Chair: Wang, Yan-Wu — Huazhong Univ. of Science and Tech.

14:10-14:30 WeB18.1
Synchronization of Dynamical Networks by Network Control, pp. 1684-1689.
Liu, Tao — The Australian National Univ.
Hill, David J. — The Australian National Univ.
Zhao, Jun — The Australian National Univ.

14:30-14:50 WeB18.2
Moment-Based Analysis of Synchronization in Small-World Networks of Oscillators, pp. 1690-1695.
Preciado, Victor M. — Univ. of Pennsylvania
Jadbabaie, Ali — Univ. of Pennsylvania

14:50-15:10 WeB18.3
Synchronization with Partial State Feedback on SO(n), pp. 1696-1701.

Lageman, Christian — Univ. of Liege
Sarlette, Alain — Univ. of Liege (Belgium)
Sepulchre, Rodolphe J. — Univ. de Liege

15:10-15:30 WeB18.4
Global Synchronization of Networked Systems with Bidirectional Connections, pp. 1702-1707.
Xiang, Ji — Zhejiang Univ. Yuquan Campus
Wei, Wei — Zhejiang Univ.
Li, Yanjun — School of Information and Electrical Engineering, Zhejiang Univ.

15:30-15:50 WeB18.5
Robust Synchronization of Weighted Complex Dynamical Networks, pp. 1708-1713.
Zhao, Junchan — Wuhan Univ.
Li, Qin — Pol. Inst. of New York Univ.
Lu, Junan — Wuhan Univ. China
Jiang, Zhong-Ping — Pol. Inst. NYU

15:50-16:10 WeB18.6
Synchronization of Complex Dynamical Networks Via Distributed Impulsive Control, pp. 1714-1719.
Liu, Zhi-Wei — Huazhong Univ. of Science and Tech.
Guan, Zhi-Hong — Huazhong Univ. of Science & Tech.
Wang, Yan-Wu — Huazhong Univ. of Science and Tech.
Liao, Rui-Quan — Yangtze Univ.

WeTBTu — Yellow River
Modeling of Interconnected Systems (Tutorial Session)

Chair: Yamamoto, Yutaka — Kyoto Univ.
Co-Chair: van der Schaft, Arjan J. — Univ. of Groningen

14:10-14:50 WeTBTu.1
*Modeling by Tearing, Zooming and Linking (I)**.
Trentelman, Harry L. — Univ. of Groningen

14:50-15:30 WeTBTu.2
*Multi-Physics Systems and Port-Hamiltonian Theory (I)**.
van der Schaft, Arjan J. — Univ. of Groningen

15:30-15:50 WeTBTu.3
*Terminals and Ports (I)**.
Trentelman, Harry L. — Univ. of Groningen

15:50-16:10 WeTBTu.4
*Distributed Parameter Systems (I)**.
van der Schaft, Arjan J. — Univ. of Groningen

WeBIn1 — Mandarin Hall
Algebraic and Computational Methods for Linear Systems (Interactive Session)

14:30-15:50 WeBIn1.1
Solving Discrete Algebraic Riccati Equations: A New Recursive Method, pp. 1720-1724.
Feng, Yantao — Australian National Univ.
Anderson, Brian D.O. — Australian National Univ.
Chen, Wei-tian — Australian National Univ.

14:30-15:50 WeBIn1.2
Iterative Solution to Matrix Equations of Form A_iXB_i=F_i, pp. 1725-1728.
Ding, Jie — Jiangnan Univ.
Ding, Feng — Jiangnan Univ.
Liu, Yanjun — Jiangnan Univ.

14:30-15:50 WeBIn1.4
Robust Pole Assignment for Discrete-Time Linear Periodic Systems Via Output Feedback, pp. 1729-1733.
Duan, Guang-Ren — Harbin Inst. of Tech.
Lv, Lingling — Harbin Inst. of Tech.
Zhou, Bin — Harbin Inst. of Tech.

14:30-15:50 WeBIn1.5
Lyapunov Stability Analysis of Higher-Order 2-D Systems, pp. 1734-1739.
Rapisarda, Paolo — Univ. of Southampton
Takaba, Kiyotsugu — Kyoto Univ.
Kojima, Chiaki — Univ. of Tokyo

14:30-15:50 WeBIn1.6
On Algebraic Time-Derivative Estimation and Deadbeat State Reconstruction, pp. 1740-1745.
Reger, Johann — TU Ilmenau
Jouffroy, Jerome — Univ. of Southern Denmark

14:30-15:50 WeBIn1.7
Transformability from Discrete-Time Periodic Non-Homogeneous Systems to Time-Invariant Ones, pp. 1746-1751.
Hayakawa, Yoshikazu — Nagoya Univ.
Jimbo, Tomohiko — Toyota central R&D Lab. Inc.

14:30-15:50 WeBIn1.8

Realization of Transfer Functions Via Degree Decreasing Interpolation Circuits, pp. 1752-1757.

Wakai, Yuya — The Univ. of Tokyo
Tsumura, Koji — The Univ. of Tokyo

14:30-15:50 WeBIn1.9

On Normal Realizations of Discrete-Time Systems with Consideration of Finite Precision Implementation, pp. 1758-1763.

Zhu, Guangxin — Zhejiang Univ.
Wang, Kuang — Zhejiang Univ.
He, Xiongxiong — Zhejiang Univ. of Tech.

14:30-15:50 WeBIn1.10

Algorithms for Transformation into the Extended Jordan Controllable and Observable Forms, pp. 1764-1769.

Busawon, Krishna K. — Northumbria Univ.
Djemai, Mohamed — Valenciennes Univ.

WeBIn2 Mandarin Hall
Control Applications I (Interactive Session)

14:30-15:50 WeBIn2.1

A Quotient Method for Controlling the Acrobot, pp. 1770-1775.

Sudarsandhari Shibani, Willson — Ec. Pol. Federale de Lausanne
Muellhaupt, Philippe — Ec. Pol. Fed. de Lausanne
Bonvin, Dominique — EPFL

14:30-15:50 WeBIn2.2

Global Asymptotic Stabilization of the Synchronization of Two Underactuated Spacecraft, pp. 1776-1781.

Hutagalung, Maclaurin — Tokyo Inst. of Tech.
Hayakawa, Tomohisa — Tokyo Inst. of Tech.

14:30-15:50 WeBIn2.3

Nonlinear Port Controlled Hamiltonian Systems under Sampling, pp. 1782-1787.

Normand-Cyrot, Marie-Dorothée — CNRS-Supélec
Monaco, Salvatore — Univ. di Roma
Tiefensee, Fernando — CNRS-Supelec-Univ. ParisXI

14:30-15:50 WeBIn2.4

On the Stability of a Class of Single-Mode Laser Diode Models, pp. 1788-1793.

Dower, Peter M. — The Univ. of Melbourne
Farrell, Peter Mark — The Univ. of Melbourne
Hinton, Kerry — Univ. of Melbourne

14:30-15:50 WeBIn2.5

Optimal Interpolation to Re-Analyse PM10 Concentration Modelling Simulations, pp. 1794-1799.

Candiani, Gabriele — Univ. di Brescia
Carnevale, Claudio — Brescia Univ.
Filisina, Veronica — Univ. of Brescia
Finzi, Giovanna — Univ. degli Studi di Brescia
Pisoni, Enrico — Univ. of Brescia
Volta, Marialuisa — Univ. degli Studi di Brescia

14:30-15:50 WeBIn2.6

Barrier Function Nonlinear Optimization for Optimal Decompression of Divers, pp. 1800-1805.

Feng, Le — The Norwegian Univ. of Science and Tech.
Gutvik, Christian R. — Norwegian Univ. of Science and
Johansen, Tor Arne — Norweigian Univ. of Science & Tech.
Sui, Dan — Norwegian Univ. of Sci and Tech.

14:30-15:50 WeBIn2.7

Transfer Operator Method for Control in Fluid Flows, pp. 1806-1811.

Vaidya, Umesh — Iowa State Univ.
Ganapathysubramanian, Baskar — Iowa State Univ.
Raghunathan, Arvind — United Tech. Res. Center

14:30-15:50 WeBIn2.9

Effects of Small Time-Delays on Dynamic Output Feedback Control of Offshore Steel Jacket Structures Subject to Wave-Induced Forces, pp. 1812-1817.

Zhang, Xian-Ming — Central Queensland Univ.
Han, Qing-Long — Central Queensland Univ.
Han, Dongsheng — Centrol Queensland Univ.

WeBIn3 Mandarin Hall
Filtering and Estimation I (Interactive Session)

14:30-15:50 WeBIn3.1

A Moving Horizon Scheme for Distributed State Estimation, pp. 1818-1823.

Farina, Marcello — Pol. di Milano
Ferrari-Trecate, Giancarlo — Univ. degli Studi di Pavia
Scattolini, Riccardo — Pol. di Milano

14:30-15:50 WeBIn3.2

Delay-Dependent H_infinity Filtering of Uncertain Stochastic Systems with Delays, pp. 1824-1829.

Chen, Yun — Hangzhou Dianzi Univ.
Wang, JunHong — Hangzhou Dianzi Univ.
Xue, Anke — Hangzhou Dianzi Univ.
Zhao, Xiaodong — Hangzhou Dianzi Univ.

14:30-15:50 WeBIn3.3

Self-Tuning Weighted Measurement Fusion Kalman Filter and Its Convergence Analysis, pp. 1830-1835.

Ran, Chen-Jian — Heilongjiang Univ.
Deng, Zi-Li — Heilongjiang Univ.

14:30-15:50 WeBIn3.6

Design of Observer-Based Controllers for LPV Systems with Unknown Parameters, pp. 1836-1841.

Heemels, Maurice — Eindhoven Univ. of Tech.
Daafouz, Jamal — CRAN -INPL
Millerioux, Gilles — Nancy Univ.

14:30-15:50 WeBIn3.7

On MLE Methods for Dynamical Systems with Fractionally Differenced Noise Spectra, pp. 1842-1847.

Vivero, Oskar — The Univ. of Manchester
Heath, William Paul — Univ. of Manchester

14:30-15:50 WeBIn3.8

L-Delay Input Reconstruction for Discrete-Time Linear Systems, pp. 1848-1853.

Kirtikar, Siddharth — Univ. of Michigan, Ann Arbor
Palanthandalam-Madapusi, Harish — Syracuse Univ.
Zattoni, Elena — Univ. of Bologna
Bernstein, Dennis S. — Univ. of Michigan

14:30-15:50 WeBIn3.9

On a Rational Transfer Function-Based Approach to Hoo Filter Design for Time-Delay Linear Systems, pp. 1854-1859.

Korogui, Rubens H. — UNICAMP
Fioravanti, Andre R. — INRIA Rocquencourt
Geromel, Jose C. — UNICAMP

14:30-15:50 WeBIn3.10

Interval Observers for Linear Systems with Delay, pp. 1860-1865.

Mazenc, Frederic — INRIA Sophia-Antipolis,
Niculescu, Silviu-Iulian — CNRS-Supelec
Bernard, Olivier — Inria

WeBIn4 — Mandarin Hall

Process Control (Interactive Session)

14:30-15:50 WeBIn4.1

Analysis and Control of the Exothermic Control Stirred Tank Reactor: The Power-Shaping Approach, pp. 1866-1871.

Favache, Audrey — Univ. catholique de Louvain
Dochain, Denis — Univ. Catholique de Louvain

14:30-15:50 WeBIn4.2

Assessment of Control System Performance with LTV Disturbance Dynamics: SISO Case, pp. 1872-1877.

Liu, Chun-yu — Beijing Inst. of Tech.
Huang, Biao — Univ. of Alberta
Wang, Qinglin — Beijing Inst. of Tech.

14:30-15:50 WeBIn4.3

Dissolved Oxygen Concentration Prediction Control through Multiobjective Evolutionary RBF Neural Network, pp. 1878-1883.

Jin, Liang — south china Univ. of Tech.
Fei, Luo — south china Univ. of Tech.
Yuge, Xu — south china Univ. of Tech.

14:30-15:50 WeBIn4.4

State Estimation for Batch Distillation Operations with a Novel Extended Kalman Filter Approach, pp. 1884-1889.

Pan, Shuwen — Zhejiang Univ.
Su, Hongye — Zhejiang Univ.
Li, Pu — Tech. Univ. of Ilmenau
Gu, Yong — Zhejiang Univ.

14:30-15:50 WeBIn4.5

Robust Analytical Scheme for Linear Non-Square Systems, pp. 1890-1895.

Chen, Peiying — Inst. of Automation, Chinese Acad. of Sciences
Ou, Linlin — Shanghai Jiaotong Univ.
Gu, Danying — Shanghai Nuclear Engineering Res. and Design Inst.
Zhang, Weidong — Shanghai Jiaotong Univ.

14:30-15:50 WeBIn4.6

PLS-Based FDI of a Three-Tank Laboratory System, pp. 1896-1901.

Klinkhieo, Supat — The Univ. of Hull
Patton, Ron J. — Univ. of Hull

14:30-15:50 WeBIn4.7

Multivariable Control Performance Assessment Based on Generalized Minimum Variance Benchmark, pp. 1902-1907.

Zhao, Yu — Zhejiang Univ.
Su, Hongye — Zhejiang Univ.
Chu, Jian — Zhejiang Univ.
Zhao, Chao — Zhejiang Univ.
Zhang, Dengfeng — Nanjing Univ. of Science and Tech.

14:30-15:50 WeBIn4.8

Cycle Prediction EWMA Run-To-Run Controller for Mixed-Product Drifting Process, pp. 1908-1913.

Ai, Bing — Huazhong Univ. of Science and Tech.
Zheng, Ying — Huazhong Univ. of Science and Tech.
Zhang, Hong — Huazhong Univ. of Science and Tech.
Wang, Zhou — Huazhong Univ. of Science and Tech.
Zhang, Zhen — Huazhong Univ. of Science and Tech.

14:30-15:50 WeBIn4.9

Controller Parameters Dependence on Model Information through Dimensional Analysis, pp. 1914-1919.

Balaguer, Pedro — Univ. Jaume I de Castello
Ibeas, Asier — Univ. Autónoma de Barcelona
Pedret, Carles — Univ. Autňnoma de Barcelona
Alcantara, Salva — UAB

WeBIn5 Mandarin Hall
Stability and Stabilization I (Interactive Session)

14:30-15:50 WeBIn5.1

A Switching Anti-Windup Design Using Multiple Lyapunov Functions, pp. 1920-1925.

Lu, Liang — Shanghai Jiao Tong Univ.
Lin, Zongli — Univ. of Virginia

14:30-15:50 WeBIn5.2

Exponential Stabilization of Switched Linear Systems, pp. 1926-1931.

Raouf, Jamila — McGill Univ.
Michalska, Hannah H. — McGill Univ.

14:30-15:50 WeBIn5.3

Observer-Based Control for Fractional-Order Continuous-Time Systems, pp. 1932-1937.

N'Doye, Ibrahima — CRAN
Zasadzinski, Michel — CRAN
Darouach, Mohamed — Univ. Henri Poincare-Nancy
Radhy, Nour-Eddine — Lab. Physique et Matériaux Microélectonique, Automatique

14:30-15:50 WeBIn5.4

Finite-Time Stability and Stabilization of Switched Linear Systems, pp. 1938-1943.

Du, HaiBo — Southeast Univ.
Lin, Xiangze — Nanjing Agricultural Univ.
Li, Shihua — Southeast Univ.

14:30-15:50 WeBIn5.5

Global Stabilization of Feedforward Systems with Lower-Order Vector Field, pp. 1944-1949.

Ding, Shihong — Southeast Univ.
Qian, Chunjiang — Univ. of Texas at San Antonio
Li, Shihua — Southeast Univ.

14:30-15:50 WeBIn5.6

A Nonlinear IMC Approach Using Model Inversion from Data, pp. 1950-1955.

Canale, Massimo — Pol. di Torino
Novara, Carlo — Pol. di Torino
Signorile, Maria Carmela — Pol. di Torino

14:30-15:50 WeBIn5.7

Adaptive Dynamic Surface Control for a Class of Uncertain Nonlinear Systems in Pure-Feedback Form, pp. 1956-1961.

Wang, Dan — Dalian Maritime Univ.
Li, Tieshan — Dalian Maritime Univ.

14:30-15:50 WeBIn5.8

Can the Energy and Actuated Variables of Underactuated Mechanical Systems Be Controlled? --Example of the Acrobot with Counterweight, pp. 1962-1967.

Xin, Xin — Okayama Prefectural Univ.
Guo, Lei — Beihang Univ.

14:30-15:50 WeBIn5.9

A Modified Contractive Model Predictive Control Approach, pp. 1968-1973.

Mejia, Juan — Univ. of Illinois
Stipanovic, Dusan M. — Univ. of Illinois, Urbana-Champaign

14:30-15:50 WeBIn5.10

Exponential Stability Region Estimates for the State-Dependent Riccati Equation Controllers, pp. 1974-1979.

Chang, Insu — Univ. of Illinois at Urbana-Champaign
Chung, Soon-Jo — Univ. of Illinois at Urbana-Champaign

14:30-15:50 WeBIn5.11

Unconstrained NCGPC with a Guaranteed Closed-Loop Stability: Case of Nonlinear SISO Systems with the Relative Degree Greater Than

Four, pp. 1980-1985.
Dabo, Marcelin — Univ. de Rouen
Chafouk, Houcine — IRSEEM / ESIGELEC
Langlois, Nicolas — IRSEEM / ESIGELEC

14:30-15:50 WeBIn5.12
Stabilize an N-Dimensional Quantized Nonlinear Feedforward System with 1 Bit, pp. 1986-1991.
Ling, Qiang — Univ. of Science and Tech. of China
Lemmon, Michael — Univ. of Notre Dame
Lin, Hai — National Univ. of Singapore

14:30-15:50 WeBIn5.13
Time Headway Requirements for String Stability of Homogeneous Linear Unidirectionally Connected Systems, pp. 1992-1997.
Klinge, Steffi — NUI Maynooth
Middleton, Richard H. — National Univ. of Ireland Maynooth

WeBIn6 Mandarin Hall
Control and Communication in Networked Systems (Interactive Session)

14:30-15:50 WeBIn6.1
Prediction-Based Power Control for Distributed Cellular Communication Networks with Time-Varying Channel Uncertainties, pp. 1998-2003.
Subramanian, Sankrith — Univ.
Shea, John — Univ. of Florida
Dixon, Warren E. — Univ. of Florida

14:30-15:50 WeBIn6.2
Joint Rate Control and Routing for Energy-Constrained Wireless Sensor Networks, pp. 2004-2009.
Zheng, Meng — Shenyang Inst. of Automation
Yu, Haibin — Chinese Acad. of Sciences
Zheng, Jianying — Shenyang Inst. of Automation
Liang, Wei — chinese acedemy of science
Zeng, Peng — Shenyang Inst. of Automation

14:30-15:50 WeBIn6.3
Algorithms and Stability Analysis for Content Distribution Over Multiple Multicast Trees, pp. 2010-2016.
Zheng, Xiaoying — Univ. of Florida
Cho, Chunglae — Univ. of Florida
Xia, Ye — Univ. of Florida

14:30-15:50 WeBIn6.4
On Observer Based Stabilization of Networked Systems, pp. 2017-2022.
Caravani, Paolo — Univ. of L'aquila
De Santis, Elena — Univ. of L'Aquila

14:30-15:50 WeBIn6.5
One-Bit Processing for Wireless Networked Real-Time Control, pp. 2023-2027.
Wu, Xiaofeng — Univ. of Sydney

14:30-15:50 WeBIn6.6
Quantized Guaranteed Cost Control for Wireless Networked Control System, pp. 2028-2033.
Hua, Changchun — Yanshan Univ.
Caihong, Ye — Yanshan Univ.
Guan, Xinping — Yanshan Univ.

14:30-15:50 WeBIn6.7
Robust Power Control of Single Sink Optical Networks with Time-Delays, pp. 2034-2039.
Stefanovic, Nem — Univ. of Toronto
Pavel, Lacra — Univ. of Toronto

14:30-15:50 WeBIn6.8
Controlling Ideal Turbulence in Time-Delayed Chua's Circuits and an Application to Communications, pp. 2040-2045.
Suzuki, Masayasu — Nagoya Univ.
Sakamoto, Noboru — Nagoya Univ.

14:30-15:50 WeBIn6.9
Distributed H_; Control of Spatially Interconnected Systems with Random Communication Packet Losses, pp. 2046-2051.
Li, Hui — Beijing Inst. of Tech.
Wu, Qinghe — Beijing Inst. of Tech.
Yu, Di — Beijing Inst. of Tech.

14:30-15:50 WeBIn6.10
Velocity-Consensus Control for Networks of Multiple Double-Integrators, pp. 2052-2057.
Chen, Jie — Beijing Inst. of Tech.
Wang, Long — Peking Univ.
Xiao, Feng — Beijing Inst. of Tech.

14:30-15:50 WeBIn6.11
Hinf Filtering for Networked Systems with Random Sensor Delays, Packet Dropouts and Missing Measurements, pp. 2058-2063.
Moayedi, Maryam — Nanyang Tech. Univ.
Soh, Yeng Chai — Nanyang Tech. Univ.
Foo, Yung Kuan — Organization

14:30-15:50 WeBIn6.12
Shortest Path Optimization under Limited Information, pp. 2064-2069.
Rinehart, Michael — Massachusetts Inst. of Tech.
Dahleh, Munther A. — Massachusetts Inst. of Tech.

14:30-15:50 WeBIn6.13
Optimal Tracking Performance of Discrete-Time Systems Over an Additive White Noise Channel, pp. 2070-2075.
Li, Yiqian — Univ. of California, Riverside
Tuncel, Ertem — Univ. of California, Riverside
Chen, Jie — Univ. of California at Riverside
Su, Weizhou — South China Univ. of Tech.

14:30-15:50 WeBIn6.14
Quantized Predictive Control Over Erasure Channels, pp. 2076-2081.
Quevedo, Daniel E. — The Univ. of Newcastle
Ostergaard, Jan — Aalborg Univ.

14:30-15:50 WeBIn6.15
Dynamic Clock Calibration Via Temperature Measurement, pp. 2082-2087.
Shuman, David — Univ. of Michigan
Liu, Mingyan — Univ. of Michigan

14:30-15:50 WeBIn6.16
Virtual Reality Enhanced Bilateral Teleoperation with Communication Constraints, pp. 2088-2093.
Polushin, Ilia G. — Univ. of Western Ontario
Rhinelander, Jason — Carleton Univ.
Liu, Peter X. — Carleton Univ.
Lung, Chung-Horng — Carleton Univ.

14:30-15:50 WeBIn6.17
Uniform Stabilization of Markovian Jump Linear Systems with Logarithmic Quantization - a Convex Approach, pp. 2094-2099.
Zhang, Chun — Cisco Systems, Inc.
Dullerud, Geir E. — Univ. of Illinois, Urbana-Champaign

WeC01 — 3D
Nonlinear Systems II (Regular Session)

Chair: Boukas, El-Kebir — Ec. Pol. de Montreal
Co-Chair: Guay, Martin — Queen's Univ.

16:30-16:50 WeC01.1
Stabilizing Controllers Design for Feedforward Nonlinear Time-Delay Systems, pp. 2100-2105.
Zhang, Xianfu — Shandong Jianzhu Univ.
Boukas, El-Kebir — Ec. Pol. de Montreal
Baron, Luc — École Pol. de Montréal

16:50-17:10 WeC01.2
Magnetization Switching in Small Ferromagnetic Ellipsoidal Samples, pp. 2106-2111.
Alouges, François — Ec. Pol.
Beauchard, Karine — Univ. Paris-Sud, France
Sigalotti, Mario — INRIA Nancy - Grand Est

17:10-17:30 WeC01.3
A Motion Planning Algorithm for the Rolling-Body Problem, pp. 2112-2116.
Alouges, François — Ec. Pol.
Chitour, Yacine — Univ. Paris-Sud, CNRS, Supelec
Long, Ruixing — Ec. Pol.

17:30-17:50 WeC01.4
A Necessary Condition for Path-Finding by the Homotopy Continuation Method, pp. 2117-2124.
Guay, Martin — Queen's Univ.
Amiss, Scott — Queen's Univ.

17:50-18:10 WeC01.5
A Pseudo-H Infinity Control Theory and Its Application to the Control of Pendulum-Like Nonlinear Systems, pp. 2125-2131.
Ouyang, Hua — UNSW@ADFA
Petersen, Ian R. — UNSW at Australian Def. Force Acad.
Ugrinovskii, Valery — Univ. of New South Wales

18:10-18:30 WeC01.6
On the PDEs Arising in IDA-PBC, pp. 2132-2137.
Acosta, José Ángel — Univ. de Sevilla
Astolfi, Alessandro — Imperial Coll. & Univ. of Rome

WeC02 — 3E
Stability Analysis of Switched Systems (Regular Session)

Chair: Hirata, Kenji — Nagaoka Univ. of Tech.
Co-Chair: Seron, Maria — The Univ. of Newcastle

16:30-16:50 WeC02.1
L2-Induced Gain Analysis for a Class of Switched Systems, pp. 2138-2143.
Hirata, Kenji — Nagaoka Univ. of Tech.

Hespanha, Joao P. — Univ. of California, Santa Barbara

16:50-17:10 — WeC02.2

On Practical Stabilizability of Discrete-Time Switched Affine Systems (I), pp. 2144-2149.

Xu, Xuping — School of Engineering, California Baptist Univ.
Zhai, Guisheng — Osaka Prefecture Univ.
He, Shouling — Penn State Erie, The Behrend Coll.

17:10-17:30 — WeC02.3

Componentwise Ultimate Bound Computation for Switched Linear Systems, pp. 2150-2155.

Haimovich, Hernan — Univ. Nacional de Rosario, Argentina
Seron, Maria — The Univ. of Newcastle

17:30-17:50 — WeC02.4

On Stability of Linear Switched Differential Algebraic Equations, pp. 2156-2161.

Liberzon, Daniel — Univ. of Illinois, Urbana-Champaign
Trenn, Stephan — Univ. of Illinois at Urbana-Champaign

17:50-18:10 — WeC02.5

The Set of Asymptotically Stable Switching Sequences of Linear Discrete-Time Switching Systems, pp. 2162-2167.

Xiao, Mingqing — Southern Illinois Univ.

18:10-18:30 — WeC02.6

A Note on Input-To-State Stability and Averaging of Fast Switching Systems, pp. 2168-2173.

Wang, Wei — The Univ. of Melbourne
Nesic, Dragan — Univ. of Melbourne

WeC03 — 3C

LMI's and Robust Control Methods (Regular Session)

Chair: Martinez Molina, John Jairo — GIPSA-Lab. GRENOBLE-INP
Co-Chair: Feng, Yu — Ec. des Mines de Nantes

16:30-16:50 — WeC03.1

Constructing a Sequence of Relaxation Problems for Robustness Analysis of Uncertain LTI Systems Via Dual LMIs, pp. 2174-2179.

Matsuda, Yusuke — Kyoto Univ.
Ebihara, Yoshio — Kyoto Univ.
Hagiwara, Tomomichi — Kyoto Univ.

16:50-17:10 — WeC03.2

Gain-Scheduled Control Synthesis by Using Filtered Scheduling Parameters, pp. 2180-2185.

Masubuchi, Izumi — Hiroshima Univ.
Kurata, Iori — Hiroshima Univ.

17:10-17:30 — WeC03.3

A Mixed H2/H_inf -Based Semiactive Control for Vibration Mitigation in Flexible Structures, pp. 2186-2191.

Zapateiro, Mauricio — Univ. of Girona
Karimi, Hamid Reza — Univ. of Agder
Luo, Ningsu — Univ. of Girona
Phillips, Brian — UIUC
Spencer, B.F. — UIUC

17:30-17:50 — WeC03.4

Design of mathcal{H}_infty Bounded Non-Fragile Controllers for Discrete-Time Systems, pp. 2192-2197.

Briat, Corentin — INPG/ENSIEG
Martinez Molina, John Jairo — GIPSA-Lab. GRENOBLE-INP

17:50-18:10 — WeC03.5

Structured LFT Representation of Digital LTI Filters/Controllers Implementation As a Graphic Tool, pp. 2198-2203.

Feng, Yu — IRCCyN/Ec. des Mines de Nantes
Chevrel, Philippe — IRCCyN / Ec. des Mines de Nantes

18:10-18:30 — WeC03.6

An Exterior-Point Approach to the Robust D-Stability Control Problem, pp. 2204-2209.

Kami, Yasushi — Akashi National Coll. of Tech.
Tanaka, Hideki — Advanced Courses of Akashi National Coll. of Tech.
Nobuyama, Eitaku — Kyushu Inst. of Tech.

WeC04 — 3A

Symbolic Approaches to Control of Dynamical Systems (Invited Session)

Chair: Belta, Calin — Boston Univ.
Co-Chair: Andersson, Sean — Boston Univ.
Organizer: Belta, Calin — Boston Univ.
Organizer: Andersson, Sean — Boston Univ.

16:30-16:50 — WeC04.1

Robust Stability of Multi-Hop Control Networks (I), pp. 2210-2215.

Weiss, Gera — Univ. of Pennsylvania
D'Innocenzo, Alessandro — Univ. of L'Aquila
Alur, Rajeev — U Penn
Johansson, Karl H. — Royal Inst. of Tech.
Pappas, George J. — Univ. of Pennsylvania

16:50-17:10 WeC04.2
A Symbolic Model Approach to the Digital Control of Nonlinear Time-Delay Systems (I), pp. 2216-2221.
Pola, Giordano — Univ. of L'Aquila
Pepe, Pierdomenico — Univ. of L' Aquila
Di Benedetto, M. Domenica — Univ. of L'Aquila
Tabuada, Paulo — Univ. of California at Los Angeles

17:10-17:30 WeC04.3
Sampling-Based Motion Planning with Deterministic Mu-Calculus Specifications (I), pp. 2222-2229.
Karaman, Sertac — Massachusetts Inst. of Tech.
Frazzoli, Emilio — Massachusetts Inst. of Tech.

17:30-17:50 WeC04.4
A Contractivity Approach for Probabilistic Bisimulations of Diffusion Processes (I), pp. 2230-2235.
Abate, Alessandro — Stanford Univ.

17:50-18:10 WeC04.5
A Probabilistic Approach for Control of a Stochastic System from LTL Specifications (I), pp. 2236-2241.
Lahijanian, Morteza — Boston Univ.
Andersson, Sean — Boston Univ.
Belta, Calin — Boston Univ.

18:10-18:30 WeC04.6
An Online Algorithm for Minimal Sensor Activation in Discrete Event Systems (I), pp. 2242-2247.
Wang, Weilin — Univ. of Michigan
Lafortune, Stephane — Univ. of Michigan
Lin, Feng — Wayne State Univ.
Girard, Anouck — Univ. of Michigan, Ann Arbor

WeC05 — 3J
Optimal Control II (Regular Session)
Chair: Sampei, Mitsuji — Tokyo Inst. of Tech.
Co-Chair: Nakaura, Shigeki — Sasebo National Coll. of Tech.

16:30-16:50 WeC05.1
Asymptotic Analysis of an Optimal Control Problem Connected to the Human Locomotion, pp. 2248-2253.
Bayen, Térence — Univ. de Montpellier
Chitour, Yacine — Univ. Paris-Sud, CNRS, Supelec
Jean, Frederic — Ec. Nat. Sup. des Tech. Avancees
Mason, Paolo — Supélec

16:50-17:10 WeC05.2
A Hybrid DE-SQP Algorithm with Switching Procedure for Dynamic Optimization, pp. 2254-2259.
Wang, Ping — China Univ. of Petroleum
Tian, Xuemin — China Univ. of Petroleum

17:10-17:30 WeC05.3
Inverse Optimal Control Problem for Bilinear Systems: Application to the Inverted Pendulum with Horizontal and Vertical Movement, pp. 2260-2267.
Kanazawa, Masao — Tokyo Inst. of Tech.
Nakaura, Shigeki — Sasebo National Coll. of Tech.
Sampei, Mitsuji — Tokyo Inst. of Tech.

17:30-17:50 WeC05.4
Function Approximation for the Deterministic Hamilton-Jacobi-Bellman Equation, pp. 2268-2273.
Rungger, Matthias — Univ. of Kassel
Stursberg, Olaf — Univ. of Kassel

17:50-18:10 WeC05.5
Robust Nonlinear Optimal Control of Dynamic Systems with Affine Uncertainties, pp. 2274-2279.
Houska, Boris — Univ. of Leuven
Diehl, Moritz — Katholieke Univ. Leuve

18:10-18:30 WeC05.6
Bang-Bang and Singular Controls in a Mathematical Model for Combined Anti-Angiogenic and Chemotherapy Treatments, pp. 2280-2285.
Ledzewicz, Urszula — Southern Illinois Univ. at Edwardsville
Maurer, Helmut — Univ. Münster
Schattler, Heinz M. — Washington Univ.

WeC06 — 3G
Optimization of Discrete Event Systems (Regular Session)
Chair: van den Boom, Ton J. J. — Delft Univ. of Tech.
Co-Chair: Farhi, Nadir — Univ. of Texas at Dallas

16:30-16:50 WeC06.1
MPC for Max-Plus-Linear Systems with an Output Cost Criterion: Steady-State Behavior and Guaranteed Stability, pp. 2286-2291.
van den Boom, Ton J. J. — Delft Univ. of Tech.
De Schutter, Bart — Delft Univ. of Tech.

16:50-17:10 WeC06.2
Modeling and Control of Elementary 2D-Traffic Systems Using Petri Nets and Minplus Algebra, pp. 2292-2297.

Farhi, Nadir — Univ. of Texas at Dallas

17:10-17:30 — WeC06.3

Online Policy Iteration Algorithm for Semi-Markov Switching State-Space Control Processes, pp. 2298-2303.

Jiang, Qi — Hefei Univ. of Tech.
Xi, Hong-Sheng — Univ. of Science and Tech. of China
Yin, Bao-Qun — Univ. of Science and Tech. of China

17:30-17:50 — WeC06.4

Revisiting the Optimality of the C Mu Rule with Stochastic Flow Models, pp. 2304-2309.

Kebarighotbi, Ali — Boston Univ.
Cassandras, Christos G. — Boston Univ.

17:50-18:10 — WeC06.5

Optimal Control of Multiple CSPS System Based on Event-Based Q Learning, pp. 2310-2314.

Tang, Hao — Hefei Univ. of Tech.
Wan, Haifeng — Hefei Univ. of Tech.
Zhou, Lei — Hefei Univ. of Tech.
Han, Jianghong — Hefei Univ. of Tech.

18:10-18:30 — WeC06.6

Improved Constrained Ordinal Optimization for Simulation-Based Constrained Optimization, pp. 2315-2320.

Jia, Qing-Shan — Tsinghua Univ.

WeC07 — 5C
Kalman Filtering (Regular Session)

Chair: Bitmead, Robert — Univ. of California San Diego
Co-Chair: Hu, Xiaoming — KTH

16:30-16:50 — WeC07.1

Bounds Related to the Riccati Difference Equation for Linear Time Varying Systems, pp. 2321-2326.

Costa, Eduardo F. — Univ. de São Paulo
Astolfi, Alessandro — Imperial Coll. & Univ. of Rome

16:50-17:10 — WeC07.2

Multi-Sensor Track Fusion Via Multiple-Model Adaptive Filter, pp. 2327-2332.

Fong, Li-Wei — Yu Da Univ.

17:10-17:30 — WeC07.3

An Optimization Approach to Adaptive Kalman Filtering, pp. 2333-2338.

Karasalo, Maja — KTH
Hu, Xiaoming — KTH

17:30-17:50 — WeC07.4

Stochastic Reconstructibility and Estimability, pp. 2339-2344.

Liu, Andrew R. — Univ. of California, San Diego
Bitmead, Robert — Univ. of California San Diego

17:50-18:10 — WeC07.5

Self-Tuning Weighted Measurement Fusion Kalman Filter Based on ARMA Innovation Model, pp. 2345-2350.

Gao, Yuan — Heilongjiang Univ.
Deng, Zi-Li — Heilongjiang Univ.
Ran, Chen-Jian — Heilongjiang Univ.

18:10-18:30 — WeC07.6

Two Correlated Measurement Fusion Kalman Filtering Algorithms Based on Orthogonal Transformation and Their Functional Equivalence, pp. 2351-2356.

Ran, Chen-Jian — Heilongjiang Univ.
Deng, Zi-Li — Heilongjiang Univ.

WeC08 — 3I
Distributed Parameter Systems I (Invited Session)

Chair: Iftime, Orest V. — Univ. of Groningen
Co-Chair: Byrnes, Christopher I. — Washington Univ.
Organizer: Demetriou, Michael A. — Worcester Pol. Inst.

16:30-16:50 — WeC08.1

On Some Aspects of Platoon Control Problems (I), pp. 2357-2362.

Curtain, Ruth F. — Univ. of Groningen
Iftime, Orest V. — Univ. of Groningen
Zwart, Hans — Univ. of Twente

16:50-17:10 — WeC08.2

Boundary Stabilization of an Anti-Stable Wave Equation with In-Domain Anti-Damping (I), pp. 2363-2368.

Smyshlyaev, Andrey — Univ. of California at San Diego
Cerpa, Eduardo — Univ. Técnica Federico Santa María
Krstic, Miroslav — Univ. of California at San Diego

17:10-17:30 — WeC08.3

On the Transfer Function of the Zero Dynamics for a Boundary Controlled Heat Problem in Two Dimensions (I), pp. 2369-2374.

Byrnes, Christopher I. — NCSU and KTH
Gilliam, David S. — Texas Tech. Univ.

17:30-17:50 WeC08.4
A Predictive Control Method for Nonlinear Parabolic PDE Systems (I), pp. 2375-2380.
Armaou, Antonios — The Pennsylvania State Univ.

17:50-18:10 WeC08.5
Controlling Distributed Parameter Systems Using Mobile Actuator-Plus-Sensor Networks (I), pp. 2381-2386.
Demetriou, Michael A. — Worcester Pol. Inst.

18:10-18:30 WeC08.6
Regulation of Film Thickness, Surface Roughness and Porosity in Thin Film Growth Using Deposition Rate (I), pp. 2387-2394.
Hu, Gangshi — Univ. of California, Los Angeles
Christofides, Panagiotis D. — Univ. of California at Los Angeles
Zhang, Xinyu — Univ. of California, Los Angeles

WeC09 — 3H
Images in the Loop: Control Theory Meets Image Analysis (Invited Session)

Chair: Vela, Patricio A. — Georgia Inst. of Tech.
Co-Chair: Niethammer, Marc — Univ. of North Carolina, Chapel Hill
Organizer: Vela, Patricio A. — Georgia Inst. of Tech.
Organizer: Niethammer, Marc — Univ. of North Carolina, Chapel Hill

16:30-16:50 WeC09.1
Tracking Deforming Objects by Filtering and Prediction in the Space of Curves (I), pp. 2395-2401.
Sundaramoorthi, Ganesh — UCLA
Mennucci, Andrea — Scuola Normale Superiore
Soatto, Stefano — Univ. of california, los angeles
Yezzi, Anthony — Georgia Inst. of Tech.

16:50-17:10 WeC09.2
Visual Motion Observer-Based Pose Synchronization: A Passivity Approach (I), pp. 2402-2407.
Fujita, Masayuki — Tokyo Inst. of Tech.
Hatanaka, Takeshi — Tokyo Inst. of Tech.
Kobayashi, Naoto — Tokyo Inst. of Tech.
Ibuki, Tatsuya — Tokyo Inst. of Tech.
Spong, Mark W. — Univ. of Texas at Dallas

17:10-17:30 WeC09.3
Inverse Optimal Homography-Based Visual Servo Control Via an Uncalibrated Camera (I), pp. 2408-2413.
Johnson, Marcus — Univ. of florida
Hu, Guoqiang — Kansas State Univ.
Dupree, Keith — Univ. of Florida
Dixon, Warren E. — Univ. of Florida

17:30-17:50 WeC09.4
Using Dynamics to Recover 3–Dimensional Euclidian Structure from 2–Dimensional Perspective Projections (I), pp. 2414-2419.
Sznaier, Mario — Northeastern Univ.
Ayazoglu, Mustafa — Northeastern Univ.
Camps, Octavia I. — Northeastern Univ.

17:50-18:10 WeC09.5
Towards a Local Kalman Filter for Visual Tracking (I), pp. 2420-2426.
Ndiour, Ibrahima — Georgia Inst. of Tech.
Vela, Patricio A. — Georgia Inst. of Tech.

18:10-18:30 WeC09.6
An Optimal Control Approach for the Registration of Image Time-Series (I), pp. 2427-2434.
Niethammer, Marc — Univ. of North Carolina, Chapel Hill
Hart, Gabe — Univ. of North Carolina, Chapel Hill
Zach, Christopher — Univ. of North Carolina, Chapel Hill

WeC10 — 5D
Robust Adaptive Control (Regular Session)

Chair: Shamma, Jeff S. — Georgia Inst. of Tech.
Co-Chair: Kvasnica, Michal — Slovak Univ. of Tech. in Bratislava

16:30-16:50 WeC10.1
Stability Overlay for Linear and Nonlinear Time-Varying Plants, pp. 2435-2440.
Rosa, Paulo Andre Nobre — Inst. for Systems and Robotics - Inst. Superior
Shamma, Jeff S. — Georgia Inst. of Tech.
Silvestre, Carlos — Inst. Superior Tecnico
Athans, Michael — Inst. Superior Tecnico

16:50-17:10 WeC10.2
Multiple-Model Adaptive Control with Set-Valued Observers, pp. 2441-2447.
Rosa, Paulo Andre Nobre — Inst. for Systems and Robotics - Inst. Superior
Silvestre, Carlos — Inst. Superior Tecnico
Shamma, Jeff S. — Georgia Inst. of Tech.
Athans, Michael — Inst. Superior Tecnico

17:10-17:30 WeC10.3

Robust Adaptive Control of a Class of Nonlinear Systems with Unknown Prandtl-Ishilinskii-Like Hysteresis, pp. 2448-2453.

Fu, Jun — Concordia Univ.
Xie, Wenfang — Concordia Univ.
Wang, Shao-Ping — Beihang Univ.

17:30-17:50 WeC10.4

Robust Adaptive Minimum-Time Control of Piecewise Affine Systems, pp. 2454-2459.

Kvasnica, Michal — Slovak Univ. of Tech. in Bratislava
Herceg, Martin — Slovak Univ. of Tech. in Bratislava
Cirka, Lubos — Slovak Univ. of Tech. in Bratislava
Fikar, Miroslav — Slovak Univ. of Tech. in Bratislava

17:50-18:10 WeC10.5

Robust Adaptive Backstepping Control Design for a Nonlinear Hydraulic-Mechanical System, pp. 2460-2467.

Choux, Martin — Univ. of Agder
Karimi, Hamid Reza — Univ. of Agder
Hovland, Geir — Univ. of Agder
Hansen, Michael Rygaard — Univ. of Agder
Ottestad, Morten — Univ. of Agder
Blanke, Mogens — Tech. Univ. of Denmark

18:10-18:30 WeC10.6

A New Approach to Design Robust Backstepping Controller for MIMO Nonlinear Systems with Input Unmodeled Dynamics, pp. 2468-2473.

Wang, Wei — Nanyang Tech. Univ.
Wen, Changyun — Nanyang Tech. Univ.

WeC11 — 5J
Quantum Information and Control (Regular Session)

Chair: Cong, Shuang — Univ. of Science and Tech. of China
Co-Chair: Xi, Zairong — Lab. Acad. of

16:30-16:50 WeC11.1

Feedback Interconnection of Open Quantum Systems: A Small Gain Theorem, pp. 2474-2479.

Somaraju, Ram Abhinav — Univ. of New South Wales
Petersen, Ian R. — UNSW at Australian Def. Force Acad.

16:50-17:10 WeC11.2

Quantum-Feedback-Control Induced Bifurcation and Its Application to Qubit Readout (I), pp. 2480-2485.

Zhang, Jing — Tsinghua Univ.
Wu, Rebing — Tsinghua Univ.
Liu, Yuxi — Tsinghua Univ.
Li, Chunwen — Professor
Tarn, Tzyh-Jong — Washington Univ.

17:10-17:30 WeC11.3

Population Control of Quantum States Based on Invariant Subsets under a Diagonal Lyapunov Function, pp. 2486-2491.

Kuang, Sen — Univ. of Science and Tech. of China
Cong, Shuang — Univ. of Science and Tech. of China
Lou, Yuesheng — USTC

17:30-17:50 WeC11.4

Synthesis of Linear Quantum Stochastic Systems Via Quantum Feedback Networks, pp. 2492-2497.

Nurdin, Hendra Ishwara — Australian National Univ.

17:50-18:10 WeC11.5

Control of Single Spin with Markovian Environment, pp. 2498-2503.

Yuan, Haidong — MIT

18:10-18:30 WeC11.6

Controlled Population Transfer for Quantum Computing in Non-Markovian Noise Environment (I), pp. 2504-2509.

Cui, Wei — Acad. ces
Xi, Zairong — Lab. demy
Pan, Yu — CAS

WeC12 — 5E
Aerospace II (Regular Session)

Chair: Banda, Siva S. — Air Force Res. Lab.
Co-Chair: He, Fenghua — Harbin Inst. of Tech.

16:30-16:50 WeC12.1

Trajectory Optimization in Convex Underapproximations of Safe Regions, pp. 2510-2515.

Ding, Jerry — Univ. of California - Berkeley
Tomlin, Claire J. — UC Berkeley

16:50-17:10 WeC12.2

Attitude Recovery for Microsatellite Via Magnetic Torque, pp. 2516-2521.

Chen, Weiyue — Harbin Inst. of Tech.
Jing, Wuxing — Harbin Inst. of Tech.
Li, Chaoyong — Univ. of Central Florida

17:10-17:30 WeC12.3

Robust Global Asymptotic Attitude Stabilization of a Rigid Body by Quaternion-Based Hybrid Feedback, pp. 2522-2527.
Mayhew, Christopher G. — Univ. of California, Santa Barbara
Sanfelice, Ricardo G. — Univ. of Arizona
Teel, Andrew R. — Univ. of California at Santa Barbara

17:30-17:50 WeC12.4
Output Tracking of VTOL Aircraft with Delayed Attitude Measurements, pp. 2528-2533.
Zhu, Bo — Beijing Univ. of Aeronautics and Astronautics
Wang, Xinhua — Beijing Univ. of Aeronautics and Astronautics
Cai, Kai-Yuan — School of Automation, Beijing Univ. of Aeronautics and Astr

17:50-18:10 WeC12.5
Estimation of Arrival-Departure Capacity Tradeoffs in Multi-Airport Systems, pp. 2534-2540.
Ramanujam, Varun — Massachusetts Inst. of Tech.
Balakrishnan, Hamsa — Massachusetts Inst. of Tech.

18:10-18:30 WeC12.6
A Finite-Time Gain Measure and Its Application to Coordinated Targets Assignment, pp. 2541-2545.
He, Fenghua — Harbin Inst. of Tech.
Ji, Denggao — Harbin Inst. of Tech.
Yao, Yu — Harbin Inst. of Tech.

WeC13 — 5A
Machine Learning (Regular Session)

Chair: Castanon, David A. — Boston Univ.
Co-Chair: Paschalidis, Ioannis — Boston Univ.

16:30-16:50 WeC13.1
A Distributed Machine Learning Framework, pp. 2546-2551.
Alpcan, Tansu — Berlin Tech. Univ.
Bauckhage, Christian — Univ. of Bonn

16:50-17:10 WeC13.2
Modified Particle Filter for Object Tracking in Low Frame Rate Video, pp. 2552-2557.
Zhang, Tao — Southeast Univ.
Fei, Shumin — Southeast Univ.
Hong, Lu — southeast Univ.
Li, Xiaodong — Southeast Univ.

17:10-17:30 WeC13.3
Support Vector Machine Classifiers for Sequential Decision Problems, pp. 2558-2563.
Rodriguez-Diaz, Eladio — Boston Univ.
Castanon, David A. — Boston Univ.

17:30-17:50 WeC13.4
An Actor-Critic Method Using Least Squares Temporal Difference Learning, pp. 2564-2569.
Paschalidis, Ioannis — Boston Univ.
Li, Keyong — Boston Univ.
Moazzez Estanjini, Reza — Boston Univ.

17:50-18:10 WeC13.5
Adaptive Inverse Control Using Support Vector Regression, pp. 2570-2575.
Shin, Jongho — Seoul National Univ.
Kim, H. Jin — Seoul National Univ.
Kim, Youdan — Seoul National Univ.

18:10-18:30 WeC13.6
Standard Dynamic Programming Applied to Time Aggregated Markov Decision Processes, pp. 2576-2580.
Arruda, Edilson — Pontifícia Univ. Católica do Rio Grande do Sul
Fragoso, Marcelo — LNCC / MCT

WeC14 — 5B
Control-Oriented Identification (Regular Session)

Chair: Chen, Tongwen — Univ. of Alberta
Co-Chair: Kulcsar, Balazs — Delft Univ. of Tech.

16:30-16:50 WeC14.1
Identification for Robust Inferential Control, pp. 2581-2586.
Oomen, Tom — Eindhoven Univ. of Tech.
Bosgra, Okko H. — Eindhoven Univ. of Tech.
van de Wal, Marc — Philips Applied Tech.

16:50-17:10 WeC14.2
Identification of Low-Order Process Model with Time Delay from Closed-Loop Step Test, pp. 2587-2591.
Liu, Tao — Hong Kong Univ. of Science & Tech.
Gao, Furong — Hong Kong Univ. of Science & Tech.
Zhao, Chunhui — The Hong Kong Univ. of Science and Tech.

17:10-17:30 WeC14.3
Closed-Loop Identification for Model Predictive Control: Direct Method, pp. 2592-2597.
Yan, Jun — Univ. of British Columbia

Harinath, Eranda — Univ. of British Columbia
Dumont, Guy A. — Univ. of British Columbia

17:30-17:50 WeC14.4
Nonlinear Model Predictive Control Using Adaptive Hinging Hyperplanes Model, pp. 2598-2603.
Xu, Jun — Tsinghua Univ.
Huang, Xiaolin — Tsinghua Univ.
Wang, Shuning — Tsinghua Univ.

17:50-18:10 WeC14.5
Closed-Loop Subspace Predictive Control for Hammerstein Systems, pp. 2604-2609.
Kulcsar, Balazs — Delft Univ. of Tech.
van Wingerden, Jan-Willem — Delft Univ. of Tech.
Dong, Jianfei — Delft Univ. of Tech.
Verhaegen, Michel — Delft Univ. of Tech.

18:10-18:30 WeC14.6
On System Identification in a Networked Environment, pp. 2610-2615.
Wang, Jiandong — Peking Univ.
Zheng, Wei Xing — Univ. of Western Sydney
Chen, Tongwen — Univ. of Alberta

WeC15 — 3B
Stochastic Control III (SIAM Session)

Chair: Guo, Xin — Dept of IEOR, UC Berkeley, CA
Co-Chair: Kleptsyna, Marina — Univ. du Maine Faculté des Sciences

16:30-16:50 WeC15.1
Direct Solution of the Parametric Stochastic Distribution Control Problem, pp. 2616-2621.
Ghasemi Afshar, Puya — The Univ. of Manchester
Nobakhti, Amin — Sharif Univ. of Tech.
Wang, Hong — The Univ. of Manchester

16:50-17:10 WeC15.2
Fault Detection and Isolation for Stochastic Linear Hybrid Systems, pp. 2622-2627.
Seah, Chze Eng — Purdue Univ.
Hwang, Inseok — Purdue Univ.

17:10-17:30 WeC15.3
Decentralized Adaptive Synchronization of a Stochastic Discrete-Time Multi-Agent Dynamic Model, pp. 2628-2633.
Ma, Hongbin — Beijing Inst. of Tech.

17:30-17:50 WeC15.4
Optimal Control of a Broadcasting Server, pp. 2634-2639.
Gummadi, Ramakrishna — Univ. of Illinois

17:50-18:10 WeC15.5
Ergodic Control of Continuous-Time Markov Chains with Pathwise Constraints, pp. 2640-2645.
Prieto Rumeau, Tomas — Univ. Nacional de Educación a Distancia (UNED)
Hernandez-Lerma, Onesimo — CINVESTAV-IPN

18:10-18:30 WeC15.6
On the Linear-Exponential Filtering Problem for General Gaussian Processes, pp. 2646-2651.
Kleptsyna, Marina — Univ. du Maine Faculté des Sciences
Le Breton, Alain — Univ. Joseph Fourier
Viot, Michel — Univ. Joseph Fourier

WeC16 — 5F
Decentralized Control and Consensus (Regular Session)

Chair: Weiland, Siep — Eindhoven Univ. of Tech.
Co-Chair: Kang, Wei — Naval Postgraduate School

16:30-16:50 WeC16.1
Group Consensus in Multi-Agent Systems with Switching Topologies, pp. 2652-2657.
Yu, Junyan — Peking Univ.
Wang, Long — Peking Univ.

16:50-17:10 WeC16.2
Stability Results for String of Stable Subsystems with Applications to Decentralized Control of Large Vehicle Platoons, pp. 2658-2663.
Cai, Chaohong — United Tech. Res. Center
Hagen, Gregory — United Tech. Res. Center

17:10-17:30 WeC16.3
Decentralized Final Value Theorem for Discrete-Time LTI Systems with Application to Minimal-Time Distributed Consensus, pp. 2664-2669.
Yuan, Ye — Univ. of Cambridge
Stan, Guy-Bart Vincent — Univ. of Cambridge
Shi, Ling — HongKong Univ. of Science & Tech.
Goncalves, Jorge M. — Univ. of Cambridge

17:30-17:50 WeC16.4
Reaching Lp Consensus in a Network of Multiagents with Stochastically Switching Topologies, pp. 2670-2675.
Liu, Bo — Fudan Univ.

Lu, Wenlian — Fudan Univ.
Chen, Tianping — Fudan Univ.

17:50-18:10 WeC16.5
Decentralized Adaptive Output-Feedback Stabilization of Large-Scale Time-Delay Nonlinear Systems with Unknown High-Frequency-Gain Signs, pp. 2676-2680.
Ye, Xudong — Zhejiang Univ.

18:10-18:30 WeC16.6
Set-Valued Estimation for Mobile Sensor Networks, pp. 2681-2686.
Nelson, Thomas — Northwestern Univ.
Freeman, Randy — Northwestern Univ.

WeC17 5H
Estimation in Networked Systems (Regular Session)
Chair: Martins, Nuno C. — Univ. of Maryland
Co-Chair: Johansson, Mikael — Royal Inst. of Tech.

16:30-16:50 WeC17.1
Estimating the Fates of the Control Packets for Networked Control Systems with Loss of Control and Measurement Packets, pp. 2687-2692.
Blind, Rainer — Univ. of Stuttgart
Allgower, Frank — Univ. of Stuttgart

16:50-17:10 WeC17.2
Minimum-Variance Filtering for Networked Control Systems with Multi-Sample Transmission Delays and Multiple Packet Dropouts Via Non-Probabilistic Approach, pp. 2693-2698.
Moayedi, Maryam — Nanyang Tech. Univ.
Foo, Yung Kuan — Organization
Soh, Yeng Chai — Nanyang Tech. Univ.

17:10-17:30 WeC17.3
H_{infinity} Filtering of a Class of Multi-Rate Multi-Sensor Fusion Systems, pp. 2699-2704.
Liang, Yan — Northwestern Pol. Univ.
Chen, Tongwen — Univ. of Alberta
Pan, Quan — Northwestern Pol. Univ.

17:30-17:50 WeC17.4
On Fusion of Information from Multiple Sensors in the Presence of Analog Erasure Links, pp. 2705-2710.
Gupta, Vijay — Univ. of Notre Dame
Martins, Nuno C. — Univ. of Maryland

17:50-18:10 WeC17.5
Networked State Estimation Over a Gilbert-Elliot Type Channel, pp. 2711-2716.
Rabi, Maben — Royal Inst. of Tech. (KTH),
Johansson, Mikael — Royal Inst. of Tech.
Almstrom, Peter — Royal Inst. of Tech.

18:10-18:30 WeC17.6
Decentralized Laplacian Eigenvalues Estimation for Networked Multi-Agent Systems, pp. 2717-2722.
Franceschelli, Mauro — Univ. of Cagliari
Gasparri, Andrea — Univ. of "Roma Tre"
Giua, Alessandro — Univ. di Cagliari
Seatzu, Carla — Univ. of Cagliari

WeC18 5I
Network Control and Synchronization (Regular Session)
Chair: Jadbabaie, Ali — Univ. of Pennsylvania
Co-Chair: Basar, Tamer — Univ. of Illinois, Urbana-Champaign

16:30-16:50 WeC18.1
The Standard Parts Problem and the Complexity of Control Communication, pp. 2723-2728.
Baillieul, John — Boston Univ.
Wong, Wing Shing — Chinese Univ. of Hong Kong

16:50-17:10 WeC18.2
Optimal Control in Two-Hop Relay Routing, pp. 2729-2735.
Altman, Eitan — INRIA
Basar, Tamer — Univ. of Illinois, Urbana-Champaign
De Pellegrini, Francesco — CREATE-NET

17:10-17:30 WeC18.3
A Distributed Newton Method for Network Optimization, pp. 2736-2741.
Jadbabaie, Ali — Univ. of Pennsylvania
Ozdaglar, Asuman — MIT
Zargham, Michael — Univ. of Pennsylvania

17:30-17:50 WeC18.4
Eigenvalue Based Approach to Pinning Synchronization in General Coupled Networks, pp. 2742-2747.
Xiang, Linying — City Univ. of Hong Kong
Zhu, Jonathan — City Univ. of Hong Kong

17:50-18:10 WeC18.5
Controlled Synchronization of Delayed Weighted Complex Network with Different Kinds of Nodes, pp. 2748-2753.
Liu, Zhongxin — Nankai Univ.
Chen, Zeng-Qiang — Nankai Univ.

18:10-18:30 WeC18.6
Synchronization Criteria for Lur'e Complex Dynamical Networks with Coupling Delays, pp. 2754-2759.
Ding, Ke — Central Queensland Univ.
Han, Qing-Long — Central Queensland Univ.

WeTCTu Yellow River
Networked Control Systems: Perspectives, Techniques, and Research Directions (Tutorial Session)
Chair: Baheti, Radhakisan — National Science Foundation
Co-Chair: Gupta, Vijay — Univ. of Notre Dame

16:30-16:50 WeTCTu.1
*NSF Programs in Networked Control Systems (I)**.
Baheti, Radhakisan — National Science Foundation

16:50-17:10 WeTCTu.2
*Recent Developments in Algorithms for Tractable Computation of Decentralized Control Systems (I)**.
Lall, Sanjay — Stanford Univ.

17:10-17:30 WeTCTu.3
*Control of Impulsive Renewal Systems with Application to Direct Design in Networked Control (I)**.
Hespanha, Joao P. — Univ. of California, Santa Barbara

17:30-17:50 WeTCTu.4
*On the Robustness of Self-Triggered Control for Linear Systems (I)**.
Tabuada, Paulo — Univ. of California at Los Angeles

17:50-18:10 WeTCTu.5
*Network Stability Analysis and Distributed Control Synthesis with a Passivity Approach (I)**.
Arcak, Murat — Univ. of California, Berkeley

18:10-18:30 WeTCTu.6
*Encoding Algorithms for Control across Analog Erasure Links (I)**.
Gupta, Vijay — Univ. of Notre Dame

WeCIn1 Mandarin Hall
Robust Control III (Interactive Session)

17:30-18:10 WeCIn1.1
A Signal-Compensation Based Approach to Robust Output Regulation for a Class of MIMO Uncertain Systems, pp. 2760-2764.
Zheng, Bo — Tsinghua Univ.
Zhong, Yisheng — Tsinghua Univ.

17:30-18:10 WeCIn1.2
Time-Convexity and Time-Gain-Scheduling in Finite-Horizon Robust H_{infty}-Control, pp. 2765-2770.
Boyarski, Shmuel — IMI
Shaked, Uri — Tel-Aviv Univ.

17:30-18:10 WeCIn1.3
A Youla Parameter Approach to Robust Constrained Linear Model Predictive Control, pp. 2771-2776.
Cheng, Qifeng — Univ. of Oxford
Kouvaritakis, Basil — Oxford Univ.
Cannon, Mark — Univ. of Oxford
Rossiter, J. Anthony — Univ. of Sheffield

17:30-18:10 WeCIn1.4
Robust H_infty Control Based on Parameters Weak Coupling LMI Equations Set for Uncertain Singular State Delay Systems, pp. 2777-2782.
Li, Minghao — Donghua Univ.
Zhou, Wuneng — Donghua Univ.
Wang, Mingjun — Donghua Univ.
Xu, Yuhua — Donghua Univ.
Mou, Xiaozheng — Donghua Univ.
Fang, Jian'an — Donghua Univ.

17:30-18:10 WeCIn1.5
Composite Disturbance-Observer-Based Control and Discrete-Time Sliding Mode Control for a Class of MIMO Systems with Nonlinearity, pp. 2783-2788.
Liu, Xiao-hua — Ludong Univ.
Wei, Xinjiang — Yantai Normal Univ.

17:30-18:10 WeCIn1.6
Stable Inversion-Based Robust Tracking Control in DC-DC Nonlinear Switched Converters, pp. 2789-2794.
Olm, Josep M. — Univ. Pol. de Catalunya
Ros, Xavier — Univ. Pol. de Catalunya
Shtessel, Yuri B. — Univ. of Alabama at Huntsville

17:30-18:10 WeCIn1.7

Modified Anti-Windup Compensators for Stable Plants: Dynamic Anti-Windup Case, pp. 2795-2800.
Sajjadi-Kia, Solmaz — Univ. of California at Irvine (UCI)
Jabbari, Faryar — Univ. of California at Irvine

17:30-18:10 WeCIn1.8
Output Feedback Strategies for Systems with Impulsive and Fast Controls, pp. 2801-2806.
Daryin, Alexander — Moscow State (Lomonosov) Univ.
Digailova, Irina — Moscow State (Lomonosov) Univ.
Kurzhanski, A.B. — Lomonosov Moscow State Univ.

17:30-18:10 WeCIn1.10
Guaranteed Tracking Error Bounds for Matched Disturbance Nonlinear Systems, pp. 2807-2812.
Gruenbacher, Engelbert — Univ. Linz
Del Re, Luigi — Johannes Kepler Univ. Linz

17:30-18:10 WeCIn1.11
Dynamic Output-Feedback Hinf Control for Polytopic Delta Operator Systems, pp. 2813-2818.
Zhang, Ying — Harbin Inst. of Tech.
Zhang, Rui — Chinese Acad. of Sciences
Duan, Guang-Ren — Harbin Inst. of Tech.

17:30-18:10 WeCIn1.12
Estimation for Nonlinear Discrete-Time Systems with Uncertain Linearization and Noises Statistics, pp. 2819-2824.
Souto, Rodrigo Fontes — Univ. of Brasilia
Ishihara, João Yoshiyuki — Univ. of Brasília
Borges, Geovany A. — Univ. de Brasilia

17:30-18:10 WeCIn1.13
A New Method for Robust Hinfty Filtering of Uncertain Discrete-Time Systems, pp. 2825-2829.
Lu, Pingli — Beijing Inst. of Tech.
Yang, Ying — Peking Univ.

WeCIn2 — Mandarin Hall
Control Applications II (Interactive Session)

17:30-18:10 WeCIn2.1
Particle Filters for Linear Regression and Fault Diagnosis: An Approach for On-Line Oilfield Drilling Processes Monitoring, pp. 2830-2830.
Ba, Amadou — ARTS
Pons, Rafel — Schlumberger
Hbaieb, Slim — Schlumberger
Nazih, Mechbal — ENSAM
Vergé, Michel — ENSAM

17:30-18:10 WeCIn2.2
Global Finite-Time Stabilization of a PVTOL Aircraft by Output Feedback, pp. 2831-2836.
Frye, Michael — Univ. of the Incarnate Word
Ding, Shihong — Southeast Univ.
Qian, Chunjiang — Univ. of Texas at San Antonio
Li, Shihua — Southeast Univ.

17:30-18:10 WeCIn2.3
Output-Feedback IDA Control Design Via Structural Properties: Application to Thyristor Controlled Series Capacitors, pp. 2837-2842.
Espinosa-Perez, Gerardo — Univ. Nacional Autonoma de Mexico
Maya-ortiz, Paul — Univ. Nacional Autonoma De Mexico
Dňria-Cerezo, Arnau — Tech. Univ. of Catalonia (UPC)
Moreno, Jaime A. — Univ. Nacional Autonoma

17:30-18:10 WeCIn2.4
DC Motor Speed Control Improvement Via On-Line Disturbance Computation and Compensation, pp. 2843-2848.
Wu, Wei — Lexmark International

17:30-18:10 WeCIn2.5
Nonlinear Control of a Buoyancy-Driven Airship, pp. 2849-2854.
Wu, Xiaotao — Ec. centrale de nantes
Moog, Claude — CNRS
Marquez-Martinez, Luis Alejandro — CICESE Res. Center
Hu, Yue-ming — South China Univ. of Tech.

17:30-18:10 WeCIn2.6
Integrated Design of System Parameters, Control and Sensor/actuator Placement for Symmetric Mechanical Systems, pp. 2855-2860.
Hiramoto, Kazuhiko — Akita Univ.
Mohammadpour, Javad — Univ. of Houston
Grigoriadis, Karolos M. — Univ. of Houston

17:30-18:10 WeCIn2.7
Boundary Detection of Variational Symmetry Breaking Using Port-Representation of Conservation Laws, pp. 2861-2868.
Nishida, Gou — RIKEN (The Inst. of Physical and Chemical Res.
Sugiura, Motonobu — Tokyo Inst. of Tech.
Yamakita, Masaki — Tokyo Inst. of Tech.
Maschke, Bernhard — Univ. Claude Bernard of Lyon
Ikeura, Ryojun — Mie Univ.

17:30-18:10 WeCIn2.8

NN-Adaptive Output Feedback for Path Tracking Control of a Surface Ship at High Speed, pp. 2869-2874.

Zhang, Lijun — Tsinghua Univ.
Jia, He-ming — Harbin Engineering Univ.
Qi, Xue — Harbin Engineering Univ.

WeCIn3 — Mandarin Hall

Stochastic Systems I (Interactive Session)

17:30-18:10 WeCIn3.1

Linear Systems with Chance Constraints: Constraint-Admissible Set and Applications in Predictive Control, pp. 2875-2880.

Wang, Chen — National Univ. of Singapore
Ong, Chong-Jin — National Univ. of Singapore
Sim, Melvyn — National Univ. of Singapore

17:30-18:10 WeCIn3.2

A Constant-Factor Approximately Optimal Solution to the Witsenhausen Counterexample, pp. 2881-2886.

Park, Se Yong — Univ. of California at Berkeley
Grover, Pulkit — UC Berkeley
Sahai, Anant — UC Berkeley

17:30-18:10 WeCIn3.3

Stochastic H-Infinity Almost Disturbance Decoupling for a Class of Stochastic Nonlinear Systems, pp. 2887-2892.

Wang, Xinghu — Univ. of Science and Tech. of China
Ji, Haibo — Univ. of Science and Tech. of China

17:30-18:10 WeCIn3.5

H_infinity Exponential Filtering for Uncertain Markovian Jump Stochastic Systems with Mode-Dependent Time Delays and Nonlinearities, pp. 2893-2898.

Yan, Huaicheng — The Chinese Univ. of Hong Kong
Meng, Max, Qinghu — The Chinese Univ. of Hong Kong
Zhang, Hao — Tongji Univ.

17:30-18:10 WeCIn3.6

Maximum Principle for Stochastic Optimal Control Problem of Forward-Backward System with Delay, pp. 2899-2904.

Chen, Li — Shandong Univ.
Wu, Zhen — Shandong Univ.

17:30-18:10 WeCIn3.8

Multitarget Tracking Via Restless Bandit Marginal Productivity Indices and Kalman Filter in Discrete Time, pp. 2905-2910.

Nino-Mora, Jose — Carlos III Univ. of Madrid
Villar, Sofia — Carlos III Univ. of Madrid

17:30-18:10 WeCIn3.9

Stochastic Intervention Strategy Applied to a Level Control with a Trade-Off between Risky Operation and Actuator Variations, pp. 2911-2916.

Carvalho Pinheiro, Nathalie — Univ. of Campinas
Do Val, Joao B.R. — UNICAMP - FEEC
Santos Mendes, Rafael — UNICAMP

17:30-18:10 WeCIn3.11

Guaranteed Cost Control for Uncertain Stochastic Systems with Multiple Decision Makers Via Static Output Feedback, pp. 2917-2922.

Mukaidani, Hiroaki — Hiroshima Univ.
Xu, Hua — Univ. of Tsukuba

17:30-18:10 WeCIn3.12

Mean-Square Exponential Stability of Stochastic Markovian Jump Systems with Mode-Dependent Time-Varying Delays, pp. 2923-2928.

Ma, Li — Southeast Univ.
Da, Fei-Peng — Southeast Univ.
Zhang, Kan_Jian — Southeast Univ.

17:30-18:10 WeCIn3.13

Stability of Markovian Jump Bilinear Systems with Delayed Saturating Actuators, pp. 2929-2934.

Kang, Yu — Univ. of Science and Tech. of China
Zhao, Ping — Univ. of Jinan
Ling, Qiang — Univ. of Science and Tech. of China

17:30-18:10 WeCIn3.14

Dealing with Stochastic Reachability, pp. 2935-2940.

Bujorianu, Manuela — Univ. of Manchester

17:30-18:10 WeCIn3.15

Nonparametric Density Estimation of Bubble Size Distribution for Monitoring Mineral Flotation Process, pp. 2941-2945.

Yang, Chunhua — Central South Univ.
Xu, Canhui — Central South Univ.
Gui, Weihua — Central South Univ.
Du, Jianjiang — Central South Univ.

17:30-18:10 WeCIn3.16

Arbitrarily Modulated Markov Decision Processes, pp. 2946-2953.

Yu, Jia Yuan — McGill Univ.

Mannor, Shie — McGill Univ.

WeCIn4 — Mandarin Hall
Autonomous Robots (Interactive Session)

17:30-18:10 — WeCIn4.1
Robust Entrainment to Natural Oscillations of Asymmetric Systems Arising from Animal Locomotion, pp. 2954-2959.
Chen, Zhiyong — The Univ. of Newcastle
Iwasaki, Tetsuya — UCLA

17:30-18:10 — WeCIn4.2
Modeling and Control for a Biped Robot on Uneven Surfaces, pp. 2960-2965.
Li, Jian — Shanghai Jiao Tong Univ.
Chen, Weidong — Shanghai Jiao Tong Univ.

17:30-18:10 — WeCIn4.3
Hybrid Position/Force Sliding Mode Control of a Class of Robotic Manipulators, pp. 2966-2971.
Bassi, Ezio — Univ. of Pavia
Benzi, Francesco — Univ. of Pavia
Capisani, Luca — Univ. of Pavia, ITALY
Cuppone, Davide — Univ. of Pavia
Ferrara, Antonella — Univ. of Pavia

17:30-18:10 — WeCIn4.4
Attitude Tracking of Rigid Bodies on the Special Orthogonal Group with Bounded Partial State Feedback, pp. 2972-2977.
Bertrand, Sylvain — ONERA
Hamel, Tarek — Univ. de Nice Sophia Antipolis
Piet-Lahanier, Helene — ONERA
Mahony, Robert — Australian National Univ.

17:30-18:10 — WeCIn4.5
Experimental Demonstration of an Online Trajectory Optimization Scheme Using Approximate Spatial Value Functions, pp. 2978-2983.
Dadkhah, Navid — Univ. of Minnesota
Korukanti, Venkateshwar Rao — Univ. of Minnesota, Twin Cities
Kong, Zhaodan — Univ. of Minnesota
Mettler, Bernard — Univ. of Minnesota

17:30-18:10 — WeCIn4.6
Mobile Robot Based Odor Source Localization Via Particle Filter, pp. 2984-2989.
Li, Ji-Gong — Tianjin Univ.
Meng, Qinghao — Tianjin Univ.
Li, Fei — Tianjin Univ.
Zeng, Ming — Tianjin Univ.
Popescu, Dorin — Univ. of Craiova

WeCIn5 — Mandarin Hall
Formation and Cooperative Control (Interactive Session)

17:30-18:10 — WeCIn5.1
Finite-Time Settling Real-Time Control for Multi-Robot Formation, pp. 2990-2995.
Zhang, Junjie — Texas A&M Univ.
Jayasuriya, Suhada — National Science Foundation

17:30-18:10 — WeCIn5.2
Experimental Verification of Formation Control with Distributed Cameras, pp. 2996-3001.
Bai, He — Rensselaer Pol. Inst.
Downum, Karen — RPI
Wason, John — Rensselaer Pol. Inst.
Wen, John T. — Rensselaer Pol. Inst.

17:30-18:10 — WeCIn5.3
Formation Shape Control: Global Asymptotic Stability of a Four-Agent Formation, pp. 3002-3007.
Summers, Tyler — Univ. of Texas at Austin
Yu, CHANGBIN (Brad) — The Australian National Univ.
Anderson, Brian D.O. — Australian National Univ.
Dasgupta, Soura — Univ. of Iowa

17:30-18:10 — WeCIn5.4
ESMF Based Multiple UAVs Active Cooperative Observation Method in Relative Velocity Coordinates, pp. 3008-3013.
Gu, Feng — Shenyang Inst. of Automation, Chinese Acad. ofSciences
He, Yuqing — Shenyang Inst. of Automation, CAS
Han, Jianda — Shenyang Inst. of Automation
Wang, Yuechao — Shenyang Inst. of Automation, Chinese Acad. of Sciences

17:30-18:10 — WeCIn5.5
Containment Control with Multiple Stationary or Dynamic Leaders under a Directed Interaction Graph, pp. 3014-3019.
Cao, Yongcan — Utah State Univ.
Ren, Wei — Utah State Univ.

17:30-18:10 — WeCIn5.6
Optimal Mistuning for Improved Stability of Vehicular Platoons, pp. 3020-3025.

Barooah, Prabir — Univ. of Florida
Mehta, Prashant G. — Univ. of Illinois, Urbana-Champaign

17:30-18:10 WeCIn5.7
Distributed Randomized PageRank Computation Based on Web Aggregation, pp. 3026-3031.
Ishii, Hideaki — Tokyo Inst. of Tech.
Tempo, Roberto — Pol. di Torino
Bai, Er-Wei — Univ. of Iowa
Dabbene, Fabrizio — IEIIT-CNR, Pol. di Torino

17:30-18:10 WeCIn5.8
A Hybrid Control Approach to Multi-Robot Coordinated Path Following, pp. 3032-3037.
Lan, Ying — Zhejiang Univ.
Yan, Gangfeng — Zhejiang Univ.
Lin, Zhiyun — Zhejiang Univ.

17:30-18:10 WeCIn5.9
Feasibility of a Distributed Flight Array, pp. 3038-3044.
Oung, Raymond — ETH Zurich
Ramezani, Alireza — Swiss Federal Inst. of Tech. (ETH Zürich)
D'Andrea, Raffaello — ETH

17:30-18:10 WeCIn5.10
Pseudo-Rigid Formation Design with Curvature Limitations, pp. 3045-3050.
Liu, Wen-Kai — National Taiwan Univ.
Wang, Li-Sheng — National Taiwan Univ.

17:30-18:10 WeCIn5.11
Pattern Preserving Path Following of Unicycle Teams with Communication Delays, pp. 3051-3056.
Li, Qin — Pol. Inst. of New York Univ.
Jiang, Zhong-Ping — Pol. Inst. NYU

17:30-18:10 WeCIn5.12
Stiffness Matrix and Quantitative Measure of Formation Rigidity, pp. 3057-3062.
Zhu, Guangwei — Purdue Univ.
Hu, Jianghai — Purdue Univ.

17:30-18:10 WeCIn5.13
Finite-Time Rendezvous Algorithms for Mobile Autonomous Agents, pp. 3063-3068.
Hui, Qing — Texas Tech. Univ.

17:30-18:10 WeCIn5.14
Multi-UAV Path Planning in Obstacle Rich Environments Using Rapidly-Exploring Random Trees, pp. 3069-3074.
Kothari, Mangal — Univ. of Leicester, UK
Postlethwaite, Ian — Univ. of Leicester
Gu, Dawei — Univ. of Leicester

17:30-18:10 WeCIn5.15
Formation Control Via Distributed Optimization of Alignment Error, pp. 3075-3080.
Moore, Brandon — GIPSA-Lab.
Canudas de Wit, Carlos — CNRS, GIPSA-Lab.

17:30-18:10 WeCIn5.16
Energy and Time Efficient Formation Reconfiguration Strategies, pp. 3081-3086.
Ajorlou, Amir — Concordia Univ.
Moezzi, Kaveh — Concordia Univ.
Aghdam, Amir G. — Concordia Univ.
Tafazoli, Siamak — Canadian Space Agency

WeCIn6 — Mandarin Hall
Discrete Event and Intelligent Systems (Interactive Session)

17:30-18:10 WeCIn6.1
H Infinity Control of T-S Fuzzy Systems Using Piecewise Lyapunov Function Based Switching Fuzzy Controller, pp. 3087-3092.
Chen, Ying-Jen — National Central Univ.
Ohtake, Hiroshi — Univ. of Electro-communications
Tanaka, Kazuo — Univ. of Electro-Communications
Wang, Wen-june — National Central Univ.
Wang, Hua O. — Boston Univ.

17:30-18:10 WeCIn6.2
H_infty Control for T-S Fuzzy Neutral Systems with Time-Varying Delays and Actuator Saturation, pp. 3093-3098.
Liu, Zhenwei — Northeastern Univ.
Wang, Zhiliang — Northeastern Univ.
Zhang, Huaguang — Northeastern Univ.
Luo, Yanhong — Northeastern Univ.

17:30-18:10 WeCIn6.3
Supervisor Localization for Large-Scale Discrete-Event Systems, pp. 3099-3105.
Cai, Kai — Univ. of Toronto
Wonham, W. Murray — Univ. of Toronto

17:30-18:10 WeCIn6.4
Fuzzy Controller Synthesis for a Dc-Dc Converter, pp. 3106-3111.
Guesmi, Kamel — CReSTIC
Hamzaoui, Abdelaziz — Professor
Zaytoon, Janan — Univ. of Reims

17:30-18:10 WeCIn6.5
Kernel-Based Target Tracking with Multiple Features Fusion, pp. 3112-3117.
Qiu, Xuena — East China Univ. of Science and Tech.
Liu, Shirong — Hangzhou Dianzi Univ.
Liu, Fei — Hangzhou Dianzi Univ.

17:30-18:10 WeCIn6.6
Structural Analysis Based Stroke Segmentation for Chinese Characters, pp. 3118-3123.
Lam, Josh H.M. — The Chinese Univ. of Hong Kong
Yam, Yeung — The Chinese Univ. of Hong Kong

17:30-18:10 WeCIn6.7
The Intelligent Setting Control of the Mill Load in Pulverizing System for an Alumina Sintering Process, pp. 3124-3129.
Zhang, Liyan — Northeastern Univ.
Yue, Heng — Northeastern Univ.
Chai, Tianyou — Northeastern Univ.

17:30-18:10 WeCIn6.8
Approach of Moving Objects Detection in Active Video Surveillance, pp. 3130-3136.
Chi, Jian-nan — Univ. of Science and Tech. Beijing
Zhang, Chuang — Univ. of Science and Tech. Beijing
Zhang, Han — Univ. of Science and Tech. Beijing
Liu, Yang — Univ. of Science and Tech. Beijing
Yan, Yan-tao — Univ. of Science and Tech. Beijing

Th1SPLA — Auditorium
What Are Moment Problems and Why Are They Useful in Systems and Control? (Semi-Plenary Session)

08:00-08:50 Th1SPLA.1
*What Are Moment Problems and Why Are They Useful in Systems and Control?**.
Lindquist, Anders G. — Royal Inst. of Tech.

Th1SPLB — Auditorium
Information Aggregation in Complex Dynamic Networks (Semi-Plenary Session)

08:00-08:50 Th1SPLB.1
*Information Aggregation in Complex Dynamic Networks**.
Jadbabaie, Ali — Univ. of Pennsylvania

Th2SPLA — Grand Ballroom
Target Choice, Control Energy, and Communication Complexity: Facets of an Information-Based Distributed Control System (Semi-Plenary Session)

09:00-09:50 Th2SPLA.1
*Target Choice, Control Energy, and Communication Complexity: Facets of an Information-Based Distributed Control System**.
Wong, Wing Shing — Chinese Univ. of Hong Kong

Th2SPLB — Grand Ballroom
Differential Geometric Approach in Control and Modeling of Vibrational Mechanics (Semi-Plenary Session)

09:00-09:50 Th2SPLB.1
*Differential Geometric Approach in Control and Modeling of Vibrational Mechanics**.
Yao, Peng-Fei — Chinese Acad. of Sciences

ThA01 — 3D
Nonlinear Systems III (Regular Session)
Chair: Hauser, John — Univ. of Colorado at Boulder
Co-Chair: Lan, Weiyao — Xiamen Univ.

10:10-10:30 ThA01.1
Smooth Time-Varying Uniform Asymptotic Stabilization of Underactuated Surface Vessels, pp. 3137-3141.
Ma, Bao-Li — Beijing Univ. of Aeronautics and Astronautics
Huo, Wei — Beijing Univ. of Aero. & Astro.

10:30-10:50 ThA01.2
On the Periodically Driven Inverted Pendulum, pp. 3142-3148.
Bailey, Robert — Univ. of Colorado - Boulder
Hauser, John — Univ. of Colorado at Boulder

10:50-11:10 ThA01.3
Simple Energy Based Controllers with Nonlinear Coupled-Dissipation Terms for Overhead Crane Systems, pp. 3149-3154.
Konstantopoulos, George — Univ. of Patras
Alexandridis, Antonis — Univ. of Patras

11:10-11:30 ThA01.4
A Generalized Chain Rule and a Bound on the Continuity of Solutions and Converse Lyapunov Functions, pp. 3155-3161.
Peet, Matthew M. Illinois Inst. of Tech.

11:30-11:50 ThA01.5
An Approximate Parametrization of the Ergodic Partition Using Time Averaged Observables, pp. 3162-3168.
Budisic, Marko Univ. of California, Santa Barbara
Mezic, Igor Univ. of California, Santa Barbara

11:50-12:10 ThA01.6
Optimal Nonlinear Gain Tuning of Composite Nonlinear Feedback Controller and Its Application to a Hard Disk Drive Servo System, pp. 3169-3174.
Lan, Weiyao Xiamen Univ.
Thum, Chin Kwan National Univ. of Singapore
Chen, Ben M. National Univ. of Singapore

ThA02 3E
Control of Hybrid Systems (Regular Session)

Chair: Haddad, Abraham H. Northwestern Univ.
Co-Chair: Anta, Adolfo Univ. of California at Los Angeles

10:10-10:30 ThA02.1
Continuous Control of Hybrid Automata with Imperfect Mode Information Assuming Separation between State Estimation and Control, pp. 3175-3181.
Verma, Rajeev Univ. of Michigan, Ann Arbor
Del Vecchio, Domitilla Univ. of Michigan

10:30-10:50 ThA02.2
Temporal Logic Control of Discrete-Time Piecewise Affine Systems, pp. 3182-3187.
Yordanov, Boyan Boston Univ.
Belta, Calin Boston Univ.

10:50-11:10 ThA02.3
Hybrid Minimal Control Synthesis Identification of Continuous Piecewise Linear Systems, pp. 3188-3193.
Di Bernardo, Mario Univ. of Naples Federico II
Montanaro, Umberto Univ. of Naples Federico II
Santini, Stefania Univ. di Napoli Federico II

11:10-11:30 ThA02.4
Isochronous Manifolds in Self-Triggered Control, pp. 3194-3199.
Anta, Adolfo Univ. of California at Los Angeles
Tabuada, Paulo Univ. of California at Los Angeles

11:30-11:50 ThA02.5
2D Bipedal Walking with Knees and Feet: A Hybrid Control Approach, pp. 3200-3207.
Sinnet, Ryan Texas A&M Univ.
Ames, Aaron Texas A&M

11:50-12:10 ThA02.6
3D Bipedal Walking with Knees and Feet: A Hybrid Geometric Approach, pp. 3208-3213.
Sinnet, Ryan Texas A&M Univ.
Ames, Aaron Texas A&M Univ.

ThA03 3C
Stability and Stabilization of Linear Systems (Regular Session)

Chair: Rogers, Eric Univ. of Southampton
Co-Chair: Eldem, Vasfi Gebze Inst. of Tech.

10:10-10:30 ThA03.1
Necessary and Sufficient Conditions for Finite-Time Boundedness of Linear Continuous-Time Systems, pp. 3214-3219.
Ichihara, Hiroyuki Kyushu Inst. of Tech.
Katayama, Hitoshi Shizuoka Univ.

10:30-10:50 ThA03.2
On the Stability of Bimodal Systems in R3, pp. 3220-3225.
Eldem, Vasfi Gebze Inst. of Tech.
Sahan, Gökhan Gebze Inst. of Tech.

10:50-11:10 ThA03.3
Necessary and Sufficient Conditions for Finite-Time Boundedness of Linear Discrete-Time Systems, pp. 3226-3231.
Ichihara, Hiroyuki Kyushu Inst. of Tech.
Katayama, Hitoshi Shizuoka Univ.

11:10-11:30 ThA03.4
Stability and Stabilization of a Class of Ill-Conditioned Second Order Differential Linear Repetitive Processes, pp. 3232-3237.
Dabkowski, Pawel Grzegorz Nicolaus Copernicus Univ.
Galkowski, Krzysztof Univ. of Zielona Gora
Rogers, Eric Univ. of Southampton

11:30-11:50 ThA03.5
Stability Criterion and Stabilization of Linear Time-Varying Systems, pp. 3238-3243.

Tan, Feng — Harbin Inst. of Tech.
Duan, Guang-Ren — Harbin Inst. of Tech.

11:50-12:10 ThA03.6

Simultaneous H_; Stabilization Via Fixed-Order Controllers: Equivalence and Computation, pp. 3244-3249.

Shu, Zhan — National Univ. of Ireland, Maynooth
Lam, James — The Univ. of Hong Kong
Li, Ping — The Univ. of HongKong

ThA04 — 3A
Model Reduction (Regular Session)

Chair: Sreeram, Victor — Univ. of Western Australia
Co-Chair: West, Matthew — Univ. of Illinois, Urbana-Champaign

10:10-10:30 ThA04.1

Improved Results on Frequency Weighted Balanced Truncation, pp. 3250-3255.

Sreeram, Victor — Univ. of Western Australia
Sahlan, Shafishuhaza — Univ. of Western Australia

10:30-10:50 ThA04.2

Network Structure Preserving Model Reduction with Weak a Priori Structural Information, pp. 3256-3263.

Yeung, Enoch — Brigham Young Univ.
Goncalves, Jorge M. — Univ. of Cambridge
Sandberg, Henrik — Royal Inst. of Tech. (KTH)
Warnick, Sean — Brigham Young Univ.

10:50-11:10 ThA04.3

An Error Bound for Model Reduction of Lur'e-Type Systems, pp. 3264-3269.

Besselink, Bart — Eindhoven Univ. of Tech.
Van De Wouw, Nathan — Eindhoven Univ. of Tech.
Nijmeijer, Hendrik — Eindhoven Univ. of Tech.

11:10-11:30 ThA04.4

Approximate Controllability and Spillover Analysis of a Class of Distributed Parameter Systems, pp. 3270-3275.

Zuyev, Alexander — National Acad. of Sciences of Ukraine

11:30-11:50 ThA04.5

Comparison of Reduced Order Lithium-Ion Battery Models for Control Applications, pp. 3276-3281.

Speltino, Carmelo — Univ. del Sannio BN Italy
Di Domenico, Domenico — Univ. degli Studi del Sannio
Fiengo, Giovanni — Univ. degli Studi del Sannio
Stefanopoulou, Anna G. — Univ. of Michigan

11:50-12:10 ThA04.6

Model Reduction, Optimal Prediction, and the Mori-Zwanzig Representation of Markov Chains, pp. 3282-3287.

Beck, Carolyn L. — Univ. of Illinois, Urbana-Champaign
Lall, Sanjay — Stanford Univ.
Liang, Tzuchen — Stanford Univ.
West, Matthew — Univ. of Illinois, Urbana-Champaign

ThA05 — 3J
Optimization of Intelligent Systems (Regular Session)

Chair: Freeman, Christopher T. — Univ. of Southampton
Co-Chair: Song, Dong-Ping — Univ. of Plymouth

10:10-10:30 ThA05.1

Iterative Learning Control for Multiple Point-To-Point Tracking, pp. 3288-3293.

Freeman, Christopher T. — Univ. of Southampton
Cai, Zhonglun — Univ. of Southampton
Lewin, Paul L. — Univ. of Southampton
Rogers, Eric — Univ. of Southampton

10:30-10:50 ThA05.2

The Hybrid Intelligent Optimization Control for the Fused Magnesia Production, pp. 3294-3299.

Yongjian, Wu — Information Engineering Coll. of Northeastern Univ.
Zhiwei, Wu — Northeastern Univ.
Bin, Dong — Northeastern Univ.
Li, Zhang — Northeastern Univ.
Chai, Tianyou — Northeastern Univ.

10:50-11:10 ThA05.3

Impact of Dynamic Information on Empty Container Repositioning in a Seaport with Uncertainties, pp. 3300-3305.

Song, Dong-Ping — Univ. of Plymouth
Zhang, Qing — Univ. of Georgia

11:10-11:30 ThA05.4

Equilibrium Species Counts and Migration Model Tradeoffs for Biogeography-Based Optimization, pp. 3306-3310.

Ma, Haiping — Shaoxing Univ.
Ni, Suhong — Hebei Univ. of Science and Tech.
Sun, Man — Northeastern Univ. at Qinhuangdao

11:30-11:50 ThA05.5
Fault Tolerant Control Allocation for a Thruster-Controlled Floating Platform Using Parametric Programming, pp. 3311-3317.
Spjřtvold, Jřrgen — Norwegian Univ. of Science & Tech.
Johansen, Tor Arne — Norweigian Univ. of Science & Tech.

11:50-12:10 ThA05.6
Isolation Niches Particle Swarm Optimization Applied to Traffic Lights Controlling, pp. 3318-3322.
Peng, Li — Jiangnan Univ.
Wang, Mao-hai — Jiangnan Univ.
Du, Jia-Ping — Jiangnan Univ.
Luo, Gang — _;W;';f;

ThA06 3G
Control of Mechanical Systems (Invited Session)
Chair: Leok, Melvin — Purdue Univ.
Co-Chair: Chang, Dong Eui — Univ. of Waterloo
Organizer: Leok, Melvin — Purdue Univ.
Organizer: Chang, Dong Eui — Univ. of Waterloo

10:10-10:30 ThA06.1
Time-Varying Path Following Control for Port-Hamiltonian Systems (I), pp. 3323-3328.
Taniguchi, Mitsuru — Nagoya Univ.
Fujimoto, Kenji — Nagoya Univ.

10:30-10:50 ThA06.2
The Method of Controlled Lagrangians: Energy Plus Force Shaping (I), pp. 3329-3334.
Chang, Dong Eui — Univ. of Waterloo

10:50-11:10 ThA06.3
Quasivelocities and Stabilization of Relative Equilibria of Underactuated Nonholonomic Systems (I), pp. 3335-3340.
Bloch, Anthony M. — Univ. of Michigan
Marsden, Jerrold E. — California Inst. of Tech.
Zenkov, Dmitry — North Carolina State Univ.

11:10-11:30 ThA06.4
Output Synchronization of Systems in Chained Form (I), pp. 3341-3346.
Listmann, Kim Daniel — Tech. Univ. Darmstadt
Woolsey, Craig — Virginia Tech.

11:30-11:50 ThA06.5
Dynamics of a 3D Elastic String Pendulum (I), pp. 3347-3352.
Lee, Taeyoung — Florida Inst. of Tech.
Leok, Melvin — Univ. of California, San Diego
McClamroch, N. Harris — Univ. of Michigan

11:50-12:10 ThA06.6
Energy-Optimal Control of a Particle in a Dielectrophoretic System (I), pp. 3353-3358.
Barve, Hrushikesh Arun — I I T Bombay
Banavar, Ravi N. — Indian Inst. of Tech.

ThA07 5C
Filtering and Estimation II (Regular Session)
Chair: Akcay, Huseyin — Anadolu Univ.
Co-Chair: Carravetta, Francesco — IASI-CNR

10:10-10:30 ThA07.1
Subspace-Based Rational Interpolation of Analytic Functions from Real or Imaginary Parts of Frequency-Response Data, pp. 3359-3363.
Akcay, Huseyin — Anadolu Univ.
Turkay, Semiha — anadolu Univ.

10:30-10:50 ThA07.2
Subspace Identification of Distributed, Decomposable Systems, pp. 3364-3369.
Massioni, Paolo — Delft Univ. of Tech.
Verhaegen, Michel — Delft Univ. of Tech.

10:50-11:10 ThA07.3
VARMAX-Based Closed-Loop Subspace Model Identification, pp. 3370-3375.
Houtzager, Ivo — Delft Univ. of Tech.
van Wingerden, Jan-Willem — Delft Univ. of Tech.
Verhaegen, Michel — Delft Univ. of Tech.

11:10-11:30 ThA07.4
Optimal Filtering for Uncertain Linear Stochastic Systems, pp. 3376-3381.
Basin, Michael V. — Autonomous Univ. of Nuevo Leon
Loukianov, Alexander G. — CINVESTAV IPN GDl
Hernandez-Gonzalez, Miguel — Centro de investigacion y estudios avanzados

11:30-11:50 ThA07.5
2D-Recursive Stochastic Realization of Discrete Gaussian Markov Fields: The Homogeneous Case on a Spheric Domain, pp. 3382-3387.
Carravetta, Francesco — IASI-CNR

11:50-12:10 ThA07.6
Average Optimal Stationary Policies: Convexity and Convergence Conditions in Linear Stochastic Control Systems, pp. 3388-3393.
Vargas, Alessandro N. Univ. Tec. Federal do Parana, UTFPR
Do Val, Joao B.R. UNICAMP - FEEC

ThA08 3I
Distributed Parameter and Delay Systems I (Regular Session)
Chair: Polis, Michael P. Oakland Univ.
Co-Chair: Li, Xiao-Dong Univ. Claude Bernand Lyon 1

10:10-10:30 ThA08.1
A Further Numerical Investigation on Luenberger Type Observers for Vibrating Systems, pp. 3394-3399.
Li, Xiao-Dong Univ. Claude Bernand Lyon 1
Xu, Chengzhong Univ. Claude Bernard - Lyon1

10:30-10:50 ThA08.2
On the Admissibility of Control Operators for Perturbed Semigroups and Application to Time-Delay Systems, pp. 3400-3405.
Hadd, Said Texas A&M Univ. at Qatar, Engineering Building
Boulite, Said Texas A&M at Qatar
Nounou, Hazem Texas A&M Univ. at Qatar.
Nounou, Mohamed Texas A&M Univ. at Qatar

10:50-11:10 ThA08.3
Lyapunov-Based Boundary Control for 2 X 2 Hyperbolic Lotka-Volterra Systems, pp. 3406-3411.
Pavel, Lacra Univ. of Toronto
Chang, L Univ. of Toronto

11:10-11:30 ThA08.4
Boundary Estimation for a Diffusion-Reaction PDE Driven by an Unknown Periodic Input, pp. 3412-3416.
Chauvin, Jonathan IFP

11:30-11:50 ThA08.5
Spectral Controllability for 2D and 3D Linear Schr"odinger Equations, pp. 3417-3422.
Beauchard, Karine Univ. Paris-Sud, France
Chitour, Yacine Univ. Paris-Sud, CNRS, Supelec
Kateb, Djalil Univ. de Compiĉgne
Long, Ruixing Ec. Pol.

11:50-12:10 ThA08.6
Boundary Exact Controllability for the Semilinear SchrÄodinger Equation, pp. 3423-3429.
Deng, Li Chinese Acad. of Sciences
Yao, Peng-Fei Chinese Acad. of Sciences

ThA09 3H
Advanced Nonlinear Control Techniques for Unmanned Air Vehicles (Invited Session)
Chair: Silvestre, Carlos Inst. Superior Tecnico
Co-Chair: Hamel, Tarek Univ. de Nice Sophia Antipolis
Organizer: Silvestre, Carlos Inst. Superior Tecnico
Organizer: Hamel, Tarek Univ. de Nice Sophia Antipolis

10:10-10:30 ThA09.1
Image-Based Visual Servo Control for Circular Trajectories for a Fixed-Wing Aircraft (I), pp. 3430-3435.
Le Bras, Florent Delegation generale de l'armement
Hamel, Tarek Univ. de Nice Sophia Antipolis
Mahony, Robert Australian National Univ.

10:30-10:50 ThA09.2
Robust Takeoff and Landing for a Class of Aerial Robots (I), pp. 3436-3441.
Naldi, Roberto Univ. di Bologna
Marconi, Lorenzo Univ. di Bologna
Gentili, Luca Univ. of Bologna

10:50-11:10 ThA09.3
Decentralized Cooperative Control for Multivehicle Formation without Velocity Measurement (I), pp. 3442-3447.
Li, Chaoyong Univ. of Central Florida

11:10-11:30 ThA09.4
On the General Characteristics of 2D Optimal Obstacle-Field Guidance Solution (I), pp. 3448-3453.
Kong, Zhaodan Univ. of Minnesota
Mettler, Bernard Univ. of Minnesota

11:30-11:50 ThA09.5
Formation Control of VTOL-UAVs (I), pp. 3454-3459.
Abdessameud, Abdelkader Univ. of Western Ontarion
Tayebi, Abdelhamid Lakehead Univ.

11:50-12:10 ThA09.6
Rotorcraft Path Following Control for Extended Flight Envelope Coverage (I), pp. 3460-3465.
Cabecinhas, David Inst. Superior Tecnico
Cunha, Rita Inst. Superior Técnico
Silvestre, Carlos Inst. Superior Tecnico

ThA10 5D

Adaptive Control II (Regular Session)

Chair: Dixon, Warren E. — Univ. of Florida
Co-Chair: Solo, Victor — Univ. of New South Wales

10:10-10:30 ThA10.1

Adaptive Control Using Retrospective Cost Optimization with RLS-Based Estimation for Concurrent Markov-Parameter Updating, pp. 3466-3471.

Santillo, Mario — Univ. of Michigan
Holzel, Matthew — Univ. of Michigan
Hoagg, Jesse B. — Univ. of Michigan
Bernstein, Dennis S. — Univ. of Michigan

10:30-10:50 ThA10.2

On the Boundedness Problem of Stochastic Adaptive Algorithms, pp. 3472-3476.

Solo, Victor — Univ. of New South Wales

10:50-11:10 ThA10.3

Direct Time Injection in the Loop: A New Adaptive Control Point of View, pp. 3477-3482.

Tayebi, Abdelhamid — Lakehead Univ.

11:10-11:30 ThA10.4

Global Adaptive Output Feedback MRAC, pp. 3483-3488.

Mackunis, William — Univ. of Florida
Wilcox, Zachary — Univ. of Florida
Kaiser, Kent — Univ. of Florida
Dixon, Warren E. — Univ. of Florida

11:30-11:50 ThA10.5

The Convergence of Parameter Estimates Is Not Necessary for a General Self-Tuning Control System Stochastic Plant, pp. 3489-3494.

Zhang, Weicun — Univ. of Science and Tech. Beijing

11:50-12:10 ThA10.6

Adaptive Output Feedback Control of Nonlinear SISO Systems Via Singular Perturbation Technique, pp. 3495-3500.

Yurkevich, Valery D. — Novosibirsk State Tech. Univ.

ThA11 5J

Modeling and Control of Physiological Systems (Regular Session)

Chair: Johansson, Rolf — Lund Univ.
Co-Chair: Hara, Shinji — The Univ. of Tokyo

10:10-10:30 ThA11.1

Glycemic Trend Prediction Using Empirical Model Identification, pp. 3501-3506.

Cescon, Marzia — Lund Univ.
Johansson, Rolf — Lund Univ.

10:30-10:50 ThA11.2

Observer-Based Closed-Loop Control of Plasma Glycemia, pp. 3507-3512.

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

10:50-11:10 ThA11.3

A Bio-Plausible Design for Visual Attitude Stabilization, pp. 3513-3520.

Censi, Andrea — California Inst. of Tech.
Han, Shuo — California Inst. of Tech.
Fuller, Sawyer — Caltech
Murray, Richard M. — California Inst. of Tech.

11:10-11:30 ThA11.4

Graphical and Analytic Criteria for the Existence of Protein Level Oscillations in Cyclic Gene Regulatory Networks, pp. 3521-3526.

Hori, Yutaka — The Univ. of Tokyo
Kim, Tae-Hyoung — Chung-Ang Univ.
Hara, Shinji — The Univ. of Tokyo

11:30-11:50 ThA11.5

Observability Issues in Networked Clocks with Applications to Epilepsy, pp. 3527-3532.

O'Sullivan-Greene, Elma — The Univ. of Melbourne
Mareels, Iven — The Univ. of Melbourne
Kuhlmann, Levin — The Univ. of Melbourne
Burkitt, Anthony N. — The Univ. of Melbourne

11:50-12:10 ThA11.6

Control of Infection Dynamics with Application to HIV/AIDS Model, pp. 3533-3538.

Chang, H.J. — Imperial Coll. London
Astolfi, Alessandro — Imperial Coll. & Univ. of Rome
Shim, Hyungbo — Seoul National Univ.

ThA12 5E

Integrated Vehicle Dynamics and Control I (Invited Session)

Chair: Lu, Jianbo — Ford Motor Company
Co-Chair: Lin, Zongli — Univ. of Virginia
Organizer: Lu, Jianbo — Ford Motor Company
Organizer: Lin, Zongli — Univ. of Virginia
Organizer: Lu, Xiao-Yun — Univ. of California at Berkeley
Organizer: Tsiotras, Panagiotis — Georgia Inst. of Tech.

10:10-10:30 ThA12.1

Multi-Objective Coordinated Control for Advanced Adaptive Cruise Control System (I), pp. 3539-3544.

Li, Shengbo — Tsinghua Univ.
Li, Keqiang — Tsinghua Univ.
Rajamani, Rajesh — Univ. of Minnesota
Wang, Jianqiang — State Key Lab. of Automotive SafetyandEnergy,Tsinghua Univ.

10:30-10:50 ThA12.2

On Steady-State Cornering Equilibria for Wheeled Vehicles with Drift (I), pp. 3545-3550.

Velenis, Efstathios — Brunel Univ.
Frazzoli, Emilio — Massachusetts Inst. of Tech.
Tsiotras, Panagiotis — Georgia Inst. of Tech.

10:50-11:10 ThA12.3

Combined Performance and Stability Optimisation Via Central Transfer Case Active Control in Four-Wheeled Vehicles (I), pp. 3551-3556.

Panzani, Giulio — Pol. di Milano
Corno, Matteo — Pol. di Milano
Tanelli, Mara — Pol. di Milano
Zappavigna, Annalisa — Pol. di Milano
Savaresi, Sergio M. — Pol. Di Milano
Fortina, Andrea — Fiat Auto S.p.A.
Campo, Sebastiano — Fiat Auto

11:10-11:30 ThA12.4

Adaptive Integrated Vehicle Control Using Active Front Steering and Rear Torque Vectoring (I), pp. 3557-3562.

Di Gennaro, Stefano — Univ. of L'Aquila
Di Benedetto, M. Domenica — Univ. of L'Aquila
Burgio, Gilberto — Ford Forschungszentrum Aachen
Borri, Alessandro — Univ. of L'Aquila
Bianchi, Domenico — Univ. of L'Aquila

11:30-11:50 ThA12.5

System Optimization in the Control of Heavy Duty Vehicle Braking Sub-Systems (I), pp. 3563-3568.

Fang, Haijun — MKS Inst.
Lu, Xiao-Yun — Univ. of California at Berkeley
Lu, Jianbo — Ford Motor Company
Lin, Zongli — Univ. of Virginia

11:50-12:10 ThA12.6

Multi-Loop Interactive Control Motivated by Driver-In-The-Loop Vehicle Dynamics Controls: The Framework (I), pp. 3569-3574.

Lu, Jianbo — Ford Motor Company
Filev, Dimitre P. — Ford Motor Company

ThA13 5A
Learning and Control I (Invited Session)

Chair: Meyn, Sean — Univ. of Illinois
Co-Chair: Mehta, Prashant G. — Univ. of Illinois, Urbana-Champaign
Organizer: Meyn, Sean — Univ. of Illinois
Organizer: Mannor, Shie — McGill Univ.
Organizer: Mehta, Prashant G. — Univ. of Illinois, Urbana-Champaign

10:10-10:30 ThA13.1

Approximate Dynamic Programming Using Fluid and Diffusion Approximations with Applications to Power Management (I), pp. 3575-3580.

Chen, Wei — Univ. of Illinois, Urbana-Champaign
Huang, Dayu — Univ. of Illinois, Urbana-Champaign
Kulkarni, Ankur — Univ. of Illinois, Urbana-Champaign
Unnikrishnan, Jayakrishnan — Univ. of Illinois, Urbana-Champaign
Zhu, Quanyan — Univ. of Illinois, Urbana-Champaign
Mehta, Prashant G. — Univ. of Illinois, Urbana-Champaign
Meyn, Sean — Univ. of Illinois
Wierman, Adam — California Inst. of Tech.

10:30-10:50 ThA13.2

Asynchronous Gossip Algorithms for Stochastic Optimization (I), pp. 3581-3586.

Srinivasan, Sundhar Ram — Univ. of Illinois, Urbana-Champaign
Nedich, Angelia — Univ. of Illinois, Urbana-Champaign
Veeravalli, Venugopal V. — Univ. of Illinois, Urbana-Champaign

10:50-11:10 ThA13.3

Asymptotic Properties of Markov Decision Processes (I), pp. 3587-3591.

Brockett, Roger — Harvard Univ.

11:10-11:30 ThA13.4
On the Myopic Policy for a Class of Restless Bandit Problems with Applications in Dynamic Multichannel Access, pp. 3592-3597.
Liu, Keqin — Univ. of California at Davis
Zhao, Qing — Univ. of California at Davis

11:30-11:50 ThA13.5
Q-Learning and Pontryagin's Minimum Principle (I), pp. 3598-3605.
Mehta, Prashant G. — Univ. of Illinois, Urbana-Champaign
Meyn, Sean — Univ. of Illinois

11:50-12:10 ThA13.6
Parametric Regret in Uncertain Markov Decision Processes (I), pp. 3606-3613.
Xu, Huan — The Univ. of Texas at Austin
Mannor, Shie — McGill Univ.

ThA14 5B
Identification of Block Structured Models (Regular Session)
Chair: Fang, Haitao — Chinese Acad. of Sciences
Co-Chair: Wang, Jiandong — Peking Univ.

10:10-10:30 ThA14.1
Refined Instrumental Variable Methods for Identifying Hammerstein Models Operating in Closed Loop, pp. 3614-3619.
Laurain, Vincent — Nancy-Univ.
Gilson, Marion — Nancy-Univ.
Garnier, Hugues — Nancy-Univ.

10:30-10:50 ThA14.2
Revisiting the Two-Stage Algorithm for Hammerstein System Identification, pp. 3620-3625.
Wang, Jiandong — Peking Univ.
Zhang, Qinghua — INRIA
Ljung, Lennart — Linkoping Univ.

10:50-11:10 ThA14.3
Recursive Identification of MIMO Wiener Systems with General Inputs, pp. 3626-3631.
Jiang, Yueping — Nanjing Univ. of Posts and Telecommunications
Fang, Haitao — Chinese Acad. of Sciences

11:10-11:30 ThA14.4
Identification Methods for Wiener Nonlinear Systems Based on the Least Squares and Gradient Iterations, pp. 3632-3636.
Ding, Feng — Jiangnan Univ.
Wang, Dongqing — Qingdao Univ.
Chu, Yanyun — Qingdao Univ.

11:30-11:50 ThA14.5
Closed-Loop Subspace Identification of Hmmerstein-Wiener Models, pp. 3637-3642.
van Wingerden, Jan-Willem — Delft Univ. of Tech.
Verhaegen, Michel — Delft Univ. of Tech.

11:50-12:10 ThA14.6
Set-Membership Identification of Block-Structured Nonlinear Feedback Systems, pp. 3643-3649.
Cerone, Vito — Pol. di Torino
Piga, Dario — Pol. di Torino
Regruto, Diego — Pol. Di Torino

ThA15 3B
Finance and Stochastics (Regular Session)
Chair: Costa, Oswaldo Luiz V. — Univ. of Sao Paulo
Co-Chair: Vellekoop, Michel H. — Univ. Twente

10:10-10:30 ThA15.1
An Optimal Investment Problem with Randomly Terminating Income, pp. 3650-3655.
Vellekoop, Michel H. — Univ. Twente
Davis, Mark — Imperial Coll. of Science, Tech. and Medicine

10:30-10:50 ThA15.2
Sampled Control for Mean-Variance Hedging in a Jump Diffusion Financial Market, pp. 3656-3661.
Costa, Oswaldo Luiz V. — Univ. of Sao Paulo
Maiali, Andre Cury — USP - Univ. de Sao Paulo
Pinto, Afonso — Fundação Getulio Vargas

10:50-11:10 ThA15.3
Pricing and Optimal Conversion Strategy of Convertible Bonds, pp. 3662-3667.
Bing, Yang — Shandong Univ. at Weihai
Xiao, Hua — Shandong Univ. at Weihai

11:10-11:30 ThA15.4
One Kind of Corporate Optimal Investment Problem: Inflation Case, pp. 3668-3672.
Huang, Zongyuan — Shandong Univ.
Wu, Zhen — Shandong Univ.

11:30-11:50 ThA15.5

An Optimization Approach to Weak Approximation of Levy-Driven Stochastic Differential Equations with Application to Option Pricing, pp. 3673-3678.

Kashima, Kenji — Tokyo Inst. of Tech.
Kawai, Reiichiro — Osaka Univ.

11:50-12:10 ThA15.6

Discrete-Time Optimal Hedging for Multi-Asset European Contingent Claims, pp. 3679-3684.

M, Uday Kumar — Tata Consultancy Services Limited
Chellaboina, Vijay — Tata Consultancy Services
Bhat, Sanjay P. — Tata Consultancy Services Limited
Prasad, Sandeep — Tata Consultancy Services Limited,
Bhatia, Anil — Tata Consultancy Services

ThA16 — 5F
Consensus in Multi-Agent Systems (Regular Session)

Chair: Zheng, Wei Xing — Univ. of Western Sydney
Co-Chair: Yu, Wenwu — City Univ. of Hong Kong, Hong Kong

10:10-10:30 ThA16.1

Consensus of High Order Linear Multi-Agent Systems Using Output Error Feedback, pp. 3685-3690.

Wang, Jinhuan — Hebei Univ. of Tech.
Liu, Zhixin — Acad. of Mathematics and Systems Science, ChineseAcademyof Sci
Hu, Xiaoming — Royal Inst. of Tech.

10:30-10:50 ThA16.2

Asynchronous Consensus of Agents with Double-Integrator Dynamics, pp. 3691-3696.

Gao, Yanping — Peking Univ.
Wang, Long — Peking Univ.

10:50-11:10 ThA16.3

Consensus of Multi-Agent Systems with an Active Leader and Asymmetric Adjacency Matrix, pp. 3697-3702.

Guo, Wanli — Wuhan Univ. China
Chen, Shihua — Wuhan Univ. China
Lu, Jinhu — Chinese Acad. of Sciences
Yu, Xinghuo — RMIT Univ.

11:10-11:30 ThA16.4

A New Result on Average Consensus for Multiple Agents with Switching Topology and Communication Delay, pp. 3703-3708.

Qin, Jiahu — Harbin Inst. of Tech. Harbin, P.R.China
Gao, Huijun — Harbin Inst. of Tech.
Zheng, Wei Xing — Univ. of Western Sydney

11:30-11:50 ThA16.5

On Second-Order Consensus in Multi-Agent Dynamical Systems with Directed Topologies and Time Delays, pp. 3709-3714.

Yu, Wenwu — City Univ. of Hong Kong, Hong Kong
Chen, Guanrong — City Univ. of Hong Kong
Cao, Ming — Univ. of Groningen

11:50-12:10 ThA16.6

Finite-Time Consensus for Multi-Agent Systems with Application to Sensor Fusion, pp. 3715-3720.

Jiang, Fangcui — Peking Univ.
Wang, Long — Peking Univ.

ThA17 — 5H
Modeling and Control of Complex Interaction: A Network Approach (Invited Session)

Chair: Ghosh, Bijoy — Texas Tech. Univ.
Co-Chair: Martin, Clyde F. — Texas Tech. Univ.
Organizer: Ghosh, Bijoy — Texas Tech. Univ.
Organizer: Martin, Clyde F. — Texas Tech. Univ.

10:10-10:30 ThA17.1

Stability of Switched Linear Systems and the Convergence of Random Products (I), pp. 3721-3726.

Wang, Ning — Texas Tech. Univ.
Egerstedt, Magnus — Georgia Inst. of Tech.
Martin, Clyde F. — Texas Tech. Univ.

10:30-10:50 ThA17.2

Target-Point Based Control Strategies for Formations of Mobile Autonomous Agents (I), pp. 3727-3732.

N/A

10:50-11:10 ThA17.3

Rendezvous with Multiple, Intermittent Leaders (I), pp. 3733-3738.

Notarstefano, Giuseppe — Univ. of Lecce
Egerstedt, Magnus — Georgia Inst. of Tech.
Haque, Musad — Georgia Inst. of Tech.

11:10-11:30 ThA17.4

Bayesian Network Approach to Understand Regulation of Biological Processes in Cyanobacteria (I), pp. 3739-3744.

Elvitigala, Thanura — Washington Univ. in St Louis
Singh, Abhay — washington Univ. in saint louis
Pakrasi, Himadri — Washington Univ.
Ghosh, Bijoy — Texas Tech. Univ.

11:30-11:50 ThA17.5
The Number of Leaders Needed for Consensus (I), pp. 3745-3750.
Liu, Zhixin — Acad. of Mathematics and Systems Science, ChineseAcademyof Sci
Han, Jing — Acad. of Mathematics and Systems Science
Hu, Xiaoming — Royal Inst. of Tech.

11:50-12:10 ThA17.6
Efficient and Robust Communication Topologies for Distributed Decision Making in Networked Systems (I), pp. 3751-3756.
Baras, John S. — Univ. of Maryland
Hovareshti, Pedram — Univ. of Maryland

ThA18 5I
Wireless Sensor Networks and Distributed Cooperative Control and Estimation (Invited Session)
Chair: Paschalidis, Ioannis — Boston Univ.
Co-Chair: Cassandras, Christos G. — Boston Univ.
Organizer: Paschalidis, Ioannis — Boston Univ.
Organizer: Cassandras, Christos G. — Boston Univ.

10:10-10:30 ThA18.1
On Maximum Lifetime Routing in Wireless Sensor Networks (I), pp. 3757-3762.
Ning, Xu — Boston Univ.
Cassandras, Christos G. — Boston Univ.

10:30-10:50 ThA18.2
On Energy Optimized Averaging in Wireless Sensor Networks (I), pp. 3763-3768.
Paschalidis, Ioannis — Boston Univ.
Li, Binbin — Boston Univ.

10:50-11:10 ThA18.3
Fault Tolerant Detection and Tracking of Multiple Sources in WSNs Using Binary Data (I), pp. 3769-3774.
Michaelides, Michalis — Univ. of Cyprus
Panayiotou, Christos — Univ. of Cyprus
Laoudias, Christos — Univ. of Cyprus

11:10-11:30 ThA18.4
Reduced-Order Predictive Outage Compensators for Networked Systems (I), pp. 3775-3780.
Henriksson, Erik — Royal Inst. of Tech.
Sandberg, Henrik — Royal Inst. of Tech. (KTH)
Johansson, Karl H. — Royal Inst. of Tech.

11:30-11:50 ThA18.5
Information Dissemination in Networks Via Linear Iterative Strategies Over Finite Fields (I), pp. 3781-3786.
Sundaram, Shreyas — Univ. of Illinois, Urbana-Champaign
Hadjicostis, Christoforos — Univ. of Cyprus

11:50-12:10 ThA18.6
Zero-Error Function Computation in Sensor Networks (I), pp. 3787-3792.
Kowshik, Hemant — Univ. of Illinois
Kumar, P. R. — Univ. of Illinois, Urbana-Champaign

ThTATu Yellow River
Nonlinear Observer Design (Tutorial Session)
Chair: Astolfi, Alessandro — Imperial Coll. & Univ. of Rome
Co-Chair: Praly, Laurent — Mines Paris-Tech.

10:10-11:10 ThTATu.1
*Nonlinear Observer Design: Problem Formulation, High-Gain and Contraction Based Observers (I)**.
Praly, Laurent — Mines Paris-Tech.
Astolfi, Alessandro — Imperial Coll. & Univ. of Rome

11:10-11:30 ThTATu.2
*Kazantzis-Kravaris/Luenberger Observers (I)**.
Andrieu, Vincent — Univ. de Toulouse & Univ. de Lyon

11:30-11:50 ThTATu.3
*Reduced-Order Observers (I)**.
Carnevale, Daniele — Univ. di Roma

11:50-12:10 ThTATu.4
*Symmetry-Preserving Observers (I)**.
Bonnabel, Silvere — Mines ParisTech

ThAIn1 Mandarin Hall
Quantum Information, Control and Algorithms (Interactive Session)

10:30-11:50 ThAIn1.1

Linear Quantum Feedback Networks with Squeezing Components, pp. 3793-3798.
Gough, John Edward — Aberystwyth Univ.
James, Matthew R. — Australian National Univ.
Nurdin, Hendra Ishwara — Australian National Univ.

10:30-11:50 ThAIn1.2
Generic Controllability Properties for the Bilinear Schrödinger Equation, pp. 3799-3804.
Sigalotti, Mario — INRIA Nancy - Grand Est
Mason, Paolo — Supélec
Boscain, Ugo V. — CNRS
Chambrion, Thomas — Univ. of Nancy

10:30-11:50 ThAIn1.3
Partial Feedback Control of Quantum Systems Using Probabilistic Fuzzy Estimator, pp. 3805-3810.
Chen, Chunlin — nanjing Univ.
Rigatos, Gerasimos — Inst. of Industrial Systems, Patras
Dong, Daoyi — Univ. of New South Wales

10:30-11:50 ThAIn1.4
Implicit Lyapunov Control of Closed Quantum Systems, pp. 3811-3815.
Zhao, Shouwei — Dept. of Math., Tongji Univ. Shanghai,200092,China
Lin, Hai — National Univ. of Singapore
Sun, Jitao — Tongji Univ.
Xue, Zhengui — National Univ. of Singapore

10:30-11:50 ThAIn1.5
Parameter Estimation of a 3-Level Quantum System with a Single Population Measurement, pp. 3816-3820.
Leghtas, Zaki — INRIA Paris-Rocquencourt
Mirrahimi, Mazyar — INRIA Paris-Rocquencourt
Rouchon, Pierre — Mines ParisTech

10:30-11:50 ThAIn1.6
Regulation and Tracking of Two-Level Quantum Systems Using Measurement Feedback, pp. 3821-3826.
Yanagisawa, Masahiro — The Australian National Univ.
James, Matthew R. — Australian National Univ.
Korotkov, Alexander — Univ. of California, Riverside

10:30-11:50 ThAIn1.7
Experimental Design and Identifiability of Model Parameters for Quantum Systems, pp. 3827-3832.
Zhang, Ming — National Univ. of Defense Tech.
Schirmer, Sonia G. — Univ. of Cambridge
Dai, Hong-Yi — National Univ. of Defense Tech.
Zhou, Weiwei — Coll. of Mechatronic Engineering and Automation,NationalUniver
Lin, Min — National Univ. of Defense Tech.

10:30-11:50 ThAIn1.8
Sparse Wiener Chaos Approximations of Nonlinear Filtering with Correlated Noise, pp. 3833-3838.
Xu, Jian — Shanghai Jiao Tong Univ.
Li, Jianxun — Shanghai Jiao Tong Univ.

10:30-11:50 ThAIn1.9
Newton-Like Extremum-Seeking Part I: Theory, pp. 3839-3844.
Moase, William — The Univ. of Melbourne
Manzie, Chris — The Univ. of Melbourne
Brear, Michael — The Univ. of Melbourne

10:30-11:50 ThAIn1.10
Newton-Like Extremum-Seeking Part II: Simulations and Experiments, pp. 3845-3850.
Moase, William — The Univ. of Melbourne
Manzie, Chris — The Univ. of Melbourne
Brear, Michael — The Univ. of Melbourne

10:30-11:50 ThAIn1.11
Dirac Mixture Approximation of Multivariate Gaussian Densities, pp. 3851-3858.
Hanebeck, Uwe D. — Univ. Karlsruhe (TH)
Huber, Marco F. — Univ. Karlsruhe (TH)
Klumpp, Vesa — Univ. Karlsruhe (TH)

ThAIn2 — Mandarin Hall
Switched and Hybrid Systems (Interactive Session)

10:30-11:50 ThAIn2.1
Exponential Stabilization of Second-Order Switched Systems: Necessary and Sufficient Conditions, pp. 3859-3863.
Cong, Shen — Nanjing Univ. of Science and Tech.
Yin, Liping — Southeast Univ.
Zou, Yun — Nanjng Univ. of Science and Tech.

10:30-11:50 ThAIn2.2
On the Robust Stability, Stabilization, and Stability Radii of Continuous-Time Markov Jump Linear Systems, pp. 3864-3869.
Todorov, Marcos G. — LNCC
Fragoso, Marcelo — LNCC / MCT

10:30-11:50 ThAIn2.3
Stability of Networks of Hybrid ISS Systems, pp. 3870-3875.
Dashkovskiy, Sergey — Univ. of Bremen
Kosmykov, Michael — Univ. of Bremen

10:30-11:50 ThAIn2.4
Algebraic Observer for a Class of Switched Systems with Zeno Phenomenon, pp. 3876-3881.
Zheng, Gang — INRIA
Yu, Lei — ENSEA
Boutat, Driss — Ensi de Bourges
Barbot, Jean Pierre — ENSEA

10:30-11:50 ThAIn2.5
Graceful Switching in Hybrid Models, pp. 3882-3884.
Georgiou, Tryphon T. — Univ. of Minnesota
Georgiou, Katerina — Univ. of Minnesota

10:30-11:50 ThAIn2.6
Variation Paradigm for Asymptotic Gain of Switched Time-Delay Systems, pp. 3885-3890.
Han, Thanh Trung — National Univ. of Singapore
Ge, Shuzhi Sam — National Univ. of Singapore
Lee, Tong Heng — National Univ. of Singapore

10:30-11:50 ThAIn2.7
Robust Stabilization of Uncertain Complex Singular Dynamical Networks Via Impulsive Control, pp. 3891-3896.
Yang, Meng — Huazhong Univ. of Science and Tech.
Wang, Yan-Wu — Huazhong Univ. of Science and Tech.
Guan, Zhi-Hong — Huazhong Univ. of Science & Tech.
Wang, Hua O. — Boston Univ.

10:30-11:50 ThAIn2.8
A Unified Approach to Analysis of Switched Linear Descriptor Systems under Arbitrary Switching, pp. 3897-3902.
Zhai, Guisheng — Osaka Prefecture Univ.
Xu, Xuping — School of Engineering, California Baptist Univ.

10:30-11:50 ThAIn2.9
Quantized Feedback Stabilization of Hybrid Impulsive Control Systems, pp. 3903-3908.
Yang, Zhichun — Chongqing Normal Univ.
Hong, Yiguang — Chinese Acad. of Sciences
Jiang, Zhong-Ping — Pol. Inst. NYU
Wang, Xiaoli — Chinese Acad. of Sciences

10:30-11:50 ThAIn2.10
Switching Time Estimation for Linear Switched Systems: An Algebraic Approach, pp. 3909-3913.
Tian, Yang — LAGIS-UMR CNRS 8146, Ec. centrale de Lille
Floquet, Thierry — CNRS
Belkoura, Lotfi — Univ. Des Sciences Et Tech. De Lille
Perruquetti, Wilfrid — Ec. Centrale de Lille

10:30-11:50 ThAIn2.11
An Analytical Solution to Dynamic Quantization Problem of Nonlinear Control Systems, pp. 3914-3919.
Azuma, Shun-ichi — Kyoto Univ.
Sugie, Toshiharu — Kyoto Univ.

10:30-11:50 ThAIn2.12
A New Methodology for Piecewise Affine Models Using Voronoi Partitions, pp. 3920-3925.
Casselman, Scott — Concordia Univ.
Rodrigues, Luis — Concordia Univ.

10:30-11:50 ThAIn2.13
Input-To-State Stability for a Class of Hybrid Dynamical Systems Via Hybrid Time Approach, pp. 3926-3931.
Liu, Bin — The Australian National Univ.
Hill, David J. — The Australian National Univ.
Teo, K. L. — Curtin Univ. of Tech.

ThAIn3 Mandarin Hall
Stochastic and Hybrid Systems (Interactive Session)

10:30-11:50 ThAIn3.1
Large Deviation Methods for Stochastic Reachability, pp. 3932-3937.
Bujorianu, Manuela — Univ. of Manchester
Wang, Hong — The Univ. of Manchester

10:30-11:50 ThAIn3.2
Beyond Local Optimality: An Improved Approach to Hybrid Model Learning, pp. 3938-3945.
Gil, Stephanie — MIT
Williams, Brian — MIT

10:30-11:50 ThAIn3.4
Estimation Algorithm for Stochastic Linear Hybrid Systems with Quadratic Guard Conditions, pp. 3946-3951.
Liu, Weiyi — Purdue Univ.

Hwang, Inseok — Purdue Univ.
Seah, Chze Eng — Purdue Univ.

10:30-11:50 ThAIn3.5
Identification of Probability Weighted Multiple ARX Models and Its Application to Behavior Analysis, pp. 3952-3957.
Taguchi, Shun — Nagoya Univ.
Suzuki, Tatsuya — Nagoya Univ.
Hayakawa, Soichiro — Toyota Tech. Inst.
Inagaki, Shinkichi — Nagoya Univ.

10:30-11:50 ThAIn3.6
Multi-Mode Multi-Dimensional Systems with Application to Switched Systems with Delay, pp. 3958-3963.
Verriest, Erik I. — Georgia Inst. of Tech.

10:30-11:50 ThAIn3.7
Switching Scheduling Policies and Their Balanceabililty, pp. 3964-3968.
Wang, Xingxuan — Fudan Univ.

10:30-11:50 ThAIn3.8
The LaSalle Stability Theorem of General Stochastic Hybrid Systems, pp. 3969-3973.
Liu, Haijun — Zhengzhou Univ.
Mu, Xiaowu — Zhengzhou Univ.

10:30-11:50 ThAIn3.9
Adaptive Control for Time-Delay Markovian Jump Linear Systems with State-Dependant Switching, pp. 3974-3979.
Dong, Yifan — Univ. of Science and Tech. of China
Kang, Yu — Univ. of Science and Tech. of China
Xi, Hong-Sheng — Univ. of Science and Tech. of China

ThAIn4 — Mandarin Hall
Model Predictive Control and Optimal Control of Linear Systems (Interactive Session)

10:30-11:50 ThAIn4.1
Real-Time MPC - Stability through Robust MPC Design, pp. 3980-3986.
Zeilinger, Melanie Nicole — ETH Zurich
Jones, Colin Neil — ETH Zurich
Raimondo, Davide Martino — ETH Zurich
Morari, Manfred — ETH Zurich

10:30-11:50 ThAIn4.2
An LMI Approach for Output Feedback Robust Predictive Control Using Orthonormal Basis Functions, pp. 3987-3992.
Araújo, Humberto Xavier — UFBA
Oliveira, Gustavo — PUCPR

10:30-11:50 ThAIn4.3
Application of Robustified Model Predictive Control to a Production-Inventory System, pp. 3993-3998.
Stoica, Cristina Nicoleta — Supelec
Arahal, Manuel R. — Univ. de Sevilla
Rivera, Daniel E. — Arizona State Univ.
Rodriguez-Ayerbe, Pedro — Supelec
Dumur, Didier — Ec. Superieure d'Electricite

10:30-11:50 ThAIn4.4
Model Predictive Control of Linear Time-Varying Systems with Bounded Disturbances Using a Dynamic Terminal Policy, pp. 3999-4004.
Gautam, Ajay — Nanyang Tech. Univ.
Chu, Yun-Chung — Nanyang Tech. Univ.
Soh, Yeng Chai — Nanyang Tech. Univ.

10:30-11:50 ThAIn4.5
Subspace-Based Model Predictive Control of Time-Varying Systems, pp. 4005-4010.
Mardi, Noor Azizi — RMIT Univ.
Wang, Liuping — Rmit Univ.

10:30-11:50 ThAIn4.6
Unified Form of Performance Limitations in Reference Tracking Control Problem for Discrete Time Systems, pp. 4011-4017.
Okajima, Hiroshi — Kumamoto Univ.
Asai, Toru — Osaka Univ.
Kawaji, Shigeyasu — Kumamoto Univ.

10:30-11:50 ThAIn4.7
Novel Characterization of the Infimum in H-Infinity Full Information Control of Discrete-Time Plants, pp. 4018-4023.
Wahls, Sander — Tech. Univ. Berlin
Boche, Holger — Tech. Univ. Berlin

10:30-11:50 ThAIn4.8
Transfer Functions of Closed-Loop Systems in H2 Optimal Control, pp. 4024-4029.
Tanaka, Hideaki — The Univ. of Tokyo
Tsumura, Koji — The Univ. of Tokyo
Kanno, Masaaki — Niigata Univ.

10:30-11:50 ThAIn4.9
Model-Free Norm-Based Fixed Structure Controller Synthesis, pp. 4030-4035.

Den Hamer, A.J. — Eindhoven Univ. of Tech.
Weiland, Siep — Eindhoven Univ. of Tech.
Steinbuch, Maarten — Eindhoven Univ. of Tech.

10:30-11:50 ThAIn4.10
Optimal Control for High Order Systems with Fixed PI Controller Based on Model Reduction and Constrained Optimization, pp. 4036-4041.
Le, Hoang Bao — LCIS/Grenoble INP
Mendes, Eduardo — LCIS - Grenoble INP

10:30-11:50 ThAIn4.11
Analytical Reachability Results for a Class of Nonlinear Systems with Ellipsoidal Initial Sets, pp. 4042-4049.
Holzinger, Marcus — Univ. of Colorado at Boulder
Scheeres, Daniel — The Univ. of Michigan

10:30-11:50 ThAIn4.12
Finite Horizon Linear Quadratic Regulation for Linear Discrete Time-Varying Systems with Single/Multiple Input Delay(s), pp. 4050-4055.
Zhou, Jing — Penn State Univ.
Wang, Qian — Penn State Univ.

10:30-11:50 ThAIn4.13
Updated Terminal Cost RHC for Continuous-Time Systems, pp. 4056-4061.
Zhang, Hongwei — the Chinese Unviersity of Hong Kong
Huang, Jie — Chinese Univ. of Hong Kong
Lewis, Frank L. — Univ. of Texas at Arlington

ThAIn5 — Mandarin Hall
Networked Systems (Interactive Session)

10:30-11:50 ThAIn5.1
Optimal Estimation Over Unreliable Communication Links with Application to Cognitive Radio, pp. 4062-4067.
Ma, Xiao — Univ. of Tennessee
Djouadi, Seddik, M. — Univ. of Tennessee
Kurugunti, Teja — Oak Ridge National Lab.
Nutaro, James — Oak Ridge National Lab.
Li, Husheng — Univ. of Tennessee

10:30-11:50 ThAIn5.2
on Signum Feedback Stabilization of Second and Third-Order Systems, pp. 4068-4074.
Michalska, Hannah H. — McGill Univ.
Hayward, Vincent — Univ. P. et M. Curie

10:30-11:50 ThAIn5.3
Optimality of the Logarithmic Quantizer for Stabilization: Achieving the Minimum Data Rate, pp. 4075-4080.
You, Keyou — Nanyang Tech. Univ.
Su, Weizhou — South China Univ. of Tech.
Fu, Minyue — Univ. of Newcastle
Xie, Lihua — Nanyang Tech. Univ.

10:30-11:50 ThAIn5.4
Quantized Robust H-Infinity Control of Discrete-Time Systems with Random Communication Delays, pp. 4081-4086.
Rasool, Faiz — Univ. of auckland
Nguang, Sing Kiong — The Univ. of Auckland
Huang, Dan — The Univ. of Auckland
Zhang, Lixian — Ec. Pol. de Montreal,

10:30-11:50 ThAIn5.5
Quantized H-Infinity Control for Networked Control Systems with Packet Dropouts, pp. 4087-4092.
Che, Wei-Wei — Northeastern Univ.
Wang, Jian Liang — Nanyang Tech. Univ.
Yang, Guang-hong — Northeastern Univ.

10:30-11:50 ThAIn5.6
Stability of Quantized Time-Delay Nonlinear Systems: A Lyapunov-Krasowskii-Functional Approach, pp. 4093-4098.
De Persis, Claudio — Sapienza Univ. of Rome
Mazenc, Frederic — INRIA Sophia-Antipolis,

10:30-11:50 ThAIn5.7
Indirect Coupled Oscillators for Keystream Generation in Secure Chaotic Communication, pp. 4099-4104.
Kharel, Rupak — Northumbria Univ.
Busawon, Krishna K. — Northumbria Univ.
Ghassemlooy, Fary — Northumbria Univ.

10:30-11:50 ThAIn5.9
H_infinity Filtering for Singular Systems with Communication Delays, pp. 4105-4110.
Lu, RenQuan — Zhejiang Univ.
Xu, Yong — Hangzhou Dianzi Univ. Hangzhou Dianzi Univ.
Zhao, Xiaodong — Hangzhou Dianzi Univ.
Xue, Anke — Hangzhou Dianzi Univ.
Su, Hongye — Zhejiang Univ.

10:30-11:50 ThAIn5.10
On Inference of Network Time Constants from Impulse Response Data: Graph-Theoretic Cramer-Rao Bounds, pp. 4111-4116.

Wan, Yan — Washington State Univ.
Roy, Sandip — Washington State Univ.

ThAIn6 — Mandarin Hall
Nonlinear and Fuzzy Systems (Interactive Session)

10:30-11:50 — ThAIn6.1
Networked Monitoring and Fault-Tolerant Control of Nonlinear Process Systems, pp. 4117-4124.
Ohran, Benjamin James — Univ. of California, Los Angeles
Liu, Jinfeng — Univ. of California, Los Angeles
Muńoz de la Peńa, David — Univ. de Sevilla
Christofides, Panagiotis D. — Univ. of California at Los Angeles
Davis, James F. — UCLA

10:30-11:50 — ThAIn6.2
Modeling and Control of Hula-Hoop System, pp. 4125-4130.
Nishizaki, Jumpei — Tokyo Inst. of Tech.
Nakaura, Shigeki — Sasebo National Coll. of Tech.
Sampei, Mitsuji — Tokyo Inst. of Tech.

10:30-11:50 — ThAIn6.3
Uniform Stability of Sets for Difference Inclusions under Summability Criteria, pp. 4131-4136.
Teel, Andrew R. — Univ. of California at Santa Barbara
Nesic, Dragan — Univ. of Melbourne
Loria, Antonio — CNRS
Panteley, Elena V. — CNRS

10:30-11:50 — ThAIn6.4
Tracking Control of the Trident Snake Robot with the Transverse Function Approach, pp. 4137-4143.
Ishikawa, Masato — Kyoto Univ.
Morin, Pascal — INRIA
Samson, Claude — INRIA Sophia-Antipolis

10:30-11:50 — ThAIn6.5
Interval T-S Fuzzy Model and Its Application to Identification of Nonlinear Interval Dynamic System Based on Interval Data, pp. 4144-4149.
Xu, Zhengguang — Univ. of Science and Tech. Beijing
Sun, Changping — Univ. of Science and Tech. Beijing

10:30-11:50 — ThAIn6.6
Static Output Feedback Controller Design for Takagi-Sugeno Systems – a Fuzzy Lyapunov LMI Approach, pp. 4150-4155.
Bouarar, Tahar — Univ. de Reims Champagne Ardenne
Guelton, Kevin — Univ. de Reims Champagne-Ardenne
Manamanni, Noureddine — Univ. of Reims

10:30-11:50 — ThAIn6.7
A Fuzzy Cross-Coupled Linear Quadratic Regulator for Improving the Contour Accuracy of Bi-Axis Machine Tools, pp. 4156-4161.
Fuh, Chyun-Chau — National Taiwan Ocean Univ.
Tsai, Hsun-Heng — National Pingtung Univ. of Science and Tech.
Huang, Chang-Cheng — National Taiwan Ocean Univ.

10:30-11:50 — ThAIn6.8
Asymptotically Necessary and Sufficient Stability with Respect to Nonquadratic Lyapunov Function for Takagi-Sugeno Model, pp. 4162-4167.
Ding, Baocang — Chongqing Univ.
Zou, Tao — Zhejiang Univ. of Tech.

10:30-11:50 — ThAIn6.9
Robust Control of T-S Fuzzy Systems with Time-Varying Delay : New Approach, pp. 4168-4173.
Gassara, Hamdi — Univ. of Picardie Jules Verne
El Hajjaji, Ahmed — Univ. de Picardie-Jules Verne
Chaabane, Mohamed — Univ. of Sfax

10:30-11:50 — ThAIn6.10
A Fast and Parsimonious Fuzzy Neural Network (FPFNN) for Function Approximation, pp. 4174-4179.
Wang, Ning — Dalian Maritime Univ.
Meng, Xianyao — Dalian Maritime Univ.
Xu, Qingyang — Dalian Maritime Univ.

10:30-11:50 — ThAIn6.11
Controllability and Observability of Uncertain Systems: A Robust Measure, pp. 4180-4186.
Sojoudi, Somayeh — California Inst. of Tech.
Lavaei, Javad — California Inst. of Tech.
Aghdam, Amir G. — Concordia Univ.

10:30-11:50 — ThAIn6.12
Nonlinear Adaptive Generalized Predictive Control Method Based on ANFIS and Switching Control, pp. 4187-4192.
Zhang, Yajun — Northeastern Univ.
Chai, Tianyou — Northeastern Univ.
Niu, Hong — Northeastern Univ.
Zuo, Jiwen — Dachang Senior Experimental Middle School, China.

10:30-11:50 — ThAIn6.13

Type-II T-S Fuzzy Model-Based Predictive Control, pp. 4193-4198.
Liao, Qianfang — Shanghai Jiao Tong Univ.
Li, Ning — Shanghai Jiao Tong Univ.
Li, Shaoyuan — Shanghai Jiao Tong Univ.

ThB01 3D
Stability of Nonlinear Systems (Regular Session)
Chair: Ito, Hiroshi — Kyushu Inst. of Tech.
Co-Chair: Andrieu, Vincent — Univ. de Toulouse

14:10-14:30 ThB01.1
Asymptotic Stabilization of Passive Systems without Damping Injection: A Sampled Integral–Approximation Technique, pp. 4199-4203.
Casagrande, Daniele — Univ. of Udine
Astolfi, Alessandro — Imperial Coll. & Univ. of Rome
Ortega, Romeo — LSS-SUPELEC

14:30-14:50 ThB01.2
Lyapunov Formulation of ISS Small-Gain in Dynamical Networks, pp. 4204-4209.
Liu, Tengfei — The Australian National Univ.
Hill, David J. — The Australian National Univ.
Jiang, Zhong-Ping — Pol. Inst. NYU

14:50-15:10 ThB01.3
On a Small Gain Theorem for Networks of Iiss Systems, pp. 4210-4215.
Ito, Hiroshi — Kyushu Inst. of Tech.
Dashkovskiy, Sergey — Univ. of Bremen
Wirth, Fabian R. — Univ. Würzburg

15:10-15:30 ThB01.4
Provably Convergent Structure and Motion Estimation for Perspective Systems, pp. 4216-4221.
Heyden, Anders — Lund Univ.
Dahl, Ola — DDA Consulting AB

15:30-15:50 ThB01.5
Synchronization of Nonlinear Pendulum-Like Systems, pp. 4222-4227.
Lu, Pingli — Beijing Inst. of Tech.
Yang, Ying — Peking Univ.

15:50-16:10 ThB01.6
Synthesis of a Global Asymptotic Stabilizing Feedback Law for a System Satisfying Two Different Sector Conditions, pp. 4228-4233.
Andrieu, Vincent — Univ. de Toulouse & Univ. de Lyon
Prieur, Christophe — LAAS-CNRS
Tarbouriech, Sophie — LAAS-CNRS
Arzelier, Denis — LAAS-CNRS

ThB02 3E
Control of Switched Systems (Regular Session)
Chair: Michalska, Hannah H. — McGill Univ.
Co-Chair: Buchstaller, Dominic Pasqual — Univ. of Southampton

14:10-14:30 ThB02.1
Robust Stability and Performance Analysis for Multiple Model Adaptive Controllers, pp. 4234-4239.
Buchstaller, Dominic Pasqual — Imperial Coll. London
French, Mark — Univ. of Southampton

14:30-14:50 ThB02.2
Variable Structure Model Reference Adaptive Control of Unknown Switched Linear Systems with Relative Degree Greater Than One, pp. 4240-4245.
Chiang, Ming-Li — National Taiwan Univ.
Fu, Li-Chen — National Taiwan Univ.

14:50-15:10 ThB02.3
Robust Exponential Stabilization of Switched Linear Systems, pp. 4246-4251.
Raouf, Jamila — Ec. Pol. de Montréal
Michalska, Hannah H. — McGill Univ.

15:10-15:30 ThB02.4
An Intelligent Mill Load Switching Control of Pulverizing System for an Alumina Sintering Process, pp. 4252-4257.
Zhang, Liyan — Northeastern Univ.
Chai, Tianyou — Northeastern Univ.
Wang, Hong — The Univ. of Manchester

15:30-15:50 ThB02.5
Passive Control for Networked Switched Systems with Network-Induced Delays and Packet Dropout, pp. 4258-4263.
Ma, Dan — Northeastern Univ.
Guo, Zhongfeng — shenyang Univ. of Tech.
Dimirovski, Georgi M — Dogus Univ. of Istanbul
Zhao, Jun — The Australian National Univ.

15:50-16:10 ThB02.6
Switched Feedback Equivalence of a Class of Planar Switched Nonlinear Systems, pp. 4264-4269.

Barkhordari Yazdi, Mojtaba — Iran Univ. of science and Tech.
Jahed Motlagh, Mohammad Reza — Iran Univ. of Science and Tech.
Attia, Sid Ahmed — TU-Berlin
Raisch, Joerg — Tech. Univ. Berlin

ThB03 3C
Linear Systems (Regular Session)

Chair: Malabre, Michel — CNRS
Co-Chair: Delvenne, Jean-Charles — Univ. catholique de Louvain

14:10-14:30 ThB03.1
Implicit Systems Reachability: A Geometric Point of View, pp. 4270-4275.
Bonilla, Moises E. — CINVESTAV-IPN
Malabre, Michel — CNRS
Loiseau, Jean Jacques — CNRS

14:30-14:50 ThB03.2
Dual Invariance Structure of Controllability and Observability, pp. 4276-4281.
Hashimoto, Tomoaki — Osaka Univ.
Amemiya, Takashi — Setsunan Univ.

14:50-15:10 ThB03.3
On Positive Real Lemma for Stabilizable and Detectable Systems, pp. 4282-4287.
Kunimatsu, Sadaaki — Kumamoto Univ.
Fujii, Takao — Fukui Univ. of Tech.
Ishitobi, Mitsuaki — Kumamoto Univ.

15:10-15:30 ThB03.4
A Characterisation of Solution Sets of LTI Differential Equations, pp. 4288-4291.
Delvenne, Jean-Charles — Univ. catholique de Louvain
Ivanov, Tzvetan — Univ. Catholique de Louvain

15:30-15:50 ThB03.5
Solution of the Disturbance Decoupling Problem Based on Fixed Poles, pp. 4292-4297.
Zou, Runmin — Ec. Centrale de Nantes, France
Malabre, Michel — CNRS

15:50-16:10 ThB03.6
Frequency-Weighted Discrete-Time LPV Model Reduction Using Structurally Balanced Truncation, pp. 4298-4303.
Abbas, Hossam Seddik — Hamburg Univ. of Tech.
Werner, Herbert — Hamburg Univ. of Tech.

ThB04 3A
Methods for Analysis and Reduction of Large-Scale Systems I (Invited Session)

Chair: Antoulas, Athanasios C. — Rice Univ.
Co-Chair: Trentelman, Harry L. — Univ. of Groningen
Organizer: Antoulas, Athanasios C. — Rice Univ.
Organizer: Rapisarda, Paolo — Univ. of Southampton

14:10-14:30 ThB04.1
A Behavioral Approach to Passivity and Bounded Realness Preserving Balanced Truncation with Error Bounds (I), pp. 4304-4309.
Trentelman, Harry L. — Univ. of Groningen
Rapisarda, Paolo — Univ. of Southampton

14:30-14:50 ThB04.2
Positive and Bounded Real Balancing for Nonlinear Systems - a Controllability and Observability Function Approach (I), pp. 4310-4315.
Ionescu, Tudor C. — Rijksuniversiteit Groningen
Fujimoto, Kenji — Nagoya Univ.
Scherpen, Jacquelien M.A. — Univ. of Groningen

14:50-15:10 ThB04.3
Discrete Empirical Interpolation for Nonlinear Model Reduction (I), pp. 4316-4321.
Chaturantabut, Saifon — Rice Univ.
Sorensen, Danny C. — Rice Univ.

15:10-15:30 ThB04.4
Structure-Preserving Model Reduction of Complex Physical Systems (I), pp. 4322-4327.
van der Schaft, Arjan J. — Univ. of Groningen
Polyuga, Rostyslav — Univ. of Groningen

15:30-15:50 ThB04.5
Parametric Model Order Reduction Accelerated by Subspace Recycling (I), pp. 4328-4333.
Feng, Lihong — Univ. of Freiburg
Benner, Peter — TU Chemnitz
Korvink, Jan G. — Freiburg Univ.

15:50-16:10 ThB04.6
Balanced State-Space Representations: A Polynomial Algebraic Approach (I), pp. 4334-4339.
Rapisarda, Paolo — Univ. of Southampton
Trentelman, Harry L. — Univ. of Groningen

ThB05 3J

Optimization (Regular Session)

Chair: Sigalotti, Mario — INRIA Nancy - Grand Est
Co-Chair: Lu, Yong-Zai — Zhejiang Univ.

14:10-14:30 ThB05.1

Two-Dimensional Almost-Riemannian Structures with Tangency Points, pp. 4340-4345.

Agrachev, Andrei A. — Int. School for Advanced Studies
Boscain, Ugo V. — CNRS
Charlot, Gregoire — Inst. Fourier, UMR 5582
Ghezzi, Roberta — International School for Advanced Studies
Sigalotti, Mario — INRIA Nancy - Grand Est

14:30-14:50 ThB05.2

Newton Geodesic Optimization on Special Linear Group, pp. 4346-4351.

Li, Guangwei — Shenyang Insititute of Automation, CAS; Deptment of Management S
Liu, Yunpeng — Shenyang Inst. of Automation,CAS
Shi, Zelin — Shenyang Inst. of Automation, CAS
Yin, Jian — Res. Inst. on General Development and Argumentation of A

14:50-15:10 ThB05.3

Survey on Computational Complexity with Phase Transitions and Extremal Optimization, pp. 4352-4359.

Zeng, Guoqiang — Zhejiang Univ.
Lu, Yong-Zai — Zhejiang Univ.

15:10-15:30 ThB05.4

Kernel Regression for Travel Time Estimation Via Convex Optimization, pp. 4360-4365.

Blandin, Sebastien — Univ. of California
El Ghaoui, Laurent M. — Univ. of California at Berkeley
Bayen, Alexandre M. — Univ. of California at Berkeley

15:30-15:50 ThB05.5

An Application of Sequential Convex Programming to Time Optimal Trajectory Planning for a Car Motion, pp. 4366-4371.

Tran, Dinh Quoc — Katholieke Univ. Leuven, Belgium
Diehl, Moritz — Katholieke Univ. Leuve

15:50-16:10 ThB05.6

Distributed Multiuser Optimization: Algorithms and Error Analysis, pp. 4372-4377.

Koshal, Jayash — Univ. of Illinois, Urbana-Champaign
Nedich, Angelia — Univ. of Illinois, Urbana-Champaign
Shanbhag, Uday V. — Univ. of Illinois, Urbana-Champaign

ThB06 3G

Mechanical and Nonholonomic Systems (Regular Session)

Chair: Ishikawa, Masato — Kyoto Univ.
Co-Chair: Hauser, John — Univ. of Colorado at Boulder

14:10-14:30 ThB06.1

Sufficient Conditions for Dissipativity on Duhem Hysteresis Model, pp. 4378-4383.

Jayawardhana, Bayu — Univ. of Groningen
Andrieu, Vincent — Univ. de Toulouse & Univ. de Lyon

14:30-14:50 ThB06.2

Dynamic Feedback Robust Regulation of Nonholonomic Mobile Robots Based on Visual Servoing, pp. 4384-4389.

Wang, Chaoli — The Univ. of ShanghaiForScienceandTechnology,Shanghai,20009
Liang, Zhenying — Univ. of Shanghai for Science and Tech.
Liu, Yun Hui — The Chinese Univ. of Hong Kong

14:50-15:10 ThB06.3

Nilpotent Normal Form for Non-Chained Driftless Systems: Characterization of the Cross-Chained Form, pp. 4390-4395.

Ishikawa, Masato — Kyoto Univ.
Kuroiwa, Takuto — Kyoto Univ.

15:10-15:30 ThB06.4

Development and Exploration of a Rigid Motorcycle Model, pp. 4396-4401.

MacMillin, Peter — Univ. of Colorado
Hauser, John — Univ. of Colorado at Boulder

15:30-15:50 ThB06.5

Casting Motion Controller for Multilinked Manipulator Utilizing Output Zeroing, pp. 4402-4407.

Numata, Tsubasa — Tokyo Inst. of Tech.
Nakaura, Shigeki — Sasebo National Coll. of Tech.
Sampei, Mitsuji — Tokyo Inst. of Tech.

15:50-16:10 ThB06.6

Finite-Time Tracking Controller Design for a General Class of Nonholonomic Systems, pp. 4408-4413.

Wu, Yuqiang — Qufu Normal Univ.
Yuan, Ruiying — Qufu Normal Univ.
Zheng, Xiuyun — Qufu Normal Univ.

ThB07 5C

Filtering and Estimation III (Regular Session)

Chair: Hassibi, Babak — Caltech
Co-Chair: Kaasa, Glenn-Ole — StatoilHydro ASA

14:10-14:30 — ThB07.1
Adaptive Observer Design for Nonlinear Systems with Parametric Uncertainties in Unmeasured State Dynamics, pp. 4414-4419.
Stamnes, Řyvind Nistad — Norwegian Univ. of Science & Tech.
Zhou, Jing — International Res. Inst. of Stavanger
Aamo, Ole Morten — NTNU
Kaasa, Glenn-Ole — StatoilHydro ASA

14:30-14:50 — ThB07.2
Delay-Dependent Filtering for Discrete-Time Systems with Finite Frequency Small Gain Specifications, pp. 4420-4425.
Zhang, Xiao-Ni — Northeastern Univ.
Yang, Guang-hong — Northeastern Univ.

14:50-15:10 — ThB07.3
Optimal Time-Delayed Joint Input and State Estimation for Systems with Unknown Inputs, pp. 4426-4431.
Hsieh, Chien-Shu — Ta Hwa Inst. of Tech.

15:10-15:30 — ThB07.4
Smoother Design for Linear Uncertain Time-Delay Systems, pp. 4432-4437.
Zhang, Mei — Shandong Jianzhu Univ.
Zhao, Hongguo — Taishan Univ.
Cui, Peng — Shandong Univ.

15:30-15:50 — ThB07.5
Robust H_; Filtering for Nonlinear Uncertain Systems Using State-Dependent Riccati Equation Technique, pp. 4438-4445.
Beikzadeh, Hossein — K.N. Toosi Univ. of Tech.
Taghirad, Hamid D. — K.N. Toosi U. of Tech.

15:50-16:10 — ThB07.6
The Kalman Like Particle Filter : Optimal Estimation with Quantized Innovations/Measurements, pp. 4446-4451.
Sukhavasi, Ravi Teja — California Inst. of Tech.
Hassibi, Babak — Caltech

ThB08 — 3I
Distributed Parameter Systems II (Regular Session)

Chair: Krstic, Miroslav — Univ. of California at San Diego
Co-Chair: Guo, Bao-Zhu — The Chinese Acad. of Sciences

14:10-14:30 — ThB08.1
Control of an Unstable Reaction-Diffusion PDE with Long Input Delay, pp. 4452-4457.
Krstic, Miroslav — Univ. of California at San Diego

14:30-14:50 — ThB08.2
Dead-Time Compensation for Wave/String PDEs, pp. 4458-4463.
Krstic, Miroslav — Univ. of California at San Diego

14:50-15:10 — ThB08.3
Boundary Model Predictive Control of Kuramoto-Sivashinsky Equation with Input and Point State Constraints, pp. 4464-4470.
Dubljevic, Stevan — UCLA

15:10-15:30 — ThB08.4
Frequency Analysis of a Wave Equation with Kelvin-Voigt Damping, pp. 4471-4476.
Guo, Bao-Zhu — The Chinese Acad. of Sciences
Wang, Jun-Min — Beijing Inst. of Tech.
Zhang, Guo-Dong — Heilongjiang Univ.

15:30-15:50 — ThB08.5
Output Stabilization of Euler Beam with Time Delay, pp. 4477-4482.
Guo, Bao-Zhu — The Chinese Acad. of Sciences
Yang, Kunyi — Acad. Sinica

15:50-16:10 — ThB08.6
State Observation Problem for the Euler-Bernoulli Plate Equation, pp. 4483-4486.
Li, Jing — Southwestern Univ. of Finance and Ec.
Zhang, Zhixiong — Sichuan Univ.

ThB09 — 3H
Modeling, Estimation and Control: Applications in Neuroscience (Invited Session)

Chair: Takahashi, Kazutaka — Univ. of Chicago
Co-Chair: Wu, Si — Inst. of Neuroscience
Organizer: Takahashi, Kazutaka — Univ. of Chicago

14:10-14:30 — ThB09.1
On the Condition for Fast Neural Computation (I), pp. 4487-4492.
Wu, Si — Inst. of Neuroscience
Amari, Shun-ichi — Riken

14:30-14:50 — ThB09.2
The Parabigeminal Nucleus As a Recursive Estimator (I), pp. 4493-4498.

Ma, Rui — Univ. of Illinois, Urbana-Champaign
Coleman, Todd — Univ. of Illinois
Malpeli, Joseph — Univ. of Illinois, Urbana-Champaign

14:50-15:10 ThB09.3
Motor Planning As an Optimization of Command Representation (I), pp. 4499-4504.
Ikeda, Shiro — The Inst. of Statistical Mathematics
Sakaguchi, Yutaka — The Univ. of Electro-Communications

15:10-15:30 ThB09.4
A Dual Adaptive Control Theory Inspired by Hebbian Associative Learning (I), pp. 4505-4510.
Feng, Jun-e — Shandong Univ.
Tin, Chung — Massachusetts Inst. of Tech.
Poon, Chi-Sang — Massachusetts Inst. of Tech.

15:30-15:50 ThB09.5
Optimal Control and Tracking with Eye Movement Dynamics with and without the Listing's Constraint, pp. 4511-4516.
Ghosh, Bijoy — Texas Tech. Univ.
Meegaskumbura, Rochana — Texas Tech. Univ.
Ekanayake, Mervyn Parakrama B. — Texas Tech. Univ.

15:50-16:10 ThB09.6
Cell Design in Bacteria As a Convex Optimization Problem, pp. 4517-4522.
Goelzer, Anne — INRA
Fromion, Vincent — INRA
Scorletti, Gerard — Ec. Centrale de Lyon

ThB10 — 5D
Adaptive Control: Applications I (Regular Session)

Chair: Ydstie, B. Erik — Carnegie Mellon
Co-Chair: Tang, Yu — National Univ. of Mexico

14:10-14:30 ThB10.1
Identification and Stabilization for a One-Dimensional Wave Equation with Boundary Output Unknown Constant and Non-Collocated Control, pp. 4523-4528.
Guo, Wei — Univ. of International Business and Ec.
Guo, Bao-Zhu — The Chinese Acad. of Sciences

14:30-14:50 ThB10.2
Passivity-Based Adaptive Inventory Control, pp. 4529-4534.
Li, Keyu — Carnegie Mellon Univ.
Chan, Kwong Ho — Carnegie Mellon Univ.
Ydstie, B. Erik — Carnegie Mellon

14:50-15:10 ThB10.3
Spacecraft Attitude Maneuvers Using Composite Adaptive Control with Invariant Sliding Manifold, pp. 4535-4540.
Dando, Aaron — Univ. of Queensland

15:10-15:30 ThB10.4
Discrete Time Extremum Seeking by Autonomous Vehicles in a Stochastic Environment, pp. 4541-4546.
Stankovic, Milos S. — Univ. of Illinois, Urbana-Champaign
Stipanovic, Dusan M. — Univ. of Illinois, Urbana-Champaign

15:30-15:50 ThB10.5
A Decentralized Adaptive Control for Interconnected Lagrangian Systems, pp. 4547-4552.
Flores, Juan Francisco — National Univ. of Mexico
Tang, Yu — National Univ. of Mexico

15:50-16:10 ThB10.6
Kalman Filtering for Linear Discrete-Time Systems with Multiple Delayed Noises, pp. 4553-4558.
Cui, Peng — Shandong Univ.
Zhang, Huanshui — Shandong Univ.
Zhang, Chenghui — Shandong Univ.
Zhao, Hongguo — Taishan Univ.

ThB11 — 5J
Modeling, Analysis and Synthesis in Biological Systems (Invited Session)

Chair: Altafini, Claudio — SISSA
Co-Chair: Angeli, David — Imperial Coll.
Organizer: Altafini, Claudio — SISSA
Organizer: Angeli, David — Imperial Coll.

14:10-14:30 ThB11.1
On Persistence of Chemical Reaction Networks with Time-Dependent Kinetics and No Global Conservation Laws (I), pp. 4559-4564.
Angeli, David — Imperial Coll.
De Leenheer, Patrick — Univ. of Florida
Sontag, Eduardo D. — Rutgers Univ.

14:30-14:50 ThB11.2
On the Compromise between Retroactivity Attenuation and Noise Amplification in Gene Regulatory Networks (I), pp. 4565-4571.
Jayanthi, Shridhar — Univ. of Michigan

Del Vecchio, Domitilla — Univ. of Michigan

14:50-15:10 — ThB11.3

Kinetic Perturbations As Robustness Analysis Tool for Biochemical Reaction Networks (I), pp. 4572-4577.

Waldherr, Steffen — Univ. of Stuttgart
Allgower, Frank — Univ. of Stuttgart
Jacobsen, Elling — Royal Inst. of Tech. - KTH

15:10-15:30 — ThB11.4

Short and Long-Term Adaptation in Olfactory Transduction As a Leaky Integral Feedback (I), pp. 4578-4583.

De Palo, Giovanna — SISSA Int. School for Advanced Studies
Boccaccio, Anna — Italian Inst. of Tech.
Menini, Anna — SISSA Int. School for Advanced Studies
Altafini, Claudio — SISSA

15:30-15:50 — ThB11.5

Design of Insulating Devices for in Vitro Synthetic Circuits (I), pp. 4584-4589.

Franco, Elisa — California Inst. of Tech.
Del Vecchio, Domitilla — Univ. of Michigan
Murray, Richard M. — California Inst. of Tech.

15:50-16:10 — ThB11.6

Models for Human Postural Regulation That Include Realistic Delays and Partial Observations, pp. 4590-4595.

Li, Yao — Univ. of Maryland at Coll. Park
Levine, William S. — Univ. of Maryland

ThB12 — 5E

Integrated Vehicle Dynamics and Control II (Invited Session)

Chair: Lu, Jianbo — Ford Motor Company
Co-Chair: Yi, Jingang — Rutgers Univ.
Organizer: Lu, Jianbo — Ford Motor Company
Organizer: Lin, Zongli — Univ. of Virginia
Organizer: Lu, Xiao-Yun — Univ. of California at Berkeley
Organizer: Tsiotras, Panagiotis — Georgia Inst. of Tech.

14:10-14:30 — ThB12.1

Vehicle Lateral Stability Control Via Approximated NMPC: Real-Time Implementation and Software-In-The-Loop Test (I), pp. 4596-4601.

Canale, Massimo — Pol. di Torino
Fagiano, Lorenzo — Pol. di Torino
Razza, Valentino — Pol. di Torino

14:30-14:50 — ThB12.2

Adaptive Williams Filters with Application to Suspension Control: The Vector Case (I), pp. 4602-4606.

Readman, Mark — National Univ. of Ireland
Corless, Martin J. — Purdue Univ.
Villegas, Carlos — National Univ. of Ireland
Shorten, Robert — Nat. Univ. of Ireland

14:50-15:10 — ThB12.3

Map-Aided GPS/INS Localization Using a Low-Order Constrained Unscented Kalman Filter (I), pp. 4607-4612.

Li, Kang — Univ. of California, Berkeley
Tan, Han-Shue — Univ. of California at Berkeley
Hedrick, Karl — Univ. of California at Berkeley

15:10-15:30 — ThB12.4

Autonomous Motorcycles for Agile Maneuvers, Part I: Dynamic Modeling (I), pp. 4613-4618.

Yi, Jingang — Rutgers Univ.
Zhang, Yizhai — Xi'an Jiaotong Univ.
Song, Dezhen — Texas A&M Univ.

15:30-15:50 — ThB12.5

Autonomous Motorcycles for Agile Maneuvers, Part II: Control Systems Design (I), pp. 4619-4624.

Yi, Jingang — Rutgers Univ.
Zhang, Yizhai — Xi'an Jiaotong Univ.
Song, Dezhen — Texas A&M Univ.

15:50-16:10 — ThB12.6

A Preliminary Study to Integrate LTV-MPC Lateral Vehicle Dynamics Control with a Slip Control, pp. 4625-4630.

Palmieri, Giovanni — Univ. degli Studi del Sannio
Barbarisi, Osvaldo — Univ. del Sannio
Glielmo, Luigi — Univ. of Sannio
Scala, Stefano — ELASIS

ThB13 — 5A

Learning and Control II (Invited Session)

Chair: Meyn, Sean — Univ. of Illinois
Co-Chair: Mehta, Prashant G. — Univ. of Illinois, Urbana-Champaign
Organizer: Meyn, Sean — Univ. of Illinois
Organizer: Mannor, Shie — McGill Univ.
Organizer: Mehta, Prashant G. — Univ. of Illinois, Urbana-Champaign

Organizer: Surana, Amit — United Tech. Res. Center

14:10-14:30 — ThB13.1

Polynomial-Time Solution of Change Detection Problems (I), pp. 4631-4636.

Isom, Joshua D. — Sikorsky Aircraft Corp.
LaBarre, Bob — United Tech. Res. Center
Braatz, Richard D. — Univ. of Illinois, Urbana-Champaign

14:30-14:50 — ThB13.2

Statistical Shape Learning for 3D Tracking (I), pp. 4637-4642.

Sandhu, Romeil — Georgia Inst. of Tech.
Lankton, Shawn — Georgia Inst. of Tech.
Dambreville, Samuel — Georgia Inst. of Tech.
Tannenbaum, Allen — Georgia Tech.

14:50-15:10 — ThB13.3

Tracking Moving Object Via a Sensor Network with Partial Information Broadcasting Scheme (I), pp. 4643-4648.

Li, Jianghai — Tsinghua Univ.
Jia, Qing-Shan — Tsinghua Univ.
Guan, Xiaohong — Xian Jiaotong Univ.
Chen, Xi — Tsinghua Univ.

15:10-15:30 — ThB13.4

Nash Equilibrium Problems with Congestion Costs and Shared Constraints (I), pp. 4649-4654.

Yin, Huibing — Univ. of Illinois, Urbana-Champaign
Shanbhag, Uday V. — Univ. of Illinois, Urbana-Champaign
Mehta, Prashant G. — Univ. of Illinois, Urbana-Champaign

15:30-15:50 — ThB13.5

Risk Sensitive Robust Support Vector Machines (I), pp. 4655-4661.

Xu, Huan — The Univ. of Texas at Austin
Caramanis, Constantine — The Univ. of Texas at Austin
Mannor, Shie — McGill Univ.
Yun, Sungho — The Univ. of Texas at Austin

15:50-16:10 — ThB13.6

Anomaly Detection Using Projective Markov Models in a Distributed Sensor Network (I), pp. 4662-4669.

Meyn, Sean — Univ. of Illinois
Surana, Amit — United Tech. Res. Center
Lin, Yiqing — United Tech. Res. Center
Narayanan, Satish — United Tech. Res. Center

ThB14 — 5B

Convexification in Identification with Applications (Regular Session)

Chair: Chiuso, Alessandro — Univ. di Padova
Co-Chair: Sznaier, Mario — Northeastern Univ.

14:10-14:30 — ThB14.1

A Convex Approximation for Parameter Estimation Involving Parameter-Affine Dynamic Models, pp. 4670-4675.

Bonilla, Julian — K.U. Leuven
Diehl, Moritz — Katholieke Univ. Leuve
Logist, Filip — Katholieke Univ. Leuven
De Moor, Bart L.R. — Katholieke Univ. Leuven
Van Impe, Jan F.M. — Katholieke Univ. Leuven

14:30-14:50 — ThB14.2

Semidefinite Programming Methods for System Realization and Identification, pp. 4676-4681.

Liu, Zhang — Univ. of California, Los Angeles
Vandenberghe, Lieven — Univ. of California at Los Angeles

14:50-15:10 — ThB14.3

Identification of Nonlinearly Parameterized Nonlinear Models: Application to Mass Balance Systems, pp. 4682-4685.

Liu, Xiangbin — Zhejiang Univ.
Ortega, Romeo — LSS-SUPELEC
Su, Hongye — Zhejiang Univ.
Chu, Jian — Zhejiang Univ.

15:10-15:30 — ThB14.4

Robust Identification of Switched Affine Systems Via Moments–Based Convex Optimization, pp. 4686-4691.

Ozay, Necmiye — Northeastern Univ.
Lagoa, Constantino M. — Pennsylvania State Univ.
Sznaier, Mario — Northeastern Univ.

15:30-15:50 — ThB14.5

System Identification Via Nuclear Norm Regularization for Simulated Moving Bed Processes from Incomplete Data Sets, pp. 4692-4697.

Grossmann, Cristian — ETH Zurich
Jones, Colin Neil — ETH Zurich
Morari, Manfred — ETH Zurich

15:50-16:10 — ThB14.6

A Bayesian Learning Approach to Linear System Identification with Missing Data, pp. 4698-4703.

Pillonetto, Gianluigi — Univ. of Padova
Chiuso, Alessandro — Univ. di Padova

ThB15 — 3B
Stochastic Systems II (Regular Session)

Chair: Teel, Andrew R. — Univ. of California at Santa Barbara
Co-Chair: Huang, Minyi — Carleton Univ.

14:10-14:30 — ThB15.1
An Algebraic Approach for the NCE Principle with Massive Subpopulations, pp. 4704-4709.
Huang, Minyi — Carleton Univ.

14:30-14:50 — ThB15.2
A Simulation-Based Method for Aggregating Markov Chains, pp. 4710-4716.
Deng, Kun — Univ. of Illinois, Urbana-Champaign
Mehta, Prashant G. — Univ. of Illinois, Urbana-Champaign
Meyn, Sean — Univ. of Illinois

14:50-15:10 — ThB15.3
Management of Electric Vehicle Charging to Mitigate Renewable Generation Intermittency and Distribution Network Congestion, pp. 4717-4722.
Caramanis, Michael C. — Boston Univ.
Foster, Justin M. — Boston Univ.

15:10-15:30 — ThB15.4
Quickest Detection in Coupled Systems, pp. 4723-4728.
Hadjiliadis, Olympia — City Univ. of New York
Schaefer, Tobias — City Univ. of New York
Poor, H. Vincent — Princeton Univ.

15:30-15:50 — ThB15.5
Preliminary Results on the Existence of Continuous Lyapunov Functions for Semicontinuous, Stochastic Discrete-Time Systems, pp. 4729-4734.
Teel, Andrew R. — Univ. of California at Santa Barbara

15:50-16:10 — ThB15.6
Multi-User Scalable Video Rate Control in Cognitive Radio Networks As a Markovian Dynamic Game, pp. 4735-4740.
Hassan, Mansour — UBC
Huang, Jane W. — Univ. of British Columbia
Krishnamurthy, Vikram — Univ. of British Columbia

ThB16 — 5F
Consensus and Agreement Algorithms (Regular Session)

Chair: Papachristodoulou, Antonis — Univ. of Oxford
Co-Chair: Zhai, Guisheng — Osaka Prefecture Univ.

14:10-14:30 — ThB16.1
General Distributed Protocols for Finite-Time Consensus of Multi-Agent Systems, pp. 4741-4746.
Xiao, Feng — Beijing Inst. of Tech.
Wang, Long — Peking Univ.
Chen, Jie — Beijing Inst. of Tech.

14:30-14:50 — ThB16.2
H2 Performance of Agreement Protocol with Noise: An Edge Approach, pp. 4747-4752.
Zelazo, Daniel — Univ. of Washington
Mesbahi, Mehran — Univ. of Washington

14:50-15:10 — ThB16.3
Multiscale Networks for Distributed Consensus Algorithms, pp. 4753-4758.
Selle, Christina — Stanford Univ.
West, Matthew — Univ. of Illinois, Urbana-Champaign

15:10-15:30 — ThB16.4
Distributed Discrete-Time Nonlinear Consensus Protocols, pp. 4759-4764.
Zhou, Jing — Penn State Univ.
Wang, Qian — Penn State Univ.

15:30-15:50 — ThB16.5
Generalized Nyquist Consensus Condition for High-Order Linear Multi-Agent Systems with Communication Delays, pp. 4765-4771.
Muenz, Ulrich — Univ. of Stuttgart
Papachristodoulou, Antonis — Univ. of Oxford
Allgower, Frank — Univ. of Stuttgart

15:50-16:10 — ThB16.6
An Extended Consensus Algorithm for Multi-Agent Systems, pp. 4772-4777.
Zhai, Guisheng — Osaka Prefecture Univ.
Okuno, Shohei — Osaka Prefecture Univ.
Imae, Joe — Osaka Prefecture Univ.
Kobayashi, Tomoaki — Osaka Prefecture Univ.

ThB17 — 5H

Network Models and Analysis (Regular Session)

Chair: Aeyels, Dirk — Ghent Univ.
Co-Chair: Giarre, Laura — Univ. Di Palermo

14:10-14:30 ThB17.1
Cluster Transitions in a Multi-Agent Clustering Model, pp. 4778-4784.
De Smet, Filip — Ghent Univ.
Aeyels, Dirk — Ghent Univ.

14:30-14:50 ThB17.2
An Explicit Formula for Differences between Laplacian-Eigenvector Components Using Coalesced Graphs, pp. 4785-4789.
Roy, Sandip — Washington State Univ.
Wan, Yan — Washington State Univ.

14:50-15:10 ThB17.3
Trust Estimation in Autonomic Networks: A Statistical Mechanics Approach, pp. 4790-4795.
Ermon, Stefano — Cornell Univ.
Schenato, Luca — Univ. of Padova
Zampieri, Sandro — Univ. di Padova

15:10-15:30 ThB17.4
Reduced Complexity Models in the Identification of Dynamical Networks: Links with Sparsification Problems, pp. 4796-4801.
Materassi, Donatello — Univ. of Minnesota
Innocenti, Giacomo — Univ. di Firenze
Giarre, Laura — Univ. Di Palermo

15:30-15:50 ThB17.5
Spectral Analysis of Virus Spreading in Random Geometric Networks, pp. 4802-4807.
Preciado, Victor M. — Univ. of Pennsylvania
Jadbabaie, Ali — Univ. of Pennsylvania

15:50-16:10 ThB17.6
Minimal Dynamical Structure Realisations with Application to Network Reconstruction from Data, pp. 4808-4813.
Yuan, Ye — Univ. of Cambridge
Stan, Guy-Bart Vincent — Univ. of Cambridge
Warnick, Sean — Brigham Young Univ.
Goncalves, Jorge M. — Univ. of Cambridge

ThB18 5I
Resource Allocation in Wireless Networks (Invited Session)

Chair: Yeh, Edmund — Yale Univ.
Co-Chair: Hariharan, Srikanth — The Ohio State Univ.
Organizer: Yeh, Edmund — Yale Univ.
Organizer: Berry, Randall — Northwestern Univ.
Organizer: Marbach, Peter — Univ. of Toronto

14:10-14:30 ThB18.1
Distributed and Optimal Reduced Primal-Dual Algorithm for Uplink OFDM Resource Allocation (I), pp. 4814-4819.
Zhang, Xiaoxin — Peking Univ.
Chen, Liang — Chinese Univ. of Hong Kong
Huang, Jianwei — The Chinese Univ. of Hong Kong
Chen, Minghua — The Chinese Univ. of Hong Kong
Zhao, Yuping — Peking Univ.

14:30-14:50 ThB18.2
On the Queue-Overflow Probabilities of Distributed Scheduling Algorithms (I), pp. 4820-4825.
Zhao, Can — Purdue Univ.
Lin, Xiaojun — Purdue Univ.

14:50-15:10 ThB18.3
Stochastic Optimization for Markov Modulated Networks with Application to Delay Constrained Wireless Scheduling (I), pp. 4826-4833.
Neely, Michael J. — Univ. of Southern California

15:10-15:30 ThB18.4
Exploring and Exploiting Routing Opportunities in Wireless Ad-Hoc Networks (I), pp. 4834-4839.
Bhorkar, Abhijeet — UCSD
Naghshvar, Mohammad — UCSD
Javidi, Tara — Univ. of California, San Diego
Rao, Bhaskar — Univ. of California San Diego

15:30-15:50 ThB18.5
Convergence and Stability of a Distributed CSMA Algorithm for Maximal Network Throughput (I), pp. 4840-4845.
Jiang, Libin — U.C. Berkeley
Walrand, Jean — Univ. of California at Berkeley

15:50-16:10 ThB18.6
Maximizing Aggregated Revenue in Sensor Networks under Deadline Constraints (I), pp. 4846-4851.
Hariharan, Srikanth — The Ohio State Univ.
Shroff, Ness B. — The Ohio State Univ.

ThTBTu Yellow River

Uncertainty: Theory, Computation and Applications (Tutorial Session)

Chair: Baras, John S. — Univ. of Maryland
Co-Chair: Kurzhanski, A.B. — Univ. of California, Berkeley

14:10-14:30 — ThTBTu.1
*On the Problem of Measurement Feedback Control under Set-Membership Uncertainty: From Theory to Computation (I)**.
Kurzhanski, A.B. — Lomonosov Moscow State Univ.

14:30-14:50 — ThTBTu.2
*Separation, Computation and Solution in Output Feedback Control (I)**.
Baras, John S. — Univ. of Maryland
Kurzhanski, A.B. — Lomonosov Moscow State Univ.

14:50-15:10 — ThTBTu.3
*Robust Output Feedback: Basic Theory and Extensions to Hybrid Dynamical Systems (I)**.
Baras, John S. — Univ. of Maryland

15:10-15:30 — ThTBTu.4
*Lyapunov and Invariance Methods: Conservative or Intractable (I)**.
Blanchini, Franco — Univ. degli Studi di Udine

15:30-15:50 — ThTBTu.5
*Controllability and Reachability under Set-Valued Constraints and Disturbances: Directions and Challenges (I)**.
Blanchini, Franco — Univ. degli Studi di Udine
Rakovic, Sasa V. — Imperial Coll. London

15:50-16:10 — ThTBTu.6
*Tube Model Predictive Control (I)**.
Rakovic, Sasa V. — Imperial Coll. London

ThBIn1 — Mandarin Hall
Iterative Learning and Fault Diagnosis (Interactive Session)

14:30-15:50 — ThBIn1.1
Iterative Learning Control for Spatio-Temporal Dynamics in an Nd Systems Setting, pp. 4852-4857.
Cichy, Blazej — Univ. of Zielona Gora
Galkowski, Krzysztof — Univ. of Zielona Gora
Rogers, Eric — Univ. of Southampton

14:30-15:50 — ThBIn1.2
Iterative Learning Control for Network Systems with Communication Delay or Data Dropout, pp. 4858-4863.
Liu, Chunping — Zhejiang Univ.
Xu, Jian-Xin — National Univ. of Singapore
Wu, Jun — Zhejiang Univ.

14:30-15:50 — ThBIn1.3
Iterative Learning Control Based on Strong Practical Stability of Repetitive Processes, pp. 4864-4869.
Dabkowski, Pawel Grzegorz — Nicolaus Copernicus Univ.
Galkowski, Krzysztof — Univ. of Zielona Gora
Rogers, Eric — Univ. of Southampton
Cai, Zhonglun — Univ. of Southampton
Freeman, Christopher T. — Univ. of Southampton
Lewin, Paul L. — Univ. of Southampton

14:30-15:50 — ThBIn1.4
Frequency-Domain Approach to Robust Iterative Learning Controller Design for Uncertain Time-Delay Systems, pp. 4870-4875.
Meng, Deyuan — Beihang Univ. (BUAA)
Jia, Yingmin — Beihang Univ.
Du, Junping — Beijing Univ. of Posts and Telecommunications
Yu, Fashan — Henan Pol. Univ.

14:30-15:50 — ThBIn1.5
Using 2D Systems Theory to Design Iterative Learning Control Laws with Multiple Reference Signals, pp. 4876-4881.
Bochniak, Jacek — Univ. of Zielona Gora
Galkowski, Krzysztof — Univ. of Zielona Gora
Rogers, Eric — Univ. of Southampton

14:30-15:50 — ThBIn1.6
H Infinity-Based Design Approach to Discrete-Time Learning Control Systems with Iteration-Varying Disturbances, pp. 4882-4887.
Meng, Deyuan — Beihang Univ. (BUAA)
Jia, Yingmin — Beihang Univ.
Du, Junping — Beijing Univ. of Posts and Telecommunications
Yu, Fashan — Henan Pol. Univ.

14:30-15:50 — ThBIn1.7
Sensor and Actuator Fault Detection and Isolation for a High Performance Aircraft Engine Bleed Air Temperature Control System, pp. 4888-4893.
Shang, Lan — Ryerson Univ.
Liu, Guangjun — Ryerson Univ.

14:30-15:50 — ThBIn1.8
On the Security of Linear Consensus Networks, pp. 4894-4901.

Pasqualetti, Fabio — Univ. of California, Santa Barbara
Bicchi, Antonio — Univ. di Pisa
Bullo, Francesco — Univ. California at Santa Barbara

14:30-15:50 ThBIn1.9
Actuator Fault Detection and Diagnosis Based on Morphology-Wavelet, pp. 4902-4907.
Zhang, Yi — Hebei Pol. Univ.
Hou, Guolian — North China Electric Power Univ.
Baojiang, Wu — Hebei Pol. Univ.

14:30-15:50 ThBIn1.10
Fault Detection and Isolation for Linear Discrete-Time Systems Using Input/Output Measurement Analysis, pp. 4908-4913.
Zhang, Ze — Imperial Coll. London
Jaimoukha, Imad M. — Imperial Coll. London

14:30-15:50 ThBIn1.11
An Extended Qualitative Multi-Faults Diagnosis from First Principles II: Algorithm and Case Study, pp. 4914-4919.
Hu, He-xuan — Univ. des Sci et Tech. Lille
Gehin, Anne-Lise — Univ. of Lille
Bayart, Mireille — Pol.

14:30-15:50 ThBIn1.12
Probing the NASA Generic Transport Aircraft in Real-Time for Health Monitoring, pp. 4920-4926.
Ruschmann, Matthew — Binghamton Univ.
Huang, Jianzhuang — Binghamton Univ.
Wu, Neng Eva — Binghamton Univ.

14:30-15:50 ThBIn1.13
Bayesian Method for Multimode Non-Gaussian Process Monitoring, pp. 4927-4932.
Ge, Zhiqiang — Zhejiang Univ.
Song, Zhi-Huan — Zhejiang Univ.
Zhang, MuGuang — Zhejiang Univ.
Fu, Ruowei — Zhejiang Univ.
Zhu, Zhi-Bo — Zhejiang Univ.

14:30-15:50 ThBIn1.14
Optimal Diagnostic Observer for Sampled-Data Systems, pp. 4933-4938.
Qiu, Aibing — Nanjing Univ. of Aeronautics and Astronautics
Wen, Chenglin — Hangzhou Dianzi Univ.
Jiang, Bin — Nanjing Univ. of Aeronautics & Astronautics

14:30-15:50 ThBIn1.15
Non-Invasive Valve Stiction Detection Using Wavelet Technology, pp. 4939-4944.
Xu, Zhanyang — 1,Nanjing Univ. of Posts and Telecommunications; 2,Nanjing
Zhan, Charles — Honeywell
Zhang, Shunyi — Nanjing Univ. of Posts and Telecommunications

ThBIn2 — Mandarin Hall
Topics in Networked Control (Interactive Session)

14:30-15:50 ThBIn2.1
Optimal Tracking and Performance Analysis for LTI Systems with Quantization Effect, pp. 4945-4950.
Qi, Tian — South China Univ. of Tech.
Su, Weizhou — South China Univ. of Tech.
Chen, Jie — Univ. of California at Riverside

14:30-15:50 ThBIn2.2
Step Tracking Control with Disturbance Rejection for Networked Control Systems with Random Time Delays, pp. 4951-4956.
Shi, Yang — Univ. of Victoria
Yu, Bo — Univ. of Saskatchewan
Huang, Ji — Univ. of Saskatchewan

14:30-15:50 ThBIn2.3
Stability Bounds on Entropy Rate for Real-Time Tracking an Unstable LTI Process Over a Multi-Access Network, pp. 4957-4962.
Huang, Ching-Ling — Univ. of California, Berkeley
Sengupta, Raja — Univ. of California at Berkeley
Guan, Xu — UC, Berkeley

14:30-15:50 ThBIn2.4
Stability of High Order Distributed Power Control, pp. 4963-4970.
Moller, Anders — Royal Inst. of Tech.
Jonsson, Ulf T. — Royal Inst. of Tech. (KTH)

14:30-15:50 ThBIn2.5
Gadara Nets: Modeling and Analyzing Lock Allocation for Deadlock Avoidance in Multithreaded Software, pp. 4971-4976.
Wang, Yin — Univ. of Michigan
Liao, Hongwei — Univ. of Michigan, Ann Arbor
Reveliotis, Spyros A. — Georgia Inst. of Tech.
Kelly, Terence — HP
Mahlke, Scott — Univ. of Michigan, Ann Arbor
Lafortune, Stephane — Univ. of Michigan

14:30-15:50 ThBIn2.6
Solving Large-Scale Linear Circuit Problems Via Convex Optimization, pp. 4977-4984.
Lavaei, Javad — California Inst. of Tech.
Babakhani, Aydin — California Inst. of Tech.
Hajimiri, Ali — California Inst. of Tech.
Doyle, John C. — California Inst. of Tech.

14:30-15:50 ThBIn2.7
Synchronization of Coupled Harmonic Oscillators in a Dynamic Proximity Network, pp. 4985-4990.
Su, Housheng — Shanghai Jiao Tong Univ.
Wang, Xiaofan — Shanghai JiaoTong Univ.
Lin, Zongli — Univ. of Virginia

14:30-15:50 ThBIn2.8
A Switched System Approach to Scheduling of Networked Control Systems with Communication Constraints, pp. 4991-4996.
Dai, Shi-Lu — National Univ. of Singapore
Lin, Hai — National Univ. of Singapore
Ge, Shuzhi Sam — National Univ. of Singapore

ThBIn3 Mandarin Hall
Optimal Control III (Interactive Session)

14:30-15:50 ThBIn3.1
Optimal Command Generation for Flexible Mechanical Systems under Multiple Constraints, pp. 4997-5002.
Nishiyama, Takehiro — Advanced Tech. R&D Center, Mitsubishi Electric
Yamada, Katsuhiko — Nagoya Univ.
Yoshikawa, Shoji — Advanced Tech. R&D Center, Mitsubishi Electric

14:30-15:50 ThBIn3.2
Parameter Approximate Dynamic Optimization for PSO Systems, pp. 5003-5008.
Kang, Qi — Tongji Univ.
Wang, Lei — Tongji Univ.
Liu, Derong — Univ. of Illinois at Chicago
Wu, Qidi — Tongji Univ.

14:30-15:50 ThBIn3.3
Model-Free Approximate Dynamic Programming for Continuous-Time Linear Systems, pp. 5009-5014.
Lee, Jae Young — Yonsei Univ.
Park, J. B. — Yonsei Univ.
Choi, Yoon Ho — Kyonggi Univ.

14:30-15:50 ThBIn3.4
Multiple Instantaneous Collisions in a Variational Framework, pp. 5015-5020.
Seghete, Vlad — Northwestern Univ.
Murphey, Todd — Northwestern Univ.

14:30-15:50 ThBIn3.5
On Normal Forms of Necessary Conditions of Optimality for Dynamic Optimization Problems with Constraints, pp. 5021-5026.
Lopes, Sofia — Univ. of Minho
Fontes, Fernando A. C. C. — Faculty of Engineering, Univ. of Porto (FEUP)

14:30-15:50 ThBIn3.6
Time-Optimal Control of Fractional Dynamic Systems, pp. 5027-5032.
Tricaud, Christophe — Utah State Univ.
Chen, YangQuan — Utah State Univ.

14:30-15:50 ThBIn3.7
Optimal Control of Dynamical Systems with Active Singularities under Single and Multi-Impact Sequences: A Ball/Racket System Example, pp. 5033-5038.
Bentsman, Joseph — Univ. of Illinois, Urbana-Champaign
Miller, Boris — Monash Univ.
Rubinovich, Evgeny — Russian Acad. of Sciences
Mazumder, Sudip — Univ. of Illinois, Chicago

14:30-15:50 ThBIn3.8
On Connecting Trajectories with Maximum Persistence of Behavior, pp. 5039-5044.
Yeung, Deryck — Georgia Inst. of Tech.
Verriest, Erik I. — Georgia Inst. of Tech.

14:30-15:50 ThBIn3.9
Time Maximum Control for a Class of Single-Input Planar Affine Control Systems and Constraints, pp. 5045-5050.
Liu, Feng — Purdue Univ.
Chiu, George T.-C. — Purdue Univ.
Hamby, Eric S. — Xerox Corp.
Eun, Yongsoon — Xerox

14:30-15:50 ThBIn3.10
Closed-Form Solution for a Class of Continuous-Time Algebraic Riccati Equations, pp. 5051-5056.
Rojas, Alejandro J. — Univ. of Newcastle

14:30-15:50 ThBIn3.11

A Chebyshev Pseudospectral Method for Nonlinear Constrained Optimal Control Problems, pp. 5057-5062.

Gong, Qi — Univ. of California, Santa Cruz
Ross, I. Michael — Naval Postgraduate School
Fahroo, Fariba — AFOSR

ThBIn4 — Mandarin Hall
Optimization and Optimal Design (Interactive Session)

14:30-15:50 — ThBIn4.1
Design of the Optimal Thruster Combinations Table for the Real Time Control Allocation of Spacecraft Thrusters, pp. 5063-5068.

Wang, Min — Beijing Inst. of Control Engineering
Xie, Yongchun — Beijing Inst. of Control Engineering

14:30-15:50 — ThBIn4.2
A Sequential Constrained Least-Squares Method to Minimax Design of Stable IIR Digital Filters, pp. 5069-5073.

Lai, Xiaoping — Hangzhou Dianzi Univ.
Lin, Zhiping — School of Electrical & Electronic Eng., Nanyang Tech. Un

14:30-15:50 — ThBIn4.3
Optimal Measurement Selection for Any-Time Kalman Filtering with Processing Constraints, pp. 5074-5079.

Moshtagh, Nima — Scientific System Company Inc.
Chen, Lingji — Scientific Systems Company Inc.
Mehra, Raman K. — Scientific Systems Co. Inc.

14:30-15:50 — ThBIn4.4
Hot Rolling Turn Scheduling Using Lagrangian Relaxation, pp. 5080-5085.

Zhang, Yanyan — Northeastern Univ.
Tang, Lixin — Northeastern Univ.

14:30-15:50 — ThBIn4.5
Dynamic Decoupling in Nano-Accurate Motion Systems Using a Gradient Approximation-Based Algorithm, pp. 5086-5091.

Heertjes, Marcel — Eindhoven Univ. of Tech.
Hennekens, Daan Willem Theresia — Eindhoven Univ. of Tech.
van Engelen, Arjan — Eindhoven Univ. of Tech.
Steinbuch, Maarten — Eindhoven Univ. of Tech.

14:30-15:50 — ThBIn4.6
Optimal Micro-Siting of Wind Turbines by Genetic Algorithms Based on Improved Wind and Turbine Models, pp. 5092-5096.

Wan, Chunqiu — Tsinghua Univ.
Wang, Jun — Tsinghua Univ.
Li, Xiaolan — Tsinghua Univ.
Yang, Geng — Tsinghua Univ.
Zhang, Xing — Tsinghua Univ.

14:30-15:50 — ThBIn4.8
Quantum Evolutionary Algorithm for Vehicle Routing Problem with Simultaneous Delivery and Pickup, pp. 5097-5101.

Hu, Feng Jun — ZheJiang ShuRen Univ.
Wu, Bin — Nanjing Univ. of Tech.

14:30-15:50 — ThBIn4.9
Hybrid Control Strategy for Five-Fingered Smart Prosthetic Hand, pp. 5102-5107.

Chen, Cheng-Hung — Idaho State Univ.
Naidu, D. Subbaram — Idaho State Univ.
Perez, Alba — Idaho State Univ.
Schoen, Marco — Idaho State Univ.

14:30-15:50 — ThBIn4.10
The Quantification of Large SNR for MLE of ARARMAX Models, pp. 5108-5113.

Zou, Yiqun — Univ. of Manchester
Heath, William Paul — Univ. of Manchester

ThBIn5 — Mandarin Hall
Distributed Parameter and Delay Systems II (Interactive Session)

14:30-15:50 — ThBIn5.1
L_2-Gain Analysis and Feedback Design for Discontinuous Time-Delay Systems Based on Functional Differential Inclusion, pp. 5114-5119.

Zhang, Jiangyan — Sophia Univ.
Shen, Tielong — Sophia Univ.
Jiao, Xiaohong — Yanshan Univ.

14:30-15:50 — ThBIn5.2
Robust Stabilization for Discretized PID Control Systems with Transmission Delay, pp. 5120-5126.

Okuyama, Yoshifumi — Humanitech Lab.

14:30-15:50 — ThBIn5.4
Semistability Theory for Spatially Distributed Systems, pp. 5127-5132.

Hui, Qing — Texas Tech. Univ.
Berg, Jordan M. — Texas Tech. Univ.

14:30-15:50 — ThBIn5.5
Control by Interconnection of Distributed Port-Hamiltonian Systems Based on Finite Elements Approximation, pp. 5133-5138.

Macchelli, Alessandro — Univ. of Bologna - Italy

Melchiorri, Claudio — Univ. of Bologna

14:30-15:50 — ThBIn5.7

A PDE Viewpoint on Basic Properties of Coordination Algorithms with Symmetries, pp. 5139-5144.

Sarlette, Alain — Univ. of Liege (Belgium)
Sepulchre, Rodolphe J. — Univ. de Liege

14:30-15:50 — ThBIn5.8

Decoupling Based Decentralized Robust Control for Combined Shape and Gauge System in Tandem Cold Rolling Process, pp. 5145-5150.

Jing, Peng — Univ. of Science and Tech. Beijing
Tong, Chaonan — Univ. of Science and Tech. Beijing
Xiao, Lei — Univ. of Science and Tech. Beijing

14:30-15:50 — ThBIn5.9

A Sub-Optimal Distributed Kalman Filter with Fusion Feedback for Acyclic Systems, pp. 5151-5157.

Azizi, Seyyedmohsen — Concordia Univ.
Khorasani, Khashayar — Concordia Univ.

ThBIn6 — Mandarin Hall

Automotive and Aerospace Systems (Interactive Session)

14:30-15:50 — ThBIn6.1

Design and Experimental Investigation of Demand Dependent Active Suspension for Vehicle Rollover Control, pp. 5158-5163.

Wang, Lifu — Univ. of Tech. Sydney
Zhang, Nong — Univ. of Tech. Sydney
Du, Haiping — Univ. of Wollongong

14:30-15:50 — ThBIn6.2

H_inf Control of Uncertain Seat Suspension Systems Subject to Input Delay and Actuator Saturation, pp. 5164-5169.

Zhao, Yingbo — Harbin Inst. of Tech. Harbin, China
Ou, Yan — Harbin Inst. of Tech. Harbin, China
Zhang, Lixian — Ec. Pol. de Montreal,
Gao, Huijun — Harbin Inst. of Tech.

14:30-15:50 — ThBIn6.3

Vibration Suppression of Vehicle Active Suspension Systems in Finite Frequency Domian, pp. 5170-5175.

Gao, Huijun — Harbin Inst. of Tech.
Sun, Weichao — Harbin Inst. of Tech.
Kaynak, Okyay — Bogazici Univ.

14:30-15:50 — ThBIn6.4

Advanced Yaw Control of Four-Wheeled Vehicles Via Rear Active Differential Braking, pp. 5176-5181.

Corno, Matteo — Pol. di Milano
Tanelli, Mara — Pol. di Milano
Boniolo, Ivo — Pol. di Milano
Savaresi, Sergio M. — Pol. Di Milano

14:30-15:50 — ThBIn6.5

Nonlinear Model Predictive Control of Lean NOx Trap Regenerations, pp. 5182-5187.

Hsieh, Ming Feng — The Ohio State Univ. Center for Automotive Res.
Wang, Junmin — Ohio State Univ.

14:30-15:50 — ThBIn6.6

Fuel Cell Based Auxiliary Power Unit Modeling, Optimization, and Control, pp. 5188-5193.

Chen, Jian — Univ. of Michigan
Sun, Jing — Univ. of Michigan

14:30-15:50 — ThBIn6.7

Reduced-Order Modeling for Studying and Controlling Misfire in Four-Stroke HCCI Engines, pp. 5194-5199.

Mayhew, Christopher G. — Univ. of California, Santa Barbara
Knierim, Karl Lukas — Univ. Stuttgart
Chaturvedi, Nalin A. — Robert Bosch LLC
Park, Sungbae — Robert Bosch LLC
Ahmed, Jasim — Program Manager
Kojic, Aleksandar — Robert Bosch Res. and Tech. Center

14:30-15:50 — ThBIn6.8

Control of a Two Stage Turbocharger on a Diesel Engine, pp. 5200-5206.

Moulin, Philippe — IFP
Grondin, Olivier — IFP
Fontvieille, Laurent — Renault SA

14:30-15:50 — ThBIn6.9

A Probabilistic Approach to Air Traffic Complexity Evaluation, pp. 5207-5212.

Prandini, Maria — Pol. di Milano
Hu, Jianghai — Purdue Univ.

14:30-15:50 — ThBIn6.10

Control of Quadrotor Aircrafts without Velocity Measurements, pp. 5213-5218.

Zhang, Ruifeng — Beijing Univ. of Aeronautics and Astronautics
Wang, Xinhua — Beijing Univ. of Aeronautics and Astronautics
Cai, Kai-Yuan — School of Automation, Beijing Univ. of Aeronautics and Astr

14:30-15:50 ThBIn6.11
A Mixed Integer Program for Flight-Level Assignment and Speed Control for Conflict Resolution, pp. 5219-5226.
Vela, Adan — Georgia Inst. of Tech.
Solak, Senay — Univ. of Massachusetts Amherst
Singhose, William — Georgia Inst. of Tech.
Clarke, John-Paul — Georgia Tech.

14:30-15:50 ThBIn6.12
Output Tracking Control for Autonomous Spacecraft Rendezvous, pp. 5227-5232.
Yang, Xuebo — Harbin Inst. of Tech.
Bo, Yuming — Nanjing Univ. of science and Tech.
Liu, Yurong — Yangzhou Univ.
Ji, Zhijian — Qingdao Univ.
Gao, Huijun — Harbin Inst. of Tech.

14:30-15:50 ThBIn6.13
Adaptive Position Tracking of VTOL UAVs, pp. 5233-5238.
Roberts, Andrew — Univ. of Western Ontario
Tayebi, Abdelhamid — Lakehead Univ.

14:30-15:50 ThBIn6.14
A Backstepping Approach to Multivariable Robust Constraint Satisfaction with Application to a VTOL Helicopter, pp. 5239-5244.
Bürger, Mathias — Univ. of Stuttgart
Guay, Martin — Queen's Univ.

ThC01 — 3D
New Techniques for Stabilization and Regulation of Nonlinear Systems (Invited Session)

Chair: Chen, Zhiyong — The Univ. of Newcastle
Co-Chair: Marconi, Lorenzo — Univ. di Bologna
Organizer: Chen, Zhiyong — The Univ. of Newcastle
Organizer: Marconi, Lorenzo — Univ. di Bologna

16:30-16:50 ThC01.1
Nonlinear Stabilization through Long Input Delay - Part I: Forward Complete Systems (I), pp. 5245-5250.
Krstic, Miroslav — Univ. of California at San Diego

16:50-17:10 ThC01.2
Performance Analysis of Output Regulation for a Class of Nonlinear Systems (I), pp. 5251-5256.
Ma, Kemao — Harbin Inst. of Tech.
Khalil, Hassan K. — Michigan State Univ.

17:10-17:30 ThC01.3
A Non-Adaptive Approach to the Problem of Tracking Uncertain Oscillations (I), pp. 5257-5262.
Isidori, Alberto — Univ. di Roma "La Sapienza"
Marconi, Lorenzo — Univ. di Bologna

17:30-17:50 ThC01.4
Controlled Synchronization Via Nonlinear Integral Coupling (I), pp. 5263-5268.
Pavlov, Alexey — StatoilHydro Res. Center
Steur, Erik — Eindhoven Univ. of Tech.
Van De Wouw, Nathan — Eindhoven Univ. of Tech.

17:50-18:10 ThC01.5
Stabilization of Boolean Control Networks (I), pp. 5269-5274.
Cheng, Daizhan — Chinese Acad. of Sciences
Liu, Jiang — Bradley Univ.

18:10-18:30 ThC01.6
Robust Adaptive Regulation of Polynomial Systems with Dynamic Uncertainties (I), pp. 5275-5280.
Chen, Zhiyong — The Univ. of Newcastle
Huang, Jie — Chinese Univ. of Hong Kong

ThC02 — 3E
Optimal Control of Hybrid Systems (Regular Session)

Chair: Egerstedt, Magnus — Georgia Inst. of Tech.
Co-Chair: Bauso, Dario — Univ. di Palermo

16:30-16:50 ThC02.1
Second Order Switching Time Optimization for Time-Varying Nonlinear Systems, pp. 5281-5286.
Johnson, Elliot — Northwestern Univ.
Murphey, Todd — Northwestern Univ.

16:50-17:10 ThC02.2
Optimal Reset Law Design of Reset Control Systems with Application to HDD Systems, pp. 5287-5292.
Guo, Yuqian — Central South Univ.
Wang, Youyi — Nanyang Tech. Univ.
Xie, Lihua — Nanyang Tech. Univ.
Li, Hui — Nanyang Tech. Univ.
Gui, Weihua — Central South Univ.

17:10-17:30 ThC02.3

Design of Optimal Switching Surfaces for Switched Autonomous Systems, pp. 5293-5298.

Schild, Axel — Ruhr Univ. Bochum
Ding, Xu Chu — Georgia Inst. of Tech.
Egerstedt, Magnus — Georgia Inst. of Tech.
Lunze, Jan — Ruhr-Univ. Bochum

17:30-17:50 ThC02.4

Optimal Impulse Control Problems and Linear Programming, pp. 5299-5304.

Bauso, Dario — Univ. di Palermo

17:50-18:10 ThC02.5

On-Line Adaptive Optimal Timing Control of Switched Systems, pp. 5305-5310.

Ding, Xu Chu — Georgia Inst. of Tech.
Wardi, Yorai — Georgia Inst. of Tech.
Egerstedt, Magnus — Georgia Inst. of Tech.

18:10-18:30 ThC02.6

An Algorithm for Event-Based Optimal Feedback Control, pp. 5311-5316.

Gruene, Lars — Univ. of Bayreuth
Mueller, Florian — Univ. of Bayreuth

ThC03 — 3C
Constrained Control of Linear Systems (Regular Session)

Chair: Schmid, Robert — The Univ. of Melbourne
Co-Chair: Dorea, Carlos E.T. — Univ. Federal da Bahia

16:30-16:50 ThC03.1

Output-Feedback Controlled-Invariant Polyhedra for Constrained Linear Systems, pp. 5317-5322.

Dorea, Carlos E.T. — Univ. Federal da Bahia

16:50-17:10 ThC03.2

On the Design of Nonovershooting Linear Tracking Controllers for Right-Invertible Systems, pp. 5323-5327.

Schmid, Robert — The Univ. of Melbourne
Ntogramatzidis, Lorenzo — Curtin Univ. of Tech.

17:10-17:30 ThC03.3

Achieving a Nonovershooting Transient Response with Multivariable Dynamic Output Feedback Tracking Controllers, pp. 5328-5332.

Schmid, Robert — The Univ. of Melbourne
Ntogramatzidis, Lorenzo — Curtin Univ. of Tech.

17:30-17:50 ThC03.4

H2 Design of Decoupling Controllers Based on Directional Interpolations, pp. 5333-5338.

Park, Kiheon — SungKyunKwan Univ.

17:50-18:10 ThC03.5

Linear Control of Time-Domain Constrained Systems, pp. 5339-5344.

Aangenent, Wouter — Eindhoven Univ. of Tech.
Heemels, Maurice — Eindhoven Univ. of Tech.
Molengraft, René van de — Eindhoven Univ. of Tech.
Steinbuch, Maarten — Eindhoven Univ. of Tech.

18:10-18:30 ThC03.6

Sharp Estimates on the Region of Attraction of Planar Linear Systems with Bounded Controls, pp. 5345-5350.

Corradini, Maria Letizia — Univ. di Camerino
Cristofaro, Andrea — Univ. di Camerino
Giannoni, Fabio — Univ. di Camerino

ThC04 — 3A
Methods for Analysis and Reduction of Large-Scale Systems II (Invited Session)

Chair: Antoulas, Athanasios C. — Rice Univ.
Co-Chair: Gugercin, Serkan — Virginia Tech.
Organizer: Antoulas, Athanasios C. — Rice Univ.

16:30-16:50 ThC04.1

Model Reduction of Multi-Variable Distributed Systems through Empirical Projection Spaces (I), pp. 5351-5356.

van Belzen, Femke — Tech. Univ. Eindhoven
Weiland, Siep — Eindhoven Univ. of Tech.
Ozkan, Leyla — Eindhoven Univ. of Tech.

16:50-17:10 ThC04.2

An Overview of Model Reduction Methods and a New Result (I), pp. 5357-5361.

Antoulas, Athanasios C. — Rice Univ.
Rapisarda, Paolo — Univ. of Southampton

17:10-17:30 ThC04.3

Interpolation-Based H_2 Model Reduction for Port-Hamiltonian Systems (I), pp. 5362-5369.

Gugercin, Serkan — Virginia Tech.
Polyuga, Rostyslav — Univ. of Groningen
Beattie, Christopher A. — Virginia Tech.
van der Schaft, Arjan J. — Univ. of Groningen

17:30-17:50 ThC04.4

A Trust Region Method for Optimal H_2 Model Reduction (I), pp. 5370-5375.
Beattie, Christopher A. — Virginia Tech.
Gugercin, Serkan — Virginia Tech.

17:50-18:10 — ThC04.5
Model Order Reduction for a Class of Nonlinear Electrical Circuits (I), pp. 5376-5383.
Reis, Timo — Tech. Univ. Berlin
Heinkenschloss, Matthias — Rice Univ.

18:10-18:30 — ThC04.6
Reduced-Order Observer Design Using a Lagrangian Method, pp. 5384-5389.
Mutsaers, Mark — Eindhoven Univ. of Tech.
Weiland, Siep — Eindhoven Univ. of Tech.
Engelaar, Richard — Eindhoven Univ. of Tech.

ThC05 — 3J
Distributed Optimization and Optimal Control (Regular Session)

Chair: Swigart, John — Stanford Univ.
Co-Chair: Zhong, Minyi — Boston Univ.

16:30-16:50 — ThC05.1
Distributed MPC Based on a Cooperative Game, pp. 5390-5395.
Maestre, J.M. — Univ. of Seville
Muńoz de la Peńa, David — Univ. de Sevilla
Camacho, Eduardo F. — Univ. of Sevilla

16:50-17:10 — ThC05.2
Asynchronous Distributed Optimization with Minimal Communication and Connectivity Preservation, pp. 5396-5401.
Zhong, Minyi — Boston Univ.
Cassandras, Christos G. — Boston Univ.

17:10-17:30 — ThC05.3
Congestion Control Algorithms from Optimal Control Perspective, pp. 5402-5408.
Lavaei, Javad — California Inst. of Tech.
Doyle, John C. — California Inst. of Tech.
Low, Steven — California Inst. of Tech.

17:30-17:50 — ThC05.4
A Graph-Theoretic Approach to Distributed Control Over Networks, pp. 5409-5414.
Swigart, John — Stanford Univ.
Lall, Sanjay — Stanford Univ.

17:50-18:10 — ThC05.5
Control and Estimation Problems under Partially Nested Information Pattern, pp. 5415-5419.
Gattami, Ather — MIT

18:10-18:30 — ThC05.6
Distributed Model Predictive Control of Dynamically Decoupled Linear Systems with Coupled Cost, pp. 5420-5425.
Wang, Chen — National Univ. of Singapore
Ong, Chong-Jin — National Univ. of Singapore
Sim, Melvyn — National Univ. of Singapore

ThC06 — 3G
Mechatronics (Regular Session)

Chair: Perez Arancibia, Nestor Osvaldo — Univ. of California, Los Angeles
Co-Chair: Mirmirani, Maj Dean — Embry-Riddle Aeronautical Univ.

16:30-16:50 — ThC06.1
A Novel Rotary Dual-Stage Actuator Positioner, pp. 5426-5431.
Zheng, Jinchuan — The Univ. of Newcastle, Australia
Salton, Aurelio Tergolina — Univ. of Newcastle, Australia
Fu, Minyue — Univ. of Newcastle

16:50-17:10 — ThC06.2
Multiple-Period Adaptive-Repetitive Control of a Hard Disk Drive, pp. 5432-5439.
Perez Arancibia, Nestor Osvaldo — Univ. of California, Los Angeles
Tsao, Tsu-chin — Univ. of California, Los Angeles
Gibson, James Steven — Univ. of California, Los Angeles

17:10-17:30 — ThC06.3
Nonlinear Control Approaches for SI Engine Model with Uncertainties, pp. 5440-5445.
Yan, Rui — Inst. for Infocomm Res. R
Li, Haizhou — Inst. for Infocomm Res.
Dong, Z. Y. — The Hong Kong Pol. Univ.
Tang, Huajin — Inst. for Infocomm Res.

17:30-17:50 — ThC06.4
Adaptive Necessary Signal Extraction Control Based on 2DF Virtual Error Approach to Smart Window Systems, pp. 5446-5453.
Okumura, Hiroshi — Keio Univ.
Sano, Akira — Keio Univ.

17:50-18:10 — ThC06.5

Testrun Adaption and Control for a Torsional Vibration Testrig Actuator, pp. 5454-5459.
Haidinger, Thomas — Graz Univ. of Tech.
Hofbaur, Michael — Graz Univ. of Tech.
Rossegger, Wilfried — Kristl, Seibt & Co

18:10-18:30 ThC06.6
Fractional Order Proportional and Derivative Controller Synthesis for a Class of Fractional Order Systems: Tuning Rule and Hardware-In-The-Loop Experiment (I), pp. 5460-5465.
Luo, Ying — Utah State Univ.
Li, Hongsheng — Nanjing Inst. of Tech. Jiangsu, P R China
Chen, YangQuan — Utah State Univ.

ThC07 5C
Filter Design (Regular Session)

Chair: Li, X. Rong — Univ. of New Orleans
Co-Chair: Novara, Carlo — Pol. di Torino

16:30-16:50 ThC07.1
Optimal Hinfinity Filtering for Nonlinear Delayed Systems with Multiple Sensors, pp. 5466-5471.
Liu, Meiqin — Zhejiang Univ.
Li, X. Rong — Univ. of New Orleans

16:50-17:10 ThC07.2
Delay-Dependent Energy-To-Peak Filter Design for Stochastic Systems with Time Delay: A Delay Partitioning Approach, pp. 5472-5477.
Yang, Rongni — Harbin Inst. of Tech.
Gao, Huijun — Harbin Inst. of Tech.
Shi, Peng — Univ. of Glamorgan
Zhang, Lixian — Ec. Pol. de Montreal,

17:10-17:30 ThC07.3
The LFT Based PHD Filter for Nonlinear Jump Markov Models in Multi-Target Tracking, pp. 5478-5483.
Pasha, Ahmed — The Univ. of New South Wales
Tuan, Hoang Duong — The Univ. of New South Wales
Apkarian, Pierre — UPS

17:30-17:50 ThC07.4
A New Approach to Optimal Filter Design for Nonlinear Systems, pp. 5484-5489.
Novara, Carlo — Pol. di Torino
Ruiz, Fredy — Pol. di Torino
Milanese, Mario — Pol. di Torino

17:50-18:10 ThC07.5
Near-Optimal Deterministic Filtering on the Unit Circle, pp. 5490-5495.
Coote, Paul William — Australian National Univ.
Trumpf, Jochen — The Australian National Univ.
Mahony, Robert — Australian National Univ.
Willems, Jan C. — K.U. Leuven

18:10-18:30 ThC07.6
Markov Chain Distributed Particle Filters (MCDPF), pp. 5496-5501.
Lee, Sun Hwan — Stanford Univ.
West, Matthew — Univ. of Illinois, Urbana-Champaign

ThC08 3I
Distributed Parameter Systems III (Regular Session)

Chair: Pavel, Lacra — Univ. of Toronto
Co-Chair: Yamamoto, Yutaka — Kyoto Univ.

16:30-16:50 ThC08.1
Hankel Norm Computation for Pseudorational Transfer Functions, pp. 5502-5507.
Ogura, Masaki — Kyoto Univ.
Yamamoto, Yutaka — Kyoto Univ.

16:50-17:10 ThC08.2
Dynamic Practical Stabilization of Sampled-Data Linear Distributed Parameter Systems, pp. 5508-5513.
Tan, Ying — The Univ. of Melbourne
Trelat, Emmanuel — Univ. d'Orléans
Chitour, Yacine — Univ. Paris-Sud, CNRS, Supelec
Nesic, Dragan — Univ. of Melbourne

17:10-17:30 ThC08.3
Global Classical Solvability of Initial-Boundary Problems for Hyperbolic Lotka-Volterra Systems in Sobolev Spaces, pp. 5514-5519.
Pavel, Lacra — Univ. of Toronto

17:30-17:50 ThC08.4
Controllability and Observability of Coupled Systems, pp. 5520-5525.
Zhao, Xiaowei — Imperial Coll. London
Weiss, George — Tel Aviv Univ.

17:50-18:10 ThC08.5
Strong Stabilization of a Wind Turbine Tower Model, pp. 5526-5531.

Zhao, Xiaowei — Imperial Coll. London
Weiss, George — Tel Aviv Univ.

18:10-18:30 ThC08.6
A Controlled Distributed Parameter Model for a Fluid-Flexible Structure System: Numerical Simulations and Experiment Validations, pp. 5532-5537.
Robu, Bogdan — LAAS - CNRS
Baudouin, Lucie — CNRS
Prieur, Christophe — LAAS-CNRS

ThC09 — 3H
Emerging Applications (Regular Session)

Chair: Collins, Pieter — Centrum voor Wiskunde en Informatica
Co-Chair: Fujioka, Hiroyuki — Fukuoka Inst. of Tech.

16:30-16:50 ThC09.1
A Computable Type Theory for Control Systems, pp. 5538-5543.
Collins, Pieter — Centrum voor Wiskunde en Informatica

16:50-17:10 ThC09.2
Discrete-Time, Minimum-Variance Hedging of European Contingent Claims, pp. 5544-5549.
Bhat, Sanjay P. — Indian Inst. of Tech. - Bombay
Chellaboina, Vijay — Tata Consultancy Services
Bhatia, Anil — Tata Consultancy Services
Prasad, Sandeep — Tata Consultancy Services Limited,
M, Uday Kumar — Tata Consultancy Services Limited

17:10-17:30 ThC09.3
Recursive Construction of Smoothing Spline Surfaces Using Normalized Uniform B-Splines, pp. 5550-5555.
Fujioka, Hiroyuki — Fukuoka Inst. of Tech.
Kano, Hiroyuki — Tokyo Denki Univ.

17:30-17:50 ThC09.4
Solution Search Algorithm for a CFD Optimization Problem with Multimodal Solution Space, pp. 5556-5561.
Kuriyama, Yoshifumi — Gifu Univ.
Hayashi, Shuichiro — Gifu Univ.
Yano, Ken'ichi — Gifu Univ.
Watanabe, Mamoru — Terrabyte Co.,Ltd.

17:50-18:10 ThC09.5
Synchronization Analysis of the Supermarket Refrigeration System, pp. 5562-5567.
Wisniewski, Rafal — Aalborg Univ.
Chen, Liang — Donghua Univ.
Larsen, Lars Finn Sloth — Danfoss A/S

18:10-18:30 ThC09.6
Energy Consumption Reduction with Low Computational Needs in Multicore Systems with Energy-Performance Tradeoff, pp. 5568-5573.
Durand, Sylvain — INRIA
Marchand, Nicolas — Gispa-Lab.

ThC10 — 5D
Adaptive Control: Applications II (Regular Session)

Chair: Chowdhury, Fahmida N. — National Science Foundation
Co-Chair: Kaasa, Glenn-Ole — StatoilHydro ASA

16:30-16:50 ThC10.1
Robust Adaptive Sliding Mode Controller for Triaxial Gyroscope, pp. 5574-5579.
Fei, Juntao — Hohai Univ.
Chowdhury, Fahmida N. — National Science Foundation

16:50-17:10 ThC10.2
Hysteresis Modeling and Compensation for an XY Micropositioning Stage with Model Reference Adaptive Control, pp. 5580-5585.
Li, Yangmin — Univ. of Macau
Xu, Qingsong — Univ. of Macau

17:10-17:30 ThC10.3
Pressure Regulation with Kick Attenuation in a Managed Pressure Drilling System, pp. 5586-5591.
Zhou, Jing — International Res. Inst. of Stavanger
Stamnes, Řyvind Nistad — Norwegian Univ. of Science & Tech.
Aamo, Ole Morten — NTNU
Kaasa, Glenn-Ole — StatoilHydro ASA

17:30-17:50 ThC10.4
Support Vector Machine Based Optimal Control for Mobile Wheeled Inverted Pendulums with Dynamics Uncertainties, pp. 5592-5597.
Li, Zhijun — Shanghai Jiao Tong Univ.
Yang, Kun — Shanghai Jiao Tong Univ.
Yang, Yipeng — Shanghai Jiao Tong Univ.

17:50-18:10 ThC10.5
Modeling and Gain Scheduling Adaptive Control of Tension Control System for Continuous Annealing Process, pp. 5598-5603.
Liu, Qiang — Northeastern Univ.

Chai, Tianyou — Northeastern Univ.
Zhao, Lijie — north eastern Univ.
Zhang, Yingwei — Northeastern Univ.
Zhang, Shuran — Shenyang Supervision Center of Energy-saving

18:10-18:30 ThC10.6
Adaptive Constraint-Filtering Method and Its Application to GPS Positioning, pp. 5604-5609.
Chang, Tsai Hsin — National Taiwan Univ.
Wang, Li-Sheng — National Taiwan Univ.
Chang, Fan Ren — National Taiwan Univ.

ThC11 — 5J
Biomolecular Networks (Invited Session)

Chair: Chesi, Graziano — Univ. of Hong Kong
Co-Chair: Chen, Luonan — Osaka Sangyo Univ.
Organizer: Chesi, Graziano — Univ. of Hong Kong
Organizer: Aihara, Kazuyuki — Univ. of Tokyo
Organizer: Chen, Luonan — Osaka Sangyo Univ.
Organizer: Zhao, Xingming — Shanghai Univ.
Organizer: Wang, Ruiqi — Shanghai Univ.

16:30-16:50 ThC11.1
Integer Programming-Based Methods for Attractor Detection and Control of Boolean Networks (I), pp. 5610-5617.
Akutsu, Tatsuya — Kyoto Univ.
Hayashida, Morihiro — Kyoto Univ.
Tamura, Takeyuki — Kyoto Univ.

16:50-17:10 ThC11.2
Canalizing Structure of Genetic Network Dynamics: Modelling and Identification Via Mixed-Integer Programming (I), pp. 5618-5623.
Cinquemani, Eugenio — ETH Zurich
Porreca, Riccardo — Univ. di Pavia
Lygeros, John — ETH Zurich
Ferrari-Trecate, Giancarlo — Univ. degli Studi di Pavia

17:10-17:30 ThC11.3
Detection of Network Structure Changes by Graphical Chain Modeling: A Case Study of Hepatitis C Virus-Related Hepatocellular Carcinoma (I), pp. 5624-5630.
Saito, Shigeru — National Inst. of Advanced IndustrialScienceandTechnology
Honda, Masao — Kanazawa Univ. Graduate School of Medicine
Kaneko, Shuichi — Kanazawa Univ. Graduate School of Medicine
Horimoto, Katsuhisa — National Inst. of Advanced IndustrialScienceandTechnology

17:30-17:50 ThC11.4
Toward Non-Conservative Stability Conditions for Equilibrium Points of Genetic Networks with SUM Regulatory Functions (I), pp. 5631-5636.
Chesi, Graziano — Univ. of Hong Kong

17:50-18:10 ThC11.5
Verification of Multistability in Gene Regulation Networks: A Combinatorial Approach (I), pp. 5637-5642.
Breindl, Christian — Univ. of Stuttgart
Allgower, Frank — Univ. of Stuttgart

18:10-18:30 ThC11.6
Analysis on Steady States of Photosynthetic Carbon Metabolic System (I), pp. 5643-5648.
Lei, Hong-Bo — Chinese Acad. of Sciences
Wang, Xin — Chinese Acad. of Sciences
Wang, Ruiqi — Shanghai Univ.
Zhu, Xinguang — PICB
Chen, Luonan — Osaka Sangyo Univ.
Zhang, Ji-Feng — Chinese Acad. of Sciences

ThC12 — 5E
Motion Planning and Coordination of Autonomous Vehicles (Regular Session)

Chair: Tsiotras, Panagiotis — Georgia Inst. of Tech.
Co-Chair: Greytak, Matthew — Massachusetts Inst. of Tech.

16:30-16:50 ThC12.1
The Asymmetric Sinistral/Dextral Markov-Dubins Problem, pp. 5649-5654.
Bakolas, Efstathios — Georgia Tech.
Tsiotras, Panagiotis — Georgia Inst. of Tech.

16:50-17:10 ThC12.2
Motion Planning with an Analytic Risk Cost for Holonomic Vehicles, pp. 5655-5660.
Greytak, Matthew — Massachusetts Inst. of Tech.
Hover, Franz S. — Massachusetts Inst. of Tech.

17:10-17:30 ThC12.3
Towards Constant Velocity Navigation and Collision Avoidance for Autonomous Nonholonomic Aircraft-Like Vehicles, pp. 5661-5666.
Roussos, Giannis — National Tech. Univ. of Athens
Kyriakopoulos, Kostas J. — National Tech. Univ. of Athens

17:30-17:50 ThC12.4
Collision-Free Tracking Control of Unicycle Mobile Robots, pp. 5667-5672.
Kostic, Dragan — Tech. Univ. Eindhoven
Adinandra, Sisdarmanto — Eindhoven Univ. of Tech.
Caarls, Jurjen — Tech. Univ. of Eindhoven
Van De Wouw, Nathan — Eindhoven Univ. of Tech.
Nijmeijer, Hendrik — Eindhoven Univ. of Tech.

17:50-18:10 ThC12.5
Deadlock-Free Path-Following Control for Collision Avoidance of Multiple Robots, pp. 5673-5678.
Sakurama, Kazunori — The Univ. of Electro-Communications
Nakano, Kazushi — The Univ. of Electro-Communications

18:10-18:30 ThC12.6
Safe Coordination Control Policy for Multiple Input Constrained Nonholonomic Vehicles, pp. 5679-5684.
Mejia, Juan — Univ. of Illinois
Stipanovic, Dusan M. — Univ. of Illinois, Urbana-Champaign

ThC13 5A
Control of Intelligent Systems (Regular Session)
Chair: Doyle, Francis — Univ. of California at Santa Barbara
Co-Chair: Karimi, Alireza — EPFL

16:30-16:50 ThC13.1
Dynamic Control of Biologically Inspired Pulsatile Jet Propulsion Thrusters, pp. 5685-5690.
Krieg, Michael — Univ. of Colorado
Mohseni, Kamran — Univ. of Colorado at Boulder

16:50-17:10 ThC13.2
Linear Parameter Varying Iterative Learning Control, pp. 5691-5695.
Butcher, Mark Edward John — Ec. Pol. Federal de Lausanne
Karimi, Alireza — EPFL

17:10-17:30 ThC13.3
A Synthesis Method for the Complex-Valued Associative Memory Constrained by the Attractive Domain, pp. 5696-5701.
Liu, Xiaoyu — Wuhan Univ. of Science and Tech.
Fang, Kang-ling — Coll. of information Science and Engineering, Wuhan Univ.
Liu, Bin — Wuhan Univ. of Science and Tech.

17:30-17:50 ThC13.4
Stability Analysis for Set-Point-Related Indirect Iterative Learning Control, pp. 5702-5707.
Wang, Youqing — Univ. of California Santa Barbara
Doyle, Francis — Univ. of California at Santa Barbara

17:50-18:10 ThC13.5
A New PID-Type Fuzzy Neural Network Controller Based on Genetic Algorithm with Improved Smith Predictor, pp. 5708-5713.
Wang, Ruiqi — Shan Dong Univ.
Li, Ke — Univ. of Shandong
Cui, Naxin — Shandong Univ.
Zhang, Chenghui — Shandong Univ.

18:10-18:30 ThC13.6
Piecewise-Linear Constrained Control for Timed Continuous Petri Nets, pp. 5714-5720.
Vazquez, Carlos Renato — Univ. de Zaragoza
Silva, Manuel — Univ. De Zaragoza

ThC14 5B
New Developments in System Identification (Invited Session)
Chair: Pasik-Duncan, Bozenna — Univ. of Kansas
Co-Chair: Ljung, Lennart — Linkoping Univ.
Organizer: Pasik-Duncan, Bozenna — Univ. of Kansas
Organizer: Ljung, Lennart — Linkoping Univ.

16:30-16:50 ThC14.1
AR Models of Singular Spectral Matrices (I), pp. 5721-5726.
Anderson, Brian D.O. — Australian National Univ.
Deistler, Manfred — Tech. Univ. of Vienna
Chen, Wei-tian — Australian National Univ.
Filler, Alexander — Tech. Univ. of Vienna

16:50-17:10 ThC14.2
On the Usefulness of Persistent Excitation in ARX Adaptive Tracking (I), pp. 5727-5732.
Bercu, Bernard — Univ. Bordeaux 1
Vazquez, Victor — Univ. Bordeaux 1

17:10-17:30 ThC14.3
Adaptation and the Effort Needed to Adapt (I), pp. 5733-5737.
Bittanti, Sergio — Pol. di Milano
Campi, M. C. — Univ. di Brescia
Prandini, Maria — Pol. di Milano

17:30-17:50 ThC14.4
On Manifolds, Climate Reconstruction and Bivalve Shells (I), pp. 5738-5743.
Ohlsson, Henrik — Linköping Univ.
Bauwens, Maite — Vrije Univ. Brussel
Ljung, Lennart — Linkoping Univ.

17:50-18:10 ThC14.5
A Model-Based Approach to Clock Synchronization (I), pp. 5744-5749.
Freris, Nikolaos — Univ. of Illinois, Urbana-Champaign
Borkar, Vivek S. — Tata Inst. of Fundamental Res.
Kumar, P. R. — Univ. of Illinois, Urbana-Champaign

18:10-18:30 ThC14.6
Optimization and Identification in a Non-Equilibrium Dynamic Game (I), pp. 5750-5755.
Mu, Yifen — Chinese Acad. of Sciences
Guo, Lei — Chinese Aacdemy of Sciences

ThC15 3B
Stochastic Systems III (Regular Session)
Chair: Lavaei, Javad — California Inst. of Tech.
Co-Chair: Mukaidani, Hiroaki — Hiroshima Univ.

16:30-16:50 ThC15.1
Quantized Consensus Via Adaptive Stochastic Gossip Algorithm, pp. 5756-5762.
Lavaei, Javad — California Inst. of Tech.
Murray, Richard M. — California Inst. of Tech.

16:50-17:10 ThC15.2
Discrete-Time Minimum Tracking Based on Stochastic Approximation Algorithm with Randomized Differences, pp. 5763-5767.
Granichin, Oleg N. — St.Petersburg State Univ.
Gurevich, Lev — SPbSU
Vakhitov, Alexander — Saint Petersburg State Univ.

17:10-17:30 ThC15.3
An Evolutionary Space Search Algorithm (ESSA) for Global Numerical Optimization, pp. 5768-5773.
Lu, Tzyy-Chyang — National Cheng Kung Univ.
Juang, Jyh-Ching — National Cheng Kung Univ.

17:30-17:50 ThC15.4
Sequentially Updated Probability Collectives, pp. 5774-5779.
Smyrnakis, Michalis — Univ. of Bristol
Leslie, David — Univ. of Bristol

17:50-18:10 ThC15.5
Search on Lines and Graphs, pp. 5780-5785.
Li, Hua — FairIsaac Co
Chong, Edwin K. P. — Colorado State Univ.

18:10-18:30 ThC15.6
Soft-Constrained Stochastic Nash Games for Multimodeling Systems Via Static Output Feedback Strategy, pp. 5786-5791.
Mukaidani, Hiroaki — Hiroshima Univ.
Xu, Hua — Univ. of Tsukuba
Dragan, Vasile — Romanian Acad.

ThC16 5F
Consensus and Rendezvous Problems (Regular Session)
Chair: Hui, Qing — Texas Tech. Univ.
Co-Chair: Di Bernardo, Mario — Univ. of Naples Federico II

16:30-16:50 ThC16.1
Hybrid Consensus Protocols: An Impulsive Dynamical System Approach, pp. 5792-5797.
Hui, Qing — Texas Tech. Univ.

16:50-17:10 ThC16.2
On Matrix Factorization and Finite-Time Average-Consensus, pp. 5798-5803.
Ko, Chih-Kai — California Inst. of Tech.
Gao, Xiaojie — California Inst. of Tech.

17:10-17:30 ThC16.3
Consensus of Multi-Agent Directed Networks with Nonlinear Perturbations Via Impulsive Control, pp. 5804-5808.
Xiong, Wenjun — City Univ. of Hong Kong
Ho, Daniel W. C. — City Univ. of Hong Kong

17:30-17:50 ThC16.4
Quantized Consensus Over Expander Networks and Communication Energy Minimization, pp. 5809-5814.
Li, Tao — Chinese Acad. of Sicences
Xie, Lihua — Nanyang Tech. Univ.
Fu, Minyue — Univ. of Newcastle
Zhang, Ji-Feng — Chinese Acad. of Sciences

17:50-18:10 ThC16.5

Agents Design for Distributed Consensus Over Networks of Fixed and Switching Topologies, pp. 5815-5820.
Wang, Jing — iowa state Univ.
Elia, Nicola — Iowa State Univ.

18:10-18:30 ThC16.6
Solving the Rendezvous Problem for Multi-Agent Systems Using Contraction Theory, pp. 5821-5826.
Russo, Giovanni — Univ. of Naples "Federico II"
Di Bernardo, Mario — Univ. of Naples Federico II

ThC17 5H
Separation and Scheduling in Networked Control (Regular Session)
Chair: Liu, Steven — Univ. of Kaiserslautern
Co-Chair: Hirche, Sandra — Tech. Univ. Muenchen

16:30-16:50 ThC17.1
On Separation Principle for a Class of Networked Control Systems, pp. 5827-5831.
Wu, Dongxiao — Zhejiang Univ.
Wu, Jun — Zhejiang Univ.
Chen, Sheng — Univ. of Southampton

16:50-17:10 ThC17.2
On LQG Joint Optimal Scheduling and Control under Communication Constraints, pp. 5832-5838.
Molin, Adam — Tech. Univ. München
Hirche, Sandra — Tech. Univ. München

17:10-17:30 ThC17.3
Optimal Control and Scheduling of Networked Control Systems, pp. 5839-5844.
Görges, Daniel — Univ. of Kaiserslautern
Izák, Michal — Univ. of Kaiserslautern
Liu, Steven — Univ. of Kaiserslautern

17:30-17:50 ThC17.4
A Mechanism Design Approach to the Stabilization of Networked Dynamical Systems, pp. 5845-5850.
Galbusera, Luca — Pol. di Milano
Gatti, Nicola — Pol. di Milano
Romani, Carlo — Pol. di Milano

17:50-18:10 ThC17.5
Robust Quasi-Decentralized Networked Control of Process Systems, pp. 5851-5856.
Sun, Yulei — Univ. of California, Davis
El-Farra, Nael H. — Univ. of California, Davis

18:10-18:30 ThC17.6
Content Distribution by Multiple Multicast Trees and Intersession Cooperation: Optimal Algorithms and Approximations, pp. 5857-5862.
Zheng, Xiaoying — Univ. of Florida
Cho, Chunglae — Univ. of Florida
Xia, Ye — Univ. of Florida

ThC18 5I
Control of Communication Systems (Regular Session)
Chair: Giarre, Laura — Univ. Di Palermo
Co-Chair: Lemmon, Michael — Univ. of Notre Dame

16:30-16:50 ThC18.1
An Event-Triggered Distributed Primal-Dual Algorithm for Network Utility Maximization, pp. 5863-5868.
Wan, Pu — Univ. of Notre Dame
Lemmon, Michael — Univ. of Notre Dame

16:50-17:10 ThC18.2
On Performance Limitations of Congestion Control, pp. 5869-5876.
Sandberg, Henrik — Royal Inst. of Tech. (KTH)
Hjalmarsson, HÍkan — Royal Inst. of Tech.
Jonsson, Ulf T. — Royal Inst. of Tech. (KTH)
Karlsson, Gunnar — Royal Inst. of Tech.
Johansson, Karl H. — Royal Inst. of Tech.

17:10-17:30 ThC18.3
Resource Sharing Optimality in WiFi Infrastructure Networks, pp. 5877-5882.
Giarre, Laura — Univ. Di Palermo
Tinnirello, Ilenia — Univ. di Palermo
Neglia, Giovanni — INRIA Sophia Antipolis Méditerranée

17:30-17:50 ThC18.4
Event-Based Control Using Quadratic Approximate Value Functions, pp. 5883-5888.
Cogill, Randy — Univ. of Virginia

17:50-18:10 ThC18.5
Stochastic Control Over Finite Capacity Channels: Causality and Feedback, pp. 5889-5894.
Charalambous, Charalambos D. — Univ. of Cyprus
Kourtellaris, Christos — Univ. of Cyprus
Stavrou, Photios — Univ. of Cyprus

18:10-18:30 ThC18.6
Uplink Power Control Via Adaptive HMM Estimation, pp. 5895-5900.
Zhang, Huan — Deakin Univ.
Pathirana, Pubudu N. — Deakin Univ.

ThTCTu Yellow River
Finite State Markov Processes: Modeling and Control (Tutorial Session)
Chair: Brockett, Roger — Harvard Univ.
Co-Chair: Meyn, Sean — Univ. of Illinois

16:30-16:50 ThTCTu.1
*A Poisson Counter Approach to Sample Path Representations (I)**.
Brockett, Roger — Harvard Univ.

16:50-17:30 ThTCTu.2
*Stochastic Chemical Kinetics Related to Molecular Biology (I)**.
Khammash, Mustafa H. — Univ. of California at Sta. Barbara

17:30-18:10 ThTCTu.3
*Lyapunov Functions, Value Functions, Performance Bounds (I)**.
Meyn, Sean — Univ. of Illinois

18:10-18:30 ThTCTu.4
*Explicitly Soluble Markov Optimization Problems (I)**.
Brockett, Roger — Harvard Univ.

ThCIn1 Mandarin Hall
Nonlinear Control and Realization (Interactive Session)

16:50-18:10 ThCIn1.1
Multi-Realization of Nonlinear Systems, pp. 5901-5905.
Su, Steven W. — Univ. of Tech. Sydney
Anderson, Brian D.O. — Australian National Univ.
Chen, Weidong — Shanghai Jiao Tong Univ.
Nguyen, Hung — Univ. of Tech. Sydney

16:50-18:10 ThCIn1.2
A Hamiltonian Approach to Moments-Based Font Recognition, pp. 5906-5911.
Casagrande, Daniele — Univ. of Udine
Sassano, Mario — Imperial Coll. London
Astolfi, Alessandro — Imperial Coll. & Univ. of Rome

16:50-18:10 ThCIn1.4
Metrics on the Space of Bounded Keplerian Orbits and Space Situational Awareness, pp. 5912-5917.
Maruskin, Jared M. — San Jose State Univ.
Scheeres, Daniel — The Univ. of Michigan

16:50-18:10 ThCIn1.5
A New Fractional-Order Chaotic System and Its Synchronization Control, pp. 5918-5922.
Shan, Liang — Nanjing Univ. of Science & Tech.
Liu, Zhong — Nanjing Univ. of Science & Tech.
Li, Jun — Nanjing Univ. of Science & Tech.
Zhiquan, Wang — Nanjing Univ. of Science & Tech.

16:50-18:10 ThCIn1.6
Existence and Representation of Stabilizing Solutions to Generalized Algebraic Riccati Equations, pp. 5923-5928.
Zhang, Xian — Heilongjiang Univ.
Zhong, Guang-Ping — Heilongjiang Univ.
Tan, Chong — Heilongjiang Univ.

16:50-18:10 ThCIn1.7
Reachability Analysis for Continuous Systems under Shared Control: Application to User-Interface Design, pp. 5929-5934.
Matni, Nikolai — Univ. of British Columbia
Oishi, Meeko — Univ. of British Columbia

16:50-18:10 ThCIn1.8
Realization Theory of Nash Systems, pp. 5935-5940.
Nemcova, Jana — Centrum Wiskunde & Informatica
Petreczky, Mihaly — Maastricht Univ.
van Schuppen, Jan H. — CWI

16:50-18:10 ThCIn1.9
Combination of Lyapunov Functions and Density Functions for Stability of Rotational Motion, pp. 5941-5946.
Vasconcelos, José Fernandes — Inst. Superior Técnico
Rantzer, Anders — Lund Univ.
Silvestre, Carlos — Inst. Superior Tecnico
Oliveira, Paulo Jorge — Inst. Superior Técnico

16:50-18:10 ThCIn1.10
Region of Attraction Estimates for Polynomial Systems, pp. 5947-5952.
Valmórbida, Giórgio — LAAS-CNRS

Tarbouriech, Sophie — LAAS-CNRS
Garcia, Germain — LAAS-CNRS

16:50-18:10 — ThCIn1.11
Robust H-Infinity Optimal Signal Predictive Quantization, pp. 5953-5958.
Chen, Yuepeng — wuhan Univ. of Tech.
Zhang, Jingxin — Monash Univ.
Li, Shenpeng — Monash Univ.
Chai, Li — Wuhan Univ. of Science and Tech.

16:50-18:10 — ThCIn1.12
Precision IPACS in the Presence of Dynamic Uncertainty, pp. 5959-5964.
Kim, Dohee — Univ. of Florida
Mackunis, William — Univ. of Florida
Fitz-Coy, Norman — Univ. of Florida
Dixon, Warren E. — Univ. of Florida

16:50-18:10 — ThCIn1.13
ISS Feedback Redesign for Disturbance Attenuation in Continuous Stirred Tank Reactors, pp. 5965-5970.
Di Ciccio, Maria Paola — Univ. of L'Aquila
Pepe, Pierdomenico — Univ. of L' Aquila
Foscolo, Pier Ugo — Univ. of L'Aquila

ThCIn2 — Mandarin Hall
Robotics and Motion Control (Interactive Session)

16:50-18:10 — ThCIn2.1
Velocity Space Approach with Region Analysis and Look-Ahead Verification for Robot Navigation, pp. 5971-5976.
Lian, Feng-Li — National Taiwan Univ.

16:50-18:10 — ThCIn2.2
Path Planning for Inchworm-Like Robot Moving in Narrow Space, pp. 5977-5984.
Jiang, Yong — sia
Wang, Hongguang — sia
Fang, Lijin — sia

16:50-18:10 — ThCIn2.3
Robust Tube-Based MPC for Constrained Mobile Robots under Slip Conditions, pp. 5985-5990.
Gonzalez, Ramon — Univ. OF ALMERIA
Fiacchini, Mirko — Univ. de Sevilla
Guzman, Jose Luis — Univ. of Almeria
Alamo, Teodoro — Univ. de Sevilla

16:50-18:10 — ThCIn2.4
A Multi-Mode Sequential Flocking Strategy for Motion Control of Multiple Mobile Robots in Obstacle Environment, pp. 5991-5996.
Cheng, Lei — Wuhan Univ. of Science and Tech.
Zhu, Quanmin — Univ. of the West of England
Wang, Yongji — Hauzhong Univ.

16:50-18:10 — ThCIn2.6
Receding Horizon Temporal Logic Planning for Dynamical Systems, pp. 5997-6004.
Wongpiromsarn, Tichakorn — California Inst. of Tech.
Topcu, Ufuk — California Inst. of Tech.
Murray, Richard M. — California Inst. of Tech.

16:50-18:10 — ThCIn2.7
Experimental Investigation of Teleoperation Performance for Miniature Rotorcraft, pp. 6005-6010.
Andersh, Jon — Univ. of Minnesota
Mettler, Bernard — Univ. of Minnesota
Papanikolopoulos, Nikolaos — Univ. of Minnesota

16:50-18:10 — ThCIn2.8
An Active Visual Servoing Strategy for Nonholonomic Mobile Robots, pp. 6011-6016.
Liu, Xi — Nankai Univ.
Fang, Yongchun — Nankai Univ.
Zhang, Xuebo — Nankai Univ.

16:50-18:10 — ThCIn2.9
An Improved Wall-Following Method for Escaping from Local Minimum in Artificial Potential Field Based Path Planning, pp. 6017-6022.
Zhu, Yi — Tsinghua Univ.
Zhang, Tao — Tsinghua Univ.
Song, Jingyan — Tsinghua Univ.

16:50-18:10 — ThCIn2.10
Identification of a Parallel Manipulator's Pose Using a Parallelogram, pp. 6023-6027.
Zhang, Shu-Ping — Donghua Univ.
Ding, Y S — Donghua Univ.
Hao, Kuangrong — Donghua Univ.

16:50-18:10 — ThCIn2.11
Comparison of Residual-Vibration and Energy-Minimizing Control Methods for Command Generation, pp. 6028-6033.
Singhose, William — Georgia Inst. of Tech.

Vela, Adan — Georgia Inst. of Tech.
Kim, Dooroo — Georgia Inst. of Tech.

16:50-18:10 ThCIn2.12
Nonlinear Modeling and Control for Electro Hydraulic Servo System in Pipe Expanding Process, pp. 6034-6039.
Jing, Ni — hangzhou dianzi Univ.
Lihui, Peng — zhejiang gongshang Univ.

16:50-18:10 ThCIn2.13
3D I-SLSJF: A Consistent Sparse Local Submap Joining Algorithm for Building Large-Scale 3D Map, pp. 6040-6045.
Hu, Gibson — The Univ. of Tech. Sydney
Huang, Shoudong — Univ. of Tech. Sydney
Dissanayake, Gamini — Univ. of Tech. Sydney

16:50-18:10 ThCIn2.14
An Advanced Selective Hydraulic Control System for the Heavy-Duty Rough Grinding Machine, pp. 6046-6051.
Li, Wan-zhou — Tsinghua Univ. Beijing,PR China
Wang, Jingchun — Tsinghua Univ.
Yang, Feng — Tsinghua Univ.
Zou, Guobin — Tsinghua Univ.

16:50-18:10 ThCIn2.15
Tracking Multiple Fluorescent Particles in Two Dimensions in a Confocal Microscope, pp. 6052-6057.
Shen, Zhaolong — Boston Univ.
Andersson, Sean — Boston Univ.

16:50-18:10 ThCIn2.16
H-Infinity Controller Design for High-Performance Scanning Tunneling Microscope, pp. 6058-6063.
Ahmad, Irfan — UJF
Voda, Alina — UJF
Besancon, Gildas — GIPSA-Lab. Grenoble INP

16:50-18:10 ThCIn2.17
Motion Generation for the Upper Body of HumanoidRobot, pp. 6064-6069.
Xing, Dengpeng — shanghai jiaotong Univ.
Su, Jianbo — Shanghai Jiaotong Univ.

16:50-18:10 ThCIn2.18
Stable Hybrid Remote Manipulation System with Adaptive Environment Observer Using Time-Scale Transformation, pp. 6070-6077.
Kakizoe, Yuki — Nara Inst. of Science and Tech.
Nakamura, Hisakazu — Nara Inst. of Science &Tech.
Nishitani, Hirokazu — Nara Inst. of Sci. & Tech.

ThCIn3 — Mandarin Hall
Sliding Mode Control and Observers (Interactive Session)

16:50-18:10 ThCIn3.1
A New Modeling Reference Direct Adaptive Sliding Mode Control for Electromechanical Actuator, pp. 6078-6082.
Li, Hao — Beijing Inst. of Tech.
Dou, Lihua — Beijing Inst. of Tech.
Su, Zhong — Bejing Information Science & Tech. Univ.
Chen, Jie — Beijing Inst. of Tech.

16:50-18:10 ThCIn3.2
Global Tracking Output-Feedback Sliding Mode Control Design Via Norm Estimators and Variable High Gain Observer, pp. 6083-6088.
Peixoto, Alessandro Jacoud — Federal Center of Tech. Celso Suckow da Fonseca
Oliveira, Tiago Roux — COPPE/UFRJ
Hsu, Liu — COPPE/UFRJ

16:50-18:10 ThCIn3.4
Back-Stepping Sliding Mode Control for Missile Systems Via Quaternions, pp. 6089-6094.
Zhu, Zheng — Beijing Inst. of Tech.
Xia, Yuanqing — Beijing Inst. of Tech.
Fu, Mengyin — Department of Automatic Control, Beijing Inst. ofTechnology

16:50-18:10 ThCIn3.5
Output-Based Finite Time Control of LTI Systems with Matched Perturbations Using HOSM, pp. 6095-6100.
Angulo Ballesteros, Marco Tulio — National Autonomous Univ. of Mexico
Fridman, Leonid M. — National Autonomous Univ.

16:50-18:10 ThCIn3.6
Observer Design in the Presence of Periodic Output Disturbances by Mixing of past and Present Output Data, pp. 6101-6106.
Grip, HÍvard Fjćr — NTNU
Saberi, Ali — Washington State Univ.

16:50-18:10 ThCIn3.7
Positive Observers for Positive Interval Linear Discrete-Time Delay Systems, pp. 6107-6112.
Li, Ping — The Univ. of HongKong
Lam, James — The Univ. of Hong Kong
Shu, Zhan — National Univ. of Ireland, Maynooth

16:50-18:10 ThCIn3.8

Exact Unknown-State, Unknown-Input Reconstruction: A Geometric Framework for Discrete-Time Systems, pp. 6113-6118.
Marro, Giovanni — Univ. of Bologna
Zattoni, Elena — Univ. of Bologna

16:50-18:10 ThCIn3.9
Robust Observer Design for a Class of Nonlinear Systems Using Filtering and Dynamic Scaling, pp. 6119-6124.
Ortner, Peter — Johannes Kepler Univ.
Astolfi, Alessandro — Imperial Coll. & Univ. of Rome

16:50-18:10 ThCIn3.10
Cooperative Observers for Nonlinear Systems, pp. 6125-6130.
Aviles, Jesus D. — Univ. Nacional Autónoma de México
Moreno, Jaime A. — Univ. Nacional Autonoma

16:50-18:10 ThCIn3.11
Observer Design for Inherently Nonlinear Systems with Lower Triangular Structure, pp. 6131-6136.
Ibrir, Salim — Univ. of Trinidad and Tobago

16:50-18:10 ThCIn3.12
Nonlinear Observer Design for Discrete MIMO Systems with Unknown Time Delay, pp. 6137-6142.
Na, Jing — Beijing Inst. of Tech.
Herrmann, Guido — Univ. of Bristol
Ren, Xuemei — Beijing Inst. of Tech.
Barber, Phil — Jaguar and Land Rover Ltd

16:50-18:10 ThCIn3.13
Speed and Load Torque Observer for Rotating Machines, pp. 6143-6148.
Shah, Dhruv — Univ. of paris sud 11
Ortega, Romeo — LSS-SUPELEC
Astolfi, Alessandro — Imperial Coll. & Univ. of Rome

ThCIn4 — Mandarin Hall
Stability of Linear Systems (Interactive Session)

16:50-18:10 ThCIn4.1
Further Results on Stability and Exact Observability of Linear Stochastic Systems, pp. 6149-6153.
Hou, Ting — Shandong Univ. of Science and Tech.
Zhang, Weihai — Shandong Univ. of Science and Tech.
Ma, Hongji — Shandong Univ. of Science and Tech.

16:50-18:10 ThCIn4.3
Fixed Order Multivariable Discrete-Time Control, pp. 6154-6159.
Keel, L. H. — Tennessee State Univ.
Bhattacharyya, Shankar P. — Texas A & M Univ.

16:50-18:10 ThCIn4.4
Rank Stability Radius for a Matrix with Structured Scalar Perturbations, pp. 6160-6165.
Xing, Wei — Coll. of Science, Northeastern Univ.
Yan, Weiyong — Curtin Univ.
Liu, Wan Quan — Curtin Univ. of Tech.

16:50-18:10 ThCIn4.5
Stability and Robustness Conditions Using Frequency Dependent Half Planes, pp. 6166-6171.
Jacobsson, Krister — California Inst. of Tech.
Andrew, Lachlan L. H. — Swinburne Univ. of Tech.
Tang, Ao — Cornell Univ.

16:50-18:10 ThCIn4.6
LMI Stability Constraints for Disjoint Stability Regions Using Rouche Theorem, pp. 6172-6176.
Dolgin, Yuri — Tech. - Israel Inst. of Tech.
Zeheb, Ezra — Tech. Inst. of Tech.

16:50-18:10 ThCIn4.7
An Optimal Design of Symmetric H Infinity Static Output Feedback Controller Using LMI for Collocated Second-Order Linear System, pp. 6177-6182.
Nagashio, Tomoyuki — Univ. of Electro-Communications
Kida, Takashi — Univ. of Electro-Communications

ThCIn5 — Mandarin Hall
Biological Systems (Interactive Session)

16:50-18:10 ThCIn5.1
Compound Control — Adaptation to Multiple Environmental Changes, pp. 6183-6188.
Tanaka, Reiko — Imperial Coll. London
Gaohua, Lu — Inst. of Physical and Chem. Res.
Shimoda, Shingo — RIKEN
Kimura, Hidenori — The Inst. of Physical and Chemical Res. (RIKEN)

16:50-18:10 ThCIn5.2
Observer-Based Identification of a Multi-Output Feedforward Loop from Gene Expression Data, pp. 6189-6194.
Cacace, Filippo — Univ. Campus Biomedico di Roma
Germani, Alfredo — Univ. dell'Aquila

Palumbo, Pasquale — IASI-CNR

16:50-18:10 — ThCIn5.3

A Bottleneck Assigned Binary Ant System for Multimodal Optimization, pp. 6195-6200.

Zhao, Jun — Ningbo Univ.
Yan, Chenyang — Ningbo Univ.

16:50-18:10 — ThCIn5.5

Analysis of HIV Mutation Dynamics for a Linear Mutation Tree, pp. 6201-6206.

dos Santos Ferreira, Jorge — National Univ. of Ireland-Maynooth
O'Donoghue, Yoann — National Univ. of Ireland-Maynooth, Hamilton Inst.
Middleton, Richard H. — National Univ. of Ireland Maynooth

16:50-18:10 — ThCIn5.6

A Closed Loop Musculoskeletal Model of Postural Coordination Dynamics, pp. 6207-6212.

Bonnet, Vincent — Lirmm
Fraisse, Philippe — Lirmm
Ramdani, Nacim — INRIA Sophia Antipolis Méditerrannée
Lagarde, Julien — EDM
Ramdani, Sofiane — EDM
Bardy, Benoit — EDM

16:50-18:10 — ThCIn5.7

Modeling in Microbial Batch Culture and Its Parameter Identification, pp. 6213-6217.

Gong, Zhaohua — Shandong Inst. of Business and Tech.
Liu, Chongyang — Shandong Inst. of Business and Tech.
Feng, Enmin — Dalian Univ. of Tech.

ThCIn6 — Mandarin Hall

Optimization and Applications (Interactive Session)

16:50-18:10 — ThCIn6.1

On an Anytime Algorithm for Control, pp. 6218-6223.

Gupta, Vijay — Univ. of Notre Dame

16:50-18:10 — ThCIn6.2

Periodic Power Management Schemes for Real-Time Event Streams, pp. 6224-6231.

Huang, Kai — ETH Zurich
Santinelli, Luca — Scuola Superiore Sant'Anna of Pisa
Chen, Jian-Jia — ETH Zurich
Thiele, Lothar — ETH Zurich
Buttazzo, Giorgio — Scuola Superiore Sant'Anna of Pisa

16:50-18:10 — ThCIn6.3

Optimal and Adaptive Battery Discharge Strategies for Cyber-Physical Systems, pp. 6232-6237.

Zhang, Fumin — Georgia Inst. of Tech.
Shi, Zhenwu — Georgia Inst. of Tech.

16:50-18:10 — ThCIn6.4

On Lyapunov Sampling for Event-Driven Controllers, pp. 6238-6243.

Velasco, Manel — Tech. Univ. of Catalonia
Marti, Pau — Tech. Univ. of Catalonia
Bini, Enrico — Scuola Superiore Sant'Anna

16:50-18:10 — ThCIn6.5

LQ Optimal Inventory Control for Multi-Supplier Periodic-Review Systems with Disparate Lead-Time Delay, pp. 6244-6249.

Ignaciuk, Przemyslaw — Tech. Univ. of Lodz
Bartoszewicz, Andrzej — Tech. Univ. of Lodz

16:50-18:10 — ThCIn6.6

A Simplified Scatter Search for a Special Single Machine Scheduling Problem to Minimize Total Tardiness, pp. 6250-6255.

Wang, Xianpeng — Northeastern Univ.
Tang, Lixin — Northeastern Univ.

16:50-18:10 — ThCIn6.7

A Scatter Search Based Heuristic for the Balancing of Parallel Assembly Lines, pp. 6256-6261.

Guo, Qingxin — Northeastern Univ.
Tang, Lixin — Northeastern Univ.

16:50-18:10 — ThCIn6.8

Model Driven Design in Industrial Automation, pp. 6262-6267.

Estévez, Elisabet — Univ. del País Vasco
Sarachaga, MŞ Isabel — Univ. del País Vasco (UPV/EHU)
Perez, Federico — Univ. del País Vasco (UPV/EHU)
Orive, Dario — Univ. del País Vasco
Marcos, Marga — Univ. del País Vasco

16:50-18:10 — ThCIn6.9

Solve the Optimum Steelmaking Charge Plan with Unknown Charge Number Using Improved DPSO, pp. 6268-6273.

Xue, Yuncan — Hohai Univ.
Zheng, Dongliang — Hohai Univ.
Liu, Fei — Jiangnan Univ.

Yang, Qiwen — Hohai Univ.

16:50-18:10 — ThCIn6.11

Modeling and Optimizing Military Air Operation, pp. 6274-6279.

Faied, Mariam — Univ. of Michigan- Ann Arbor
Girard, Anouck — Univ. of Michigan, Ann Arbor

16:50-18:10 — ThCIn6.12

Approximate Robust Optimization of Time-Periodic Stationary States with Application to Biochemical Processes, pp. 6280-6285.

Houska, Boris — Univ. of Leuven
Logist, Filip — Katholieke Univ. Leuven
Van Impe, Jan F.M. — Katholieke Univ. Leuven
Diehl, Moritz — Katholieke Univ. Leuve

16:50-18:10 — ThCIn6.13

On Trajectory Optimization for Active Sensing in Gaussian Process Models, pp. 6286-6292.

Le Ny, Jerome — Univ. of Pennsylvania
Pappas, George J. — Univ. of Pennsylvania

Fr1PL — Grand Ballroom
New Opportunities for Control: Quantum Internal Model Principle and Decoherence Control (Plenary Session)

08:00-08:50 — Fr1PL.1

*New Opportunities for Control: Quantum Internal Model Principle and Decoherence Control**.

Tarn, Tzyh-Jong — Washington Univ.

Fr2PL — Grand Ballroom
Mean Field Stochastic Control (Bode Lecture) (Plenary Session)

09:00-09:50 — Fr2PL.1

*Mean Field Stochastic Control**.

Caines, Peter E. — McGill Univ.

FrA01 — 3D
Lyapunov Methods I (Regular Session)

Chair: Polis, Michael P. — Oakland Univ.
Co-Chair: Krstic, Miroslav — Univ. of California at San Diego

10:10-10:30 — FrA01.1

Nonlinear Stabilization through Long Input Delay - Part II: The Strict-Feedforward Class, pp. 6293-6298.

Krstic, Miroslav — Univ. of California at San Diego

10:30-10:50 — FrA01.2

On Global Lyapunov Characterization of Multi-Stable Nonlinear Systems, pp. 6299-6304.

Efimov, Denis — Inst. for Problems of Mechanical Eng.

10:50-11:10 — FrA01.3

Extending Interconnection and Damping Assignment Passivity-Based Control (IDA-PBC) to Underactuated Mechanical Systems with Nonholonomic Pfaffian Constraints: The Mobile Inverted Pendulum Robot, pp. 6305-6310.

Muralidharan, Vijay — Indian Inst. of Tech. Madras
Maruthi, T .R — Indian Inst. of Tech. Madras
Mahindrakar, Arun D. — Indian Inst. of Tech. Madras

11:10-11:30 — FrA01.4

Network Stability within Visual Cortex: A Lyapunov Function Approach, pp. 6311-6316.

Ulinski, Philip — Univ. of Chicago

11:30-11:50 — FrA01.5

Lasalle's Invariant Principle Via Vector Lyapunov Functions of a Class of Discontinuous Systems, pp. 6317-6320.

Cheng, Gui-fang — Zhengzhou Univ.
Mu, Xiaowu — Zhengzhou Univ.

11:50-12:10 — FrA01.6

The Steering Control of Vehicle Dynamics Via a Lyapunov Redesign Approach, pp. 6321-6326.

Chung, Wen-Ching — National Chiao Tung Univ.
Liaw, Der-Cherng — National Chiao Tung Univ.
Chang, Shih-Tse — National Chiao Tung Univ.

FrA02 — 3E
Model Predictive Control: Stability and Robustness (Regular Session)

Chair: Lygeros, John — ETH Zurich
Co-Chair: Bemporad, Alberto — Univ. of Siena

10:10-10:30 — FrA02.1

A Multiscale Approximation Scheme for Explicit Model Predictive Control with Stability, Feasibility, and Performance Guarantees, pp. 6327-6332.

Summers, Sean — ETH Zurich
Jones, Colin Neil — ETH Zurich
Lygeros, John — ETH Zurich
Morari, Manfred — ETH Zurich

10:30-10:50 FrA02.2
Scenario-Based Model Predictive Control of Stochastic Constrained Linear Systems, pp. 6333-6338.
Bernardini, Daniele — Univ. of Siena
Bemporad, Alberto — Univ. of Siena

10:50-11:10 FrA02.3
Robust Constrained Model Predictive Control of Piecewise Linear Systems with Bounded Additive Disturbances, pp. 6339-6344.
Li, Shaoyuan — Shanghai Jiao Tong Univ.
Zou, Yuanyuan — Shanghai Jiao Tong Univ.

11:10-11:30 FrA02.4
Verifying Stability of Approximate Explicit MPC, pp. 6345-6350.
Hovd, Morten — Norwegian Univ. of Sci & Tech.
Scibilia, Francesco — Norwegian Univ. of Science & Tech.
Maciejowski, Jan M. — Univ. of Cambridge
Olaru, Sorin — Supelec

11:30-11:50 FrA02.5
Model Predictive Control of Linear Periodic Systems - a Unified Framework Including Control of Multirate and Multiplexed Systems, pp. 6351-6358.
Gondhalekar, Ravi — Osaka Univ.
Jones, Colin Neil — ETH Zurich

11:50-12:10 FrA02.6
On Stochastic Receding Horizon Control with Bounded Control Inputs, pp. 6359-6364.
Hokayem, Peter — ETH Zurich
Chatterjee, Debasish — ETH Zurich
Lygeros, John — ETH Zurich

FrA03 — 3C
LMI Techniques for Switched Systems (Regular Session)

Chair: Trofino, Alexandre — Federal Univ. of Santa Catarina
Co-Chair: Daafouz, Jamal — CRAN -INPL

10:10-10:30 FrA03.1
Switching Rule Design for Switched Dynamic Systems with Affine Vector Fields, pp. 6365-6370.
Trofino, Alexandre — Federal Univ. of Santa Catarina
Assmann, Diego — UFSC
Scharlau, Cesar Cataldo — Univ. Federal de Santa Catarina (UFSC)
Coutinho, Daniel Ferreira — Pont. Univ. Catolica do Rio Grande

10:30-10:50 FrA03.2
Stabilization of Continuous-Time Singularly Perturbed Switched Systems, pp. 6371-6376.
Malloci, Ivan — CRAN
Daafouz, Jamal — CRAN, UMR CNRS - Nancy Univ.
Iung, Claude — Inst. National Pol. de Lorraine

10:50-11:10 FrA03.3
Full Order Dynamic Output Feedback Hoo Control for Continuous-Time Switched Linear Systems, pp. 6377-6382.
Deaecto, Grace S. — UNICAMP
Geromel, Jose C. — UNICAMP

11:10-11:30 FrA03.4
Exponential mathcal{H}_{infty} Static Output Feedback Control of Switched Systems with Average Dwell-Time and Time-Varying Uncertainties, pp. 6383-6388.
Qiu, Jianbin — USTC & CityU Joint Advanced Res. Center
Feng, Gang — City Univ. of Hong Kong
Gao, Huijun — Harbin Inst. of Tech.
Fan, Yuan — USTC & CityU Joint Advanced Res. Center

11:30-11:50 FrA03.5
Model Reduction for Markovian Jump Systems with Time-Delay and Uncertain Switching Probabilities, pp. 6389-6394.
Zhao, Huanyu — Nanjing Univ. of Science and Tech.
Chen, Qingwei — Nanjing Univ. of Science and Tech.
Xu, Shengyuan — The Univ. of Hong Kong

11:50-12:10 FrA03.6
Stability and Stabilization for a Class of Discrete-Time Piecewise Affine Singular Systems, pp. 6395-6400.
Ma, Shuping — Shandong Univ.
Boukas, El-Kebir — Ec. Pol. de Montreal

FrA04 — 3A
Algebraic and Geometric Methods (Regular Session)

Chair: D'Andrea, Raffaello — ETH
Co-Chair: Trumpf, Jochen — The Australian National Univ.

10:10-10:30 FrA04.1
Measures of Unobservability, pp. 6401-6406.
Krener, Arthur J — Naval Postgraduate School
Ide, Kayo — Univ. of Maryland

10:30-10:50 FrA04.2
Nonlinear Attitude Observers on SO(3) for Complementary and Compatible Measurements: A Theoretical Study, pp. 6407-6412.
Mahony, Robert — Australian National Univ.
Hamel, Tarek — Univ. de Nice Sophia Antipolis
Trumpf, Jochen — The Australian National Univ.
Lageman, Christian — Univ. of Liege

10:50-11:10 FrA04.3
A Quantitative Measure of Observability and Controllability, pp. 6413-6418.
Kang, Wei — Naval Postgraduate School
Xu, Liang — Naval Res. Lab.

11:10-11:30 FrA04.4
A Limiting Property of the Matrix Exponential with Application to Multi-Loop Control, pp. 6419-6425.
Trimpe, Sebastian — ETH Zurich
D'Andrea, Raffaello — ETH

11:30-11:50 FrA04.5
Variety of Linear Continuous Time Systems, pp. 6426-6431.
Zhang, Hui — Zhejiang Univ.
Sun, Youxian — Zhejiang Univ.

11:50-12:10 FrA04.6
A Floquet-Like Factorization for Linear Periodic Systems, pp. 6432-6437.
Jikuya, Ichiro — Nagoya Univ.
Hodaka, Ichijo — Nagoya Univ.

FrA05 — 3J
Distributed Control and Differential Games (SIAM Session)

Chair: Hintermueller, Michael — Humboldt-Univ. of Berlin
Co-Chair: Sarlette, Alain — Univ. of Liege (Belgium)

10:10-10:30 FrA05.1
Consensus on Homogeneous Manifolds, pp. 6438-6443.
Sarlette, Alain — Univ. of Liege (Belgium)
Sepulchre, Rodolphe J. — Univ. de Liege

10:30-10:50 FrA05.2
A Problem of Guarding Line Segment, pp. 6444-6447.
Rzymowski, Witold — Lublin Univ. of Tech.

10:50-11:10 FrA05.3
Vector-Valued Hyperbolic System and Applications to the Complex Networks of Strings, pp. 6448-6453.
Xu, Gen Qi — Tianjin Univ.
Zhang, Yaxuan — School of Sience, Tianjin Univ.

11:10-11:30 FrA05.4
Goal-Oriented Adaptivity in Control Constrained Optimal Control of Partial Differential Equations, pp. 6454-6459.
Hintermueller, Michael — Humboldt-Univ. of Berlin
Hoppe, Ronald H. W. — Univ. of Houston

11:30-11:50 FrA05.5
Mixed H2/Hinf Control Via Nonsmooth Optimization, pp. 6460-6465.
Apkarian, Pierre — UPS
Noll, Dominikus — Univ. Paul Sabatier
Rondepierre, Aude — Univ. of Toulouse, INSA.

11:50-12:10 FrA05.6
Overcoming Limitations of Game-Theoretic Distributed Control, pp. 6466-6471.
Marden, Jason — California Inst. of Tech.
Wierman, Adam — California Inst. of Tech.

FrA06 — 3G
Robotics (Regular Session)

Chair: Shiriaev, Anton — NTNU/Umea Univ.
Co-Chair: Kim, Sang Hee — Kumoh National Inst. of Tech.

10:10-10:30 FrA06.1
Statistical Methods for Estimating the Dynamical Parameters of Manipulators, pp. 6472-6477.
Muradore, Riccardo — Univ. of Verona
Foroncelli, Roberto — Univ. of Verona
Fiorini, Paolo — Univ. of Verona

10:30-10:50 FrA06.2
Motion Control for an Underwater Robotic Fish with Two Undulating Long-Fins, pp. 6478-6483.
Shang, Liuji — Inst. of Automation, Chinese Acad. of Sciences
Wang, Shuo — Chinese Acad. of Sciences
Tan, Min — Inst. of Automation, Chinese Acad. of Sciences
Dong, Xiang — Inst. of Automation, Chinese Acad. of Sciences

10:50-11:10 FrA06.3

Simultaneous Localization and Sampled Environment Mapping, pp. 6484-6489.

Sun, Rongchuan — Shenyang Inst. of Automation, the Chinese Acad. of Science
Ma, Shugen — Ritsumeikan Univ.
Li, Bin — Shenyang Inst. of Automation, the Chinese Acad. of Science
Wang, Yuechao — Shenyang Inst. of Automation, Chinese Acad. of Sciences

11:10-11:30 FrA06.4

Transverse Linearization for Mechanical Systems with Passive Links, Impulse Effects, and Friction Forces, pp. 6490-6495.

Freidovich, Leonid — Umeĺ Univ.
Shiriaev, Anton — NTNU/Umea Univ.

11:30-11:50 FrA06.5

Nonlinear Attitude Estimation Using Active Vision and Inertial Measurements, pp. 6496-6501.

Brás, Sérgio — Inst. Superior Técnico
Cunha, Rita — Inst. Superior Técnico
Vasconcelos, José Fernandes — Inst. Superior Técnico
Silvestre, Carlos — Inst. Superior Tecnico
Oliveira, Paulo Jorge — Inst. Superior Técnico

11:50-12:10 FrA06.6

Modeling Neural Control of Robotic Fish with Pectoral Fins Using a CPG-Based Network, pp. 6502-6507.

Wang, Ming — Inst. of Automation, Chinese Acad. of Sciences
Yu, Junzhi — Inst. of Automation, Chinese Acad. of Sciences
Tan, Min — Inst. of Automation, Chinese Acad. of Sciences

FrA07 — 5C
Observer Design for Nonlinear Systems (Regular Session)

Chair: Manes, Costanzo — Univ. dell'Aquila
Co-Chair: Praly, Laurent — Mines Paris-Tech.

10:10-10:30 FrA07.1

A Globally Exponentially Convergent Immersion and Invariance Speed Observer for N Degrees of Freedom Mechanical Systems, pp. 6508-6513.

Astolfi, Alessandro — Imperial Coll. & Univ. of Rome
Ortega, Romeo — LSS-SUPELEC
Venkatraman, Aneesh — Univ. of Groningen

10:30-10:50 FrA07.2

Nonlinear Observer Design with an Appropriate Riemannian Metric, pp. 6514-6519.

Sanfelice, Ricardo G. — Univ. of Arizona
Praly, Laurent — Mines Paris-Tech.

10:50-11:10 FrA07.3

Extended Nonlinear Observable Canonical Form for Multi-Output Dynamical Systems, pp. 6520-6525.

Boutat, Driss — Ensi de Bourges
Busawon, Krishna K. — Northumbria Univ.

11:10-11:30 FrA07.4

Global Finite-Time Observers for Non Linear Systems, pp. 6526-6531.

Menard, Tomas — Ec. Centrale Nantes
Moulay, Emmanuel — Ec. Centrale de Nantes
Perruquetti, Wilfrid — Ec. Centrale de Lille

11:30-11:50 FrA07.5

Semiglobal State Observers for Nonlinear Analytic Discrete-Time Systems, pp. 6532-6537.

Germani, Alfredo — Univ. dell'Aquila
Manes, Costanzo — Univ. dell'Aquila

11:50-12:10 FrA07.6

Full-Order High-Gain Observers for Minimum Phase Nonlinear Systems, pp. 6538-6543.

Memon, Attaullah — Michigan State Univ.
Khalil, Hassan K. — Michigan State Univ.

FrA08 — 3I
Switched Electronic Systems (Invited Session)

Chair: Vasca, Francesco — Univ. of Sannio
Co-Chair: Chiasson, John — Boise State Univ.
Organizer: Vasca, Francesco — Univ. of Sannio
Organizer: Iannelli, Luigi — Univ. of Sannio in Benevento

10:10-10:30 FrA08.1

Stabilitiy Analysis of a Lyapunov-Based Controlled Boost Converter (I), pp. 6544-6548.

Spinetti-Rivera, Mario — Univ. of Los Andes
Fossas, Enric — Univ. Pol. de Catalunya
Biel, Domingo — Univ. Pol. de Catalunya

10:30-10:50 FrA08.2

Cyclic Steady State Behavior of Switched Electronic Systems (I), pp. 6549-6554.

Iannelli, Luigi — Univ. of Sannio in Benevento
Vasca, Francesco — Univ. of Sannio

10:50-11:10 FrA08.3
Model Reduction by Moment Matching for Switched Power Converters (I), pp. 6555-6560.
Dib, Wissam — LSS-SUPELEC
Astolfi, Alessandro — Imperial Coll. & Univ. of Rome
Ortega, Romeo — LSS-SUPELEC

11:10-11:30 FrA08.4
High Dynamic Performance Programmed PWM Control of a Multilevel Inverter with Capacitor DC Sources (I), pp. 6561-6568.
Chiasson, John — Boise State Univ.
Du, Zhong — Parker Hannifin Corp.
Ozpineci, Burak — OAK RIDGE NATIONAL Lab.
Tolbert, Leon — The Univ. of Tennessee

11:30-11:50 FrA08.5
Power Factor Compensation with Lossless Linear Filters Is Equivalent to (weighted) Power Equalization and a New Cyclo--Dissipativity Characterization (I), pp. 6569-6574.
Del Puerto-Flores, Dunstano — Univ. OF GRONINGEN
Ortega, Romeo — LSS-SUPELEC
Scherpen, Jacquelien M.A. — Univ. of Groningen

11:50-12:10 FrA08.6
Optimal Control of a Two Control Input Buck-Boost Converter (I), pp. 6575-6581.
Mariethoz, Sebastien — ETH Zurich
Almer, Stefan — ETH Zuerich
Morari, Manfred — ETH Zurich

FrA09 — 3H
Engine Modeling and Control (Regular Session)

Chair: Glass, John — MathWorks
Co-Chair: Wang, Junmin — Ohio State Univ.

10:10-10:30 FrA09.1
Control of a Turbocharged Diesel Engine Fitted with High Pressure and Low Pressure Exhaust Gas Recirculation Systems, pp. 6582-6589.
Grondin, Olivier — IFP
Moulin, Philippe — IFP
Chauvin, Jonathan — IFP

10:30-10:50 FrA09.2
Nonlinear Model Predictive Control for Idle Speed Control of SI Engine, pp. 6590-6595.
Li, Shu — Jilin Univ.
Chen, Hong — Jilin Univ. Campus NanLing
Yu, Shuyou — Stuttgart Univ.

10:50-11:10 FrA09.3
Nonlinear Observer Designs for Diesel Engine Selective Catalytic Reduction (SCR) Ammonia Coverage Ratio Estimation, pp. 6596-6601.
Hsieh, Ming Feng — The Ohio State Univ. Center for Automotive Res.
Wang, Junmin — Ohio State Univ.

11:10-11:30 FrA09.4
Model Reduction of Automotive Engines Using Perturbation Theory, pp. 6602-6607.
Sharma, Rahul — The Univ. of Melbourne
Nesic, Dragan — Univ. of Melbourne
Manzie, Chris — The Univ. of Melbourne

11:30-11:50 FrA09.5
Dynamic Periodic Observer for a Combustion Engine Test Bench, pp. 6608-6613.
Chauvin, Jonathan — IFP
Chasse, Alexandre — IFP

11:50-12:10 FrA09.6
A Control Oriented Model of a Common-Rail System for Gasoline Direct Injection Engine, pp. 6614-6619.
di Gaeta, Alessandro — Consiglio Nazionale delle Ricerche
Fiengo, Giovanni — Univ. degli Studi del Sannio
Palladino, Angelo — Univ. del Sannio
Giglio, Veniero — Consiglio Nazionale delle Ricerche

FrA10 — 5D
Nonlinear Adaptive Control I (Regular Session)

Chair: Hill, David J. — The Australian National Univ.
Co-Chair: Ren, Beibei — National Univ. of Singapore

10:10-10:30 FrA10.1
A Discrete-Time Periodic Adaptive Control Approach for Parametric-Strict-Feedback Systems, pp. 6620-6625.
Huang, Deqing — Univ.
Xu, Jian-Xin — National Univ. of Singapore
Hou, Zhongsheng — Beijing Jiaotong Univ.

10:30-10:50 FrA10.2
Integrated Direct/Indirect Adaptive Robust Control of a Class of Nonlinear Systems Preceded by Unknown Dead-Zone Nonlinearity, pp. 6626-6631.

Hu, Chuxiong — Zhejiang Univ.
Yao, Bin — Purdue Univ.
Wang, Qingfeng — Zhejiang Univ.

10:50-11:10 FrA10.3
A Multivariable MRAC Scheme with Sensor Uncertainty Compensation, pp. 6632-6637.
Guo, Jiaxing — Univ. of Virginia
Tao, Gang — Univ. of Virginia

11:10-11:30 FrA10.4
Dissipativity-Based Switching Adaptive Control, pp. 6638-6643.
Liu, Tengfei — The Australian National Univ.
Hill, David J. — The Australian National Univ.
Wang, Cong — South China Univ. of Tech.

11:30-11:50 FrA10.5
Multiple Models Adaptive Feedforward Decoupling Controller Using HDBD Focus, pp. 6644-6649.
Wang, Xin — Shanghai Jiao Tong Univ.
Yang, Hui — East China Jiaotong Univ.
Li, Shaoyuan — Shanghai Jiao Tong Univ.
Zheng, Yihui — Shanghai Jiao Tong Univ.

11:50-12:10 FrA10.6
Adaptive Control for Parametric Output Feedback Systems with Output Constraint, pp. 6650-6655.
Ren, Beibei — National Univ. of Singapore
Ge, Shuzhi Sam — National Univ. of Singapore
Tee, Keng Peng — Inst. for Infocomm Res.
Lee, Tong Heng — National Univ. of Singapore

FrA11 — 5J
Advanced Control Techniques (Regular Session)

Chair: Liberzon, Daniel — Univ. of Illinois, Urbana-Champaign
Co-Chair: Zheng, Wei Xing — Univ. of Western Sydney

10:10-10:30 FrA11.1
LQ Feedback Formulation for Discrete-Time H-Infinity Output Feedback, pp. 6656-6661.
Karthikeyan, Anantha — Univ. of Southern California
Safonov, Michael G. — Univ. of Southern California

10:30-10:50 FrA11.2
Nonlinear Control of Non-Minimal Tensegrity Models, pp. 6662-6667.
Skelton, Robert E. — Univ. of California at San Diego
Mirats Tur, Josep M. — Inst. de Robňtica

10:50-11:10 FrA11.3
Sufficient LMI Conditions for the Design of Static and Reduced Order Controllers, pp. 6668-6673.
Trofino, Alexandre — Federal Univ. of Santa Catarina

11:10-11:30 FrA11.4
A Primal-Dual Method for Low Order H-Infinity Controller Synthesis, pp. 6674-6679.
Ankelhed, Daniel — Linköping Univ.
Helmersson, Anders — Linköpings Univ.
Hansson, Anders — Linkoping Univ.

11:30-11:50 FrA11.5
Quasi-ISS Reduced-Order Observers and Quantized Output Feedback, pp. 6680-6685.
Shim, Hyungbo — Seoul National Univ.
Liberzon, Daniel — Univ. of Illinois, Urbana-Champaign
Kim, Jung Su — Korea Univ.

11:50-12:10 FrA11.6
Mixed mbox{boldmath mu} Robust Finite Word Length Controller Design, pp. 6686-6691.
Wu, Jun — Zhejiang Univ.
Li, Gang — Nanyang Tech. Univ.
Chen, Sheng — Univ. of Southampton
Chu, Jian — Zhejiang Univ.

FrA12 — 5E
Sliding Mode Control I (Regular Session)

Chair: Shi, Peng — Faculty of Advanced Tech.
Co-Chair: Spurgeon, Sarah K. — Univ. of Kent

10:10-10:30 FrA12.1
Robust Output Regulation with Exact Unmatched Uncertainties Compensation Based on HOSM Observation (I), pp. 6692-6696.
Ferreira, Alejandra — National Autonomous Univ.
Bejarano, Francisco Javier — Univ. Nacional Autonoma de México (UNAM)
Fridman, Leonid M. — National Autonomous Univ.

10:30-10:50 FrA12.2
Euler Discretization of Second-Order Terminal Sliding Mode Control Systems, pp. 6697-6702.
Wang, Bin — Royal Melbourne Inst. of Tech.

Yu, Xinghuo — RMIT Univ.

10:50-11:10 — FrA12.3

Adaptive Sliding Mode Control for Takagi-Sugeno Fuzzy Systems, pp. 6703-6708.

Zhang, Jinhui — Beijing Inst. of Tech.
Shi, Peng — Faculty of Advanced Tech.
Xia, Yuanqing — Beijing Inst. of Tech.
Fu, Mengyin — Department of Automatic Control, Beijing Inst. ofTechnology

11:10-11:30 — FrA12.4

Global Time-Delay Dependent Decentralised Sliding Mode Control Using Only Output Information, pp. 6709-6714.

Yan, Xing-Gang — Univ. of Kent
Spurgeon, Sarah K. — Univ. of Kent
Edwards, Christopher — Univ. of Leicester

11:30-11:50 — FrA12.5

A Second Order Sliding Mode Controller with Polygonal Constraints, pp. 6715-6719.

Dinuzzo, Francesco — Univ. of Pavia

11:50-12:10 — FrA12.6

ITAE Optimal Transient Performance in SMC of Third Order Systems with State and Input Constraints, pp. 6720-6725.

Nowacka-Leverton, Aleksandra — Tech. Univ. of A;ódz;
Bartoszewicz, Andrzej — Tech. Univ. of Lodz

FrA13 — 5A
Neural Network Systems (Regular Session)

Chair: Dixon, Warren E. — Univ. of Florida
Co-Chair: Wang, Cong — South China Univ. of Tech.

10:10-10:30 — FrA13.1

Composite Adaptation for Neural Network-Based Controllers, pp. 6726-6731.

Patre, Parag — Univ. of Florida
Bhasin, Shubhendu — Univ. of Florida
Wilcox, Zachary — Univ. of Florida
Dixon, Warren E. — Univ. of Florida

10:30-10:50 — FrA13.2

Learning from Neural Control for a Class of Discrete-Time Nonlinear Systems, pp. 6732-6737.

Chen, Tianrui — South China Univ. of Tech.
Wang, Cong — South China Univ. of Tech.

10:50-11:10 — FrA13.3

Generating Training Data for Identifying Neurofuzzy Models of Non-Linear Dynamic Systems, pp. 6738-6743.

Zhou, Yimin — Loughborough Univ.
Dexter, A.L. — Univ. of Oxford
Zolotas, Argyrios — Loughborough Univ.

11:10-11:30 — FrA13.4

Optimal Hinfinity Synchronization of General Discrete-Time Delayed Chaotic Neural Networks Via Dynamic Output Feedback, pp. 6744-6749.

Liu, Meiqin — Zhejiang Univ.
Li, X. Rong — Univ. of New Orleans

11:30-11:50 — FrA13.5

Optimal Tracking Control of Affine Nonlinear Discrete-Time Systems with Unknown Internal Dynamics, pp. 6750-6755.

Dierks, Travis — Missouri S&T
Jagannathan, Sarangapani — Missouri Univ. of Science & Tech.

11:50-12:10 — FrA13.6

Synchronization Control of Stochastic Delayed Neural Networks Communicating with Unreliable Links, pp. 6756-6761.

Zhang, Yijun — Nanjing Univ. of Science and Tech.
Yue, Dong — Nanjing Normal Univ.
Tian, Engang — Nanjing Normal Univ.

FrA14 — 5B
Identification of Nonlinear Systems (Regular Session)

Chair: Runolfsson, Thordur — The Univ. of Oklahoma
Co-Chair: Findeisen, Rolf — OVG Univ. Magdeburg

10:10-10:30 — FrA14.1

A Tunable Radial Basis Function Model for Nonlinear System Identification Using Particle Swarm Optimisation, pp. 6762-6767.

Chen, Sheng — Univ. of Southampton
Hong, Xia — Reading
Luk, Bing L. — City Univ. of Hong Kong
Harris, Chris J. — Univ. of Southampton

10:30-10:50 — FrA14.2

Non-Parametric Nonlinear System Identification: An Asymptotic Minimum Mean Squared Error Estimator, pp. 6768-6773.

Bai, Er-Wei — Univ. of Iowa

10:50-11:10 — FrA14.3

Robustness Analysis for Least Squares Kernel Based Regression: An Optimization Approach, pp. 6774-6779.

Falck, Tillmann — K.U. Leuven
Suykens, J.A.K. — Katholieke Univ. Leuven
De Moor, Bart L.R. — Katholieke Univ. Leuven

11:10-11:30 FrA14.4
Bounded Characteristics of Wavelet Based SDP Models, pp. 6780-6785.
Truong, Nguyen-Vu — RMIT Univ.
Wang, Liuping — Rmit Univ.

11:30-11:50 FrA14.5
A Set-Based Framework for Coherent Model Invalidation and Parameter Estimation of Discrete Time Nonlinear Systems, pp. 6786-6792.
Borchers, Steffen — Otto-von-Guericke Univ. Magdeburg
Bosio, Sandro — Otto-von-Guericke Univ. Magdeburg
Rumschinski, Philipp — OVGU Univ. Magdeburg
Weismantel, Robert — Otto-von-Guericke Univ. Magdeburg
Findeisen, Rolf — OVG Univ. Magdeburg

11:50-12:10 FrA14.6
Identification of Autonomous Complex Dynamic Systems from Noisy Data, pp. 6793-6798.
Xue, Yuzhen — Univ. of Oklahoma
Runolfsson, Thordur — The Univ. of Oklahoma

FrA15 — 3B
Electrical Machines (Regular Session)

Chair: Geyer, Tobias — The Univ. of Auckland
Co-Chair: Malaize, Jeremy — Ec. des Mines de Paris

10:10-10:30 FrA15.1
Generalized Model Predictive Direct Torque Control: Long Prediction Horizons and Minimization of Switching Losses, pp. 6799-6804.
Geyer, Tobias — The Univ. of Auckland

10:30-10:50 FrA15.2
Speed Synchronization of Multiple Induction Motors with Adjacent Cross Coupling Control, pp. 6805-6810.
Zhao, Dezong — Tsinghua Univ.
Li, Chunwen — Professor
Ren, Jun — Tsinghua Univ.

10:50-11:10 FrA15.3
An Observer-Based Design for Cogging Forces Cancellation in Permanent Magnet Linear Motors, pp. 6811-6816.
Malaize, Jeremy — Ec. des Mines de Paris
Levine, Jean — Mines-ParisTech

11:10-11:30 FrA15.4
Ordinal Optimization Based Security Dispatching in Deregulated Power Systems, pp. 6817-6822.
Jia, Qing-Shan — Tsinghua Univ.
Xie, Min — South China Univ. of Tech.
Wu, Felix F. — the Univ. of Hong Kong

11:30-11:50 FrA15.5
Sensorless Maximum Power Point Tracking in Multi-Type Wind Energy Conversion Systems, pp. 6823-6828.
Fan, Lingling — Univ. of South Florida
Miao, Zhixin — Midwest ISO
Wang, Xin — NDSU

11:50-12:10 FrA15.6
Fault Ride through Techniques of DFIG-Based Wind Energy Systems, pp. 6829-6834.
Fan, Lingling — Univ. of South Florida
Zhu, Chanxia — Southeast Univ.
Hu, Minqiang — Southeast Univ.

FrA16 — 5F
Sensor/ Communication Networks (Regular Session)

Chair: Fang, Huajing — Huazhong Univ. of Science and Tech.
Co-Chair: Zhou, Yan — Shanghai Jiao Tong Univ.

10:10-10:30 FrA16.1
Quantized Measurement Fusion for Target Tracking in Wireless Sensor Networks, pp. 6835-6840.
Zhou, Yan — Shanghai Jiao Tong Univ.
Li, Jianxun — Shanghai Jiao Tong Univ.

10:30-10:50 FrA16.2
Adaptive Actuator Failure Compensation Design for Networked Control Systems with State-Dependent Disturbances, pp. 6841-6846.
H. Tahoun, A — huazhong Univ. of science and Tech.
Fang, Huajing — Huazhong Univ. of Science and Tech.

10:50-11:10 FrA16.3
On the Steady-State Performance of Kalman Filtering with Intermittent Observations for Stable Systems, pp. 6847-6852.
Vakili, Ali — Caltech
Hassibi, Babak — Caltech

11:10-11:30 FrA16.4
Adaptive Feedback Exponentially Synchronization of Complex Delayed Dynamical Networks with Nonlinearly Coupled Nodes, pp.

6853-6857.

Yue, Dong — Nanjing Normal Univ.
Li, Hongjie — Res. Center for Information & Control EngineeringTechnology
Liu, Jinliang — Donghua Univ.
Tian, Engang — Nanjing Normal Univ.
Li, Minghao — Donghua Univ.

11:30-11:50 FrA16.5

LQ Control for Networked Systems with Input Delay and Packet Loss, pp. 6858-6863.

Wang, Haoqian — Harbin Inst. of Tech.
Zhang, Ying — Harbin Inst. of Tech.

11:50-12:10 FrA16.6

Self-Learning PD Game with Imperfect Information on Networks, pp. 6864-6869.

Li, Zhuozheng — Peking Univ.
Chu, Tianguang — Peking Univ.
Wang, Long — Peking Univ.

FrA17 — 5H
Stochastic Networked Control Systems (Regular Session)

Chair: Wang, Zidong — Brunel Univ.
Co-Chair: Wang, Hong — The Univ. of Manchester

10:10-10:30 FrA17.1

On H-Infinity Control with Multiple Packet Dropouts: Dealing with Repeated Scalar Nonlinearities, pp. 6870-6875.

Dong, Hongli — Harbin Inst. of Tech.
Wang, Zidong — Brunel Univ.
Liang, Jinling — Southeast Univ.
Gao, Huijun — Harbin Inst. of Tech.

10:30-10:50 FrA17.2

A Minimized Zero Mean Entropy Approach to Networked Control Systems, pp. 6876-6881.

Zhang, Jianhua — NCEPU
Wang, Hong — The Univ. of Manchester

10:50-11:10 FrA17.3

Control of Impulsive Renewal Systems: Application to Direct Design in Networked Control, pp. 6882-6887.

Antunes, Duarte — Inst. Superior Tecnico, Lisbon
Hespanha, Joao P. — Univ. of California, Santa Barbara
Silvestre, Carlos — Inst. Superior Tecnico

11:10-11:30 FrA17.4

Stability of Networked Control Systems Subject to Input and Output Packet Loss, pp. 6888-6892.

Hu, Shawn — Curtin Univ. of Tech.
Yan, Wei-Yong — Curtin Univ. of Tech.

11:30-11:50 FrA17.5

Mean Square Stabilization of Multi-Input Systems Over Stochastic Multiplicative Channels, pp. 6893-6898.

Xiao, Nan — Nanyang Tech. Univ.
Xie, Lihua — Nanyang Tech. Univ.
Qiu, Li — Hong Kong Univ. of Sci. & Tech.

11:50-12:10 FrA17.6

Stochastic Stability Analysis of Packet-Based Networked Control Systems, pp. 6899-6903.

Zhao, Yun-Bo — Univ. of Glamorgan
Liu, Guoping — Univ. of Glamorgan
Rees, David — Univ. of Glamorgan

FrA18 — 5I
Constrained Control I (Regular Session)

Chair: Gomes Da Silva Jr., Joao Manoel — Univ. Federal do Rio Grande do Sul
Co-Chair: Lens, Hendrik — TU Darmstadt

10:10-10:30 FrA18.1

Dynamic Anti-Windup Synthesis for State Delayed Systems: An LMI Approach, pp. 6904-6909.

Gomes Da Silva Jr., Joao Manoel — Univ. Federal do Rio Grande do Sul
Bender, Fernando Augusto — UFRGS
Tarbouriech, Sophie — LAAS-CNRS
Biannic, Jean-Marc — ONERA

10:30-10:50 FrA18.2

Anti-Windup Compensation for Nonlinear Systems Via Gradient Projection: Application to Adaptive Control, pp. 6910-6916.

Teo, Justin — Massachusetts Inst. of Tech.
How, Jonathan P. — MIT

10:50-11:10 FrA18.3

Controller Design for Polynomial Systems with Input Constraints, pp. 6917-6922.

Gussner, Thomas — Tech. Univ. Darmstadt
Adamy, Jürgen — Tech. Univ. Darmstadt

11:10-11:30 FrA18.4

Constrained Time-Optimal Control of Linear Parameter-Varying Systems, pp. 6923-6928.
Besselmann, Thomas — ETH Zurich
Löfberg, Johan — Linköpings Univ.
Morari, Manfred — ETH Zurich

11:30-11:50 FrA18.5
An Extended Command Governor for Constrained Linear Systems with Disturbances, pp. 6929-6934.
Gilbert, Elmer G. — Univ. of Michigan, Ann Arbor
Ong, Chong-Jin — National Univ. of Singapore

11:50-12:10 FrA18.6
Fast Robust Stabilization by Saturating Output Feedback of Uncertain Linear Systems with Input Constraints, pp. 6935-6940.
Lens, Hendrik — TU Darmstadt

FrAIn1 Mandarin Hall
Fault Diagnosis II (Interactive Session)

10:30-11:50 FrAIn1.1
A Note on Fault Diagnosis Algorithms, pp. 6941-6946.
Cassez, Franck — NICTA & CNRS

10:30-11:50 FrAIn1.2
Fault Diagnosis with Disturbance Rejection Performance Based on Disturbance Observer, pp. 6947-6951.
Cao, Songyin — southeast Univ.
Guo, Lei — Beihang Univ.

10:30-11:50 FrAIn1.3
New Results for Fault Detection of Untimed Continuous Petri Nets, pp. 6952-6957.
Seatzu, Carla — Univ. of Cagliari
Cabasino, Maria Paola — Univ. of Cagliari
Mahulea, Cristian — Univ. of Zaragoza
Silva, Manuel — Univ. De Zaragoza

10:30-11:50 FrAIn1.4
Design of Integral Sliding Mode Observers with Application to Fault and Unknown Input Reconstruction, pp. 6958-6963.
Sharma, Rahul — The Univ. of Melbourne
Aldeen, Mohammad — The Univ. of Melbourne

10:30-11:50 FrAIn1.5
The Nullspace Method - a Unifying Paradigm to Fault Detection, pp. 6964-6969.
Varga, Andras — German Aerospace Center (DLR)

10:30-11:50 FrAIn1.6
On-Line Analytic Redundancy Relations Instantiation Guided by Component Discrete-Dynamics for a Class of Non-Linear Hybrid Systems, pp. 6970-6975.
Bayoudh, Mehdi — LAAS-CNRS
Trave-Massuyes, Louise — CNRS
Olive, Xavier — Thales Alenia Space

10:30-11:50 FrAIn1.7
Fault Detection for Descriptor Networked Systems with Multiple Packet Dropouts, pp. 6976-6981.
Wang, Jia — Fuzhou Univ.
Wang, Wu — Fuzhou Univ.
Yang, Fuwen — Brunel Univ.
Zhang, Jinxian — Fuzhou Univ.

10:30-11:50 FrAIn1.8
Fault Detection and Isolation of Linear Impulsive Systems, pp. 6982-6987.
Meskin, Nader — Concordia Univ.
Khorasani, Khashayar — Concordia Univ.

10:30-11:50 FrAIn1.9
Decentralized Fault Detection in a Class of Large-Scale Nonlinear Uncertain Systems, pp. 6988-6993.
Zhang, Xiaodong — Wright State Univ.
Polycarpou, Marios M. — Univ. of Cyprus
Parisini, Thomas — Univ. of Trieste

10:30-11:50 FrAIn1.10
A Parity Space Approach to Fault Detection for Networked Control System Via Optimal Measurement Selection, pp. 6994-6999.
Peng, Tao — Hunan Univ. of Tech.
Ding, Steven X. — Univ. of Duisburg-Essen
Gui, Weihua — Central South Univ.
Chen, Jie — Beijing Inst. of Tech.

FrAIn2 Mandarin Hall
Autonomous Agents and Networks (Interactive Session)

10:30-11:50 FrAIn2.1
Achieving Symmetric Pareto Nash Equilibria Using Biased Replicator Dynamics, pp. 7000-7005.
Somasundaram, Kiran — Univ. of Maryland, Coll. Park
Baras, John S. — Univ. of Maryland

10:30-11:50 FrAIn2.2
A Hybrid Model Predictive Control Scheme for Multi-Agent Containment and Distributed Sensing, pp. 7006-7011.
Galbusera, Luca — Pol. di Milano
Ferrari-Trecate, Giancarlo — Univ. degli Studi di Pavia
Scattolini, Riccardo — Pol. di Milano

10:30-11:50 FrAIn2.3
A Graph-Theoretic Characterization of Structural Controllability for Multi-Agent System with Switching Topology, pp. 7012-7017.
Liu, Xiaomeng — National Univ. of Singapore
Lin, Hai — National Univ. of Singapore
Chen, Ben M. — National Univ. of Singapore

10:30-11:50 FrAIn2.4
Consensus of Discrete-Time Multi-Agent Systems with Nonlinear Local Rules and Time-Varying Delays, pp. 7018-7023.
Chen, Yao — Inst. of Systems, Acad. of Mathematics and SystemsScience.
Lu, Jinhu — Chinese Acad. of Sciences
Lin, Zongli — Univ. of Virginia

10:30-11:50 FrAIn2.5
An Exploration Strategy by Constructing Voronoi Diagrams with Provable Completeness, pp. 7024-7029.
Kim, Jonghoek — Georgia Inst. of Tech.
Zhang, Fumin — Georgia Inst. of Tech.
Egerstedt, Magnus — Georgia Inst. of Tech.

10:30-11:50 FrAIn2.6
Randomized Algorithms for Robustness Analysis: A Distributed Approach, pp. 7030-7035.
Calafiore, Giuseppe — Pol. di Torino

10:30-11:50 FrAIn2.7
Kalman-Consensus Filter : Optimality, Stability, and Performance, pp. 7036-7042.
Olfati-Saber, Reza — Dartmouth Coll.

10:30-11:50 FrAIn2.9
Three-Dimensional Motion Coordination in a Time-Invariant Flowfield, pp. 7043-7048.
Hernandez, Sonia — Univ. of Maryland
Paley, Derek A. — Univ. of Maryland

10:30-11:50 FrAIn2.10
Distributed Estimation through Randomized Gossip Kalman Filter, pp. 7049-7054.
Del Favero, Simone — Univ. of Padova
Zampieri, Sandro — Univ. di Padova

10:30-11:50 FrAIn2.11
Cooperative Adaptive Sampling Via Approximate Entropy Maximization, pp. 7055-7060.
Graham, Rishi — Univ. of California at Santa Cruz
Cortes, Jorge — Univ. of California at San Diego

10:30-11:50 FrAIn2.12
Connectivity Preservation in a Network of Single Integrator Agents, pp. 7061-7067.
Ajorlou, Amir — Concordia Univ.
Momeni, Ahmadreza — Concordia Univ.
Aghdam, Amir G. — Concordia Univ.

FrAIn3 — Mandarin Hall
Network and Distributed Control (Interactive Session)

10:30-11:50 FrAIn3.1
Impact of Arrival Burstiness on Queue Length: An Infinitesimal Perturbation Analysis, pp. 7068-7073.
Cai, Yan — Univ. of Massachusetts, Amherst
Liu, Yong — Pol. Inst. of NYU
Gong, Weibo — Univ. of Massachusetts at Amherst
Wolf, Tilman — Univ. of Massachusetts Amherst

10:30-11:50 FrAIn3.2
Distributed Power Control in Wireless Networks: Stability and Delay Independence, pp. 7074-7079.
Lestas, Ioannis — Univ. of Cambridge,

10:30-11:50 FrAIn3.3
Designing Linear Distributed Algorithms with Memory for Fast Convergence, pp. 7080-7085.
Roy, Sandip — Washington State Univ.
Wan, Yan — Washington State Univ.
Saberi, Ali — Washington State Univ.
Xue, Mengran — Washington State Univ.

10:30-11:50 FrAIn3.4
Synthesis of Positive-Real Functions with Low-Complexity Series-Parallel Networks, pp. 7086-7091.
Jiang, Jason Zheng — Univ. of Cambridge
Smith, Malcolm C. — Univ. of Cambridge

10:30-11:50 FrAIn3.5
Distributed Control of Spatially Invariant Systems Using Fast Iterative Solutions to Rationally Parametric Matrix Problems, pp. 7092-7098.
Rice, Justin — TU Delft

Verhaegen, Michel — Delft Univ. of Tech.

10:30-11:50 FrAIn3.6

Distributed MPC: A Supply Chain Case Study, pp. 7099-7104.

Maestre, J.M. — Univ. of Seville
Muńoz de la Peńa, David — Univ. de Sevilla
Camacho, Eduardo F. — Univ. of Sevilla

10:30-11:50 FrAIn3.7

Distributed Model Predictive Control of Nonlinear Systems Subject to Delayed Measurements, pp. 7105-7112.

Liu, Jinfeng — Univ. of California, Los Angeles
Muńoz de la Peńa, David — Univ. de Sevilla
Christofides, Panagiotis D. — Univ. of California at Los Angeles

10:30-11:50 FrAIn3.8

Adaptive Optics Application of Distributed Control Design for Decomposable Systems, pp. 7113-7118.

Massioni, Paolo — Delft Univ. of Tech.
Fraanje, Rufus — Delft Univ. of Tech.
Verhaegen, Michel — Delft Univ. of Tech.

10:30-11:50 FrAIn3.10

Joint Congestion Control and Random Access MAC in Multi-Hop Wireless Networks Via a Simplified Model, pp. 7119-7124.

Gao, Yan — Univ. of Illinois, Urbana-Champaign
Kumar, P. R. — Univ. of Illinois, Urbana-Champaign

10:30-11:50 FrAIn3.11

Distributed Coordination of Fractional-Order Systems with Extensions to Directed Dynamic Networks and Absolute/Relative Damping, pp. 7125-7130.

Cao, Yongcan — Utah State Univ.
Ren, Wei — Utah State Univ.

10:30-11:50 FrAIn3.12

Event-Triggered Control for Multi-Agent Systems, pp. 7131-7136.

Dimarogonas, Dimos V. — Massachusetts Inst. of Tech.
Johansson, Karl H. — Royal Inst. of Tech.

10:30-11:50 FrAIn3.13

Production Planning and Quality of Service Allocation across the Supply Chain in a Dynamic Lead Time Model, pp. 7137-7144.

Caramanis, Michael C. — Boston Univ.
Wu, Chang-Chen — Boston Univ.
Paschalidis, Ioannis — Boston Univ.

FrAIn4 — Mandarin Hall
LMIs and Delay Systems (Interactive Session)

10:30-11:50 FrAIn4.1

On Passivity and Passification of Markovian Jump Systems, pp. 7145-7150.

Wang, Changhong — Dept. of Control Science and Engineering, Harbin Inst.
Yao, Xiuming — Harbin Inst. of Tech.
Wu, Ligang — Harbin Inst. of Tech.
Zheng, Wei Xing — Univ. of Western Sydney

10:30-11:50 FrAIn4.2

H-Infinity Filtering for Networked Systems with Limited Communication, pp. 7151-7156.

Che, Wei-Wei — Northeastern Univ.
Wang, Jian Liang — Nanyang Tech. Univ.
Yang, Guang-hong — Northeastern Univ.

10:30-11:50 FrAIn4.3

Insensitive H_infty Filter Design for Discrete-Time System: An LMI Optimization Approach, pp. 7157-7162.

Yang, Guang-hong — Northeastern Univ.
Guo, Xiang-Gui — Northeastern Univ.

10:30-11:50 FrAIn4.4

Identification of Spatially Interconnected Systems, pp. 7163-7168.

Ali, Mukhtar — Tech. Univ. Hamburg Harburg (TUHH)
Chughtai, Saulat Shuja — Hamburg Univ. of Tech.
Werner, Herbert — Hamburg Univ. of Tech.

10:30-11:50 FrAIn4.5

Improved Stability Criteria for Linear Uncertain Systems with Interval Time-Varying Delay, pp. 7169-7174.

Li, Boren — South China Univ. of Tech.
Xu, Bugong — South China Univ. of Tech.

10:30-11:50 FrAIn4.6

New Delay-Dependent Stability Criteria for Linear Stochastic Systems with Time-Varying Delay, pp. 7175-7179.

Yu, Jianjiang — Southeast Univ.
Zhang, Kan_Jian — Southeast Univ.
Fei, Shumin — Southeast Univ.

10:30-11:50 FrAIn4.7

Robust Stability Analysis on Discrete-Time Cohen-Grossberg Neural Networks with Distributed Delay, pp. 7180-7185.

Tao, Li — School of Inst. Nan
Song, Aiguo — Southeast Univ.
Fei, Shumin — Southeast Univ.

10:30-11:50 FrAIn4.8
H_{infty} Filtering for Neutral Stochastic Systems with Time-Varying Delays, pp. 7186-7191.
Li, Lin — BeiHang Univ.
Jia, Yingmin — Beihang Univ.
Du, Junping — Beijing Univ. of Posts and Telecommunications
Kokame, Hideki — Osaka Prefecture Univ.

10:30-11:50 FrAIn4.9
State Dependent NGMV Control of Delayed Piecewise Affine Systems, pp. 7192-7197.
Pang, Yan — Univ. of Strathclyde
Grimble, Michael John — Univ. of Strathclyde

10:30-11:50 FrAIn4.10
Impulse Elimination by Derivative Feedback for Singular Systems with Delay, pp. 7198-7203.
Perdon, Anna Maria — Univ. Pol. delle Marche
Anderlucci, Maria — Univ. Pol. delle Marche

10:30-11:50 FrAIn4.11
A Nonlinear Small-Gain Theorem for Large-Scale Time Delay Systems, pp. 7204-7209.
Tiwari, Shanaz — Florida Atlantic Univ.
Wang, Yuan — Florida Atlantic Univ.
Jiang, Zhong-Ping — Pol. Inst. NYU

10:30-11:50 FrAIn4.12
Improved Stability and Stabilization Results for Discrete Singular Delay Systems Via Delay Partitioning, pp. 7210-7215.
Feng, Zhiguang — The Univ. of Hong Kong
Lam, James — The Univ. of Hong Kong
Gao, Huijun — Harbin Inst. of Tech.
Du, Baozhu — The Univ. of Hong Kong

10:30-11:50 FrAIn4.13
Stability Analysis for Time-Delay Systems with Partial States Subject to Impulsive Inputs, pp. 7216-7221.
Chen, Wu-Hua — Guangxi Univ.
Zheng, Wei Xing — Univ. of Western Sydney

10:30-11:50 FrAIn4.14
A Switching Control Approach to Stabilization of Parameter Varying Time Delay Systems, pp. 7222-7226.
Yan, Peng — Seagate Tech.
Ozbay, Hitay — Bilkent Univ.
Sansal, Murat — Hacettepe Univ.

10:30-11:50 FrAIn4.15
Stability of Discrete Impulsive Systems with Time Delays, pp. 7227-7231.
Zhang, Yu — Tongji Univ. China
Sun, Jitao — Tongji Univ.

FrAIn5 — Mandarin Hall
Identification and Estimation (Interactive Session)

10:30-11:50 FrAIn5.1
Modeling and Identification of Reciprocal Processes, pp. 7232-7237.
Picci, Giorgio — Univ. di Padova
Carli, Francesca — Univ. of Padova

10:30-11:50 FrAIn5.2
Using an Information Filter to Speed Computation of Sparse Parameter Estimates, pp. 7238-7243.
Blackhall, Lachlan — The Australian National Univ.
Rotkowitz, Michael C. — The Univ. of Melbourne

10:30-11:50 FrAIn5.3
Identification of Linear Continuous-Time Systems Based on the Signal Projection, pp. 7244-7249.
Maruta, Ichiro — Kyoto Univ.
Sugie, Toshiharu — Kyoto Univ.

10:30-11:50 FrAIn5.4
Recursive Identification of Both Coefficients and Orders for ARMAX, pp. 7250-7255.
Chen, Han-Fu — Chinese Acad. of Sciences
Zhao, Wenxiao — Tsinghua Univ.

10:30-11:50 FrAIn5.5
Decomposition Based Least Squares Estimation Algorithm for Non-Uniformly Sampled Multirate Systems, pp. 7256-7260.
Liu, Yanjun — Jiangnan Univ.
Ding, Feng — Jiangnan Univ.

10:30-11:50 FrAIn5.6
Further Results on Plant Parameter Identification Using Continuous-Time Multiple-Model Adaptive Estimators, pp. 7261-7266.
Hassani, Vahid — Tech. Univ. of Lisbon
Aguiar, A. Pedro — Tech. Univ. of Lisbon

Pascoal, Antonio Manuel — Inst. Superior Tecnico
Athans, Michael — Inst. Superior Tecnico

10:30-11:50 FrAIn5.7
Position Estimation and Fall Detection Using Visual Receding Horizon Estimation, pp. 7267-7272.
Brulin, Damien — Ec. Nationale Supérieure d'Ingénieurs de Bourges
Courtial, Estelle — Pol. Univ. d'Orléans
Allibert, Guillaume — Pol.

10:30-11:50 FrAIn5.8
On Retrieval of Intermodulated Sinusoids, pp. 7273-7278.
Yang, Zaiyue — Hong Kong Pol. Univ.
Chan, Che Wai — Univ. of Hong Kong
Wang, Yiwen — Hong Kong Univ. of Science and Tech.

FrAIn6 Mandarin Hall
Modeling of Emerging Control Systems and Neural Networks (Interactive Session)

10:30-11:50 FrAIn6.1
Generalized Prandtl-Ishlinskii Hysteresis: Modeling and Robust Control for Smart Actuators, pp. 7279-7284.
Al Janaideh, Mohammad — Concordia Univ.
Feng, Ying — Concordia Univ.
Rakheja, Subhash — Concordia Univ.
Tan, Yonghong — Shanghai Normal Univ.
Su, Chun-Yi — Concordia Univ.

10:30-11:50 FrAIn6.2
Model Reduction for High-Order Port-Hamiltonian Systems. Application to Piezo-Electric Systems, pp. 7285-7290.
Gentili, Luca — Univ. of Bologna
Bassi, Luca — Univ. of Bologna
Macchelli, Alessandro — Univ. of Bologna - Italy
Melchiorri, Claudio — Univ. of Bologna
Borsari, Roberto — Tetra Pak Packaging Solutions

10:30-11:50 FrAIn6.3
Intelligent Prediction Method of Technical Indices in the Industrial Process and Its Application, pp. 7291-7296.
Bai, Rui — Liaoning Univ. of Tech.
Tong, Shaocheng — Liaoning Univ. of Tech.
Chai, Tianyou — Northeastern Univ.

10:30-11:50 FrAIn6.4
A Neural Network Approach for Least Squares Support Vector Machines Learning, pp. 7297-7302.
Liu, Han — Xi'an Univ. of Tech.
Liu, Ding — Xi'an Univ. of Tech.

10:30-11:50 FrAIn6.5
Multivariable Nonlinear Dynamic Modeling Based on DPLS and Hammerstein Model and Its Application, pp. 7303-7308.
Wang, Wei — Northeastern Univ.
Zhao, Lijie — north eastern Univ.
Chai, Tianyou — Northeastern Univ.

10:30-11:50 FrAIn6.6
Auto-Tuning of FOPI and FO[PI] Controllers with Iso-Damping Property, pp. 7309-7314.
Wang, Chunyang — Changchun Univ. of Sci and Tech.
Jin, Yongshun — Utah State Univ.
Chen, YangQuan — Utah State Univ.

10:30-11:50 FrAIn6.7
Neural Control of the Wells Turbine-Generator Module, pp. 7315-7320.
Amundarain, Modesto — Univ. of the Basque Coutry
Alberdi, Mikel — Univ. of the Basque Country
Garrido, Aitor J. — Univ. of the Basque Country
Garrido, Izaskun — Univ. of the Basque Country

10:30-11:50 FrAIn6.8
Modeling a Fire-Rescue Turntable Ladder As Piecewise Euler-Bernoulli Beam with a Tip Mass, pp. 7321-7326.
Pertsch, Alexander — Univ. Stuttgart
Zimmert, Nico — Univ. Stuttgart
Sawodny, Oliver — Univ. of Stuttgart

10:30-11:50 FrAIn6.9
Transient Modelling for Dynamic Power Regulation in Raman Amplified Optical Fibre Links, pp. 7327-7332.
Dower, Peter M. — The Univ. of Melbourne
Farrell, Peter Mark — The Univ. of Melbourne

FrB01 3D
Lyapunov Methods II (Regular Session)
Chair: Xin, Xin — Okayama Prefectural Univ.
Co-Chair: Pota, Hemanshu R. — The Univ. of New South Wales

14:10-14:30 FrB01.1

Nonlinear Adaptive Flight Control Law Design and Handling Qualities Evaluation, pp. 7333-7338.

Sonneveldt, Lars — Delft Univ. of Tech.
van Oort, Eduard Richard — Delft Univ. of Tech.
Chu, Q. P. — Delft Univ. of Tech.
Mulder, J.A. (Bob) — Delft Univ. of Tech.

14:30-14:50 FrB01.2

Nonlinear Stabilization through Long Input Delay - Part III: Linearizable Strict-Feedforward Systems, pp. 7339-7344.

Krstic, Miroslav — Univ. of California at San Diego

14:50-15:10 FrB01.3

A Case Study on Spacecraft Attitude Control, pp. 7345-7350.

Ahmed, Rihan — Univ. of Leicester
Gu, Dawei — Univ. of Leicester
Postlethwaite, Ian — Univ. of Leicester

15:10-15:30 FrB01.4

Swinging up Multiple Parallel Pendulums on a Cart Via Energy Control, pp. 7351-7356.

Xin, Xin — Okayama Prefectural Univ.

15:30-15:50 FrB01.5

Path Tracking Control of Agricultural Tractors with Compensation for Steering Dynamics, pp. 7357-7362.

Eaton, Ray — The Univ. of New South Wales
Pota, Hemanshu R. — The Univ. of New South Wales
Katupitiya, Jayantha — Univ. of NSW

15:50-16:10 FrB01.6

Stabilization Problems of Nonlinear Systems Using Feedback Laws with Wiener Processes, pp. 7363-7368.

Nishimura, Yuki — Yamaguchi Univ.
Takehara, Kazuki — Komatsu Ltd.
Yamashita, Yuh — Hokkaido Univ.
Tanaka, Kanya — Yamaguchi Univ.
Wakasa, Yuji — Yamaguchi Univ.

FrB02 — 3E
Algorithms for Linear Model Predictive Control (Regular Session)

Chair: Kouvaritakis, Basil — Oxford Univ.
Co-Chair: Oldewurtel, Frauke — Swiss Federal Inst. of Tech.

14:10-14:30 FrB02.1

Predictive Control for Dual-Rate Systems Based on Lifted State-Space Model Identified by N4SID Method, pp. 7369-7374.

Qin, Pan — Kyushu Univ.
Yang, Zi-jiang — Ibaraki Univ.
Nishii, Ryuei — Kyushu Univ.

14:30-14:50 FrB02.2

On the Computation of Linear Model Predictive Control Laws, pp. 7375-7380.

Borrelli, Francesco — Unversity of California at Berkeley
Pekar, Jaroslav — Honeywell spol s r.o.
Baotic, Mato — Univ. of Zagreb
Stewart, Greg E — Honeywell Automation & Control Sol.

14:50-15:10 FrB02.3

Blocking Parameterizations for Improving the Computational Tractability of Affine Disturbance Feedback MPC Problems, pp. 7381-7386.

Oldewurtel, Frauke — ETH Zurich
Gondhalekar, Ravi — Osaka Univ.
Jones, Colin Neil — ETH Zurich
Morari, Manfred — ETH Zurich

15:10-15:30 FrB02.4

Real-Time Input-Constrained MPC Using Fast Gradient Methods, pp. 7387-7393.

Richter, Stefan — ETH Zurich
Jones, Colin Neil — ETH Zurich
Morari, Manfred — ETH Zurich

15:30-15:50 FrB02.5

Improvements on the Efficiency of Linear MPC, pp. 7394-7399.

Li, Shuang — Beijing Inst. of Tech.
Kouvaritakis, Basil — Oxford Univ.
Cannon, Mark — Univ. of Oxford

15:50-16:10 FrB02.6

Aggregation Based Closed-Loop MPC with Guaranteed Performance, pp. 7400-7405.

Li, Dewei — Shanghai Jiao Tong Univ.
Xi, Yugeng — Shanghai Jiao Tong Univ.

FrB03 — 3C
Modeling of Linear Parameter Varying Systems (Regular Session)

Chair: Blanchini, Franco — Univ. degli Studi di Udine
Co-Chair: Tóth, Roland — Delft Univ. of Tech.

14:10-14:30 FrB03.1

Order and Structural Dependence Selection of LPV-ARX Models Using a Nonnegative Garrote Approach, pp. 7406-7411.

Tóth, Roland — Delft Univ. of Tech.
Lyzell, Christian — Linköpings Univ.
Enqvist, Martin — Linköping Univ.
Heuberger, Peter S.C. — Delft Univ. of Tech.
Van den Hof, Paul M.J. — Delft Univ. of Tech.

14:30-14:50 FrB03.2

Control-Oriented Multirate LPV Modelling of Virtualized Service Center Environments, pp. 7412-7417.

Tanelli, Mara — Pol. di Milano
Schiavoni, Nicola L.M. — Pol. di Milano
Ardagna, Danilo — Pol. di Milano
Lovera, Marco — Pol. di Milano

14:50-15:10 FrB03.3

LPV Modelling and Control of a 2-DOF Robotic Manipulator Using PCA-Based Parameter Set Mapping, pp. 7418-7423.

Hashemi, Seyed Mahdi — Hamburg Univ. of Tech.
Abbas, Hossam Seddik — Hamburg Univ. of Tech.
Werner, Herbert — Hamburg Univ. of Tech.

15:10-15:30 FrB03.4

Discretization of Linear Fractional Representations of LPV Systems, pp. 7424-7429.

Tóth, Roland — Delft Univ. of Tech.
Lovera, Marco — Pol. di Milano
Heuberger, Peter S.C. — Delft Univ. of Tech.
Van den Hof, Paul M.J. — Delft Univ. of Tech.

15:30-15:50 FrB03.5

LMI Relaxations for Non-Quadratic Discrete Stabilization Via Polya Theorem, pp. 7430-7435.

Lo, Ji-Chang — National Central Univ.

15:50-16:10 FrB03.6

Stable LPV Realization of Parametric Transfer Functions and Its Application to Gain-Scheduling Control Design, pp. 7436-7441.

Blanchini, Franco — Univ. degli Studi di Udine
Casagrande, Daniele — Univ. of Udine
Miani, Stefano — Univ. degli Studi di Udine
Viaro, Umberto — Univ. of Udine

FrB04 — 3A

Differential Geometric Methods (Regular Session)

Chair: Tall, Issa Amadou — Southern Illinois Univ. Carbondale
Co-Chair: Morin, Pascal — INRIA

14:10-14:30 FrB04.1

On the Generation of Classes of Planar Systems with Given Orbital Symmetries, pp. 7442-7447.

Menini, Laura — Univ. di Roma 'Tor Vergata'
Tornambe, Antonio — Univ. Di Roma Tor Vergata

14:30-14:50 FrB04.2

State Linearization of Control Systems: An Explicit Algorithm, pp. 7448-7453.

Tall, Issa Amadou — Southern Illinois Univ. Carbondale

14:50-15:10 FrB04.3

Explicit Feedback Linearization of Control Systems, pp. 7454-7459.

Tall, Issa Amadou — Southern Illinois Univ. Carbondale

15:10-15:30 FrB04.4

A Procedure for the Computation of Semi-Invariants, pp. 7460-7465.

Menini, Laura — Univ. di Roma 'Tor Vergata'
Tornambe, Antonio — Univ. Di Roma Tor Vergata

15:30-15:50 FrB04.5

Poisson Reduction Via Feedback Invariant Distributions, pp. 7466-7471.

Hoeffner, Kai — Queens Univ.
Guay, Martin — Queen's Univ.

15:50-16:10 FrB04.6

Transverse Functions on Special Orthogonal Groups for Vector Fields Satisfying the LARC at the Order One, pp. 7472-7477.

Morin, Pascal — INRIA
Samson, Claude — INRIA Sophia-Antipolis

FrB05 — 3J

Mathematical Systems Theory (Regular Session)

Chair: Gray, W. Steven — Old Dominion Univ.
Co-Chair: Ebenbauer, Christian — Massachusetts Inst. of Tech.

14:10-14:30 FrB05.1

On Fliess Operators Driven by L2-Ito Random Processes, pp. 7478-7484.

Duffaut Espinosa, Luis Augusto — Old Dominion Univ.
Gray, W. Steven — Old Dominion Univ.

González, Oscar R. — Old Dominion Univ.

14:30-14:50 FrB05.2
Geometry of Cyclic Pursuit, pp. 7485-7490.
Galloway, Kevin — Univ. of Maryland
Justh, Eric — Naval Res. Lab.
Krishnaprasad, P. S. — Univ. of Maryland

14:50-15:10 FrB05.3
On an Eigenflow Equation and Its Structure Preserving Properties, pp. 7491-7496.
Ebenbauer, Christian — Stuttgart Univ.
Arsie, Alessandro — Penn State Univ.

15:10-15:30 FrB05.4
Ergodic Partition of Phase Space in Continuous Dynamical Systems, pp. 7497-7502.
Susuki, Yoshihiko — Univ. of California, Santa Barbara
Mezic, Igor — Univ. of California, Santa Barbara

15:30-15:50 FrB05.5
Control Interpretations of Products in the Hopf Algebra, pp. 7503-7508.
Kawski, Matthias — Arizona State Univ.

15:50-16:10 FrB05.6
Computation of Convergence Radius and Error Bounds of Volterra Series for Single Input Systems with a Polynomial Nonlinearity, pp. 7509-7514.
Helie, Thomas — CNRS UMR 9912, Ircam - Centre Georges Pompidou
Laroche, Beatrice — Univ. Paris Sud & Supelec

FrB06 — 3G
Robotics and Mechatronical Systems (Regular Session)

Chair: de Callafon, Raymond A. — Univ. of California, San Diego
Co-Chair: Namerikawa, Toru — Keio Univ.

14:10-14:30 FrB06.1
Damping Enhancement of Haptic Devices by Using Velocities from Accelerometers and Encoders, pp. 7515-7520.
Zhu, Wen-Hong — Canadian Space Agency
Lamarche, Tom — Canadian Space Agency

14:30-14:50 FrB06.2
A Power Based Time Domain Passivity Control for Haptic Interfaces, pp. 7521-7526.
Ye, Yongqiang — Dalhousie Univ.
Pan, Ya-Jun — Dalhousie Univ.
Gupta, Yash P. — Dalhousie Univ.

14:50-15:10 FrB06.3
Bilateral Control with Constant Feedback Gains for Teleoperation with Time Varying Delay, pp. 7527-7532.
Namerikawa, Toru — Keio Univ.

15:10-15:30 FrB06.4
Time Domain Passivity Control of Teleoperation Systems with Random Asymmetric Time Delays, pp. 7533-7538.
Ye, Yongqiang — Dalhousie Univ.
Pan, Ya-Jun — Dalhousie Univ.
Gupta, Yash P. — Dalhousie Univ.

15:30-15:50 FrB06.5
Evaluation of Track Following Performance for Patterned Servo Sectors in Hard Disk Drives, pp. 7539-7544.
Han, Younghee — Univ. of California, San Diego
de Callafon, Raymond A. — Univ. of California, San Diego

15:50-16:10 FrB06.6
A Novel Contour Error Estimation in Biaxial Contouring Control, pp. 7545-7550.
Yang, Jiangzhao — Harbin Inst. of Tech.
Li, Zexiang — Hong Kong Univ. of Science & Tech.

FrB07 — 5C
Observer Design and Applications (Regular Session)

Chair: Leonessa, Alexander — Virginia Tech.
Co-Chair: Yang, Zi-jiang — Ibaraki Univ.

14:10-14:30 FrB07.1
Prediction-Based Observation of Nonlinear Systems Non-Affine in the Unmeasured States, pp. 7551-7556.
Morel, Yannick — Virginia Tech.
Leonessa, Alexander — Virginia Tech.

14:30-14:50 FrB07.2
Dwell-Time and Monitoring Schemes for Peaking Avoidance in High-Gain Observer Based Output-Feedback Control, pp. 7557-7562.
Oliveira, Tiago Roux — COPPE/UFRJ
Peixoto, Alessandro Jacoud — Federal Center of Tech. Celso Suckow da Fonseca
Hsu, Liu — COPPE/UFRJ

14:50-15:10 FrB07.3
Sensor-Based Complementary Globally Asymptotically Stable Filters for Attitude Estimation, pp. 7563-7568.

Batista, Pedro T. M. — Inst. Superior Técnico
Silvestre, Carlos — Inst. Superior Tecnico
Oliveira, Paulo Jorge — Inst. Superior Técnico

15:10-15:30 FrB07.4
A Nonlinear Observer for Semidetectable Chemical Reactions with Application to Kinetic-Rate-Constant Estimation, pp. 7569-7574.
D'Amato, Anthony — Univ. of Michigan
Ridley, Aaron — Univ. of Michigan
Bernstein, Dennis S. — Univ. of Michigan

15:30-15:50 FrB07.5
Robust Output Feedback Control of a Magnetic Levitation System Via High-Gain Observer, pp. 7575-7580.
Yang, Zi-jiang — Ibaraki Univ.
Hara, Seiichiro — kyushu Univ.
Kanae, Shunshoku — Fukui Univ. of Tech.
Wada, Kiyoshi — Kyushu Univ.

15:50-16:10 FrB07.6
Coupling Framers to Get Enhanced Interval Observers. Application to Growth Rate Estimation in a Photobioreactor, pp. 7581-7586.
Mairet, Francis — Inria
Bernard, Olivier — Inria

FrB08 3I
Estimation Fusion in Distributed Systems (Regular Session)
Chair: Fang, Huajing — Huazhong Univ. of Science and Tech.
Co-Chair: Tinka, Andrew — Univ. of California at Berkeley

14:10-14:30 FrB08.1
A Distributed Hybrid Filter for Target Tracking in Sensor Networks, pp. 7587-7592.
Li, Feng — Univ. of Melbourne
Evans, Jamie Scott — Univ. of Melbourne

14:30-14:50 FrB08.2
Weighted Measurement Fusion Kalman Filter Based on Linear Unbiased Minimum Variance Criterion, pp. 7593-7598.
Gao, Yuan — Heilongjiang Univ.
Ran, Chen-Jian — Heilongjiang Univ.
Deng, Zi-Li — Heilongjiang Univ.

14:50-15:10 FrB08.3
Scalar-Weighted Fusion Estimators for Systems with Multiple Sensors and Multiple Delayed Measurements, pp. 7599-7602.
Lv, Nan — Heilongjiang Univ.
Sun, Shuli — Heilongjiang Univ.

15:10-15:30 FrB08.4
A Robust Estimation Fusion with Unknown Cross-Covariance in Distributed Systems, pp. 7603-7607.
Wu, Duzhi — sichuan Univ.
Zhou, Jie — Sichuan Univ.
Qu, Xiaomei — Si Chuan Univ.

15:30-15:50 FrB08.5
Distributed Function and Time Delay Estimation Using Nonparametric Techniques, pp. 7608-7613.
Varagnolo, Damiano — Univ. of Padova
Pillonetto, Gianluigi — Univ. of Padova
Schenato, Luca — Univ. of Padova

15:50-16:10 FrB08.6
Quadratic Programming Based Data Assimilation with Passive Drifting Sensors for Shallow Water Flows, pp. 7614-7620.
Tinka, Andrew — Univ. of California at Berkeley
Strub, Issam S. — Univ. of California, Berkeley
Wu, Qingfang — Univ. of California, Berkeley
Bayen, Alexandre M. — Univ. of California at Berkeley

FrB09 3H
Automotive Control (Regular Session)
Chair: Falcone, Paolo — Chalmers Univ. of Tech.
Co-Chair: Chen, Hong — Jilin Univ. Campus NanLing

14:10-14:30 FrB09.1
Drive-By-Wire Vehicle Stabilization and Yaw Regulation: A Hybrid Model Predictive Control Design, pp. 7621-7626.
Bernardini, Daniele — Univ. of Siena
Di Cairano, Stefano — Ford Motor Company
Bemporad, Alberto — Univ. of Siena
Tseng, Eric — Ford Motor Company

14:30-14:50 FrB09.2
Predictive Approaches to Rear Axle Regenerative Braking Control in Hybrid Vehicles, pp. 7627-7632.
Falcone, Paolo — Chalmers Univ. of Tech.
Khoshfetrat pakazad, Sina — Chalmers Univ. of Tech.
Solyom, Stefan — Volvo Cars Corp.

14:50-15:10 FrB09.3

Analysis and Design of Handling-Oriented Control Strategies for Semi-Active Suspensions, pp. 7633-7638.

Spelta, Cristiano — Univ. degli studi di Bergamo
Delvecchio, Diego — Pol. di Milano
Cantoni, Roberto — Pol. di Milano
Lazzari, Riccardo — Pol. di Milano
Savaresi, Sergio M. — Pol. Di Milano

15:10-15:30 FrB09.4

Robust Controller Design for Vehicle Semi-Active Suspensions with Electrorheological Dampers, pp. 7639-7644.

Du, Haiping — Univ. of Wollongong
Zhang, Nong — Univ. of Tech. Sydney

15:30-15:50 FrB09.5

Nonlinear Adaptive Tracking for Ground Vehicles, pp. 7645-7650.

Di Gennaro, Stefano — Univ. of L'Aquila
Castillo-Toledo, Bernardino — CINVESTAV-GDL, Mexico
Burgio, Gilberto — Ford Forschungszentrum Aachen

15:50-16:10 FrB09.6

Clutch Slip Control of Automatic Transmission Using Nonlinear Method, pp. 7651-7656.

Gao, Bingzhao — Jilin Univ. Yokohama National Univ.
Chen, Hong — Jilin Univ. Campus NanLing
Ma, Yan — JiLin Univ.
Sanada, Kazushi — Yokohama National Univ.

FrB10 — 5D
Nonlinear Adaptive Control II (Regular Session)

Chair: Anderson, Brian D.O. — Australian National Univ.
Co-Chair: Hou, Zhongsheng — Beijing Jiaotong Univ.

14:10-14:30 FrB10.1

Verifying Nonlinear Controllers for Stability Utilizing Closed-Loop Noisy Data, pp. 7657-7662.

Cha, Sung Han — RSISE, The Australian National Univ.
Dehghani, Arvin — The Australian National Univ.
Anderson, Brian D.O. — Australian National Univ.

14:30-14:50 FrB10.2

Model-Free Indirect Adaptive Decoupling Control for Nonlinear Discrete-Time MIMO Systems, pp. 7663-7668.

Wang, Weihong — Beijing Univ. of Aeronautics and Astronautics
Hou, Zhongsheng — Beijing Jiaotong Univ.
Jin, Shangtai — Beijing Jiaotong Univ.

14:50-15:10 FrB10.3

Multiple Model Adaptive Control (MMAC) for Nonlinear Systems with Nonlinear Parameterization, pp. 7669-7674.

Chen, Wei-tian — Australian National Univ.
Anderson, Brian D.O. — Australian National Univ.

15:10-15:30 FrB10.4

High Performance Adaptive Robust Control for Nonlinear System with Unknown Input Backlash, pp. 7675-7679.

Guo, Jian — Nanjing Univ. of Science and Tech.
Yao, Bin — Purdue Univ.
Chen, Qingwei — Nanjing Univ. of Science and Tech.
Wu, Xiaobei — Nanjing Univ. of Sci. & Tech.

15:30-15:50 FrB10.5

Modular Design of Adaptive Tracking for a Class of Stochastic Nonlinear Systems with Passive Identifiers, pp. 7680-7685.

Wang, Jun — Univ. of Science and Tech. of China
Cai, Tao — Univ. of Science and Tech. of China
Kang, Yu — Univ. of Science and Tech. of China
Li, Yafeng — Univ. of Science and Tech. of China

15:50-16:10 FrB10.6

Robust Adaptive Output Feedback Control of a Class of Discrete-Time Nonlinear Systems Perturbed by Nonlinear Uncertainties, pp. 7686-7691.

Dai, Shi-Lu — National Univ. of Singapore
Yang, Chenguang — National Univ. of Singapore
Ge, Shuzhi Sam — National Univ. of Singapore
Lee, Tong Heng — National Univ. of Singapore

FrB11 — 5J
Biomedical and Biological Systems (Regular Session)

Chair: Jiang, Zhong-Ping — Pol. Inst. NYU
Co-Chair: Sarma, Sridevi — Massachusetts Inst. of Tech.

14:10-14:30 FrB11.1

Controlling the Phase of an Oscillator: A Phase Response Curve Approach, pp. 7692-7697.

Efimov, Denis — Inst. for Problems of Mechanical Eng.
Sacré, Pierre — Univ. de Lič̆ge
Sepulchre, Rodolphe J. — Univ. de Liege

14:30-14:50 FrB11.2

Reconfigurable Ion-Channel Based Biosensor: Input Excitation Design and Analyte Classification, pp. 7698-7703.

Monfared, Sahar — Univ. of British Columbia
Krishnamurthy, Vikram — Univ. of British Columbia
Cornell, Bruce — Surgical Diagnostics Pty. Ltd.

14:50-15:10 FrB11.3

Evolutionary Game Dynamics in Finite Populations with Migration, pp. 7704-7709.

Wang, Jing — Peking Univ.
Chen, Xiaojie — Peking Univ.
Wang, Long — Peking Univ.

15:10-15:30 FrB11.4

Time-Varying Control Laws with Guaranteed Persistence for a Class of Multi-Species Chemostats, pp. 7710-7715.

Mazenc, Frederic — INRIA Sophia-Antipolis,
Jiang, Zhong-Ping — Pol. Inst. NYU

15:30-15:50 FrB11.5

Using Point Process Models to Determine the Impact of Visual Cues on Basal Ganglia Activity and Behavior of Parkinson's Patients, pp. 7716-7722.

Sarma, Sridevi — Johns Hopkins Univ.
Eden, Uri — Boston Univ.
Cheng, Ming — Brown Univ.
Williams, Ziv — Massachusetts General Hospital
Eskandar, Emad — Massachusetts General Hospital
Brown, Emery — MIT

15:50-16:10 FrB11.6

System Identification of Hunchback Protein Patterning in Early Drosophila Embryogenesis, pp. 7723-7728.

Aswani, Anil — Univ. of California at Berkeley
Guturu, Harendra — Stanford Univ.
Tomlin, Claire J. — UC Berkeley

FrB12 — 5E

Sliding Mode Control II (Regular Session)

Chair: Punta, Elisabetta — National Res. Council of Italy
Co-Chair: Zong, Qun — Tianjin Univ.

14:10-14:30 FrB12.1

Sliding-Mode State Observers for Multi-Output Nonlinear Systems with Bounded Noises on Dynamics and Measurements, pp. 7729-7734.

Alessandri, Angelo — Univ. of Genoa
Cuneo, Marta — ISSIA-CNR
Punta, Elisabetta — National Res. Council of Italy

14:30-14:50 FrB12.2

Compensator-Based Sliding Mode Output Feedback Simultaneous Stabilisation Controller Design Via LMIs for Uncertain Systems, pp. 7735-7740.

Andrade Da Silva, J. M. — Univ. of Leicester
Edwards, Christopher — Univ. of Leicester

14:50-15:10 FrB12.3

Second Order Sliding Output Control of Permanent Magnet Synchronous Machines, pp. 7741-7746.

Cavallo, Alberto — Seconda Univ. degli Studi di Napoli
Natale, Ciro — Seconda Univ. degli Studi di Napoli

15:10-15:30 FrB12.4

Sliding-Mode Real-Time Mobile Platform Control in the Presence of Uncertainties, pp. 7747-7752.

Solea, Razvan — "Dunarea de Jos" Univ. of Galati
Filipescu, Adrian — Univ. Dunarea de Jos, Galati
Stamatescu, Grigore — Pol. Univ. of Bucharest

15:30-15:50 FrB12.5

An Extension of Sliding Mode Control Design for the 2-D Systems in Roesser Model, pp. 7753-7758.

Adloo, Hassan — Shiraz Univ.
Karimaghaee, Paknosh — Shiraz Univ.
Soltani Sarvestani, Ahad — Shiraz Univ.

15:50-16:10 FrB12.6

Higher Order Adaptive Sliding Mode Control for a Class of SISO Systems, pp. 7759-7764.

Zong, Qun — Tianjin Univ.
Zhao, Zhanshan — Tianjin Univ.
Dou, Liqian — Tianjin Univ.

FrB13 — 5A

Fuzzy Systems (Regular Session)

Chair: Chen, Jie — Beijing Inst. of Tech.
Co-Chair: Chang, Wen-Jer — National Taiwan Ocean Univ.

14:10-14:30 FrB13.1

H-Infinity Dynamic Output Feedback Control for Fuzzy Systems with Quantized Measurements, pp. 7765-7770.

Guan, Yanpeng — Hangzhou Dianzi Univ.
Zhou, Shaosheng — Hangzhou Dianzi Univ.
Zheng, Wei Xing — Univ. of Western Sydney

14:30-14:50 FrB13.2
Polynomial Fuzzy Observer Design: A Sum of Squares Approach, pp. 7771-7776.
Tanaka, Kazuo — Univ. of Electro-Communications
Ohtake, Hiroshi — Univ. of Electro-communications
Wada, Motohiro — The Univ. of Electro-Communications
Wang, Hua O. — Boston Univ.
Chen, Ying-Jen — National Central Univ.

14:50-15:10 FrB13.3
Color Image Retrieval and Classification Using Fuzzy Similarity Measure and Fuzzy Clustering Method, pp. 7777-7782.
Ban, Xiaojuan — Univ. of Science and Tech. Beijing
Lv, Xiaolong — Univ. of Science and Tech. Beijing
Chen, Jie — Beijing Inst. of Tech.

15:10-15:30 FrB13.4
Observer-Based Robust Fuzzy Controller Design for Uncertain Stochastic T-S Fuzzy Model with Passivity Performance, pp. 7783-7788.
Ku, Cheung-Chieh — National Taiwan Ocean Univ.
Huang, Pei-Hwa — National Taiwan Ocean Univ.
Chang, Wen-Jer — National Taiwan Ocean Univ.

15:30-15:50 FrB13.5
An Approach for the State Estimation of Takagi-Sugeno Models and Application to Sensor Fault Diagnosis, pp. 7789-7794.
Ichalal, Dalil — Nancy-Univ. (CRAN)
Marx, Benoit — Ctr de Recherche en Automat. de Nancy
Ragot, Jose — CRAN-INPL
Maquin, Didier — Inst. National Pol. de Lorraine

15:50-16:10 FrB13.6
State Estimation of the Three-Tank System Using a Multiple Model, pp. 7795-7800.
Nagy, Anca Maria — Inst. National Pol. de Lorraine (INPL)
Mourot, Gilles — Inst. National Pol. De Lorraine
Marx, Benoit — Ctr de Recherche en Automat. de Nancy
Georges, Schutz — Centre de recherche public Henri Tudor
Ragot, Jose — CRAN-INPL

FrB14 — 5B
Fault Tolerant Systems I (Regular Session)

Chair: Zheng, Ying — Huazhong Univ. of Science and Tech.
Co-Chair: Jiang, Bin — Nanjing Univ. of Aeronautics & Astronautics

14:10-14:30 FrB14.1
Fault Tolerant Control Using Virtual Actuators and Invariant-Set Based Fault Detection and Identification, pp. 7801-7806.
Seron, Maria — The Univ. of Newcastle
De Dona, Jose Adrian — The Univ. of Newcastle

14:30-14:50 FrB14.2
Improved Multisensor Switching Scheme for Fault Tolerant Control, pp. 7807-7812.
Seron, Maria — The Univ. of Newcastle
De Dona, Jose Adrian — The Univ. of Newcastle
Martinez Molina, John Jairo — GIPSA-Lab. GRENOBLE-INP

14:50-15:10 FrB14.3
A New Supervisory Fault Tolerant Output Regulation Scheme for Nonlinear Systems, pp. 7813-7818.
Yang, Hao — Univ. des Sciences et Tech. de Lille
Jiang, Bin — Nanjing Univ. of Aeronautics & Astronautics
Cocquempot, Vincent — Univ. des Sci et Tech. de Lille

15:10-15:30 FrB14.4
PACT : A PAssive / ACTive Approach to Fault Tolerant Stability under Actuator Outages, pp. 7819-7824.
Staroswiecki, Marcel — Univ. des Sciences et Tech. de Lille
Berdjag, Denis — Ec. Normale Supérieure de Cachan
Jiang, Bin — Nanjing Univ. of Aeronautics & Astronautics
Zhang, Ke — Nanjing Univ. of Aeronautics and Astronautics

15:30-15:50 FrB14.5
Multisensor Fusion Fault-Tolerant Control with Diagnosis Via a Set Separation Principle, pp. 7825-7830.
De Dona, Jose Adrian — The Univ. of Newcastle
Seron, Maria — The Univ. of Newcastle
Yetendje, Alain — Univ. of Newcastle, Australia

15:50-16:10 FrB14.6
Statistical Properties of CUSUM Based Fault Detection Schemes for Fault Tolerant Control, pp. 7831-7836.
Zhao, Qing — Univ. of Alberta
Kinnaert, Michel — Univ. Libre de Bruxelles

FrB15 — 3B

Electrical Power Systems (Regular Session)

Chair: Lamnabhi-Lagarrigue, Francoise — CNRS and EECI
Co-Chair: Liaw, Der-Cherng — National Chiao Tung Univ.

14:10-14:30 — FrB15.1
An Application of Immersion and Invariance to Transient Stability and Voltage Regulation of Power Systems with Unknown Mechanical Power, pp. 7837-7842.
Dib, Wissam — LSS-SUPELEC
Kenne, Godpromesse — Univ. de Dschang
Lamnabhi-Lagarrigue, Francoise — CNRS and EECI

14:30-14:50 — FrB15.2
A Novel STATCOM Control to Augment LVRT of Fixed Speed Wind Generators, pp. 7843-7848.
Hossain, Md. Jahangir — UNSW@ADFA
Pota, Hemanshu R. — The Univ. of New South Wales
Ugrinovskii, Valery — Univ. of New South Wales
Ramos, Rodrigo A. — Univ. de Sao Paulo

14:50-15:10 — FrB15.3
Model Predictive Control for Wind Power Generation Smoothing with Controlled Battery Storage, pp. 7849-7853.
Khalid, Muhammad — Univ. of New South Wales
Savkin, Andrey V. — Univ. of New South Wales

15:10-15:30 — FrB15.4
Voltage Tracking Design for Electric Power Systems Via SMC Approach, pp. 7854-7859.
Liaw, Der-Cherng — National Chiao Tung Univ.
Chang, Shih-Tse — National Chiao Tung Univ.
Huang, Yun-Hua — National Chiao Tung Univ.

15:30-15:50 — FrB15.5
PEM Fuel Cell Distributed Generation System: Modeling and Robust Adaptive Control, pp. 7860-7865.
Khorrami, Farshad — Pol. Inst. of NYU
Puranik, Sachin — The Ohio State Univ.
Keyhani, Ali — The Ohio State Univ.
Krishnamurthy, Prashanth — IMI
She, Yun — Pol. Inst. of NYU

15:50-16:10 — FrB15.6
Common Mode Current Reduction in an Inverter-Fed Induction Motor Control System, pp. 7866-7871.
Yan, Wenguang — Ohio State Univ.

FrB16 — 5F
Sensor Networks (Regular Session)

Chair: Xi, Yugeng — Shanghai Jiao Tong Univ.
Co-Chair: Cogill, Randy — Univ. of Virginia

14:10-14:30 — FrB16.1
Spectral Multiscale Coverage: A Uniform Coverage Algorithm for Mobile Sensor Networks, pp. 7872-7877.
Mathew, George — Univ. of California, Santa BArbara
Mezic, Igor — Univ. of California, Santa Barbara

14:30-14:50 — FrB16.2
Optimal Sensor Placement for Time Difference of Arrival Localization, pp. 7878-7884.
Isaacs, Jason T. — Univ. of California, Santa Barbara
Klein, Daniel J. — Univ. of California, Santa Barbara
Hespanha, Joao P. — Univ. of California, Santa Barbara

14:50-15:10 — FrB16.3
On the Global Convergence of a Class of Distributed Algorithms for Maximizing the Coverage of a WSN, pp. 7885-7890.
Fontanelli, Daniele — Univ. of Trento
Palopoli, Luigi — Univ. of Trento
Passerone, Roberto — Univ. of California at Berkeley

15:10-15:30 — FrB16.4
Distributed Cooperative Coverage and Connectivity Maintenance for Mobile Sensing Devices, pp. 7891-7896.
Li, Xiaoli — Shanghai Jiao Tong Univ.
Xi, Yugeng — Shanghai Jiao Tong Univ.

15:30-15:50 — FrB16.5
Decentralized Control of a Mobile Sensor Network for Deployment in Corridor Coverage, pp. 7897-7902.
Cheng, Teddy M. — Univ. of New South Wales
Savkin, Andrey V. — Univ. of New South Wales

15:50-16:10 — FrB16.6
An Adaptive Artificial Potential Function Approach for Geometric Sensing, pp. 7903-7910.
Zhang, Guoxian — Duke Univ.
Ferrari, Silvia — Duke Univ.

FrB17 — 5H
Stabilization of Networked Control Systems (Regular Session)

Chair: Heemels, Maurice — Eindhoven Univ. of Tech.

Co-Chair: Lazar, Mircea — Eindhoven Univ. of Tech.

14:10-14:30 — FrB17.1

Comparison of Stability Characterisations for Networked Control Systems, pp. 7911-7916.

Hetel, Laurentiu — Ec.
Cloosterman, Marieke — Eindhoven Univ. of Tech.
Van De Wouw, Nathan — Eindhoven Univ. of Tech.
Heemels, Maurice — Eindhoven Univ. of Tech.
Daafouz, Jamal — CRAN, UMR CNRS - Nancy Univ.
Nijmeijer, Hendrik — Eindhoven Univ. of Tech.

14:30-14:50 — FrB17.2

Robust Stabilization of Model-Based Uncertain Singularly Perturbed Systems with Networked Time-Delay, pp. 7917-7922.

Wang, Zhiming — East China Normal Univ.
Liu, Wei — East China Normal Univ.
Dai, Haohui — East China Normal Univ.
Naidu, D. Subbaram — Idaho State Univ.

14:50-15:10 — FrB17.3

Switching Controller for Stabilization of Linear Systems with Switched Time-Varying Delays, pp. 7923-7928.

Jiang, Wenjuan — Ec. Centrale de Lille
Fridman, Emilia — Tel-Aviv Univ.
Kruszewski, Alexandre — Ec. Centrale de Lille
Richard, Jean-Pierre — Ec. Centrale de Lille

15:10-15:30 — FrB17.4

Networked and Quantized Control Systems with Communication Delays, pp. 7929-7935.

Heemels, Maurice — Eindhoven Univ. of Tech.
Nesic, Dragan — Univ. of Melbourne
Teel, Andrew R. — Univ. of California at Santa Barbara
Van De Wouw, Nathan — Eindhoven Univ. of Tech.

15:30-15:50 — FrB17.5

Stabilization of Networked Control Systems with Communication Constraints and Packet Dropouts, pp. 7936-7941.

Song, Hongbo — Zhejiang Univ. of Tech.
Yu, Li — Zhejiang Univ. of Tech.
Zhang, Wenan — Zhejiang Univ. of Tech.

15:50-16:10 — FrB17.6

Stabilization of Networked Control Systems Via Non-Monotone Control Lyapunov Functions, pp. 7942-7948.

Gielen, Rob — Eindhoven Univ. of Tech.
Lazar, Mircea — Eindhoven Univ. of Tech.

FrB18 — 5I
Constrained Control II (Regular Session)

Chair: Ohta, Yoshito — Kyoto Univ.
Co-Chair: Angeli, David — Imperial Coll.

14:10-14:30 — FrB18.1

An Abstract Linear Programming Approach to Continuous-Time LQ Control for Constrained Systems, pp. 7949-7954.

Ohta, Yoshito — Kyoto Univ.

14:30-14:50 — FrB18.2

Modelling and Constrained Stabilization of the Inverted Pendulum on a Cart Beam System, pp. 7955-7959.

Velupillai, Sankaranarayanan — NIT - Tiruchirappalli
Subbaraman, Anantharaman — National Inst. of Tech. - Tiruchirappalli
Alagarsamy Balasubramanian, Aswin Chandarr — National Inst. of Tech. - Tiruchirappalli
Sri, Adarsh — National Inst. of Tech.

14:50-15:10 — FrB18.3

Robust Periodic Reference Tracking for Uncertain Linear Systems Subject to Control Saturation, pp. 7960-7965.

Flores, Jeferson Vieira — UFRGS
Gomes Da Silva Jr., Joao Manoel — Univ. Federal do Rio Grande do Sul
Sbarbaro, Daniel G. — Univ. de Concepcion

15:10-15:30 — FrB18.4

Simultaneous L_p-Stabilization and Internal Stabilization for Linear Singular Systems Subject to Input Saturation, pp. 7966-7971.

Zhou, Lei — Nantong Univ.
Xiao, Xiaoqing — Nantong Univ.
Lu, Guoping — Nantong Univ.

15:30-15:50 — FrB18.5

Receding Horizon Cost Optimization for Overly Constrained Nonlinear Plants, pp. 7972-7977.

Angeli, David — Imperial Coll.
Rawlings, James B. — Univ. of Wisconsin-Madison
Amrit, Rishi — Univ. of Wisconsin - Madison

15:50-16:10 — FrB18.6

MPC for Tracking of Constrained Nonlinear Systems, pp. 7978-7983.

Ferramosca, Antonio — Univ. of Seville
Limon, Daniel — Univ. de Sevilla

Alvarado, Ignacio — Univ. of Seville
Alamo, Teodoro — Univ. de Sevilla
Camacho, Eduardo F. — Univ. of Sevilla

FrC01 3D
Stability and Stabilization II (Regular Session)

Chair: Lin, Zongli — Univ. of Virginia
Co-Chair: Guay, Martin — Queen's Univ.

16:30-16:50 FrC01.1
Norm Vanishment and Its Applications in Constrained Control Part II: The L_{2} Case, pp. 7984-7989.
Zhou, Bin — Harbin Inst. of Tech.
Lin, Zongli — Univ. of Virginia
Duan, Guang-Ren — Harbin Inst. of Tech.

16:50-17:10 FrC01.2
Norm Vanishment and Its Applications in Constrained Control-Part I: The L_{infinity} Case, pp. 7990-7995.
Zhou, Bin — Harbin Inst. of Tech.
Lin, Zongli — Univ. of Virginia
Duan, Guang-Ren — Harbin Inst. of Tech.

17:10-17:30 FrC01.3
A Vector Small-Gain Theorem for General Nonlinear Control Systems, pp. 7996-8001.
Karafyllis, Iasson — Tech. Univ. of Crete
Jiang, Zhong-Ping — Pol. Inst. NYU

17:30-17:50 FrC01.4
A Unified Approach to Generating Series for Nonlinear Cascade Systems, pp. 8002-8007.
Gray, W. Steven — Old Dominion Univ.

17:50-18:10 FrC01.5
Construction of Control Lyapunov Functions for Damping Stabilization of Control Affine Systems, pp. 8008-8013.
Hudon, Nicolas — Queen's Univ.
Guay, Martin — Queen's Univ.

18:10-18:30 FrC01.6
On Semistability of Nonlinear Switched Systems, pp. 8014-8019.
Hui, Qing — Texas Tech. Univ.
Haddad, Wassim M. — Georgia Inst. of Tech.

FrC02 3E
MPC: Theory and Applications (Regular Session)

Chair: Sato, Masayuki — Japan Aerospace Exploration Agency
Co-Chair: Xie, Lihua — Nanyang Tech. Univ.

16:30-16:50 FrC02.1
MPC for Tracking Target Sets, pp. 8020-8025.
Ferramosca, Antonio — Univ. of Seville
Limon, Daniel — Univ. de Sevilla
Gonzalez, Alejandro H. — CONICET
Odloak, Darci — Univ. of São Paulo - Brazil
Camacho, Eduardo F. — Univ. of Sevilla

16:50-17:10 FrC02.2
Disturbance Suppression Via Robust MPC Using Prior Disturbance Data -Application to Flight Controller Design for Gust Alleviation, pp. 8026-8033.
Sato, Masayuki — Japan Aerospace Exploration Agency
Yokoyama, Nobuhiro — National Defense Acad.
Satoh, Atsushi — Iwate Univ.

17:10-17:30 FrC02.3
Dynamic Output Feedback Robust Model Predictive Control with Guaranteed Quadratic Boundedness, pp. 8034-8039.
Ding, Baocang — Chongqing Univ.
Xie, Lihua — Nanyang Tech. Univ.

17:30-17:50 FrC02.4
Time Optimal MPC for Mechatronic Applications, pp. 8040-8045.
Van den Broeck, Lieboud — K. U. Leuven
Diehl, Moritz — Katholieke Univ. Leuve
Swevers, Jan — K. U. Leuven

17:50-18:10 FrC02.5
Robust Extended Kalman Filter Based Nonlinear Model Predictive Control Formulation, pp. 8046-8051.
Huang, Rui — Carnegie Mellon Univ.
Patwardhan, Sachin — IIT Bombay
Biegler, Lorenz T. — Carnegie Mellon Univ.

18:10-18:30 FrC02.6
On Modelling Approaches for Receding-Horizon Control Design Applied to Large-Scale Sewage Systems, pp. 8052-8058.
Ocampo-Martinez, Carlos — Inst. de Robotica i Informatica Industrial (CSIC-UPC)
Puig, Vicenc — Univ. Pol. de Catalunya

FrC03 3C
Estimation in Mechanical and Energy Systems (Regular Session)

Chair: Fu, Minyue — Univ. of Newcastle
Co-Chair: Yau, Stephen S.-T. — Univ. of Illinois at Chicago

16:30-16:50 FrC03.1
A Reset Kinematic State Estimator to Suppress Sensor Quantization for Enhanced Position Tracking Control, pp. 8059-8064.
Zheng, Jinchuan — The Univ. of Newcastle, Australia
Fu, Minyue — Univ. of Newcastle

16:50-17:10 FrC03.2
Experimental Comparison of Observers for Tool Position Estimation of Industrial Robots, pp. 8065-8070.
Henriksson, Robert — Linköping Univ.
Norrlof, Mikael — Linköping Univ.
Moberg, Stig — ABB Robotics
Wernholt, Erik — Linköping Univ. Sweden
Schon, Thomas (Bo) — Linköping Univ.

17:10-17:30 FrC03.3
Attitude Observers for Accelerated Rigid Bodies Based on GPS and INS Measurements, pp. 8071-8076.
Hua, Minh-Duc — INRIA

17:30-17:50 FrC03.4
Attitude Estimation with Gyros-Bias Compensation Using Low-Cost Sensors, pp. 8077-8082.
El-Hadri, AbdelHafid — Versailles Univ.
Benallegue, Abdelaziz — Univ. of Versailles St Quentin

17:50-18:10 FrC03.5
The Mix Estimation Algorithm for Battery State-Of-Charge Estimator – Analysis of the Sensitivity to Measurement Errors, pp. 8083-8088.
Codecŕ, Fabio — Pol. di Milano
Savaresi, Sergio M. — Pol. Di Milano
Manzoni, Vincenzo — Pol. di Milano

18:10-18:30 FrC03.6
Schrodinger Equation with Quartic Potential and Nonlinear Filtering Problem, pp. 8089-8094.
Yau, Stephen S.-T. — Univ. of Illinois at Chicago
Chang, Der-Chen — Georgetown Univ.
Lin, Ke-pao — Chang Gung Inst. of Tech.

FrC04 3A
Behavioral Systems and Control Theory (Invited Session)

Chair: Rapisarda, Paolo — Univ. of Southampton
Co-Chair: Takaba, Kiyotsugu — Kyoto Univ.
Organizer: Rapisarda, Paolo — Univ. of Southampton
Organizer: Takaba, Kiyotsugu — Kyoto Univ.

16:30-16:50 FrC04.1
Identifiability of Clock Synchronization Errors: A Behavioural Approach (I), pp. 8095-8100.
Przedwojski, Marek — Univ. of Southampton
Markovsky, Ivan — Univ. of Southampton
Rogers, Eric — Univ. of Southampton

16:50-17:10 FrC04.2
Groebner Bases and Behaviors Over Finite Rings (I), pp. 8101-8106.
Kuijper, Margreta — Univ. of Melbourne
Schindelar, Kristina — RWTH Aachen Univ.

17:10-17:30 FrC04.3
Small Gain Theorem and Optimal Robust Stabilization in a Behavioral Framework (I), pp. 8107-8112.
Trentelman, Harry L. — Univ. of Groningen
Fiaz, Shaik — Univ. of Groningen
Takaba, Kiyotsugu — Kyoto Univ.

17:30-17:50 FrC04.4
Path Integrals and Bezoutians for Pseudorational Transfer Functions (I), pp. 8113-8118.
Yamamoto, Yutaka — Kyoto Univ.
Willems, Jan C. — K.U. Leuven

17:50-18:10 FrC04.5
Implementation of Autonomous Multidimensional Behaviors (I), pp. 8119-8123.
Napp, Diego — Univ. of Aveiro
Rocha, Paula — Univ. of Oporto

18:10-18:30 FrC04.6
The Behavior of Resistive Circuits (I), pp. 8124-8129.
Willems, Jan C. — K.U. Leuven
Verriest, Erik I. — Georgia Inst. of Tech.

FrC05 3J
Sampled-Data Control (Regular Session)

Chair: Bitmead, Robert — Univ. of California San Diego
Co-Chair: Seuret, Alexandre — CNRS

16:30-16:50 FrC05.1
Stability Analysis for Sampled-Data Systems with a Time-Varying Period, pp. 8130-8135.
Seuret, Alexandre — CNRS

16:50-17:10 FrC05.2
Robust Repetitive Control by Sampled-Data H-Infinity Filters, pp. 8136-8141.
Nagahara, Masaaki — Kyoto Univ.
Yamamoto, Yutaka — Kyoto Univ.

17:10-17:30 FrC05.3
Stability and Stabilization of Aperiodic Sampled-Data Control Systems: An Approach Using Robust Linear Matrix Inequalities, pp. 8142-8147.
Oishi, Yasuaki — Nanzan Univ.
Fujioka, Hisaya — Kyoto Univ.

17:30-17:50 FrC05.4
Rejection of Aliased Disturbances in a Pulsed Light Source, pp. 8148-8153.
Riggs, Daniel — Cymer, Inc.
Bitmead, Robert — Univ. of California San Diego

17:50-18:10 FrC05.5
Optimization-Based Digital Redesign of Analogue Controllers, pp. 8154-8159.
Polyakov, Konstantin — State Univ. of Ocean Tech.
Rosenwasser, Efim N. — Marine Tech. Univ. of Saint Petersburg
Lampe, Bernhard P. — Univ. of Rostock

18:10-18:30 FrC05.6
Modeling and Design of LTI Controllers for Multirate Systems, pp. 8160-8165.
Cimino, Mauro — Oklahoma State Univ.
Pagilla, Prabhakar R. — Oklahoma State Univ.

FrC06 — 3G
Control of Robotic Manipulators and Bipedal Walking Robots (Regular Session)

Chair: Gregg, Robert D. — Univ. of Illinois, Urbana-Champaign
Co-Chair: Scheint, Michael — Tech. Univ. Muenchen

16:30-16:50 FrC06.1
Reduction-Based Control of Branched Chains: Application to Three-Dimensional Bipedal Torso Robots, pp. 8166-8173.
Gregg, Robert D. — Univ. of Illinois, Urbana-Champaign
Spong, Mark W. — Univ. of Texas at Dallas

16:50-17:10 FrC06.2
'; Stability Analysis of Adaptive Jacobian Controller for Free-Floating Space Manipulators , pp. 8174-8179.
Wang, Hanlei — Beijing Inst. of Control Engineering, Chinese Acad. of Spa
Xie, Yongchun — Beijing Inst. of Control Engineering

17:10-17:30 FrC06.3
Virtual Holonomic Constraint Approach for Planar Bipedal Walking Robots Extended to Double Support, pp. 8180-8185.
Scheint, Michael — Tech. Univ. Muenchen
Sobotka, Marion — TU Muenchen
Buss, Martin — Tech. Univ. Muenchen

17:30-17:50 FrC06.4
Coordination Control of Parallel Manipulators with Actuation Redundancy, pp. 8186-8191.
Shang, Weiwei — Univ. of Science and Tech. of China
Cong, Shuang — Univ. of Science and Tech. of China
Jiang, Shilong — Googol Tech. Ltd

17:50-18:10 FrC06.5
Stability Analysis of Grasped Object by Soft-Fingers with 3-Dimensional Deformation Based on Moment Stability, pp. 8192-8199.
Nakashima, Akira — Nagoya Univ.
Hayakawa, Yoshikazu — Nagoya Univ.

18:10-18:30 FrC06.6
Three-Dimensional Quasi-Passive Dynamic Bipedal Walking with Flat Feet and Compliant Ankles, pp. 8200-8205.
Wang, Qining — Peking Univ.
Wang, Long — Peking Univ.
Huang, Yan — Peking Univ.
Zhu, Jinying — Peking Univ.
Chen, Wei — Peking Univ.

FrC07 — 5C
Observer Design (Regular Session)

Chair: Mirmirani, Maj Dean — Embry-Riddle Aeronautical Univ.
Co-Chair: Perruquetti, Wilfrid — Ec. Centrale de Lille

16:30-16:50 FrC07.1
LPV Approach to Continuous and Discrete Nonlinear Observer Design, pp. 8206-8211.
Ibrir, Salim — Univ. of Trinidad and Tobago

16:50-17:10 FrC07.2
Estimation Delay Compensation in High-Gain Observer-Based Parameter Identification, pp. 8212-8217.
Dai, Xuewu — Southwest Univ.
Gao, Zhiwei — Tianjin Univ.
Breikin, T. V. — Univ. of Sheffield
Wang, Hong — The Univ. of Manchester

17:10-17:30 FrC07.3
State and Parameter Estimation for Linear Systems with Nonlinearly Parameterized Perturbations, pp. 8218-8225.
Grip, HÍvard Fjćr — NTNU
Saberi, Ali — Washington State Univ.
Johansen, Tor Arne — Norweigian Univ. of Science & Tech.

17:30-17:50 FrC07.4
Cascade High Gain Observers for Nonlinear Systems with Delayed Output Measurement, pp. 8226-8231.
Ahmed-Ali, Tarek — ENSIETA
Cherrier, Estelle — GREYC ENSICAEN
M'Saad, Mohammed — ENSI CAEN

17:50-18:10 FrC07.5
Observer Design for a Class of Nonlinear Descriptor Systems, pp. 8232-8237.
Yang, Chunyu — Northeastern Univ.
Zhang, Qingling — Northeastern Univ.
Chai, Tianyou — Northeastern Univ.

18:10-18:30 FrC07.6
Error Analysis for a Class of Numerical Differentiator: Application to State Observation, pp. 8238-8243.
Liu, Dayan — INRIA
Gibaru, Olivier — ARTS ET METIERS PARISTECH
Perruquetti, Wilfrid — Ec. Centrale de Lille

FrC08 3I
Fluid Flow Systems (Regular Session)
Chair: Aamo, Ole Morten — NTNU
Co-Chair: Werner, Herbert — Hamburg Univ. of Tech.

16:30-16:50 FrC08.1
A First Principle Model for Multiphase Slugging Flow in Vertical Risers, pp. 8244-8251.
Di Meglio, Florent — Ec. des Mines de Paris
Kaasa, Glenn-Ole — StatoilHydro ASA
Petit, Nicolas — MINES ParisTech

16:50-17:10 FrC08.2
Model-Based Stabilization of Vortex Shedding with CFD Verification, pp. 8252-8257.
Milovanovic, Milan — NTNU
Gayer, Marek — NTNU
Michielsen, Joris — TU Eindhoven
Aamo, Ole Morten — NTNU

17:10-17:30 FrC08.3
Inverse Modeling for Open Boundary Conditions in Channel Network, pp. 8258-8265.
Wu, Qingfang — Univ. of California, Berkeley
Rafiee, Mohammad — Univ. of California, Berkeley
Tinka, Andrew — Univ. of California at Berkeley
Bayen, Alexandre M. — Univ. of California at Berkeley

17:30-17:50 FrC08.4
Kalman Filter Based Estimation of Flow States in Open Channels Using Lagrangian Sensing, pp. 8266-8271.
Rafiee, Mohammad — Univ. of California, Berkeley
Wu, Qingfang — Univ. of California, Berkeley
Bayen, Alexandre M. — Univ. of California at Berkeley

17:50-18:10 FrC08.5
Boundary Feedback Control for Heat Exchange Enhancement in 2D Magnetohydrodynamic Channel Flow by Extremum Seeking, pp. 8272-8277.
Luo, Lixiang — Lehigh Univ.
Schuster, Eugenio — Lehigh Univ.

18:10-18:30 FrC08.6
Robust Transition Control in Non-Periodic Channels, pp. 8278-8283.
Chughtai, Saulat Shuja — Hamburg Univ. of Tech.
Werner, Herbert — Hamburg Univ. of Tech.

FrC09 3H
MEMS and Nano Systems (Regular Session)
Chair: Xie, Ping — Iowa State Univ.
Co-Chair: Tejada, Arturo — Delft Univ. of Tech.

16:30-16:50 FrC09.1
An Adaptive Filtering Approach to Dynamics Effect Compensation in Nanoscale Broadband Viscoelasticity Measurements of Soft Materials,

pp. 8284-8289.

Xie, Ping — Yan Shan Univ.
Zou, Qingze — Iowa State Univ.
Xu, Zhonghua — Iowa State Univ.
Xu, Hongbing — Univ. of Electronic Science and Tech. of China

16:50-17:10 FrC09.2

A Maximum-Likelihood Detection Scheme for Rapid Imaging of String-Like Samples in Atomic Force Microscopy, pp. 8290-8295.

Chang, Peter — Boston Univ.
Andersson, Sean — Boston Univ.

17:10-17:30 FrC09.3

Iterative Calibration Method for Inertial and Magnetic Sensors, pp. 8296-8303.

Dorveaux, Eric — MINES ParisTech
Vissičre, David — SYSNAV
Martin, Alain — LRBA Vernon
Petit, Nicolas — MINES ParisTech

17:30-17:50 FrC09.4

Configuration Design and Performance Analysis of a Multidimensional Acceleration Sensor Based on 3RRPRR Decoupling Parallel Mechanism, pp. 8304-8309.

Zhang, Dan — Univ. of Ontario Inst. of Tech.
Gao, Zhen — Chinese Acad. of Sciences
Song, Bo — Univ. of Science and Tech. of China
Ge, Yunjian — 1.Inst. of Intelligent Machines, Chinese Acad. of Sciences

17:50-18:10 FrC09.5

Towards STEM Control: Modeling Framework and Development of a Sensor for Defocus Control, pp. 8310-8315.

Tejada Ruiz, Arturo — Delft Univ. of Tech.
Van Den Broek, Wouter — Univ. of Antwerp
van der Hoeven, Saartje — Tech. Univ. of Delft
den Dekker, Arnold J. — Delft Univ. of Tech.

18:10-18:30 FrC09.6

Data Based Modeling and Control of a Dual-Stage Actuator Hard Disk Drive, pp. 8316-8321.

Boettcher, Uwe — Univ. of California, San Diego
de Callafon, Raymond A. — Univ. of California, San Diego
Talke, Frank E. — Univ. of California, San Diego

FrC10 — 5D
Formation Control (Regular Session)

Chair: Hadaegh, Fred Y. — California Inst. of Tech.
Co-Chair: Anderson, Brian D.O. — Australian National Univ.

16:30-16:50 FrC10.1

Robust Controller Design for Formation Flight of Quad-Rotor Helicopters, pp. 8322-8327.

Pilz, Ulf — Hamburg Univ. of Tech.
Popov, Andrey — Hamburg Univ. of Tech.
Werner, Herbert — Hamburg Univ. of Tech.

16:50-17:10 FrC10.2

Formation Control of Unicycle Mobile Robots: A Virtual Structure Approach, pp. 8328-8333.

van den Broek, Thijs H.A. — TNO Automotive
Van De Wouw, Nathan — Eindhoven Univ. of Tech.
Nijmeijer, Hendrik — Eindhoven Univ. of Tech.

17:10-17:30 FrC10.3

Control of Coleader Formations in the Plane, pp. 8334-8339.

Summers, Tyler — Univ. of Texas at Austin
Yu, CHANGBIN (Brad) — The Australian National Univ.
Anderson, Brian D.O. — Australian National Univ.
Dasgupta, Soura — Univ. of Iowa

17:30-17:50 FrC10.4

Formation Control of Multiple Nonholonomic Mobile Robots Based on Cascade Design, pp. 8340-8344.

Cao, Ke-Cai — Nanjing Univ. of Posts and Telecommunications

17:50-18:10 FrC10.5

Translation Control of a Fleet Circular Formation of AUVs under Finite Communication Range, pp. 8345-8350.

Brińon Arranz, Lara — INRIA Rhône-Alpes
Canudas de Wit, Carlos — CNRS, GIPSA-Lab.
Seuret, Alexandre — CNRS

18:10-18:30 FrC10.6

Decentralized Receding Horizon Control for Multiple Unmanned Helicopters Considering Dynamics Model, pp. 8351-8356.

He, Yuqing — Shenyang Inst. of Automation, CAS
Han, Jianda — Shenyang Inst. of Automation

FrC11 — 5J
Modeling Methodology (Regular Session)

Chair: Dochain, Denis — Univ. Catholique de Louvain
Co-Chair: Lovera, Marco — Pol. di Milano

16:30-16:50 FrC11.1
Integrated Modelling and Parameter Estimation: An LFT-Modelica Approach, pp. 8357-8362.
Donida, Filippo — Pol. di Milano
Romani, Carlo — Pol. di Milano
Casella, Francesco — Pol. di Milano
Lovera, Marco — Pol. di Milano

16:50-17:10 FrC11.2
The Kullback-Leibler Rate Metric for Comparing Dynamical Systems, pp. 8363-8368.
Sun, Yu — Univ. of Illinois, Urbana-Champaign
Mehta, Prashant G. — Univ. of Illinois, Urbana-Champaign

17:10-17:30 FrC11.3
Dynamical Systems Complexity with a View towards Air Traffic Management Applications, pp. 8369-8374.
Puechmorel, Stephane — ENAC
Daniel, Delahaye — ENAC

17:30-17:50 FrC11.4
A New Soft Sensor Modeling Method Based on Modified AdaBoost with Incremental Learning, pp. 8375-8380.
Tian, Huixin — Tianjin Pol. Univ.
Wang, An-na — Northeastern Univ.
Mao, Zhi-zhong — Northeastern Univ.

17:50-18:10 FrC11.5
A Multiplay Model for Rate-Independent and Rate-Dependent Hysteresis with Nonlocal Memory, pp. 8381-8386.
Drincic, Bojana — Univ. of Michigan
Bernstein, Dennis S. — Univ. of Michigan

18:10-18:30 FrC11.6
A Geometric Perspective to Open Irreversible Thermodynamic Systems: GENERIC, Matrix and Port-Contact Systems, pp. 8387-8392.
Favache, Audrey — Univ. catholique de Louvain
Dochain, Denis — Univ. Catholique de Louvain
Maschke, Bernhard — Univ. Claude Bernard of Lyon

FrC12 — 5E
Advances in Higher Order Sliding Mode Observation and Output Control (Invited Session)

Chair: Fridman, Leonid M. — National Autonomous Univ.
Co-Chair: Plestan, Franck — Ec. Centrale De Nantes-CNRS
Organizer: Fridman, Leonid M. — National Autonomous Univ.

16:30-16:50 FrC12.1
Unbounded Unknown Inputs Estimation Based on High-Order Sliding Mode Differentiator (I), pp. 8393-8398.
Bejarano, Francisco Javier — Univ. Nacional Autonoma de México (UNAM)
Fridman, Leonid M. — National Autonomous Univ.

16:50-17:10 FrC12.2
Non-Homogeneous Finite-Time-Convergent Differentiator (I), pp. 8399-8404.
Levant, Arie — Tel - Aviv Univ.

17:10-17:30 FrC12.3
Optimal Lyapunov Function Selection for Reaching Time Estimation of Super Twisting Algorithm (I), pp. 8405-8410.
DÁvila Merida, Israel Alejandro — UNAM
Moreno, Jaime A. — Univ. Nacional Autonoma
Fridman, Leonid M. — National Autonomous Univ.

17:30-17:50 FrC12.4
Reduced-Order Observer and Chattering Reduction for Sliding Mode Control of Nonlinear Systems (I), pp. 8411-8416.
Bartolini, Giorgio — Univ. of Cagliari
Punta, Elisabetta — National Res. Council of Italy

17:50-18:10 FrC12.5
Output Feedback Sliding Mode Control of Time Delay Systems with Bounded Disturbances (I), pp. 8417-8422.
Han, Xiaoran — Univ. of Kent
Fridman, Emilia — Tel-Aviv Univ.
Spurgeon, Sarah K. — Univ. of Kent

18:10-18:30 FrC12.6
Output Feedback Sampling Control: A Robust Solution Based on Second Order Sliding Mode (I), pp. 8423-8427.
Plestan, Franck — Ec. Centrale De Nantes-CNRS
Moulay, Emmanuel — Ec. Centrale de Nantes
Glumineau, Alain — Ec. Centrale Nantes

FrC13 — 5A
Visual Servo Control (Regular Session)

Chair: Fontanelli, Daniele — Univ. of Trento
Co-Chair: Dixon, Warren E. — Univ. of Florida

16:30-16:50 FrC13.1
Visual Servoing of Nonholonomic Mobile Robots Based on a New Motion Estimation Technique, pp. 8428-8433.

Zhang, Xuebo — Nankai Univ.
Fang, Yongchun — Nankai Univ.
Liu, Xi — Nankai Univ.

16:50-17:10 FrC13.2
Shortest Paths for Non-Holonomic Vehicles with Limited Field of View Camera, pp. 8434-8439.
Salaris, Paolo — Faculty of Engineering - Univ. of Pisa
Fontanelli, Daniele — Univ. of Trento
Pallottino, Lucia — Univ. of Pisa
Bicchi, Antonio — Univ. di Pisa

17:10-17:30 FrC13.3
Black-Box Modeling of a 2-DOF Manipulator in the Image Plane Using Recurrent Neurofuzzy Networks, pp. 8440-8445.
Gonzalez-Olvera, Marcos A. — National Autonomous Univ. of Mexico (UNAM)
Rodriguez-Morales, Angel Luis — Univ. Nacional Autónoma de México
Tang, Yu — National Univ. of Mexico

17:30-17:50 FrC13.4
Nonuniformity Correction and Calibration Method in the High-Precision CCD Measurement and Servo Control System, pp. 8446-8451.
Li, Jing — Beijing Inst. of Tech.
Wang, Junzheng — Beijing Inst. of Tech.
Zhou, Bin — Beijing Inst. of Tech.
Shen, Wei — Beijing Inst. of Tech.

17:50-18:10 FrC13.5
A Novel Algorithm for Refinement of Vision-Based Two-View Pose Estimates, pp. 8452-8457.
Mehta, Siddhartha — Univ. of Florida
Barooah, Prabir — Univ. of Florida
Dixon, Warren E. — Univ. of Florida
Susca, Sara — Univ. of California, Santa Barbara

18:10-18:30 FrC13.6
Combined Line-Of-Sight Inertial Stabilization and Visual Tracking: Application to an Airborne Camera Platform, pp. 8458-8463.
Hurak, Zdenek — Czech Tech. Univ.
Rezac, Martin — Czech Tech. Univ. in Prague

FrC14 — 5B
Fault Tolerant Systems II (Regular Session)

Chair: Patton, Ron J. — Univ. of Hull
Co-Chair: Shumsky, Alexey — Inst. for Marine Tech. Problems

16:30-16:50 FrC14.1
Fault Accommodation in Dynamic Systems: Fault Decoupling Based Approach, pp. 8464-8469.
Zhirabok, Alexey — Far Eastern State Tech. Univ.
Shumsky, Alexey — Inst. for Marine Tech. Problems
Jiang, Bin — Nanjing Univ. of Aeronautics & Astronautics
Zhang, Ke — Nanjing Univ. of Aeronautics and Astronautics

16:50-17:10 FrC14.2
Fault Tolerant Control - a Residual Based Set-Up, pp. 8470-8475.
Niemann, Henrik — Tech. Univ. of Denmark
Poulsen, Niels Kjřlstad — Tech. Univ. of Denmark

17:10-17:30 FrC14.3
Automated Fault Tolerant Control Synthesis Based on Discrete Games, pp. 8476-8481.
Grunnet, Jacob Deleuran — Aalborg Univ.
Bendtsen, Jan Dimon — Aalborg Univ.
Bak, Thomas — Aalborg Univ.

17:30-17:50 FrC14.4
Actuator Fault Estimation and Compensation Based on an Augmented State Observer Approach, pp. 8482-8487.
Patton, Ron J. — Univ. of Hull
Klinkhieo, Supat — The Univ. of Hull

17:50-18:10 FrC14.5
Lateral Imbalance Detection on a UAV Based on Multiple Models, pp. 8488-8493.
Fekri, Sajjad — Univ. of Leicester
Gu, Dawei — Univ. of Leicester
Postlethwaite, Ian — Univ. of Leicester

18:10-18:30 FrC14.6
Switching-Based Fault-Tolerant Control for an F-16 Aircraft with Thrust Vectoring, pp. 8494-8499.
Lu, Bei — California State Univ. Long Beach
Wu, Fen — North Carolina State Univ.

FrC15 — 3B
New Developments in Stochastic Analysis, Systems and Control (Invited Session)

Chair: Pasik-Duncan, Bozenna — Univ. of Kansas
Co-Chair: Kumar, P. R. — Univ. of Illinois, Urbana-Champaign
Organizer: Pasik-Duncan, Bozenna — Univ. of Kansas

Organizer: Kumar, P. R. — Univ. of Illinois, Urbana-Champaign

16:30-16:50 FrC15.1

On Nonlinear State Estimation in a Riemannian Manifold (I), pp. 8500-8505.

Solo, Victor — Univ. of New South Wales

16:50-17:10 FrC15.2

Irregular Sampling, Active Observability, and Convergence Rates of State Observers for Systems with Binary-Valued Observations (I), pp. 8506-8511.

Li, Chanying — Wayne State Univ.
Wang, Le Yi — Wayne State Univ.
Yin, George — Wayne State Univ.
Guo, Lei — Chinese Acad. of Sciences
Xu, Chengzhong — Wayne State Univ.

17:10-17:30 FrC15.3

Singular Control and Impulse Control with Application to Mutual Insurance Optimization (I), pp. 8512-8517.

Bensoussan, Alain — UTD Univ. of Texas at Dallas
Liu, John — The Hong Kong Pol. Univ.
Yuan, Jiguang — The Hong Kong Pol. Univ.

17:30-17:50 FrC15.4

Control of Some Linear Stochastic Systems with a Fractional Brownian Motion (I), pp. 8518-8522.

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

17:50-18:10 FrC15.5

Context-Dependent Multi-Class Classification with Unknown Observation and Class Distributions with Applications to Bioinformatics (I), pp. 8523-8530.

Baras, Alex — Univ. of Virginia
Baras, John S. — Univ. of Maryland

18:10-18:30 FrC15.6

Dynamic Pricing with Continuous Stochastic Demand (I), pp. 8531-8536.

Wang, Yongqiang — Univ. of Maryland--Coll. Park
Fu, Michael C. — Univ. of Maryland
Marcus, Steve — Univ. of Maryland

FrC16 — 5F
Detection, Tracking, and Surveillance in Sensor Networks (Regular Session)

Chair: Pappas, George J. — Univ. of Pennsylvania
Co-Chair: Bullo, Francesco — Univ. California at Santa Barbara

16:30-16:50 FrC16.1

The Problem of Target Following Based on Range-Only Measurements for Car-Like Robots, pp. 8537-8542.

Matveev, Alexey S. — St.Petersburg Univ.
Teimoori Sangani, Hamid — Univ. of New South Wales
Savkin, Andrey V. — Univ. of New South Wales

16:50-17:10 FrC16.2

A Dynamic Boundary Guarding Problem with Translating Targets, pp. 8543-8548.

Smith, Stephen L. — Massachusetts Inst. of Tech.
Bopardikar, Shaunak D. — Univ. of California, Santa Barbara
Bullo, Francesco — Univ. California at Santa Barbara

17:10-17:30 FrC16.3

Multiple Target Detection Using Bayesian Learning, pp. 8549-8554.

Nair, Sujit — California Inst. of Tech.
Chevva, Konda Reddy — United Tech. Res. Center
Owhadi, Houman — Caltech
Marsden, Jerrold E. — California Inst. of Tech.

17:30-17:50 FrC16.4

Symmetric Probabilistic Values for Identifying Informative Sensors, pp. 8555-8560.

Ghassemi, Farhad — Univ. of British Columbia
Krishnamurthy, Vikram — Univ. of British Columbia

17:50-18:10 FrC16.5

Resource Allocation for Signal Detection with Active Sensors, pp. 8561-8566.

Le Ny, Jerome — Univ. of Pennsylvania
Zavlanos, Michael M. — Univ. of Pennsylvania
Pappas, George J. — Univ. of Pennsylvania

18:10-18:30 FrC16.6

On a Stochastic Robotic Surveillance Problem, pp. 8567-8574.

Srivastava, Kunal — Univ. of Illinois, Urbana-Champaign
Stipanovic, Dusan M. — Univ. of Illinois, Urbana-Champaign
Spong, Mark W. — Univ. of Texas at Dallas

FrC17 — 5H
Game Theory Applied to Network Analysis and Control (Regular Session)

Chair: Pavel, Lacra — Univ. of Toronto
Co-Chair: Jia, Peng — McGill Univ.

16:30-16:50 FrC17.1
A Control Theoretic Approach to Noncooperative Game Design, pp. 8575-8580.
Alpcan, Tansu — Berlin Tech. Univ.
Pavel, Lacra — Univ. of Toronto
Stefanovic, Nem — Univ. of Toronto

16:50-17:10 FrC17.2
Opportunistic Scheduling in Cellular Systems in the Presence of Non-Cooperative Mobiles, pp. 8581-8587.
Veeraruna, Kavitha — INRIA
Altman, Eitan — INRIA
El-Azouzi, Rachid — Univ. d'avignon
Sundaresan, Rajesh — Indian Inst. of Science

17:10-17:30 FrC17.3
Bertrand Games in Multi-Class Queues, pp. 8588-8593.
Jain, Rahul — Univ. of Southern California
Dube, Parijat — IBM Watson Res. Center

17:30-17:50 FrC17.4
Interaction of Service Providers in Task Delegation under Simple Payment Rules, pp. 8594-8599.
La, Richard J. — Univ. of Maryland, Coll. Park
Mo, Jeonghoon — Yonsei Univ.

17:50-18:10 FrC17.5
Dynamic Policy-Based IDS Configuration, pp. 8600-8605.
Zhu, Quanyan — Univ. of Illinois, Urbana-Champaign
Basar, Tamer — Univ. of Illinois, Urbana-Champaign

18:10-18:30 FrC17.6
Auctions on Networks: Efficiency, Consensus, Passivity, Rates of Convergence, pp. 8606-8611.
Jia, Peng — McGill Univ.
Caines, Peter E. — McGill Univ.

FrC18 — 5I
Constrained Control III (Regular Session)

Chair: Kyriakopoulos, Kostas J. — National Tech. Univ. of Athens
Co-Chair: Tee, Keng Peng — Inst. for Infocomm Res.

16:30-16:50 FrC18.1
A Viability Approach for the Stabilization of an Underactuated Underwater Vehicle in the Presence of Current Disturbances, pp. 8612-8617.
Panagou, Dimitra — National Tech. Univ. of Athens
Margellos, Kostas — ETH Zurich
Summers, Sean — ETH Zurich
Lygeros, John — ETH Zurich
Kyriakopoulos, Kostas J. — National Tech. Univ. of Athens

16:50-17:10 FrC18.2
Control of Nonlinear Systems with Full State Constraint Using a Barrier Lyapunov Function, pp. 8618-8623.
Tee, Keng Peng — Inst. for Infocomm Res.
Ge, Shuzhi Sam — National Univ. of Singapore

17:10-17:30 FrC18.3
Existence of Feasible Approximating Trajectories for Differential Inclusions with Obstacles As State Constraints, pp. 8624-8629.
Bettiol, Piernicola — Imperial Coll. London
Vinter, Richard B. — Imperial Coll.

17:30-17:50 FrC18.4
Nonlinear Model Predictive Control Scheme: A Sum of Squares Approach, pp. 8630-8635.
Franze', Giuseppe — Univ. Degli Studi della Calabria
Casavola, Alessandro — Univ. Della Calabria
Famularo, Domenico — Univ. degli Studi Mediterranea di Reggio Calabria

17:50-18:10 FrC18.5
Set Membership Approximation of Discontinuous NMPC Laws, pp. 8636-8641.
Fagiano, Lorenzo — Pol. di Torino
Canale, Massimo — Pol. di Torino
Milanese, Mario — Pol. di Torino

18:10-18:30 FrC18.6
Model Predictive Path Following for Constrained Nonlinear Systems, pp. 8642-8647.
Faulwasser, Timm — Otto-von-Guericke Univ. Magdeburg
Kern, Benjamin — Otto-von-Guericke Univ. Magdeburg
Findeisen, Rolf — OVG Univ. Magdeburg