2014 European Control Conference

(ECC 2014)

Strasbourg, France
24-27 June 2014

Pages 1-707

IEEE Catalog Number: CFP1490U-POD
ISBN: 978-1-4799-4728-7

Content List of European Control Conference 2014

Technical Program for Tuesday June 24, 2014

TuW1 Oberlin Room

Time-Delay Systems in Networks: Models, Stability Theory, Control, and Numerics (Workshop)

Chair: Sipahi, Rifat — Northeastern Univ.
Co-Chair: Ozbay, Hitay — Bilkent Univ.

08:30-17:30 TuW1.1

*TIME DELAY SYSTEMS IN NETWORKS Models, Stability Theory, Control, and Numerics**.

Atay, Fatihcan M. — Max Planck Inst. for Mathematics in the Sciences
Michiels, Wim — KU Leuven
Niculescu, Silviu-Iulian — UMR CNRS 8506, CNRS-SUPELEC
Ozbay, Hitay — Bilkent Univ.
Sipahi, Rifat — Northeastern Univ.

TuW3 Arp 4 Room

Control of Large-Scale Distributed and Cooperating Systems: Recent Achievements within the Network of Excellence HYCON2 (Workshop)

Chair: Lamnabhi-Lagarrigue, Francoise — CNRS
Co-Chair: Damm, Gilney — Lab. IBISC - CNRS/Evry Univ.

08:50-17:40 TuW3.1

*Control of Large-Scale Distributed and Cooperating Systems: Recent Achievements within the Network of Excellence HYCON2**.

Lamnabhi-Lagarrigue, Francoise — CNRS

TuW4 Arp 5 Room

A Set-Membership Approach to Health Monitoring of Uncertain Systems: From Theory to Application (Workshop)

Chair: Ramdani, Nacim — Univ. d'Orléans
Co-Chair: Raïssi, Tarek — Conservatoire National des Arts et Métiers

08:30-17:30 TuW4.1

*A Set-Membership Approach to Health Monitoring of Uncertain Systems: From Theory to Application**.

Ramdani, Nacim — Univ. d'Orléans
Raïssi, Tarek — Conservatoire National des Arts et Métiers
Zolghadri, Ali — Univ. Bordeaux I
Jauberthie, Carine — LAAS-CNRS
Verdière, Nathalie — IUT du Havre - Caucriauville-Place Robert Schuman
Combastel, Christophe — Ec. ENSEA
Travé-Massuyès, Louise — CNRS

TuW5 Leicester Room

Interpolation Based Techniques for Constrained Control. from Improved Vertex Control to Robust Model Predictive Control Alternatives (Workshop)

Chair: Olaru, Sorin — SUPELEC
Co-Chair: Gutman, Per-Olof — Tech.

08:30-17:30 TuW5.1

*Interpolation Based Techniques for Constrained Control. from Improved Vertex Control to Robust Model Predictive Control Alternatives**.

Nguyen, Hoai-Nam — Tech.
Olaru, Sorin — SUPELEC
Gutman, Per-Olof — Tech.

TuW7	Orangerie Room
Mathworks Workshop (Workshop)	
Chair: Buhr, Craig	MathWorks
Co-Chair: Bedjaoui, Nadia	MathWorks
16:00-17:00	TuW7.1
*Techniques for Project Based Learning with Low Cost Hardware Support**.	
Buhr, Craig	MathWorks
17:00-17:30	TuW7.2
*Motor Control Using Arduino**.	
Buhr, Craig	MathWorks

WeA1 Arp 3 Room

Systems Identification (Regular Session)

Chair: Tomei, Patrizio — Univ. of Roma Tor Vergata
Co-Chair: Potts, Alain — Univ. de São Paulo

10:00-10:20 WeA1.1

Detection of No-Model Input/Output Combinations in MIMO Systems Subject to Noise and Unmeasured Disturbances, pp. 1-6.

Potts, Alain — Univ. Federal do ABC
Massaro, Leandro — Univ. de São Paulo
Garcia, Claudio — Pol. School of the Univ. of São Paulo

10:20-10:40 WeA1.2

Frequency Estimation of Periodic Signals, pp. 7-12.

Marino, Riccardo — Univ. di Roma Tor Vergata
Tomei, Patrizio — Univ. of Roma Tor Vergata

10:40-11:00 WeA1.3

Least Squares End Performance Experiment Design in Multicarrier Systems: The Sparse Preamble Case, pp. 13-18.

Katselis, D. — KTH
Rojas, Cristian R. — KTH Royal Inst. of Tech.
Hjalmarsson, Håkan — Royal Inst. of Tech.

11:00-11:20 WeA1.4

Closed-Loop Identification of Continuous-Time Systems from Non-Uniformly Sampled Data, pp. 19-24.

Chen, Fengwei — Univ. de Lorraine
Gilson, Marion — Univ. de Lorraine
Aguero, Juan C. — The Univ. of Newcastle
Garnier, Hugues — Univ. of Lorraine
Schorsch, Julien — nancy-Univ.

11:20-11:40 WeA1.5

Experiment Design for Parameter Estimation in Nonlinear Systems Based on Multilevel Excitation, pp. 25-30.

Forgione, Marco — Delft Univ. of Tech.
Bombois, Xavier — Delft Univ. of Tech.
Van den Hof, Paul M.J. — Eindhoven Univ. of Tech.
Hjalmarsson, Håkan — Royal Inst. of Tech.

11:40-12:00 WeA1.6

Adaptive Identification of Continuous-Time Switched Linear and Piecewise Linear Systems, pp. 31-36.

Kersting, Stefan — Tech. Univ. München
Buss, Martin — Tech. Univ. Muenchen

WeA2 Leicester Room

Topics in Linear Systems I (Regular Session)

Chair: Jeltsema, Dimitri — Delft Univ. of Tech.
Co-Chair: Bokor, Jozsef — Hungarian Acad. of Sciences

10:00-10:20 WeA2.1

On the Discretisation of Sparse Linear Systems, pp. 37-42.

Souza, Matheus — National Univ. of Ireland Maynooth
Geromel, Jose C. — UNICAMP
Colaneri, Patrizio — Pol. di Milano
Shorten, Robert — Nat. Univ. of Ireland

10:20-10:40 WeA2.2

Quasi-Positive Realization of Externally Positive Discrete Systems, pp. 43-48.

Guidorzi, Roberto — Univ. of Bologna

10:40-11:00 WeA2.3

Currents' Physical Components (CPC) in the Time-Domain: Single-Phase Systems, pp. 49-54.

Jeltsema, Dimitri — Delft Univ. of Tech.
van der Woude, Jacob — Delft Univ. of Tech.

11:00-11:20 WeA2.4

Spectral Expression for the Frequency-Limited H2-Norm of LTI Dynamical Systems with High Order Poles, pp. 55-60.

Vuillemin, Pierre — Onera - The French Aerospace Lab.
Poussot-Vassal, Charles — Onera
Alazard, Daniel — Univ. de Toulouse, ISAE

11:20-11:40 WeA2.5

Simple Causal Fixed-Structure Feedforward Control Law for General Continuous-Time LTI SISO Systems, pp. 61-66.

Michalek, Maciej, Marcin — Poznan Univ. of Tech.

11:40-12:00 WeA2.6

Stable Hinf Controller Design Based on a Novel Parameterization of the Controller Set, pp. 67-72.

Peni, Tamas — Inst. for Computer Science and Control of Hungarian Acad.
Szabo, Zoltan — MTA SZTAKI
Bokor, Jozsef — Hungarian Acad. of Sciences

WeA3 Oberlin Room

Delay Systems I (Regular Session)

Chair: Iftar, Altug — Anadolu Univ.
Co-Chair: Boussaada, Islam — IPSA & Lab. des Signaux et Systèmes

10:00-10:20 WeA3.1

Expanding the Parameter Space Approach to Multi Loop Control with Multi Time Delays, pp. 73-78.

Schrödel, Frank — RWTH Aachen Univ.
Abel, Dirk — RWTH Aachen Univ.

10:20-10:40 WeA3.2

Dominant Pole of Positive Systems with Time-Delays, pp. 79-84.

Ebihara, Yoshio — Kyoto Univ.
Peaucelle, Dimitri — CNRS
Arzelier, Denis — LAAS-CNRS
Gouaisbaut, Frederic — LAAS CNRS

10:40-11:00 WeA3.3

A Robust Controller Design Approach for Systems with Distributed Time-Delay, pp. 85-90.

Iftar, Altug — Anadolu Univ.

11:00-11:20 WeA3.4

Singularly Perturbed Implicit Control Law for Linear Time Varying Delay SISO Systems with Unknown Parameters, pp. 91-96.

Puga Manjarrez, Saul Alfredo — ESFN-IPN
Bonilla, Moises E. — CINVESTAV-IPN
Mondie, Sabine — CINVESTAV-IPN
Malabre, Michel — IRCCyN - CNRS

11:20-11:40 WeA3.5

Computing the Codimension of the Singularity at the Origin for Delay Systems in the Regular Case: A Vandermonde-Based Approach, pp. 97-102.

Boussaada, Islam — IPSA & Lab. des Signaux et Systèmes
Irofti, Dina Alina — Lab. des Signaux et Systèmes, Supélec
Niculescu, Silviu-Iulian — UMR CNRS 8506, CNRS-SUPELEC

WeA4 Arp 1 Room

Predictive Control for Linear Systems (Regular Session)

Chair: Olaru, Sorin — SUPELEC

Co-Chair: Jørgensen, John Bagterp — Tech. Univ. of Denmark

10:00-10:20 — WeA4.1

Accelerating Space Traversal Methods for Explicit Model Predictive Control Via Space Partitioning Trees, pp. 103-108.

Jafargholi, Mahmoud — École Pol. Fédérale de Lausanne
Peyrl, Helfried — ABB Corp. Res.
Zanarini, Alessandro — ABB Schweiz AG
Herceg, Martin — Swiss Federal Inst. of Tech. - ETH Zurich
Mariethoz, Sebastien — ETH Zurich

10:20-10:40 — WeA4.2

Reverse Engineered MPC for Tracking with Systems That Become Uncertain, pp. 109-114.

Hartley, Edward Nicholas — Univ. of Cambridge
Maciejowski, Jan M. — Univ. of Cambridge

10:40-11:00 — WeA4.3

Input-Constrained Model Predictive Control Via the Alternating Direction Method of Multipliers, pp. 115-120.

Sokoler, Leo Emil — Tech. Univ. of Denmark
Frison, Gianluca — DTU
Andersen, Martin Skovgaard — Tech. Univ. of Denmark
Jørgensen, John Bagterp — Tech. Univ. of Denmark

11:00-11:20 — WeA4.4

On MPC Based Trajectory Tracking, pp. 121-127.

Koegel, Markus — OVG Univ. Magdeburg
Findeisen, Rolf — Univ. of Magdeburg

11:20-11:40 — WeA4.5

High-Performance Small-Scale Solvers for Linear Model Predictive Control, pp. 128-133.

Frison, Gianluca — DTU
Sørensen, Hans Henrik Brandenborg — Tech. Univ. of Denmark
Dammann, Bernd — Tech. Univ. of Denmark
Jørgensen, John Bagterp — Tech. Univ. of Denmark

11:40-12:00 — WeA4.6

Optimal Control of Shading System Using Hybrid Model Predictive Control, pp. 134-139.

Le, Khang — Supélec
Bourdais, Romain — Supélec
Gueguen, Herve — SUPELEC

WeA5 — Arp 5 Room

Biological Systems (Regular Session)

Chair: Simaan, Marwan A. — Univ. of Central Florida
Co-Chair: N'Doye, Ibrahima — Univ. of Luxembourg

10:00-10:20 — WeA5.1

Detection of Aortic Valve Dynamics in Bridge-To-Recovery Feedback Control of the Left Ventricular Assist Device, pp. 140-145.

Wang, Yu — Univ. of Central Florida
Faragallah, George — Univ. of Central Florida
Simaan, Marwan A. — Univ. of Central Florida

10:20-10:40 — WeA5.2

Gain Scheduled Luenberger Observers for Microalgal Cultures, pp. 146-151.

Benavides, Micaela — Univ. of Mons
Coutinho, Daniel — Univ. Federal de Santa Catarina
Hantson, Anne-Lise — Univ. of Mons
Van Impe, Jan F.M. — Katholieke Univ. Leuven
Vande Wouwer, Alain — Univ. de Mons

10:40-11:00 — WeA5.3

Dynamical Model Identification of Population of Oysters for Water Quality Monitoring, pp. 152-157.

Ahmed, Hafiz	Non-A team at Inria, Lille
Ushirobira, Rosane	Inria
Efimov, Denis	Inria
Tran, Damien	EA team at UMR 5805 EPOC – OASU, Bordeaux I
Massabuau, Jean-Charles	UMR 5805 EPOC - OASU, Bordeuax I

11:00-11:20 WeA5.4

A Nonlinear SEIR Epidemic Model with Feedback Vaccination Control, pp. 158-164.

Nistal Riobello, Raul	Ehu Univ. of Basque Country
de la Sen, Manuel	Univ. del Pais Vasco
Alonso-Quesada, Santiago	UPV /EHU
Ibeas, Asier	Univ. Autonoma de Barcelona

11:20-11:40 WeA5.5

Minimal Time Problem for a Fed-Batch Bioreactor with a Non Admissible Singular Arc, pp. 165-170.

Bayen, Térence	INRIA
Mairet, Francis	Inria
Mazade, Marc	Univ. Montpellier 2

11:40-12:00 WeA5.6

Chaos in a Fractional-Order Cancer System, pp. 171-176.

N'Doye, Ibrahima	Univ. of Luxembourg
Voos, Holger	Univ. of Luxembourg
Darouach, Mohamed	CRAN CNRS UMR 7039, Nancy Univ.

WeA6 Arp 2 Room

Coordination and Consensus Agreement in Dynamical Systems I (Regular Session)

Chair: Hirche, Sandra	Inst. of Automatic Control Engineering
Co-Chair: Gazi, Veysel	Istanbul Kemerburgaz Univ.

10:00-10:20 WeA6.1

Distributed Output Agreement in a Class of Uncertain Linear Heterogeneous Multi-Agent Dynamic Systems, pp. 177-183.

Gazi, Veysel	Istanbul Kemerburgaz Univ.

10:20-10:40 WeA6.2

Achieving Unanimous Opinions in Signed Social Networks, pp. 184-189.

Altafini, Claudio	Univ. of Linkoping
Lini, Gabriele	Univ. di Parma

10:40-11:00 WeA6.3

A Message Passing Algorithm for the Evaluation of Social Influence, pp. 190-195.

Vassio, Luca	Pol. di Torino
Fagnani, Fabio	Pol. Di Torino
Frasca, Paolo	Univ. of Twente
Ozdaglar, Asuman	MIT

11:00-11:20 WeA6.4

Uncontrollability of Controlled Consensus Networks Characterized by Faria Vectors, pp. 196-201.

Sieber, Dominik	Tech. Univ. München
Hirche, Sandra	Inst. of Automatic Control Engineering

11:20-11:40 WeA6.5

The Second-Order Parametric Consensus Protocol, pp. 202-207.

Morbidi, Fabio	Inria, Grenoble - Rhone-Alpes

11:40-12:00 WeA6.6

Synchronization of Autonomous Agents by an Optimal Networked Controller, pp. 208-213.

Mosebach, Andrej	Ruhr-Univ. Bochum
Lunze, Jan	Ruhr-Univ. Bochum

WeA7 Orangerie Room

Uncertain Systems: From Analysis to Control (Regular Session)

Chair: Haggblom, Kurt E. Abo Akademi Univ.
Co-Chair: Roos, Clément ONERA

10:00-10:20 WeA7.1

Performance Analysis and Coherent Guaranteed Cost Control for Uncertain Quantum Systems, pp. 214-219.
Xiang, Chengdi Univ. of New South Wales at the Australian Defence Force Ac
Petersen, Ian R. Australian Defence Force Acad.
Dong, Daoyi UNSW

10:20-10:40 WeA7.2

A Detailed Comparative Analysis of Mu Lower Bound Algorithms, pp. 220-226.
Fabrizi, Andrea ONERA
Roos, Clément ONERA
Biannic, Jean-Marc ONERA

10:40-11:00 WeA7.3

Computing Reachable Sets for Nonlinear Systems in Presence of Bounded Uncertainties, pp. 227-233.
Thabet, Rihab El Houda Univ. OF BORDEAUX 1
Combastel, Christophe Ec. ENSEA
Raïssi, Tarek Conservatoire National des Arts et Métiers
Ramdani, Nacim Univ. d'Orléans
Zolghadri, Ali Univ. Bordeaux I

11:00-11:20 WeA7.4

Nonlinear Hybrid Reachability Using Set Integration and Zonotope Enclosures, pp. 234-239.
Maiga, Moussa Prisme-Laas
Combastel, Christophe Ec. ENSEA
Ramdani, Nacim Univ. d'Orléans
Travé-Massuyès, Louise CNRS

11:20-11:40 WeA7.5

Stabilization of Uncertain Systems Using Quantized and Lossy Observations and Uncertain Control Inputs, pp. 240-245.
Okano, Kunihisa Univ. of California at Santa Barbara
Ishii, Hideaki Tokyo Inst. of Tech.

11:40-12:00 WeA7.6

Identification of an LFT Uncertainty Model by Minimizing the Nu-Gap Metric, pp. 246-251.
Haggblom, Kurt E. Abo Akademi Univ.

WeA8 Arp 4 Room

Fault Tolerant Systems I (Regular Session)

Chair: Lefebvre, Dimitri Univ. Le Havre
Co-Chair: Luzar, Marcel Univ. of Zielona Góra

10:00-10:20 WeA8.1

A Bank of Virtual Sensors for Active Fault Tolerant Control of LPV Systems, pp. 252-257.
Rotondo, Damiano Univ. Pol. de Catalunya (UPC)
Puig, Vicenc Univ. Pol. de Catalunya
Nejjari, Fatiha Univ. Pol. de Catalunya

10:20-10:40 WeA8.2

Probability of Current State and Future Faults with Partially Observed Stochastic Petri Nets, pp. 258-263.
Lefebvre, Dimitri Univ. Le Havre

10:40-11:00 WeA8.3

Closed-Loop Performance Diagnosis for Model Predictive Control Systems, pp. 264-269.
Bombois, Xavier Delft Univ. of Tech.
Potters, Marcus Gerardus Delft Univ. of Tech.

Mesbah, Ali	Massachusetts Inst. of Tech.

11:00-11:20	WeA8.4

A LMI-Based Strategy for H-Infinity Fault Estimation of Non-Linear Systems: Application to the Multi-Tank System, pp. 270-275.

Witczak, Marcin	Univ. of Zielona Gora
Korbicz, Jozef	Univ. of Zielona Gora
Luzar, Marcel	Univ. of Zielona Góra

11:20-11:40	WeA8.5

Neural-Network Based Robust Predictive Fault-Tolerant Control for Multi-Tank System, pp. 276-281.

Luzar, Marcel	Univ. of Zielona Góra
Witczak, Marcin	Univ. of Zielona Gora
Witczak, Piotr	Univ. of Zielona Gora
Aubrun, Christophe	Univ. of Lorraine

11:40-12:00	WeA8.6

Probabilistic Reliability Assessment of Elementary Graphical Conditions for Structured Systems: A Graph Theoretical Approach, pp. 282-287.

Dakil, Manal	Lorraine Univ.
Simon, Christophe	CRAN, Nancy Univ. CNRS
Boukhobza, Taha	Lorraine Univ.
Join, Cédric	Nancy Univ.

WeA9	Boston Room

Observers Design for Nonlinear Systems (Invited Session)

Chair: Farza, Mondher	Univ. DE CAEN, ENSICAEN,CNRS
Co-Chair: M'Saad, Mohammed	ENSICAEN
Organizer: Farza, Mondher	Univ. DE CAEN, ENSICAEN,CNRS
Organizer: M'Saad, Mohammed	ENSICAEN

10:00-10:20	WeA9.1

Homogeneous Differentiator Design Using Implicit Lyapunov Function Method (I), pp. 288-293.

Polyakov, Andrey	INRIA Lille Nord-Europe
Efimov, Denis	Inria
Perruquetti, Wilfrid	Ec. Centrale de Lille

10:20-10:40	WeA9.2

Observer Design for a Class of Singular Stochastic Nonlinear Systems (I), pp. 294-299.

Barbata, Asma	CRAN
Zasadzinski, Michel	Univ. de Lorraine, CRAN, CNRS UMR 7039
Souley Ali, Harouna	CRAN UMR 7039 CNRS
Messaoud, Hassani	Ec. Nationale d'Ingénieurs de Monastir

10:40-11:00	WeA9.3

Nonlinear Observer Based on Observable Cascade Form (I), pp. 300-305.

Sahnoun, Mariem	Univ. Claude Bernard Lyon 1
Hammouri, Hassan	Univ. Claude Bernard

11:00-11:20	WeA9.4

Observer Synthesis for Some Classes of Switched Dynamical Systems (I), pp. 306-311.

Etienne, Lucien	ENSEA/Univ. L'Aquila
Di Gennaro, Stefano	Univ. of L'Aquila
Barbot, Jean Pierre	ENSEA
Zerad, Jonathan	ENSEA

11:20-11:40	WeA9.5

Sampled Output Observer Design for a Class of Nonlinear Systems (I), pp. 312-317.

Farza, Mondher	Univ. DE CAEN, ENSICAEN,CNRS
Bouraoui, Ibtissem	ENIG, CONPRI
Ménard, Tomas	GREYC

Ben Abdennour, Ridha	National school of engineering of Gabes
M'Saad, Mohammed	ENSICAEN

11:40-12:00 WeA9.6

Output Observer Design for Linear Systems: Application to Filtering and Fault Detection (I), pp. 318-323.

Busawon, Krishna K.	Northumbria Univ.

WeA10 Dresde Room

Robotics (Regular Session)

Chair: Laroche, Edouard	Strasbourg Univ. I
Co-Chair: Sekiguchi, Kazuma	Tokyo City Univ.

10:00-10:20 WeA10.1

Pairwise Observable Relative Localization in Ground Aerial Multi-Robot Networks, pp. 324-329.

De Silva, Oscar	Memorial Univ. of Newfoundland
Mann, George K. I.	Memorial Univ. of Newfoundland
Gosine, Raymond G.	Memorial Univ. of Newfoundland

10:20-10:40 WeA10.2

Dynamic Analysis of Continuous Cascaded Generalized Inverse Resolution of Kinematically Redundant Manipulators with Flexible Joints, pp. 330-335.

Baratcart, Travis Lee	The Univ. of Tokyo
Salvucci, Valerio	The Univ. of Tokyo
Koseki, Takafumi	The Univ. of Tokyo

10:40-11:00 WeA10.3

On Efficient Consistency Checks by Robots, pp. 336-343.

Qu, Hongyang	Univ. of Sheffield
Veres, Sandor	Univ. of Sheffield

11:00-11:20 WeA10.4

Performance Study for an Acoustic-Inertial Close Range Navigation System Used in Minimally-Invasive Surgical Interventions, pp. 344-351.

Rapp, Philipp	Univ. of Stuttgart
Hägele, Lena Katharina	Univ. of Stuttgart
Sawodny, Oliver	Univ. of Stuttgart
Tarin, Cristina	Univ. of Stuttgart

11:20-11:40 WeA10.5

Model Predictive Obstacle Avoidance Control for Omni-Directional Mobile Robots Based on Fuzzy Potential Method, pp. 352-357.

Nagata, Atsushi	Tokyo city Univ.
Nonaka, Kenichiro	Tokyo City Univ.
Sekiguchi, Kazuma	Tokyo City Univ.

11:40-12:00 WeA10.6

An H∞ Methodology for Position Control of 6-DoF Cable-Driven Parallel Robots, pp. 358-363.

Chellal, Ryad	UdS, ICube-CNRS
Laroche, Edouard	Strasbourg Univ.
Cuvillon, Loïc	LSIIT

WeB1 Arp 3 Room

Identification and Modeling I (Regular Session)

Chair: Kroll, Andreas	Univ. of Kassel
Co-Chair: Mercère, Guillaume	Poitiers Univ.

13:30-13:50 WeB1.1

Continuous-Time Model Identification of Wells Interaction on the Hydrogeological Experimental Site of Poitiers, pp. 364-369.

Chamroo, Afzal	Univ. of Poitiers

Ouvrard, Régis	Univ. of Poitiers
Poinot, Thierry	Ec. Nationale Supérieure d'Ingénieurs de Poitiers
Porel, Gilles	Univ. of Poitiers
Nauleau, Benoît	Univ. of Poitiers
Bodin, Jacques	Univ. of Poitiers

13:50-14:10 WeB1.2

A Support Vector Machine-Based Method for LPV-ARX Identification with Noisy Scheduling Parameters, pp. 370-375.

Abbasi, Farshid	Univ. of Georgia
Mohammadpour, Javad	Univ. of Georgia
Tóth, Roland	Eindhoven Univ. of Tech.
Meskin, Nader	Qatar Univ.

14:10-14:30 WeB1.3

Identification Method for Nonlinear LFR Block-Oriented Models with Multiple Inputs and Outputs, pp. 376-381.

Vanbeylen, Laurent	Vrije Univ. Brussel
Van Mulders, Anne	Vrije Univ. Brussel

14:30-14:50 WeB1.4

Identification of 2D Roesser Models by Using Linear Fractional Transformations, pp. 382-387.

Farah, Mohamed	Univ. of Poitiers
Mercère, Guillaume	Poitiers Univ.
Ouvrard, Régis	Univ. of Poitiers
Poinot, Thierry	Ec. Nationale Supérieure d'Ingénieurs de Poitiers
Ramos, Jose A.	Nova Southeastern Univ.

14:50-15:10 WeB1.5

H_{infty}-Based LPV Model Identification from Local Experiments with a Gap Metric-Based Operating Point Selection, pp. 388-393.

Vizer, Daniel	Univ. of Tech. and Ec. of Budapest
Mercère, Guillaume	Poitiers Univ.

15:10-15:30 WeB1.6

A Method to Identify Hybrid Systems with Mixed Piecewise Affine or Nonlinear Models of Takagi-Sugeno Type, pp. 394-399.

Wagner, Moritz	TRW
Kroll, Andreas	Univ. of Kassel

WeB2 Leicester Room

Topics in Linear Systems II (Regular Session)

Chair: Kulcsar, Balazs	Chalmers Univ. of Tech.
Co-Chair: Masuda, Shiro	Tokyo Metropolitan Univ.

13:30-13:50 WeB2.1

A Matrix Sign Function Based Solution of Parameter Dependent Sylvester Equations, pp. 400-405.

Guerra, Jérémie	Ec. des mines de Nantes IRCCyN
Yagoubi, Mohamed	Ec. des Mines de Nantes (IRCCyN)
Chevrel, Philippe	IRCCyN / Ec. des Mines de Nantes

13:50-14:10 WeB2.2

Decentralised Stabilisability Condition for Expanded and Contracted LTI Systems and Quotient Fixed Modes, pp. 406-411.

Seyedadel, Ahmaditabatabaei	Univ. of Melbourne
Aldeen, Mohammad	The Univ. of Melbourne
Abdolmaleki, Mohammad	Univ. of Melbourne

14:10-14:30 WeB2.3

Empirical Characteristic Function Identification of Linear Stochastic Systems with Possibly Unstable Zeros, pp. 412-417.

Gerencser, Laszlo	Hungarian Acad. of Sciences
Manfay, Mate	MTA SZTAKI

14:30-14:50 WeB2.4

Data-Driven Generalized Minimum Variance Regulatory Control, pp. 418-423.

Ando, Kazuma	Tokyo Metropolitan Univ.
Masuda, Shiro	Tokyo Metropolitan Univ.
Kano, Manabu	Kyoto Univ.

14:50-15:10 WeB2.5

Impulse Response Parameter Based Internal Model Control for Discrete-Time LPV Systems, pp. 424-429.

Kulcsar, Balazs	Chalmers Univ. of Tech.
Dong, Jianfei	Delft Univ. of Tech.

15:10-15:30 WeB2.6

Anisotropy-Based Analysis for Descriptor Systems with Nonzero-Mean Input Signals, pp. 430-435.

Andrianova, Olga	ICS RAS
Kurdyukov, Alexander	Inst. of Control problem RAS
Belov, Alexey	Inst. of Control Sciences
Kustov, Arkadiy	Inst. of Control Sciences

WeB3 — Oberlin Room

Time Delay Systems – Stability and Control (Invited Session)

Chair: Sipahi, Rifat	Northeastern Univ.
Co-Chair: Vyhlidal, Tomas	Czech Tech. Univ. in Prague
Organizer: Sipahi, Rifat	Northeastern Univ.
Organizer: Vyhlidal, Tomas	Czech Tech. Univ. in Prague

13:30-13:50 WeB3.1

Algorithms and Software for Approximating and Evaluating FIR Filters (I), pp. 436-441.

Michiels, Wim	KU Leuven
Unal, Hakki Ulas	Anadolu Univ.

13:50-14:10 WeB3.2

Discrete-Time Network-Based Control under Try-Once-Discard Protocol and Actuator Constraints (I), pp. 442-447.

Liu, Kun	KTH
Fridman, E. M.	Tel-Aviv Univ.

14:10-14:30 WeB3.3

Complete Quadratic Lyapunov Functionals Using Bessel-Legendre Inequality (I), pp. 448-453.

Seuret, Alexandre	LAAS-CNRS
Gouaisbaut, Frederic	LAAS CNRS

14:30-14:50 WeB3.4

Stability Margins and Model-Free Control: A First Look (I), pp. 454-459.

Fliess, Michel	Ec. Pol.
Join, Cédric	Nancy Univ.

14:50-15:10 WeB3.5

Input-State Feedback Linearization of Single-Input Nonlinear Time-Delay Systems (I), pp. 460-465.

Baibeche, Kamel	Ec.
Moog, Claude	CNRS

15:10-15:30 WeB3.6

Simultaneous Compensation of Input and State Delays for Nonlinear Systems (I), pp. 466-471.

Bekiaris-Liberis, Nikolaos	Univ. of California, Berkeley

WeB4 — Arp 1 Room

Robust Model Predictive Control (Regular Session)

Chair: Goulart, Paul J.	ETH Zurich
Co-Chair: Kristoffersen, Torstein Thode	Norwegian Univ. of Science and Tech. Statoil ASA

13:30-13:50 WeB4.1

Robust Self-Triggered MPC for Constrained Linear Systems, pp. 472-477.

Brunner, Florian David	Univ. of Stuttgart
Heemels, Maurice	Eindhoven Univ. of Tech.
Allgower, Frank	Univ. of Stuttgart

13:50-14:10 WeB4.2

On the Sample Size of Randomized MPC for Chance-Constrained Systems with Application to Building Climate Control, pp. 478-483.

Zhang, Xiaojing	ETH Zurich
Grammatico, Sergio	ETH Zurich
Schildbach, Georg	ETH Zurich
Goulart, Paul J.	ETH Zurich
Lygeros, John	ETH Zurich

14:10-14:30 WeB4.3

Rule Predictive Control and Model Predictive Control Strategies for Recurrent Fuzzy Systems, pp. 484-490.

Gering, Stefan	TU Darmstadt
Adamy, Juergen	Tech. Univ. Darmstadt

14:30-14:50 WeB4.4

Optimal and Robust Production of High Pressure Steam, pp. 491-497.

Kristoffersen, Torstein Thode	Norwegian Univ. of Science and Tech. Statoil ASA
Imsland, Lars	Norwegian Univ. of Science and Tech.
Snarheim, Dagfinn	Norwegian Univ. of Science & Tech.
Govatsmark, Marius Støre	Statoil ASA

14:50-15:10 WeB4.5

Robust Explicit Model Predictive Flight Control of Unmanned Rotorcrafts: Design and Experimental Evaluation, pp. 498-503.

Alexis, Kostas	Eidgenössische Tech. Hochschule Zürich
Papachristos, Christos	Univ. of Patras
Siegwart, Roland Y.	ETH Zürich
Tzes, Anthony	Univ. of Patras

15:10-15:30 WeB4.6

Experimental Testing of an Adaptive Model Predictive Controller on a Quad-Tank System, pp. 504-509.

Tanaskovic, Marko	ETH Zurich
Minnetian, Lawrence	ETH Zurich
Fagiano, Lorenzo	ABB Schweiz
Morari, Manfred	ETH Zurich

WeB5 Arp 5 Room

Estimation, Control and Optimization in Medicine and Biology I (Regular Session)

Chair: Zheng, Gang	INRIA, Lille-Nord
Co-Chair: Copot, Dana	Ghent Univ.

13:30-13:50 WeB5.1

Parameterization through Fractional Calculus of the Stress-Strain Relation in Lungs, pp. 510-515.

Ionescu, Clara	Ghent Univ.
Copot, Dana	Ghent Univ.
De Keyser, Robin M.C.	Univ. of Gent

13:50-14:10 WeB5.2

A Design of Neural Decoder by Reducing Discrepancy between Manual Control (MC) and Brain Control (BC), pp. 516-521.

Chang, Young Hwan	UC Berkeley
Chen, Mo	UC Berkeley
Shanechi, Maryam	UC Berkeley
Carmena, Jose M.	UC Berkeley
Tomlin, Claire J.	UC Berkeley

14:10-14:30 WeB5.3

Joint State and Parameter Estimation for a Class of Cascade Systems: Application to a Hemodynamic Model, pp. 522-527.

Zayane-Aissa, Chadia	King Abdullah Univ. of Science and Tech.
Liu, Da-Yan	INSA Centre Val de Loire, Campus de Bourges
Laleg, Taous-Meriem	KAUST

14:30-14:50 WeB5.4

Parameters and States Estimation for Dengue Epidemic Model, pp. 528-533.

Tami, Ramdane	école nationale supérieur d'ingénieurs de bourges
Boutat, Driss	INSA Centre Val de Loire
Zheng, Gang	INRIA, Lille-Nord
Kratz, Frederic	ENSIB

14:50-15:10 WeB5.5

Continuous Discrete Observer for an Activated Sludge Process with Bounded Disturbances, pp. 534-539.

Mesquine, Fouad	Cadi Ayyad Univ.
Bakka, Othman	Cadi Ayyad Univ. Faculty of sciences semlalia
El Hajjaji, Ahmed	Univ. de Picardie-Jules Verne
Boulkroune, Boulaid	Univ. de Picardie Jules Verne

15:10-15:30 WeB5.6

Near-Optimal Selection of Parallel Inputs in Bayesian Experimental Design for Systems Biology, pp. 540-545.

Busetto, Alberto Giovanni	ETH Zurich
Lygeros, John	ETH Zurich

WeB6 Arp 2 Room

Multi-Agent Systems I (Regular Session)

Chair: Dorfler, Florian	Univ. of California Los Angeles
Co-Chair: Bolzern, Paolo	Pol. di Milano

13:30-13:50 WeB6.1

Finite-Time Consensus of Networked Nonlinear Systems under Directed Graph, pp. 546-551.

Zoghlami, Naim	Univ. of Evry and Pol. School of Tunisia
Beji, Lotfi	Univ. of Evry
Mlayeh, Rhouma	Pol. School of Tunisia
Abichou, Azgal	Pol. School of Tunisia
Jammazi, Chaker	Faculté des Sciences de Bizerte and Ec. Pol. de Tunis

13:50-14:10 WeB6.2

Synchronization of Nonlinear Circuits in Dynamic Electrical Networks, pp. 552-557.

Dorfler, Florian	Univ. of California Los Angeles
Dhople, Sairaj	Univ. of Minnesota
Johnson, Brian	National Renewable Energy Lab.
Hamadeh, Abdullah Omar	Massachusetts Inst. of Tech.

14:10-14:30 WeB6.3

Probabilistic Consensus in Markovian Multi-Agent Networks, pp. 558-563.

Bolzern, Paolo	Pol. di Milano
Cerotti, Davide	Pol. di Milano
Colaneri, Patrizio	Pol. di Milano
Gribaudo, Marco	Pol. di Milano

14:30-14:50 WeB6.4

A Multidimensional Comparison Theorem for SDE with Reflection Applications to Control of a Group of Independent Identical Agents, pp. 564-568.

Anulova, Svetlana	Inst. for Control Sciences RAS

14:50-15:10 WeB6.5

Distributed Source Localization with No Position Information, pp. 569-574.

Fabbiano, Ruggero	Inria
Canudas-de-Wit, Carlos	CNRS-GIPSA-Lab.

Garin, Federica — INRIA Grenoble Rhone-Alpes

15:10-15:30 — WeB6.6

Simultaneous Fault Detection and Control Design for a Network of Multi-Agent Systems, pp. 575-581.

Davoodi, Mohammadreza — Qatar Univ.
Meskin, Nader — Qatar Univ.
Khorasani, Khashayar — Concordia Univ.

WeB7 — Orangerie Room

Robust Control I (Regular Session)

Chair: Canuto, Enrico — Pol. di Torino
Co-Chair: Sandou, Guillaume — Ec. Superieure d Electricite

13:30-13:50 — WeB7.1

Maximization of the Volume of the μ Guaranteed Stability Domain Using Particle Swarm Optimization, pp. 582-587.

Sandou, Guillaume — Ec. Superieure d Electricite

13:50-14:10 — WeB7.2

An Active Disturbance Rejection Control Approach for Decentralized Tracking in Interconnected Systems, pp. 588-593.

Sira-Ramirez, Hebertt J. — CINVESTAV-IPN
Gao, Zhiqiang — Cleveland State Univ.
Canuto, Enrico — Pol. di Torino

14:10-14:30 — WeB7.3

Fixed Structure H∞ Control for a Canard-Guided Projectile Pitch/Yaw Dynamics Autopilot Design, pp. 594-599.

Sève, Florian — French-German Res. Inst. of Saint-Louis (ISL)
Theodoulis, Spilios — French-German Res. Inst. of Saint-Louis (ISL)
Zasadzinski, Michel — CRAN
Boutayeb, M. — Lorraine Univ.
Wernert, Philippe — ISL

14:30-14:50 — WeB7.4

Air-Heating Set Control Via Direct Search Method and Structured Singular Value, pp. 600-605.

Dlapa, Marek — Tomas Bata Univ. in Zlin

14:50-15:10 — WeB7.5

Mu-Synthesis with Dynamic D-Scalings Using Quantum Particle Swarm Optimization, pp. 606-611.

Feyel, Philippe — Sagem Défense Sécurité
Duc, Gilles — Ec. Supérieure D' Electricité
Sandou, Guillaume — Ec. Superieure d Electricite

15:10-15:30 — WeB7.6

State Feedback Synthesis for Robust Stabilization of Discrete-Time Linear Systems Characterized by Stochastic Polytopes, pp. 612-617.

Hosoe, Yohei — Kyoto Univ.
Hagiwara, Tomomichi — Kyoto Univ.

WeB8 — Arp 4 Room

Fault Tolerant Systems: Actuator Failures (Regular Session)

Chair: Tao, Gang — Univ. of Virginia
Co-Chair: Sebe, Noboru — Kyushu Inst. of Tech.

13:30-13:50 — WeB8.1

Adaptive Actuator Failure Compensation for Microsatelltes Using Uncertainty Decomposition, pp. 618-623.

Ma, Yajie — Nanjing Univ. of Aeronautics and Astronautics
Jiang, Bin — NUAA
Tao, Gang — Univ. of Virginia
Cheng, Yuehua — Nanjing Univ. of Aeronautics and Astronautics

13:50-14:10 — WeB8.2

Adaptive Actuator Failure Compensation for Multivariable Feedback Linearizable Systems, pp. 624-629.

Yao, Xuelian	Nanjing Univ. of Aeronautics and Astronautics
Tao, Gang	Univ. of Virginia
Jiang, Bin	NUAA
Yang, Hao	Nanjing Univ. of Aeronautics and Astronautics

14:10-14:30 WeB8.3

Adaptive Actuator Failure Compensation Using Multiple-Model Switching, pp. 630-635.

Tan, Chang	Nanjing Univ. of Aeronautics and Astronautics
Tao, Gang	Univ. of Virginia
Yang, Hao	Nanjing Univ. of Aeronautics and Astronautics

14:30-14:50 WeB8.4

Actuator Fault Accommodation Strategy for a Team of LTI Multi-Agent Systems, pp. 636-643.

Saboori, Iman	Concordia Univ.
Khorasani, Khashayar	Concordia Univ.

14:50-15:10 WeB8.5

Passive Fault Tolerant Servo Control against One Device Failure Out of Sensors and Actuators, pp. 644-651.

Sebe, Noboru	Kyushu Inst. of Tech.
Suyama, Koichi	Tokyo Univ. of Marine Science and Tech.

15:10-15:30 WeB8.6

Dependability Analysis of Fault-Tolerant Servo Systems Using Limited Integrators, pp. 652-659.

Suyama, Koichi	Tokyo Univ. of Marine Science and Tech.
Sebe, Noboru	Kyushu Inst. of Tech.

WeB9 Boston Room

Observers for Nonlinear Systems (Regular Session)

Chair: Mazenc, Frederic	INRIA-SUPELEC
Co-Chair: Efimov, Denis	INRIA - LNE

13:30-13:50 WeB9.1

Interval Observer Composed of Observers for Nonlinear Systems, pp. 660-665.

Dinh, Thach Ngoc	INRIA L2S CNRS
Mazenc, Frederic	INRIA-SUPELEC
Niculescu, Silviu-Iulian	UMR CNRS 8506, CNRS-SUPELEC

13:50-14:10 WeB9.2

Event-Triggered Observer-Based Output-Feedback Stabilization of Linear System with Communication Delays in the Measurements, pp. 666-671.

Durand, Sylvain	GIPSA-Lab. Univ. of Grenoble
Torres, Lizeth	UNAM
Guerrero Castellanos, Jose Fermi	Autonomous Univ. of Puebla (BUAP),

14:10-14:30 WeB9.3

Observer-Based Control Design for Diesel Engines Via LMI, pp. 672-677.

Boulkroune, Boulaid	Univ. de Picardie Jules Verne
Pages, Olivier	Univ. of Picardie Jules Verne
El Hajjaji, Ahmed	Univ. de Picardie-Jules Verne
Zemouche, Ali	Nancy-Univ.

14:30-14:50 WeB9.4

Interval Estimation for Systems with Time Delays and Algebraic Constraints (I), pp. 678-683.

Efimov, Denis	Inria
Polyakov, Andrey	INRIA Lille Nord-Europe
Richard, Jean-Pierre	Ec. Centrale de Lille

14:50-15:10 WeB9.5

Parameter Identification of Hammerstein Systems with Bouc-Wen Hysteresis Input Nonlinearity, pp. 684-689.

Radouane, Abdelhadi	ENSET Rabat

Ahmed-Ali, Tarek — GREYC- UMR CNRS 6072
Giri, F. — Univ. of Caen

WeB10 — Dresde Room

Transportation Systems (Regular Session)

Chair: Dotoli, Mariagrazia — Pol. di Bari
Co-Chair: De Schutter, Bart — Delft Univ. of Tech.

13:30-13:50 — WeB10.1

A Generalized Input Admittance Criterion for Resonance Stability in Electrical Railway Networks, pp. 690-695.

Pendharkar, Ishan — Bombardier Transportation Switzerland

13:50-14:10 — WeB10.2

A Decision Support System for Real-Time Rescheduling of Railways, pp. 696-701.

Dotoli, Mariagrazia — Pol. di Bari
Epicoco, Nicola — DEI-Pol. di Bari
Falagario, Marco — Pol. di Bari
Turchiano, Biagio — DEE - Pol. di Bari
Cavone, Graziana — DEI-Pol. di Bari
Convertini, Antonio — DEI-Pol. di Bari

14:10-14:30 — WeB10.3

Guaranteed Characterization of the Vehicle Stable State Domain, pp. 702-707.

Dandach, Hoda — Univ. de Tech. de Compiègne
De Miras, Jérôme — Univ. de Tech. de Compiègne
Charara, Ali — UMR CNRS 7253

14:30-14:50 — WeB10.4

Rule-Based Price Control for Bike Sharing Systems, pp. 708-713.

Ruch, Claudio — ETH Zürich
Warrington, Joseph — ETH Zurich
Morari, Manfred — ETH Zurich

14:50-15:10 — WeB10.5

Look-Ahead Control of Road Vehicles for Safety and Economy Purposes, pp. 714-719.

Mihaly, Andras — Budapest Univ. of Tech. and Ec.
Nemeth, Balazs — Hungarian Acad. of Sciences
Gaspar, Peter — MTA SZTAKI

15:10-15:30 — WeB10.6

Modeling of the Dynamics and the Energy Consumption of a Fleet of Cybercars, pp. 720-725.

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

WeC1 — Arp 3 Room

Identification for Control (Regular Session)

Chair: Bombois, Xavier — Delft Univ. of Tech.
Co-Chair: Hjalmarsson, Håkan — Royal Inst. of Tech.

17:00-17:20 — WeC1.1

Optimal Experiment Design in Closed Loop with Unknown, Nonlinear and Implicit Controllers Using Stealth Identification, pp. 726-731.

Potters, Marcus Gerardus — Delft Univ. of Tech.
Bombois, Xavier — Delft Univ. of Tech.
Forgione, Marco — Delft Univ. of Tech.
Modén, Per Erik — ABB
Lundh, Michael — ABB
Hjalmarsson, Håkan — Royal Inst. of Tech.

Van den Hof, Paul M.J.	Eindhoven Univ. of Tech.

17:20-17:40 WeC1.2

Economical and Plant Friendly Input Design for System Identification, pp. 732-737.

Kumar, Abhishankar	IIT Madras
Magbool Jan, Nabil	Indian Inst. of Tech. Madras
Narasimhan, Sridharakumar	IIT Madras

17:40-18:00 WeC1.3

Metrics to Compare and Control Dynamical Systems, pp. 738-743.

Kersting, Stefan	Tech. Univ. München
Buss, Martin	Tech. Univ. Muenchen

18:00-18:20 WeC1.4

Application Set Approximation in Optimal Input Design for Model Predictive Control, pp. 744-749.

Ebadat, Afrooz	Royal Inst. of Tech. (KTH)
Annergren, Mariette	KTH Royal Inst. of Tech.
Larsson, Christian A.	KTH Royal Inst. of Tech.
Rojas, Cristian R.	KTH Royal Inst. of Tech.
Wahlberg, Bo	KTH Royal Inst. of Tech.
Hjalmarsson, Håkan	Royal Inst. of Tech.
Molander, Mats	ABB AB
Sjöberg, Johan	Linköpings Univ.

18:20-18:40 WeC1.5

Model Tree Ensembles for the Identification of Multiple-Output Systems, pp. 750-755.

Aleksovski, Darko	Jozef Stefan Inst.
Kocijan, Jus	Jozef Stefan Inst.
Dzeroski, Saso	Jozef Stefan Inst.

WeC2 — Leicester Room

Quantum Control (Tutorial Session)

Chair: Beige, Almut	Univ. of Leeds
Co-Chair: Pachos, Jiannis	Univ. of leeds
Organizer: Beige, Almut	Univ. of Leeds

17:00-17:40 WeC2.1

*An Introduction to Quantum Control Theory (I)**.

Beige, Almut	Univ. of Leeds

17:40-18:00 WeC2.2

*Parametric Feedback Cooling of a Single Atom Inside an Optical Cavity (I)**.

Wilk, Tatjana	Max-Planck-Inst. für Quantenoptik

18:00-18:20 WeC2.3

*Towards Coherent Control of Chemical Reactions (I)**.

Koch, Christiane	Univ. of Kassel

18:20-18:40 WeC2.4

*Simulation and Control of Many-Body Quantum Dynamics (I)**.

Montangero, Simone	Ulm Univ.

18:40-19:00 WeC2.5

*Topological Quantum Computing (I)**.

Pachos, Jiannis	Univ. of leeds

WeC3 — Oberlin Room

Delay Systems II (Regular Session)

Chair: Roca, Lidia	Univ. of Almería - PSA - CIEMAT
Co-Chair: Boussaada, Islam	Lab. des Signaux et Systèmes

17:00-17:20 WeC3.1

Robust Fault Detection Design for Unknown Inputs Takagi-Sugeno Models with Parametric Uncertainties and Time-Varying Delays, pp. 756-761.

Saeed, Ahmadizadeh — Melbourne Univ.
Karimi, Hamid Reza — Univ. of Agder
Zarei, Jafar — Shiraz Univ. of Tech.

17:20-17:40 WeC3.2

Observer Design for a Class of Nonlinear Systems with Long Delay in Output Measurements: An LMI Approach, pp. 762-766.

Vafaei, Alaleh — Univ. of Tehran
Yazdanpanah, M. J. — Univ. of Tehran

17:40-18:00 WeC3.3

Improved H_{2}/H_{infty} Control Design for Time Delay Systems: Synthesis and Analysis, pp. 767-772.

Orihuela, Luis — Univ. de Sevilla
Millán, Pablo — Univ. Loyola Andalucía
Vivas, Carlos — Univ. De Sevilla
Rubio, Francisco R. — Univ. de Sevilla

18:00-18:20 WeC3.4

Filtered Smith Predictor with Nonlinear Model Applied to a Solar Field, pp. 773-777.

Roca, Lidia — PSA - CIEMAT
Guzman, Jose Luis — Univ. of Almeria
Normey-Rico, Julio Elias — Federal Univ. of Santa Catarina
Berenguel, Manuel — Univ. of Almeria

18:20-18:40 WeC3.5

On Controlled-Invariance and Stabilization of Time-Delay Systems (I), pp. 778-783.

Athanasopoulos, Nikolaos — Eindhoven Univ. of Tech.
Lazar, Mircea — Eindhoven Univ. of Tech.

18:40-19:00 WeC3.6

On the Prediction Error of Dead-Time Compensation Control for Constrained Nonlinear Systems (I), pp. 784-789.

Santos, Tito — Federal Univ. of Bahia (Brazil)
Raffo, Guilherme Vianna — Univ. of Seville
Limon, Daniel — Univ. de Sevilla
Normey-Rico, Julio Elias — Federal Univ. of Santa Catarina

WeC4 Arp 1 Room

Predictive Control Applications I (Regular Session)

Chair: Puig, Vicenc — Univ. Pol. de Catalunya
Co-Chair: Revollar, Silvana — Univ. de Salamanca

17:00-17:20 WeC4.1

Economic MPC for the Management of Drinking Water Networks (I), pp. 790-795.

Grosso, Juan — Inst. de Robòtica i Informàtica Industrial (CSIC-UPC)
Ocampo-Martinez, Carlos — Tech. Univ. of Catalonia (UPC)
Puig, Vicenc — Univ. Pol. de Catalunya
Limon, Daniel — Univ. de Sevilla
Pereira Martin, Mario — Univ. de Sevilla

17:20-17:40 WeC4.2

A New Tracking Control Approach for 3D Overhead Crane Systems Using Model Predictive Control, pp. 796-801.

Khatamianfar, Arash — Univ. of New South Wales
Savkin, Andrey V. — Univ. of New South Wales

17:40-18:00 WeC4.3

RCopterX - Experimental Validation of a Distributed Leader-Follower MPC Approach on a Miniature Helicopter Test Bed, pp. 802-807.

Huck, Stephan M.	ETH Zurich
Rueppel, Marvin	ETHZ IFA
Summers, Tyler H.	ETH Zurich
Lygeros, John	ETH Zurich

18:00-18:20 WeC4.4

Neural-MPC for N-Removal in Activated-Sludge Plants, pp. 808-813.

Goldar Dávila, Alejandro	Univ. Simón Bolívar
Revollar, Silvana	Univ. de Salamanca
Lamanna, Rosalba	Univ. Simon Bolivar
Vega, Pastora	Univ. of Salamanca

18:20-18:40 WeC4.5

Evaluation of the NEPSAC Nonlinear Predictive Controller on a Thermal Process, pp. 814-819.

De Keyser, Robin M.C.	Univ. of Gent
Hernandez, Andres	Ghent Univ.

18:40-19:00 WeC4.6

Robust Predictive Control of a Variable Speed Wind Turbine Using the LMI Formalism, pp. 820-825.

Bououden, Sofiane	Faculty of Sciences and Tech. Univ. of Abbes Laghrour
Chadli, Mohammed	Univ. de Picardie-Jules Verne
Karimi, Hamid Reza	Univ. of Agder

WeC5 Arp 5 Room

Computer-Aided Design and Control Education (Regular Session)

Chair: Apkarian, Pierre	UPS
Co-Chair: Birk, Wolfgang	Luleå Univ. of Tech.

17:00-17:20 WeC5.1

Model Based Control Design -- a Free Tool-Chain, pp. 826-831.

Grabmair, Gernot	Upper Austrian Univ. of Applied Sciences
Mayr, Simon	Univ. of Applied Sciences - WELS
Hochwallner, Martin	Linz Center of Mechatronics GmbH
Aigner, Markus	LCM GmbH

17:20-17:40 WeC5.2

Design of Control Functions for an Internet-Based Tele-Robotic Laboratory, pp. 832-837.

Wollatz, Lasse	Univ. of Southampton
Gallo, Radovan	Univ. of Southampton
Laila, Dina Shona	Univ. of Southampton
Ofoegbu, Tochukwu Charles	Univ. of Southampton
Kovalan, Erik	Univ. of Southampton
Sharkh, Suleiman	Univ. of Southampton
Thomas, Kenneth	Univ. of Southampton

17:40-18:00 WeC5.3

Analysis and Control of an Extended Quadruple Tank Process, pp. 838-843.

Dadhich, Siddharth	Luleå Univ. of Tech.
Birk, Wolfgang	Luleå Univ. of Tech.

18:00-18:20 WeC5.4

"Ruzzle" Arm: A Low Cost Educational Application in Real-Time Control Course, pp. 844-849.

Meola, Daniela	Univ. degli Studi del Sannio
Siano, Gianmichele	Univ. of Sannio
Glielmo, Luigi	Univ. of Sannio

18:20-18:40 WeC5.5

Open and Closed Logarithmic Nyquist Plots, pp. 850-855.

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

18:40-19:00 WeC5.6

Multi-Model, Multi-Objective Tuning of Fixed-Structure Controllers, pp. 856-861.

Apkarian, Pierre UPS
Gahinet, Pascal MathWorks
Buhr, Craig MathWorks

WeC6 Arp 2 Room

Coordination and Consensus Agreement in Dynamical Systems II (Regular Session)

Chair: Seuret, Alexandre LAAS
Co-Chair: Proskurnikov, Anton St.-Petersburg State Univ.

17:00-17:20 WeC6.1

Leader-Following Output Consensus and Regulation of Identical Agents with Output Saturations, pp. 862-867.

Lim, Young-Hun Gwangju Inst. of Science and Tech. (GIST)
Oh, Kwang-Kyo Gwangju Inst. of Science and Tech. (GIST)
Ahn, Hyo-Sung Gwangju Inst. of Sci & Tech.

17:20-17:40 WeC6.2

Multi-Agent Consensus Tracking with Input Sharing by Iterative Learning Control, pp. 868-873.

Yang, Shiping National Univ. of Singapore
Xu, Jian-Xin National Univ. of Singapore

17:40-18:00 WeC6.3

Consensus Control Laws with Guaranteed Performance in Presence of Fixed Delays, pp. 874-879.

Prathyush, Purushothama Menon Univ. of Exeter
Seuret, Alexandre LAAS-CNRS
Edwards, Christopher Univ. of Exeter

18:00-18:20 WeC6.4

Consensus between Nonlinearly Coupled Discrete-Time Agents, pp. 880-885.

Proskurnikov, Anton Univ. of Groningen

18:20-18:40 WeC6.5

Persistence Based Analysis of Consensus Protocols for Dynamic Graph Networks, pp. 886-891.

Roy Chowdhury, Nilanjan IIT Bombay
Sukumar, Srikant IIT Bombay

18:40-19:00 WeC6.6

Modified Distributed Consensus Filter for Sensor Networks, pp. 892-895.

Rosero, Esteban Hambug Univ. of Tech.
Werner, Herbert Hamburg Univ. of Tech.

WeC7 Orangerie Room

Uncertain Systems and Robustness Approaches (Regular Session)

Chair: Kablar, Natasa A. Lola Inst.
Co-Chair: Mahmoud Sadek, MagdiSadek KFUPM

17:00-17:20 WeC7.1

Robust Smoothing for Estimating Optical Phase Varying As a Continuous Resonant Process, pp. 896-901.

Roy, Shibdas Univ. of New South Wales, Canberra
Rehman, Obaid Ur UNSW at ADFA
Petersen, Ian R. Australian Defence Force Acad.
Huntington, Elanor H. Univ. of New South Wales, Canberra

17:20-17:40 WeC7.2

Experimental Results on Robust Optimal Attitude Feedback Control of a Model Helicopter, pp. 902-907.

Liu, Hao Beihang Univ.
Xi, Jianxiang Tsinghua Univ.
Zhong, Yisheng Tsinghua Univ.

17:40-18:00 WeC7.3

Robust Trajectory Tracking Control of a Quadrotor Helicopter, pp. 908-913.

Guadarrama-Olvera Julio Rogelio, Julio Rogelio — Student CINVESTAV
Castro Linares, Rafael — CINVESTAV-IPN
Castro-Linares, Rafael — CINVESTAV-IPN

18:00-18:20 WeC7.4

Robust Decentralized Guaranteed-Cost Control for Interconnected Power Systems, pp. 914-919.

Mahmoud Sadek, MagdiSadek — KFUPM

18:20-18:40 WeC7.5

Learning-Based Adaptive Control for Nonlinear Systems, pp. 920-925.

Benosman, Mouhacine — Mitsubishi Electric Res. Lab.

WeC8 Arp 4 Room

Fault Detection and Identification (Regular Session)

Chair: Besancon, Gildas — Ense3 - Grenoble INP
Co-Chair: Lombardi, Warody — CEA - LETI

17:00-17:20 WeC8.1

Guaranteed Active Fault Diagnosis for Uncertain Nonlinear Systems, pp. 926-931.

Paulson, Joel — MIT
Raimondo, Davide Martino — Univ. of Pavia
Findeisen, Rolf — Univ. of Magdeburg
Braatz, Richard D. — Massachusetts Inst. of Tech.
Streif, Stefan — Otto-von-Guericke-Univ. Magdeburg

17:20-17:40 WeC8.2

Sequential Residual Generator Selection for Fault Detection, pp. 932-937.

Eriksson, Daniel — Linköping Univ.
Sundström, Christofer — Linköping Univ.

17:40-18:00 WeC8.3

Robust FDI Based on LFT BG and Relative Activity at Junction, pp. 938-943.

Jha, Mayank Shekhar — Ec. Centrale de Lille
Dauphin-Tanguy, Genevieve — Ec. Centrale de Lille
Ould Bouamama, Belkacem — Pol. Lille

18:00-18:20 WeC8.4

Fault Diagnosis of Gas Turbine Engines: A Symbolic Multiple Model Approach, pp. 944-951.

Abbasfard, Zahra — Schneider Electric
Baniamerian, Amir — Concordia Univ.
Khorasani, Khashayar — Concordia Univ.

18:20-18:40 WeC8.5

Detection and Isolation of Faulty Sensors in a Battery Pack, pp. 952-957.

Lombardi, Warody — CEA - LETI
Zarudniev, Micha — CEA, LETI MInatec Campus
Lesecq, Suzanne — CEA
Bacquet, Sylvain — CEA

18:40-19:00 WeC8.6

Leak Detection and Location Based on Improved Pipe Model and Nonlinear Observer, pp. 958-963.

Guillen, Marcos — Univ. de los Andes,Departamento de Ciencias Termicas, Escu
Dulhoste, Jean-francois — Escuela De Ingenieria Mecanica Ula
Besancon, Gildas — Ense3 - Grenoble INP
Rubio Scola, Ignacio Eduardo — GIPSA-Lab.
Santos, Rafael — Univ. de los Andes,Departamento de Ciencias Termicas, Escu
Georges, Didier — Grenoble Inst. of Tech.

WeC9 Boston Room

Observers for Dynamical Systems I (Regular Session)

Chair: Stoica, Cristina — Supelec
Co-Chair: Sayyad Delshad, Saleh — Luleå Univ. of Tech.

17:00-17:20 WeC9.1

Observer-Based Control for Linear Systems with Quantized Output, pp. 964-969.
Ferrante, Francesco — LAAS-CNRS
Tarbouriech, Sophie — LAAS-CNRS
Gouaisbaut, Frederic — LAAS CNRS

17:20-17:40 WeC9.2

Observer Design for a Class of Nonlinear Systems Subject to Unknown Inputs, pp. 970-974.
Sayyaddelshad, Saleh — Luleå Univ. of Tech.
Gustafsson, Thomas — Luleå Univ. of Tech.

17:40-18:00 WeC9.3

Linear Time-Varying Anisotropic Filtering and Its Application to Nonlinear Systems State Estimation, pp. 975-980.
Yaesh, Isaac — IMI
Stoica, Adrian-Mihail — Univ. Pol. of Bucharest

18:00-18:20 WeC9.4

On Reduced-Order Fuzzy Observer for One Class of Bilinear Takagi-Sugeno Systems, pp. 981-986.
Krokavec, Dusan — Tech. Univ. of Kosice
Filasova, Anna — Tech. Univ. of Kosice

18:20-18:40 WeC9.5

Active Disturbance Rejection Robust Control for Uncertain Systems with Ill-Defined Relative Degree, pp. 987-992.
Lozada-Castillo, Norma Beatriz — ESIME - IPN
Luviano-Juárez, Alberto — UPIITA - IPN
Chairez, Isaac — UPIBI - IPN

18:40-19:00 WeC9.6

Improved Set-Membership Estimation Approach Based on Zonotopes and Ellipsoids, pp. 993-998.
Ben Chabane, Sofiane — Supélec
Stoica Maniu, Cristina — Supelec
Alamo, Teodoro — Univ. de Sevilla
Camacho, Eduardo F. — Univ. of Sevilla
Dumur, Didier — SUPELEC

WeC10 Dresde Room

Automotive I (Regular Session)

Chair: Nemeth, Balazs — Hungarian Acad. of Sciences
Co-Chair: Kasprzyk, Jerzy — Silesian Univ. of Tech.

17:00-17:20 WeC10.1

Hierarchical Design of Electro-Hydraulic Actuator Control for Vehicle Dynamic Purposes, pp. 999-1004.
Varga, Balazs — MTA SZTAKI
Nemeth, Balazs — Hungarian Acad. of Sciences
Gaspar, Peter — MTA SZTAKI

17:20-17:40 WeC10.2

Vibration Control in Quarter-Car Model with Magnetorheological Dampers Using FxLMS Algorithm with Preview, pp. 1005-1010.
Krauze, Piotr — Silesian Univ. of Tech.
Kasprzyk, Jerzy — Silesian Univ. of Tech.

17:40-18:00 WeC10.3

Electro-Mechanical Clutch-By-Wire Control for Sport Motorcycles, pp. 1011-1016.
Paolo, Giani — Pol. di Milano

Tanelli, Mara	Pol. di Milano
Savaresi, Sergio M.	Pol. Di Milano
Selmanaj, Donald	Pol. di Milano

18:00-18:20 WeC10.4

Multi-Objective Optimal Powertrain Design of Parallel Hybrid Vehicles with Respect to Fuel Consumption and Driving Performance, pp. 1017-1023.

Boehme, Thomas Juergen	IAV Automotive Engineering
Frank, Benjamin	IAV GmbH
Schori, Markus	Univ. of Rostock
Jeinsch, Torsten	IAV GmbH

18:20-18:40 WeC10.5

Lateral Trajectory Tracking Control for Autonomous Vehicles, pp. 1024-1029.

Rathgeber, Christian	BMW AG
Winkler, Franz Josef	BMW AG
Odenthal, Dirk	BMW AG

ThA1 Arp 3 Room

Identification and Modeling II (Regular Session)

Chair: Bittanti, Sergio — Pol. di Milano
Co-Chair: Chamil, Abeykoon — Univ. of Bradford

10:00-10:20 ThA1.1

Monitoring and Modelling of the Energy Consumption in Polymer Extrusion, pp. 1030-1035.

Abeykoon, Chamil — Glyndwr Univ.
Kelly, Adrian L. — Univ. of Bradford
Sorroche, Javier — Univ. of Bradford
Brown, Elaine C. — Univ. of Bradford
Coates, Phil D. — Univ. of Bradford

10:20-10:40 ThA1.2

Online Adaptation of Performance Maps for Centrifugal Gas Compressors, pp. 1036-1041.

Cortinovis, Andrea — ABB Corp. Res.
Zovadelli, Matteo — Pol. di Milano
Mercangöz, Mehmet — ABB Corp. Res.
Pareschi, Diego — ABB
De Marco, Antonio — Pol. di Milano
Bittanti, Sergio — Pol. di Milano

10:40-11:00 ThA1.3

Modeling and Control of a Linear Fresnel Collector System, pp. 1042-1048.

Domínguez, Luis F. — ABB Corp. Res. Center
Klasing, Freerk — E.ON Energy Res. Center, RWTH Aachen Univ.
Mercangöz, Mehmet — ABB Corp. Res.

11:00-11:20 ThA1.4

A Novel Input Design Approach for Systems with Quantized Output Data, pp. 1049-1054.

Godoy, Boris I. — The Univ. of Newcastle
Valenzuela, Patricio E. — KTH Royal Inst. of Tech.
Rojas, Cristian R. — KTH Royal Inst. of Tech.
Aguero, Juan C. — The Univ. of Newcastle
Ninness, Brett — Univ. of Newcastle

11:20-11:40 ThA1.5

Understanding Control in Microchannels to Manipulate Drop-Drop Interactions, pp. 1055-1060.

M, Danny Raj — Indian Inst. of Tech. Madras
Rengaswamy, Raghunathan — Indian Inst. of Tech. Madras

11:40-12:00 ThA1.6

Bayesian Approach to Direct Pole Estimation, pp. 1061-1068.

Chlebek, Christof — Karlsruhe Inst. of Tech. (KIT)
Hanebeck, Uwe — Karlsruhe Inst. of Tech. (KIT)

ThA2 Leicester Room

Model and Controller Reduction I (Regular Session)

Chair: Kojima, Chiaki — Univ. of Tokyo
Co-Chair: Geuss, Matthias — TU München

10:00-10:20 ThA2.1

Model Reduction of Networked Passive Systems through Clustering, pp. 1069-1074.

Besselink, Bart — KTH Royal Inst. of Tech.
Sandberg, Henrik — KTH Royal Inst. of Tech.
Johansson, Karl Henrik — Royal Inst. of Tech.

10:20-10:40 ThA2.2

Interpolatory Model Reduction Techniques for Linear Second-Order Descriptor Systems, pp. 1075-1079.

Ahmad, Mian Ilyas	Max Planck Inst. of Complex Tech. Systems
Benner, Peter	Max Planck Inst. for Dynamics of Complex Tech. Systems

10:40-11:00 ThA2.3

Poles Residues Descent Algorithm for Optimal Frequency-Limited H2 Model Approximation, pp. 1080-1085.

Vuillemin, Pierre	Onera - The French Aerospace Lab.
Poussot-Vassal, Charles	Onera
Alazard, Daniel	Univ. de Toulouse, ISAE

11:00-11:20 ThA2.4

Distributed Proper Orthogonal Decomposition for Large-Scale Networked Nonlinear Systems with Approximation Error Bound, pp. 1086-1091.

Kojima, Chiaki	Univ. of Tokyo

11:20-11:40 ThA2.5

Fast Simulation of Nonlinear Dynamical Systems for Application in Reduced Order Modelling, pp. 1092-1097.

Nahvi, Shahkar Ahmad	Islamic Univ. of Science & Tech.
Bazaz, Mohammad Abid	National Inst. of Tech.
Nabi, Mashuq-un-	Indian Inst. of Tech.
Janardhanan, S	IIT Delhi

11:40-12:00 ThA2.6

Stability Preservation for Parametric Model Order Reduction by Matrix Interpolation, pp. 1098-1103.

Geuss, Matthias	TU München
Panzer, Heiko K. F.	Tech. Univ. München
Wolf, Thomas	Tech. Univ. München
Lohmann, Boris	Tech. Univ. Muenchen

ThA3 Oberlin Room

Time Delay Systems – Applied Theory (Invited Session)

Chair: Vyhlidal, Tomas	Czech Tech. Univ. in Prague
Co-Chair: Sipahi, Rifat	Northeastern Univ.
Organizer: Sipahi, Rifat	Northeastern Univ.
Organizer: Vyhlidal, Tomas	Czech Tech. Univ. in Prague

10:00-10:20 ThA3.1

The Trade-Off between Robustness and Disturbance Rejection for Congestion Control Algorithms Based on a Modified Smith-Predictor (I), pp. 1104-1109.

De Cicco, Luca	Pol. di Bari
Mascolo, Saverio	Pol. di Bari
Niculescu, Silviu-Iulian	UMR CNRS 8506, CNRS-SUPELEC

10:20-10:40 ThA3.2

Network Consensus under Distributed Transmission Delays (I), pp. 1110-1114.

Atay, Fatihcan M.	Max Planck Inst. for Mathematics in the Sciences

10:40-11:00 ThA3.3

A Time-Delay Approach for Modeling and Control of Mist in a Poiseuille Flow (I), pp. 1115-1120.

Hernández Pérez, Miguel Angel	Inst. Pol. Nacional, ESIME Culhuacan.
Witrant, Emmanuel	Univ. Joseph Fourrier
Sename, Olivier	Grenoble INP / GIPSA-Lab.

11:00-11:20 ThA3.4

Double Oscillatory Mode Compensation by Inverse Signal Shaper with Distributed Delays (I), pp. 1121-1126.

Vyhlidal, Tomas	Czech Tech. Univ. in Prague
Hromcik, Martin	Czech Tech. Univ.
Kucera, Vladimir	Czech Tech. Univ. in Prague, Faculty of Mechanical Engi
Anderle, Milan	Czech Tech. Univ. in Prague

11:20-11:40 ThA3.5

Controlling a Non-Linear Epidemic PDE Model with Delayed Detection: A Model Simplification Approach (I), pp. 1127-1132.

Laroche, Beatrice — INRA

11:40-12:00 — ThA3.6

On Reduced Order Modeling of Flexible Structures from Frequency Response Data (I), pp. 1133-1138.

Demir, Okan — Bilkent Univ.

Ozbay, Hitay — Bilkent Univ.

ThA4 — Arp 1 Room

Nonlinear Model Predictive Control (Regular Session)

Chair: Engell, Sebastian — TU Dortmund

Co-Chair: Lygeros, John — ETH Zurich

10:00-10:20 — ThA4.1

Optimizing Set Point Control of the MCSGP Process, pp. 1139-1144.

Behrens, Malte — TU Dortmund

Potschka, Andreas — Heidelberg Univ.

Khobkhun, Phawitphorn — TU Dortmund

Engell, Sebastian — TU Dortmund

10:20-10:40 — ThA4.2

Model Based Power Optimisation of Wind Farms, pp. 1145-1150.

Heer, Flavio Carmine — ETH Zurich

Mohajerin Esfahani, Peyman — ETH Zurich

Kamgarpour, Maryam — ETH Zurich

Lygeros, John — ETH Zurich

10:40-11:00 — ThA4.3

A Two-Stage Suboptimal Approximation for Variable Compliance and Torque Control, pp. 1151-1157.

Geoffroy, Perle — Ec. Pol. de Montréal

Bordron, Olivier — Ec. Normale Supérieure de Bretagne

Mansard, Nicolas — LAAS

Raison, Maxime — Ec. Pol. de Montréal

Stasse, Olivier — LAAS

Bretl, Tim — Univ. of Illinois

11:00-11:20 — ThA4.4

Control of Towing Kites under Uncertainty Using Robust Economic Nonlinear Model Predictive Control, pp. 1158-1163.

Lucia, Sergio — TU Dortmund

Engell, Sebastian — TU Dortmund

11:20-11:40 — ThA4.5

Nonlinear MPC-Based Power-Assist Scheme of Internal Combustion Engines in Plug-In Hybrid Electric Vehicles, pp. 1164-1169.

Zhang, Jiangyan — Dalian Nationalities Univ.

Shen, Tielong — Sophia Univ.

11:40-12:00 — ThA4.6

The Gradient Based Nonlinear Model Predictive Control Software GRAMPC, pp. 1170-1175.

Käpernick, Bartosz — Univ. of Ulm

Graichen, Knut — Ulm Univ.

ThA5 — Arp 5 Room

Biomolecular Networks (Tutorial Session)

Chair: Khammash, Mustafa H. — Univ. of California at Sta. Barbara

Co-Chair: Koeppl, Heinz — ETH Zurich

Organizer: Khammash, Mustafa H. — Univ. of California at Sta. Barbara

10:00-10:40 — ThA5.1

*Modelling of Biomolecular Networks: A Tutorial (I)**.

Khammash, Mustafa H. — Univ. of California at Sta. Barbara

10:40-11:00 — ThA5.2

*Identification of Biomolecular Networks (I)**.

Koeppl, Heinz — Tech. Univ. Darmstadt

11:00-11:20 — ThA5.3

Robustness Analysis of Biomolecular Networks (I), pp. 1176-1181.

Waldherr, Steffen — Otto-von-Guericke Univ. Magdeburg

11:20-11:40 — ThA5.4

Synthetic Biology: A Control Engineering Perspective (I), pp. 1182-1186.

Prescott, Thomas — Univ. of Oxford

Papachristodoulou, Antonis — Univ. of Oxford

11:40-12:00 — ThA5.5

Real-Time Gene Newtorks Control in Microfluidics (I), pp. 1187-1192.

Menolascina, Filippo — Massachusetts Inst. of Tech.

ThA6 — Arp 2 Room

Networks Analysis and Control (Regular Session)

Chair: Bauso, Dario — Univ. di Palermo

Co-Chair: Bartoszewicz, Andrzej — Tech. Univ. of Lodz

10:00-10:20 — ThA6.1

Anticipative Control Design for Output Measurement in Internet-Like Networks, pp. 1193-1198.

Guinaldo, Maria — UNED

Sánchez Moreno, José — UNED

Dormido, Sebastián — UNED

10:20-10:40 — ThA6.2

Approximate Optimal Monitoring, pp. 1199-1204.

Mylvaganam, Thulasi — Imperial Coll. London

Astolfi, Alessandro — Imperial Coll. London

10:40-11:00 — ThA6.3

Decentralized Trust-Based Self-Organizing Cooperative Control, pp. 1205-1210.

Haus, Tomislav — Univ. of Zagreb

Palunko, Ivana — Univ. of Zagreb

Tolic, Domagoj — Univ. of Zagreb

Bogdan, Stjepan — Univ. of Zagreb

Lewis, Frank L. — Univ. of Texas at Arlington

11:00-11:20 — ThA6.4

Non-Switching Type Reaching Law with Application to Congestion Control in Connection-Oriented Communication Networks, pp. 1211-1216.

Bartoszewicz, Andrzej — Tech. Univ. of Lodz

Leśniewski, Piotr — Tech. Univ. of Lodz

11:20-11:40 — ThA6.5

Approximate Solutions for Crowd-Averse Robust Mean-Field Games, pp. 1217-1222.

Bauso, Dario — Univ. di Palermo

Mylvaganam, Thulasi — Imperial Coll. London

Astolfi, Alessandro — Imperial Coll. London

11:40-12:00 — ThA6.6

Constraints on the Shapley Value for a Coalitional Control System, pp. 1223-1228.

Muros Ponce, Francisco Javier — Univ. of Seville

Maestre, J. M. — Univ. of Seville

Algaba Durán, Encarnación — Univ. of Seville

Alamo, Teodoro — Univ. de Sevilla

Camacho, Eduardo F. — Univ. of Sevilla

ThA7 — Orangerie Room

Optimal Control I (Regular Session)

Chair: Bayen, Térence — Univ. Montpellier 2
Co-Chair: Vallerio, Mattia — KU Leuven

10:00-10:20 — ThA7.1

Guaranteed Cost Control for Uncertain Nonlinear Quadratic Systems, pp. 1229-1235.

Amato, Francesco — Univ. degli Studi Magna Graecia di Catanzaro
Colacino, Domenico — Univ. degli Studi Magna Græcia di Catanzaro
Cosentino, Carlo — Univ. degli Studi Magna Græcia di Catanzaro
Merola, Alessio — Univ. degli Studi Magna Graecia di Catanzaro

10:20-10:40 — ThA7.2

Expanding the Exploration of the Criterion Space for Multi-Objective Optimal Control Problems, pp. 1236-1241.

Vallerio, Mattia — KU Leuven
Vercammen, Dominique — KU Leuven
Van Impe, Jan F.M. — Katholieke Univ. Leuven
Logist, Filip — Katholieke Univ. Leuven

10:40-11:00 — ThA7.3

Full Algorithmic Differentiation of a Rosenbrock-Type Method for Direct Single Shooting, pp. 1242-1248.

Hannemann-Tamas, Ralf — NTNU Trondheim
Imsland, Lars — Norwegian Univ. of Science and Tech.

11:00-11:20 — ThA7.4

Optimal Control and Numerical Optimization for Missile Interception Guidance, pp. 1249-1255.

Walter, Leif — Tech. Univ. of Munich
Schlöffel, Gunther — French-German Res. Inst. Saint Louis
Theodoulis, Spilios — French-German Res. Inst. of Saint-Louis (ISL)
Wernert, Philippe — ISL
Holzapfel, Florian — Tech. Univ. München
Kostina, Ekaterina — Univ. of Marburg

11:20-11:40 — ThA7.5

Minimal Time Control of the Two Tanks Gradostat Model under a Cascade Inputs Constraint, pp. 1256-1261.

Bayen, Térence — INRIA
Rapaport, Alain — INRA
Sebbah, Matthieu — INRIA Sophia-Antipolis Mediterranee, UMR INRA-SupAgro

ThA8 — Arp 4 Room

Fault Diagnosis (Regular Session)

Chair: Varga, Andreas — German Aerospace Center
Co-Chair: Zhao, Chunhui — Zhejiang Univ.

10:00-10:20 — ThA8.1

Relative Sub-PCA Modeling Algorithm Using Iterative Within-Phase Relative Analysis for Multiphase Batch Process Monitoring, pp. 1262-1267.

Zhao, Chunhui — Zhejiang Univ.

10:20-10:40 — ThA8.2

Diagnosis of PEMFC by Using Data-Driven Parity Space Strategy, pp. 1268-1273.

Li, Zhongliang — Univ. of Aix-Marseille
Outbib, Rachid — Isis
Hissel, Daniel — Univ. of Franche-Comte
Giurgea, Stefan — Univ. of Tech. Belfort-Montbeliard (UTBM)

10:40-11:00 — ThA8.3

State, Unknown Input and Uncertainty Estimation for Nonlinear Systems Using a Takagi-Sugeno Model, pp. 1274-1280.

Nagy Kiss, Anca Maria	Centre de Recherche Public Henri Tudor
Schutz, Georges	Public Res. Centre Henri Tudor
Ragot, Jose	Univ. de Lorraine

11:00-11:20 ThA8.4

On Solving Periodic H2-Optimal Fault Detection and Isolation Problems, pp. 1281-1286.

Varga, Andreas	German Aerospace Center

11:20-11:40 ThA8.5

An Innovations Approach to Fault Diagnosis in Linear Time-Varying Descriptor Systems, pp. 1287-1292.

Moussa Ali, Abdouramane	LSIS
Zhang, Qinghua	INRIA

11:40-12:00 ThA8.6

Toward an Efficient Approach for Diagnosability Analysis of DES Modeled by Labeled Petri Nets by Labeled Petri Nets, pp. 1293-1298.

Liu, Baisi	Ec. Centrale de Lille
Ghazel, Mohamed	IFSTTAR
Toguyeni, Armand	Ec. Centrale de Lille

ThA9 Boston Room

Power Systems (Regular Session)

Chair: Voda, Alina	UJF
Co-Chair: Susuki, Yoshihiko	Kyoto Univ.

10:00-10:20 ThA9.1

A Consensus-Based Distributed Voltage Control for Reactive Power Sharing in Microgrids, pp. 1299-1305.

Schiffer, Johannes	TU Berlin
Seel, Thomas	TU Berlin
Raisch, Joerg	Tech. Univ. Berlin
Sezi, Tevfik	Siemens AG

10:20-10:40 ThA9.2

State Observation in Medium-Voltage Grids with Incomplete Measurement Infrastructure through Online Correction of Power Forecasts, pp. 1306-1312.

Heins, Wiebke	Clausthal Univ. of Tech.
Ell, Nikola	Clausthal Univ. of Tech.
Beck, Hans-Peter	Energy Res. Center of Lower Saxony (EFZN)
Bohn, Christian	Clausthal Univ. of Tech.

10:40-11:00 ThA9.3

Nonlinear Instability of a Network of Fixed-Speed Induction Generators, pp. 1313-1318.

Susuki, Yoshihiko	Kyoto Univ.
Hoshino, Hikaru	Kyoto Univ.
Hikihara, Takashi	Graduate School of Engineering, Kyoto Univ.
Mezic, Igor	Univ. of California, Santa Barbara

11:00-11:20 ThA9.4

Modeling and Control of a Linear Fresnel Reflector for an Integrated Solar Combined Cycle, pp. 1319-1324.

Leo, Jessica	EDF
Kharrat, Chady	CEA Leti, MINATEC
Voda, Alina	UJF
Besancon, Gildas	Ense3 - Grenoble INP
Davelaar, Frans	EDF R&D

11:20-11:40 ThA9.5

Sensorless Control of Wind Turbines Featuring Power Efficiency Maximization and Fault Accommodation, pp. 1325-1330.

Corradini, Maria Letizia	Univ. di Camerino
Ippoliti, Gianluca	Univ. Pol. delle Marche
Orlando, Giuseppe	Univ. di Ancona

ThA10	Dresde Room
Control of Water Systems (Invited Session)	
Chair: Sadowska, Anna	TU Delft
Co-Chair: De Schutter, Bart	Delft Univ. of Tech.
Organizer: Sadowska, Anna	TU Delft
Organizer: De Schutter, Bart	Delft Univ. of Tech.
Organizer: van Overloop, Peter-Jules	Delft Univ. of Tech.
10:00-10:20	ThA10.1
Water-Level Reference Planning for Automated Irrigation Channels Via Robust MPC (I), pp. 1331-1336.	
Neshastehriz, Amir Reza	The Univ. of Melbourne
Cantoni, Michael	Univ. of Melbourne
Shames, Iman	Univ. of Melbourne
10:20-10:40	ThA10.2
MPC Control of Water Level in a Navigation Canal - the Cuinchy-Fontinettes Case Study (I), pp. 1337-1342.	
Horváth, Klaudia	Ec. des Mines de Douai
Petreczky, Mihaly	Ec. des Mines Douai
Rajaoarisoa, Lala Herimanjaka	Inst. Mines-Télécom. Mines Douai
Duviella, Eric	Ec. des Mines de Douai
Chuquet, Karine	Voie Navigables de France, Lille
10:40-11:00	ThA10.3
Gradient-Based Hybrid Model Predictive Control Using Time Instant Optimization for Dutch Regional Water Systems (I), pp. 1343-1348.	
Dekens, Bart	Witteveen+Bos
Sadowska, Anna	TU Delft
van Overloop, Peter-Jules	Delft Univ. of Tech.
Schwanenberg, Dirk	Deltares
De Schutter, Bart	Delft Univ. of Tech.
11:00-11:20	ThA10.4
Hierarchical Control of Irrigation Canals in the Presence of Disturbances: Framework and Comparison (I), pp. 1349-1354.	
Sadowska, Anna	TU Delft
De Schutter, Bart	Delft Univ. of Tech.
van Overloop, Peter-Jules	Delft Univ. of Tech.
11:20-11:40	ThA10.5
System Identification of the Upper Part of Murray River (I), pp. 1355-1360.	
Nasir, Hasan Arshad	Univ. of Melbourne
Weyer, Erik	Univ. of Melbourne
11:40-12:00	ThA10.6
Comparison of Model Based Feed-Forward Control Strategies for Impounded Rivers (I), pp. 1361-1366.	
Amann, Kai-Uwe	Univ. of Stuttgart
Arnold, Eckhard	Univ. Stuttgart
Sawodny, Oliver	Univ. of Stuttgart

ThB1	Arp 3 Room
Filtering (Regular Session)	
Chair: Charalambous, Charalambos D.	Univ. of Cyprus
Co-Chair: Kibangou, Alain	Univ. Joseph Fourier/CNRS
13:30-13:50	ThB1.1
Convergence Analysis of Cubature Kalman Filter, pp. 1367-1372.	
Zarei, Jafar	Shiraz Univ. of Tech.
Shokri, Ehsan	Shiraz Univ. of Tech.
Karimi, Hamid Reza	Univ. of Agder
13:50-14:10	ThB1.2

A Robust Unscented Fusion Filter Using Fuzzy Adaptation Rule, pp. 1373-1378.

Kang, Chul Woo	Seoul National Univ.
Park, Chan Gook	Seoul National Univ.

14:10-14:30 ThB1.3

Adaptive Kalman Filter for MEMS-IMU Based Attitude Estimation under External Acceleration and Parsimonious Use of Gyroscopes, pp. 1379-1384.

Makni, Aida	Grenoble INP_Gipsa-Lab.
Fourati, Hassen	Univ. Joseph Fourrier, GIPSA-Lab.
Kibangou, Alain	Univ. Joseph Fourier/CNRS

14:30-14:50 ThB1.4

Optimization of Directed Information and Relations to Filtering Theory, pp. 1385-1390.

Charalambous, Charalambos D.	Univ. of Cyprus
Stavrou, Photios A.	Univ. of Cyprus

ThB2 Leicester Room

Stability and Control of Dynamical Systems (Regular Session)

Chair: Barabanov, Nikita E.	North Dakota State Univ.
Co-Chair: Knoll, Carsten	TU Dresden

13:30-13:50 ThB2.1

Linear Third Order Inclusions: The Adjacent Vector, pp. 1391-1396.

Barabanov, Nikita E.	North Dakota State Univ.

13:50-14:10 ThB2.2

A Globally Asymptotically Stable Decentralized PI Controller for Multi-Terminal High-Voltage DC Transmission Systems, pp. 1397-1403.

Zonetti, Daniele	Supelec
Ortega, Romeo	supelec
Benchaib, Abdelkrim	Alstom Grid

14:10-14:30 ThB2.3

Adaptive Quantizer for Networked Control System, pp. 1404-1409.

Al-Makhles, Dhafer	The Univ. of Auckland
Swain, Akshya	Univ. of Auckland
Patel, Nitish	Univ. of Auckland

14:30-14:50 ThB2.4

On Sign-Definite Pairs of Functions, pp. 1410-1415.

Lee, Ti-Chung	Minghsin Univ. of Science and Tech.
Tan, Ying	The Univ. of Melbourne
Mareels, Iven	The Univ. of Melbourne

14:50-15:10 ThB2.5

On Configuration Flatness of Linear Mechanical Systems, pp. 1416-1421.

Knoll, Carsten	TU Dresden
Röbenack, Klaus	TU Dresden

15:10-15:30 ThB2.6

On the Finite-Time Stabilizability of Triangular Control Systems. Applications, pp. 1422-1427.

Jammazi, Chaker	Faculté des Sciences de Bizerte and Ec. Pol. de Tunis

ThB3 Oberlin Room

Time-Delay and Sampled-Data Systems (Tutorial Session)

Chair: Fridman, E. M.	Tel-Aviv Univ.
Co-Chair: Richard, Jean-Pierre	Ec. Centrale de Lille
Organizer: Fridman, E. M.	Tel-Aviv Univ.

13:30-14:10 ThB3.1

Introduction to Time-Delay and Sampled-Data Systems (I), pp. 1428-1433.

Fridman, E. M.	Tel-Aviv Univ.

14:10-14:30 ThB3.2

*Integral Inequalities for Time-Delay and Sampled-Data Systems (I)**.

Seuret, Alexandre	LAAS-CNRS
Gouaisbaut, Frederic	LAAS CNRS

14:30-14:50 ThB3.3

Networked Control Systems: A Time-Delay Approach (I), pp. 1434-1439.

Liu, Kun	KTH
Fridman, E. M.	Tel-Aviv Univ.
Hetel, Laurentiu	CNRS

14:50-15:10 ThB3.4

Tutorial on Arbitrary and State-Dependent Sampling (I), pp. 1440-1445.

Fiter, Christophe	Univ. Lille1 - Sciences et Tech.
Omran, Hassan	Ec. Centrale de Lille
Hetel, Laurentiu	CNRS
Richard, Jean-Pierre	Ec. Centrale de Lille

15:10-15:30 ThB3.5

Reduction Model Approach to Linear Systems with Sampled Delayed Inputs (I), pp. 1446-1449.

Mazenc, Frederic	INRIA-SUPELEC

ThB4 Arp 1 Room

Constrained Control I (Regular Session)

Chair: Bitsoris, Georges	Univ. of Patras
Co-Chair: Fiacchini, Mirko	GIPSA-Lab. CNRS

13:30-13:50 ThB4.1

Explicit Fragility Margins for PWA Control Laws of Discrete-Time Linear Systems, pp. 1450-1455.

Nguyen, Ngoc Anh	Supélec Sciences des Systèmes (E3S), SUPELEC
Olaru, Sorin	SUPELEC
Bitsoris, Georges	Univ. of Patras
Rodriguez-Ayerbe, Pedro	Supelec

13:50-14:10 ThB4.2

Application of Covering Mappings to Constrained Dynamic Systems and Differential Inclusions, pp. 1456-1461.

Arutyunov, Aram V.	Peoples Friendship Univ. Russia
Pereira, Fernando Lobo	Porto Univ.
Zhukovskiy, Sergey	Peoples' Friendship Univ. Russia

14:10-14:30 ThB4.3

Improved MPC Design for Constrained Linear Periodic Systems, pp. 1462-1467.

Nguyen, Hoai-Nam	Tech.
Bourdais, Romain	Supélec
Gutman, Per-Olof	Tech.

14:30-14:50 ThB4.4

Experimental Implementation of UFAD Regulation Based on Robust Controlled Invariance, pp. 1468-1473.

Meyer, Pierre-Jean	Univ. de Grenoble
Nazarpour, Hosein	Univ. de Grenoble
Girard, Antoine	Univ. Joseph Fourier
Witrant, Emmanuel	Univ. Joseph Fourrier

14:50-15:10 ThB4.5

Mixed-Integer SOCP Formulation of the Path Planning Problem for Heterogeneous Multi-Vehicle Systems, pp. 1474-1479.

Klauco, Martin	Slovak Univ. of Tech. in Bratislava
Blažek, Slavomír	Slovak Univ. of Tech. in Bratislava
Kvasnica, Michal	Slovak Univ. of Tech. in Bratislava

Fikar, Miroslav	Slovak Univ. of Tech.

15:10-15:30 ThB4.6

MPC Tracking under Time-Varying Polytopic Constraints for Real-Time Applications, pp. 1480-1485.

Manrique, Tatiana	Univ. of Lorraine, Res. Center in Automatics of Nancy C
Fiacchini, Mirko	GIPSA-Lab. CNRS
Chambrion, Thomas	Univ. de Lorraine
Millerioux, Gilles	Univ. de Lorraine

ThB5 Arp 5 Room

Estimation, Control and Optimization in Medicine and Biology II (Regular Session)

Chair: Vidyasagar, Mathukumalli	The Univ. of Texas at Dallas
Co-Chair: Lygeros, John	ETH Zurich

13:30-13:50 ThB5.1

Robust Stability and Instability of Nonlinear Feedback System with Uncertainty-Dependent Equilibrium, pp. 1486-1491.

Inoue, Masaki	Keio Univ.
Arai, Takayuki	Tokyo Inst. of Tech.
Imura, Jun-ichi	Tokyo Inst. of Tech.
Kashima, Kenji	Kyoto Univ.
Aihara, Kazuyuki	The Univ. of Tokyo

13:50-14:10 ThB5.2

Reconstruction of Gene Regulatory Networks with Hidden Nodes, pp. 1492-1497.

Chang, Young Hwan	UC Berkeley
Tomlin, Claire J.	UC Berkeley

14:10-14:30 ThB5.3

Grey-Box Techniques for the Identification of a Controlled Gene Expression Model, pp. 1498-1503.

Parise, Francesca	ETH Zurich
Ruess, Jakob	ETH Zürich
Lygeros, John	ETH Zurich

14:30-14:50 ThB5.4

Design of Boolean Networks Based on Prescribed Singleton Attractors, pp. 1504-1509.

Kobayashi, Koichi	Japan Advanced Inst. of Science and Tech.
Hiraishi, Kunihiko	JAIST

14:50-15:10 ThB5.5

Inferring Gene Regulatory Networks with Sparse Bayesian Learning and Phi-Mixing Coefficient, pp. 1510-1515.

Singh, Nitin	The Univ. of Texas at Dallas
Vidyasagar, Mathukumalli	The Univ. of Texas at Dallas

15:10-15:30 ThB5.6

Model Based Control of Human Heart Rate on a Bicycle Ergometer, pp. 1516-1521.

Leitner, Thomas	Johannes Kepler Univ. Linz
Kirchsteiger, Harald	JKU
Trogmann, Hannes	Johannes Kepler Univ. Linz
Del Re, Luigi	Johannes Kepler Univ. Linz

ThB6 Arp 2 Room

Multi-Agent Systems II (Regular Session)

Chair: Regula, Gergely	Inst. for Computer Science and Control, Hungarian Acad. of Sciences
Co-Chair: Peters, Andres	National Univ. of Ireland, Maynooth

13:30-13:50 ThB6.1

Formation Control of a Large Group of UAVs with Safe Path Planning and Obstacle Avoidance, pp. 1522-1529.

Regula, Gergely	Inst. for Computer Science and Control, Hungarian Acad. of
Lantos, Béla	Budapest Univ. of Tech. and Ec.

13:50-14:10 ThB6.2

Multi-Agent Consensus with Noisy Communication Via Time Averaging, pp. 1530-1535.

Morita, Ryosuke — Aoyama Gakuin Univ.
Wada, Takayuki — Osaka Univ.
Masubuchi, Izumi — Kobe Univ.
Asai, Toru — Osaka Univ.
Fujisaki, Yasumasa — Osaka Univ.

14:10-14:30 ThB6.3

Optimal Design of Observable Multi-Agent Networks: A Structural System Approach, pp. 1536-1541.

Pequito, Sergio — Carnegie Mellon Univ.
Rego, Francisco — Inst. Superior Tecnico/EPFL
Kar, Soummya — Carnegie Mellon Univ.
Aguiar, A. Pedro — Faculty of Engineering, Univ. of Porto (FEUP)
Pascoal, Antonio Manuel — Inst. Superior Tecnico
Jones, Colin N — EPFL, Lausanne

14:30-14:50 ThB6.4

Rigid Formation Construction from Non-Rigid Components (I), pp. 1542-1547.

Hou, Yun — the Australian National Univ.
Yu, Changbin — Australian National Univ.

14:50-15:10 ThB6.5

Cyclic Interconnection in 1-D Vehicle Formation Control, pp. 1548-1553.

Peters, Andres — National Univ. of Ireland, Maynooth
Mason, Oliver — NUI Maynooth
Middleton, Richard H. — The Univ. of Newcastle

15:10-15:30 ThB6.6

Robust Cooperative Control Reconfiguration/Recovery in Multi-Agent Systems, pp. 1554-1561.

Gallehdari, Zahra — Concordia Univ.
Meskin, Nader — Qatar Univ.
Khorasani, Khashayar — Concordia Univ.

ThB7 Orangerie Room

Optimal Control II (Regular Session)

Chair: Pereira, Fernando Lobo — Porto Univ.
Co-Chair: Bayen, Térence — Univ. Montpellier 2

13:30-13:50 ThB7.1

Minimal Time Problem for a Chemostat Model with Growth Rate of Haldane Type, pp. 1562-1567.

Bayen, Térence — INRIA
Harmand, Jérome — INRA

13:50-14:10 ThB7.2

The Principle of Least Action and Fundamental Solution of Two-Point Boundary Value Problems in Orbital Mechanics, pp. 1568-1573.

Han, Seung Hak — Univ. of California, San Diego
McEneaney, William — Univ. of California, San Diego

14:10-14:30 ThB7.3

On the Computation of Local Quadratic Performance Indices for Hierarchically Interconnected Systems, pp. 1574-1581.

Jilg, Martin — Univ. of Kassel
Stursberg, Olaf — Univ. of Kassel

14:30-14:50 ThB7.4

H_2 Optimal Output Feedback Control for a General Discrete-Time System, pp. 1582-1587.

Tudor, Florin Sebastian — Faculty of Automatic Control and Computer Science, Univ. Po
Oara, Cristian — Univ. Pol. bucharest

14:50-15:10 ThB7.5

On Properness of Impulsive Extension, pp. 1588-1593.

Karamzin, Dimitry	Porto Univ.
de Oliveira, Valeriano	UNESP - Univ. Estadual Paulista
Pereira, Fernando Lobo	Porto Univ.
Silva, Geraldo N.	Univ. Estadual Paulista

15:10-15:30 ThB7.6

Differential Graphical Games: Policy Iteration Solutions and Coupled Riccati Formulation, pp. 1594-1599.

Abouheaf, Mohammed	King Fahd Univ. of Petroleum & Mineral
Lewis, Frank L.	Univ. of Texas at Arlington
Mahmoud Sadek, MagdiSadek	KFUPM

ThB8 Arp 4 Room

Stochastic Systems (Regular Session)

Chair: Antunes, Duarte	Eindhoven Univ. of Tech.
Co-Chair: Kashima, Kenji	Kyoto Univ.

13:30-13:50 ThB8.1

Decentralized Bayesian Consensus Over Networks, pp. 1600-1606.

Willert, Volker	TU Darmstadt
Haumann, Dominik	TU Darmstadt
Gering, Stefan	TU Darmstadt

13:50-14:10 ThB8.2

Minimax Stochastic Estimation and Filtering under Unknown Covariances, pp. 1607-1612.

Kogan, Mark M.	Architecture And Civil Engineering Univ.

14:10-14:30 ThB8.3

Finite Difference and Simultaneous Perturbation Stochastic Approximation with Fixed Step Sizes in Case of Multiplicative Noise, pp. 1613-1618.

Vakhitov, Alexander	Saint Petersburg State Univ.

14:30-14:50 ThB8.4

Root Locus Analysis for Randomly Sampled Systems, pp. 1619-1624.

Antunes, Duarte	Eindhoven Univ. of Tech.
Heemels, Maurice	Eindhoven Univ. of Tech.

14:50-15:10 ThB8.5

Stationary Performance Evaluation of Control Systems with Random Dither Quantization, pp. 1625-1630.

Kashima, Kenji	Kyoto Univ.
Inoue, Daisuke	Osaka Univ.

15:10-15:30 ThB8.6

An Algorithm to Recover an LED Path, pp. 1631-1636.

Zheng, Dongfang	Univ. of California, Riverside
Chen, Gang	Univ. of California, Riverside
Farrell, Jay A.	Univ. of California at Riverside

ThB9 Boston Room

Optimization and Control for Energy Efficiency in Building Systems and Smart Homes (Regular Session)

Chair: Sandberg, Henrik	KTH Royal Inst. of Tech.
Co-Chair: Polycarpou, Marios M.	Univ. of Cyprus

13:30-13:50 ThB9.1

A Distributed Framework for Contaminant Event Detection and Isolation in Multi-Zone Intelligent Buildings, pp. 1637-1642.

Reppa, Vasso	Supelec
Michaelides, Michalis	Cyprus Univ. of Tech.
Christodoulou, Marinos	Univ. of Cyprus, Electrical and Computer Engineering Depart
Panayiotou, Christos	Univ. of Cyprus

Polycarpou, Marios M.	Univ. of Cyprus

13:50-14:10 ThB9.2

Nonserial Dynamic Programming with Applications in Smart Home Appliances Scheduling - Part I: Precedence Graph Simplification, pp. 1643-1648.

Sou, Kin Cheong	Chalmers Univ. of Tech.
Sandberg, Henrik	KTH Royal Inst. of Tech.
Johansson, Karl Henrik	Royal Inst. of Tech.

14:10-14:30 ThB9.3

Nonlinear System Identification of Thermal Dynamics in Buildings, pp. 1649-1654.

Chasparis, Georgios	Software Competence Center Hagenberg GmbH
Natschläger, Thomas	Software Competence Center Hagenberg GmbH

14:30-14:50 ThB9.4

A Distributed Coordination Framework for On-Line Scheduling and Power Demand Balancing of Households Communities, pp. 1655-1662.

Verschae, Rodrigo	Kyoto Univ.
Kawashima, Hiroaki	Kyoto Univ.
Kato, Takekazu	Kyoto Univ.
Matsuyama, Takashi	Kyoto Univ.

14:50-15:10 ThB9.5

Nonserial Dynamic Programming with Applications in Smart Home Appliances Scheduling - Part II: Nonserial Dynamic Programming, pp. 1663-1668.

Sou, Kin Cheong	Chalmers Univ. of Tech.
Sandberg, Henrik	KTH Royal Inst. of Tech.
Johansson, Karl Henrik	Royal Inst. of Tech.

ThB10 Dresde Room

Automotive II (Regular Session)

Chair: Johannesson, Lars	Chalmers
Co-Chair: Nitzsche, Gunter	Fraunhofer Inst. for Transportation and Infrastructure Systems IVI

13:30-13:50 ThB10.1

Preview Optimal Control of Vehicle Semi-Active Suspension Based on Partitioning of Chassis Acceleration and Tire Load Spectra, pp. 1669-1674.

Ahmed, Mahmoud	Univ. of the Federal Armed Forces Munich
Svaricek, Ferdinand	Univ. of the German Armed Forces, Munich

13:50-14:10 ThB10.2

Estimation of Road Profile for Suspension Systems Using Adaptive Super-Twisting Observer, pp. 1675-1680.

Rath, Jagat Jyoti	Kyungpook National Univ.
Veluvolu, Kalyana C	Kyungpook National Univ.
Defoort, Michael	Valenciennes Univ.

14:10-14:30 ThB10.3

Design of a Nonlinear Braking-Based Yaw Rate Controller, pp. 1681-1686.

Nitzsche, Gunter	Fraunhofer Inst. for Transportation and Infrastructure Syste
Völz, Benjamin	Fraunhofer Inst. for Transportation and Infrastructure Syste
Röbenack, Klaus	TU Dresden
Wagner, Sebastian	Fraunhofer Inst. for Transportation and Infrastructure Syste
Zipser, Stephan	Fraun

14:30-14:50 ThB10.4

Accelerometer-Based Data-Driven Hazard Detection and Classification for Motorcycles, pp. 1687-1692.

Selmanaj, Donald	Pol. di Milano
Corno, Matteo	Pol. di Milano
Savaresi, Sergio M.	Pol. Di Milano

14:50-15:10 ThB10.5

Assessing the Potential of Prediction in Energy Management for Ancillaries in Heavy-Duty Trucks, pp. 1693-1698.

Nilsson, Magnus	Viktoria Swedish ICT
Johannesson, Lars	Chalmers

15:10-15:30 ThB10.6

Cubic Spline Approximations of the Dynamic Programming Cost-To-Go in HEV Energy Management Problems, pp. 1699-1704.

Larsson, Viktor	Chalmers Univ. of Tech.
Johannesson, Lars	Chalmers
Egardt, Bo S.	Chalmers Univ. of Tech.

ThC1 Arp 3 Room

Identification and Modeling III (Regular Session)

Chair: Van Mulders, Anne	Vrije Univ. Brussel
Co-Chair: Bravo, Jose Manuel	Huelva Univ.

17:00-17:20 ThC1.1

Wiener System Identification by Weighted Principal Component Analysis, pp. 1705-1710.

Zhang, Qinghua	INRIA
Laurain, Vincent	Univ. de Lorraine

17:20-17:40 ThC1.2

Grey-Box Identification of the Pitch Damping Coefficient from Free Flight Tests, pp. 1711-1716.

Albisser, Marie	ISL / CRAN
Dobre, Simona	French-German Res. Inst. of Saint Louis
Berner, Claude	ISL
Thomassin, Magalie	Univ. de Lorraine
Garnier, Hugues	Univ. of Lorraine

17:40-18:00 ThC1.3

Identification of a Block-Structured Model with Several Sources of Nonlinearity, pp. 1717-1722.

Van Mulders, Anne	Vrije Univ. Brussel
Vanbeylen, Laurent	Vrije Univ. Brussel
Usevich, Konstantin	Vrije Univ. Brussel

18:00-18:20 ThC1.4

Robust Predictor for Nonlinear Systems Based on Bounding-Error Methods, pp. 1723-1728.

Bravo, Jose Manuel	Huelva Univ.
Alamo, Teodoro	Univ. de Sevilla
Gegundez, Manuel Emilio	Univ. de Huelva
Vasallo, Manuel	Univ. de Huelva

18:20-18:40 ThC1.5

Generic Wind Estimation and Compensation Based on NLGA and RBF-NN (I), pp. 1729-1734.

Baldi, Pietro	Univ. of Bologna
Castaldi, Paolo	Univ. of Bologna
Mimmo, Nicola	Univ. of Bologna
Simani, Silvio	Univ. of Ferrara

ThC2 Leicester Room

Lyapunov Methods (Regular Session)

Chair: M'Saad, Mohammed	ENSICAEN
Co-Chair: Nemeth, Balazs	Hungarian Acad. of Sciences

17:00-17:20 ThC2.1

Adaptive High Gain Observer for a Class of Nonlinear Systems with Nonlinear Parametrization, pp. 1735-1740.

Ménard, Tomas	GREYC
Maouche, Abdelaziz	GREYC, ENSICAEN
Targui, Boubekeur	ENSICAEN CAEN, FRANCE

Bouraoui, Ibtissem	ENIG, CONPRI
Farza, Mondher	Univ. DE CAEN, ENSICAEN,CNRS
M'Saad, Mohammed	ENSICAEN

17:20-17:40 ThC2.2

Nonlinear Automotive Actuator Analysis Based on Sum of Squares Programming, pp. 1741-1746.

Nemeth, Balazs	Hungarian Acad. of Sciences
Gaspar, Peter	MTA SZTAKI
Peni, Tamas	Inst. for Computer Science and Control of Hungarian Acad.

17:40-18:00 ThC2.3

Attitude Synchronization of Satellites with Internal Actuation, pp. 1747-1752.

Sahoo, Soumya Ranjan	Indian Inst. of Tech. Bombay
Banavar, Ravi N.	Indian Inst. of Tech.

18:00-18:20 ThC2.4

Control-Based Synthesis and Tracking of Grasping Points, pp. 1753-1758.

Ozgur, Erol	Inst. Pascal
Mezouar, Youcef	Inst. Pascal
Gogu, Grigore	Inst. Pascal

18:20-18:40 ThC2.5

New Results on Feedback Stabilization of Diesel Engines, pp. 1759-1764.

Graton, Guillaume	Ec. Centrale de Marseille
Outbib, Rachid	Isis

18:40-19:00 ThC2.6

Trajectory-Tracking Control Design for an Under-Actuated Quadrotor, pp. 1765-1770.

Nguyen Dang, Hao	Lorraine Univ.
Boutayeb, M.	Lorraine Univ.
Hugues, Rafaralahy	Lorraine Univ.

ThC3 Oberlin Room

Delay Systems III (Regular Session)

Chair: Gershon, Eli	Holon Inst. of Tech.
Co-Chair: Pan, Lin	Univ. of Luxembourg

17:00-17:20 ThC3.1

Group Synchronization and Control of a New Class of Adaptive Complex Network with Brownian Motion and Time-Varying Delay, pp. 1771-1776.

Pan, Lin	Univ. of Luxembourg
Voos, Holger	Univ. of Luxembourg
N'Doye, Ibrahima	Univ. of Luxembourg
Darouach, Mohamed	CRAN CNRS UMR 7039, Nancy Univ.

17:20-17:40 ThC3.2

Dynamic High Gain Scaling Based Output Feedback for Nonlinear Systems with Time-Delayed Input Unmodeled Dynamics, pp. 1777-1782.

Krishnamurthy, Prashanth	Pol. Inst. of NYU
Khorrami, Farshad	Pol. Inst. of NYU

17:40-18:00 ThC3.3

Dynamic Optimisation for Fly Gaze Stabilisation Based on Noisy and Delayed Sensor Information, pp. 1783-1788.

Sabatier, Quentin	Imperial Coll.
Krapp, Holger G	Department of Bioengineering, Imperial Coll. London
Tanaka, Reiko	Imperial Coll. London

18:00-18:20 ThC3.4

Tolerating Intermittent Faults in Input/State Asynchronous Sequential Machines with a Bounded Delay, pp. 1789-1794.

Yang, Jung-Min	Kyungpook National Univ.
Kwak, Seong Woo	Keimyung Univ.

18:20-18:40 ThC3.5

Stochastic H_infty Static Output-Feedback Control of State-Multiplicative Discrete-Time Systems with Delay, pp. 1795-1800.

Gershon, Eli — Holon Inst. of Tech.
Shaked, Uri — Tel-Aviv Univ.
Allerhand, Liron — Tel-Aviv Univ.

ThC4 Arp 1 Room

Predictive Control Applications II (Regular Session)

Chair: Puig, Vicenc — Univ. Pol. de Catalunya
Co-Chair: Dufour, Pascal — Univ. de Lyon, F-69622, Lyon, France; Univ. Lyon 1, Villeurbanne; LAGEP, UMR 5007, CNRS

17:00-17:20 ThC4.1

Control of Dual-Airfoil Airborne Wind Energy Systems Based on Nonlinear MPC and MHE, pp. 1801-1806.

Zanon, Mario — KU Leuven
Horn, Gregory — KU Leuven
Gros, Sébastien — Chalmers Univ. of Tech.
Diehl, Moritz — Albert-Ludwigs-Univ. Freiburg

17:20-17:40 ThC4.2

Nonlinear Predictive Control for the Concentrations Profile Regulation in a PEM Fuel Cell Anode Gas Channel, pp. 1807-1812.

Luna, Julio — Univ. Pol. de Catalunya
Ocampo-Martinez, Carlos — Tech. Univ. of Catalonia (UPC)
Serra, Maria — Univ. Pol. de Catalunya

17:40-18:00 ThC4.3

Closed Loop Optimal Experiment Design for On-Line Nonlinear System Parameter Identification, pp. 1813-1818.

Qian, Jun — Acsysteme, LAGEP(Lab. of Process Control and Chemical Engi
Dufour, Pascal — Univ. de Lyon, F-69622, Lyon, France; Univ. Lyon 1, V
Nadri, Madiha — Univ. Claude Bernard Lyon 1
Morosan, Petru-Daniel — ACSYSTEME

18:00-18:20 ThC4.4

Modeling and Nonlinear Model Predictive Control of a Rotary Disc Dryer for Fishmeal Production, pp. 1819-1824.

Hernandez, Andres — Ghent Univ.
De Keyser, Robin M.C. — Univ. of Gent
Manrique Silupu, Jose Jose — Univ. de Piura
Oliden, José Carlos — Univ. de Piura
Ipanaque Alama, William — Univ. de Piura

18:20-18:40 ThC4.5

Limitation of Flow Variations of Continuous Petri Nets Via Model Predictive Control and Lyapunov Criterion, pp. 1825-1830.

Taleb, Marwa — Univ. of Le Havre
Lefebvre, Dimitri — Univ. Le Havre
Leclercq, Edouard — Univ. LE HAVRE

18:40-19:00 ThC4.6

Real-Time Economic Optimization for a Fermentation Process Using Model Predictive Control, pp. 1831-1836.

Petersen, Lars Norbert — Tech. Univ. of Denmark
Jørgensen, John Bagterp — Tech. Univ. of Denmark

ThC5 Arp 5 Room

Biomedical Systems (Regular Session)

Chair: Medvedev, Alexander V. — Uppsala Univ.
Co-Chair: Mergner, Thomas — Univ. of Freiburg

17:00-17:20 ThC5.1

To Boost or Not to Boost: Immune Activation in HIV Infection, pp. 1837-1842.

Shu, Zhan — Univ. of Southampton
Middleton, Richard H. — The Univ. of Newcastle
Chen, Michael Z. Q. — The Univ. of Hong Kong

17:20-17:40 ThC5.2

Extended Observer to Estimate the Spreading of Contagious Disease, pp. 1843-1848.

Abdelhedi, Abdessamad — National Engineer- ing School of Gabes
Boutat, Driss — INSA Centre Val de Loire
Sbita, Lassaad — National Engineering School of Gabes (ENIG), Tunisia.
Tami, Ramdane — Lab. PRISME

17:40-18:00 ThC5.3

Stability Analysis of Human Stance Control from the System Theoretic Point of View, pp. 1849-1855.

Antritter, Felix — Univ. der Bundeswehr Muenchen
Scholz, Frank — Univ. der Bundeswehr-München
Hettich, Georg — Univ. of Freiburg
Mergner, Thomas — Univ. of Freiburg

18:00-18:20 ThC5.4

Volterra Modeling of the Smooth Pursuit System with Application to Motor Symptoms Characterization in Parkinson's Disease, pp. 1856-1861.

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

18:20-18:40 ThC5.5

Residual Generator for Cardiovascular Anomalies Detection, pp. 1862-1868.

Belkhatir, Zehor — King Abdullah Univ. of science and Tech.
Laleg, Taous-Meriem — KAUST
Tadjine, Mohamed — Ec. Nationale Pol.

18:40-19:00 ThC5.6

Adaptive Controller Based on Uncertainty Parametric Estimation Using Backstepping and Sliding Mode Techniques : Application to an Active Orthosis, pp. 1869-1874.

Madani, Tarek — Univ. of Paris Est Créteil (UPEC)
Daachi, Boubaker — LISSI
Djouani, Karim — Tshwane Univ. of Tech. Pretoria

ThC6 Arp 2 Room

Agents and Autonomous Systems (Regular Session)

Chair: Fanti, Maria Pia — Pol. of Bari
Co-Chair: Riehl, James Robert — Univ. of Groningen

17:00-17:20 ThC6.1

A Simple Real-Time Algorithm for Safe Navigation of a Non-Holonomic Robot in Complex Unknown Environments with Moving Obstacles, pp. 1875-1880.

Savkin, Andrey V. — Univ. of New South Wales
Wang, Chao — Univ. of New South Wales

17:20-17:40 ThC6.2

Triggered Minimum Spanning Tree for Distributed Coverage with Connectivity Maintenance, pp. 1881-1887.

Aragues, Rosario — Clermont Univ.
Sagues, Carlos — Univ. de zaragoza
Mezouar, Youcef — Inst. Pascal

17:40-18:00 ThC6.3

Assignment of Electrical Vehicles to Charging Stations by a Distributed Approach, pp. 1888-1893.

Fanti, Maria Pia — Pol. of Bari
Mangini, Agostino Marcello — Pol. di Bari

Pedroncelli, Giovanni	Univ. of Trieste
Ukovich, Walter	Univ. di Trieste

18:00-18:20 ThC6.4

On the Construction of Barrier in a Visibility Based Pursuit Evasion Game, pp. 1894-1901.

Bhattacharya, Sourabh	Iowa State Univ.
Basar, Tamer	Univ. of Illinois at Urbana-Champaign
Hovakimyan, Naira	UIUC

18:20-18:40 ThC6.5

Image-Based Road Network Clearing without Localization and without Maps Using a Team of UAVs, pp. 1902-1908.

Gagliardi, Matteo	Max Planck Inst. for Biological Cybernetics
Oriolo, Giuseppe	Univ. di Roma La Sapienza
Bülthoff, Heinrich H.	Max Planck Inst. for Biological Cybernetics
Franchi, Antonio	Centre National de la Recherche Scientifique (CNRS)

18:40-19:00 ThC6.6

Formation Control for Cooperative Containment of a Diffusing Substance, pp. 1909-1914.

Riehl, James Robert	Univ. of Groningen
Cao, Ming	Univ. of Groningen

ThC7 Orangerie Room

Robust Control II (Regular Session)

Chair: de Souza, Carlos E.	National Lab. for Scientific Computing (LNCC)
Co-Chair: Ippoliti, Gianluca	Univ. Pol. delle Marche

17:00-17:20 ThC7.1

Robust H-Infinity Control of Discrete-Time Descriptor Systems, pp. 1915-1920.

Coutinho, Daniel	Univ. Federal de Santa Catarina
de Souza, Carlos E.	National Lab. for Scientific Computing (LNCC)
Barbosa, Karina A.	Univ. de Santiago de Chile

17:20-17:40 ThC7.2

Synchronous Buck Converter Control Via Robust Periodic Pole Assignment, pp. 1921-1926.

Cimini, Gionata	Univ. Pol. delle Marche
Ippoliti, Gianluca	Univ. Pol. delle Marche
Longhi, Sauro	Univ. Pol. delle Marche
Orlando, Giuseppe	Univ. di Ancona
Pirro, Matteo	Univ. Pol. delle Marche

17:40-18:00 ThC7.3

Nonfragile Controllers for Rejection of Exogenous Disturbances, pp. 1927-1932.

Khlebnikov, Mikhail	Inst. for Control Science, RAS
Shcherbakov, Pavel	Moscow Inst. for Control Sciences, RAS

18:00-18:20 ThC7.4

Minimax LQG Controller Design for Nanopositioners, pp. 1933-1938.

Das, Sajal	The Univ. of New South Wales @theAustralianDefenceForce Aca
Rehman, Obaid Ur	UNSW at ADFA
Pota, Hemanshu R.	Univ. of New South Wales
Petersen, Ian R.	Australian Defence Force Acad.

18:20-18:40 ThC7.5

Feedforward/Feedback Multivariable Control Design for High Speed Nanopositioning, pp. 1939-1944.

Kara Mohamed, Mohamed	The Univ. of Manchester
Heath, William Paul	Univ. of Manchester
Lanzon, Alexander	Univ. of Manchester

ThC8 Arp 4 Room

Fault Tolerant Systems II (Regular Session)

Chair: Corradini, Maria Letizia	Univ. di Camerino
Co-Chair: Petrovic, Vlaho	Univ. of Zagreb Faculty of Electrical Engineering and Computing

17:00-17:20 ThC8.1

Experimental Evaluation of a Fault-Tolerant Plug-And-Play Controller, pp. 1945-1950.

Bodenburg, Sven	Ruhr-Univ. Bochum
Niemann, Simon	Ruhr-Univ. Bochum
Lunze, Jan	Ruhr-Univ. Bochum

17:20-17:40 ThC8.2

Reduction of Wind Turbine Structural Loads Caused by Rotor Asymmetries, pp. 1951-1956.

Petrović, Vlaho	Univ. of Zagreb Faculty of Electrical Engineering and Compu
Jelavić, Mate	Končar Electrical Engineering Inst.
Baotic, Mato	Univ. of Zagreb Faculty of Electrical Engineering and Compu

17:40-18:00 ThC8.3

Diagnosis and Accommodation of Faults Affecting the PMSG in Variable-Speed Sensorless Wind Turbines - a Deterministic Approach, pp. 1957-1962.

Corradini, Maria Letizia	Univ. di Camerino
Cristofaro, Andrea	Univ. degli Studi di Camerino
Pettinari, Silvia	Univ. degli Studi di Camerino

18:00-18:20 ThC8.4

Strategies for Sensor-Fault Compensation on UAVs: Review, Discussions & Additions, pp. 1963-1968.

Ducard, Guillaume	I3S, UMR7271, CNRS, Univ. de Nice Sophia Antipolis
Rudin, Konrad	ETH Zürich
Omari, Sammy	ETH Zurich
Siegwart, Roland Y.	ETH Zürich

18:20-18:40 ThC8.5

Fault Tolerant Control Allocation for Fractional-Order Systems, pp. 1969-1974.

Pettinari, Silvia	Univ. degli Studi di Camerino
Corradini, Maria Letizia	Univ. di Camerino

18:40-19:00 ThC8.6

Fault Tolerance of Distributed Systems by Information Pattern Reconfiguration in the Publisher-Subscriber Communication Scheme, pp. 1975-1980.

Staroswiecki, Marcel	Univ. des Sciences et Tech. de Lille
Moradi Amani, Ali	Amirkabir Univ. of Tech.

ThC9 Boston Room

Control Applications I (Regular Session)

Chair: Sandoval-Moreno, John	GIPSA Lab. Grenoble-INP
Co-Chair: Goulart, Paul J.	ETH Zurich

17:00-17:20 ThC9.1

Model-Based Current Limiting for Traction Control of an Electric Four-Wheel Drive Race Car, pp. 1981-1986.

Bohl, Daniel	Automatic Control Lab. ETH Zurich
Kariotoglou, Nikolaos	ETH Zurich
Hempel, Andreas Berndt	ETH Zurich
Goulart, Paul J.	ETH Zurich
Lygeros, John	ETH Zurich

17:20-17:40 ThC9.2

Lagrange Multipliers Based Price Driven Coordination with Constraints Consideration for Multisource Power Generation Systems, pp. 1987-1992.

Sandoval-Moreno, John	GIPSA Lab. Grenoble-INP
Besancon, Gildas	Ense3 - Grenoble INP
Martinez, John-Jairo	Gipsa-Lab. INP-Grenoble

17:40-18:00 ThC9.3

Control of Spatio-Temporal Pattern Formation Governed by Geometrical Models of Interface Evolution, pp. 1993-1998.

Coca, Daniel — The Univ. of Sheffield
Bouaru, Adrian — The Univ. of Sheffield

18:00-18:20 ThC9.4

Feedback Linearization for the DC Voltage Control of a VSC-HVDC Terminal, pp. 1999-2004.

Chen, Yijing — Lab. des Signaux et Systemes (LSS), CNRS
Damm, Gilney — Lab. IBISC - CNRS/Evry Univ.
Benchaib, Abdelkrim — Alstom Grid - CNAM Paris
Lamnabhi-Lagarrigue, Francoise — CNRS

18:20-18:40 ThC9.5

Life Extending Control for Helicopter Using Robust Dynamic Inversion, pp. 2005-2010.

Liu, Jing — Tianjin Univ.
Wu, Aiguo — Tianjin Univ.

18:40-19:00 ThC9.6

Nonlinear PI Control for Piezoelectric Actuators, pp. 2011-2015.

Orszulik, Ryan — York Univ.
Shan, Jinjun — York Univ.

ThC10 Dresde Room

Mechatronics (Regular Session)

Chair: Aschemann, Harald — Univ. of Rostock
Co-Chair: Radac, Mircea-Bogdan — Pol. Univ. of Timisoara

17:00-17:20 ThC10.1

Enhancing Control Robustness of a 6 DOF Parallel Testing Machine, pp. 2016-2021.

Le Flohic, Julien — Inst. Pascal UMR 6602 UBP/CNRS/IFMA
Paccot, Flavien — IUT - Département GIM - Univ. d'Auvergne
Bouton, Nicolas — Inst. Français de Mécanique Avancée
Chanal, Hélène — IFMA

17:20-17:40 ThC10.2

Creep, Hysteresis, and Vibration Effects Attenuation in an AFM PTS, pp. 2022-2027.

Rana, Md. Sohel — The Univ. of New South wales, Canberra
Pota, Hemanshu R. — Univ. of New South Wales
Petersen, Ian R. — Australian Defence Force Acad.

17:40-18:00 ThC10.3

Control System Design for Piezoelectric Actuator Based on Hysteresis Compensation, pp. 2028-2033.

Liu, Yanfang — Harbin Inst. of Tech.
Shan, Jinjun — York Univ.
Qi, Naiming — Harbin Inst. of Tech.

18:00-18:20 ThC10.4

Design and Testing of a Constrained Data-Driven Iterative Reference Input Tuning Algorithm, pp. 2034-2039.

Radac, Mircea-Bogdan — Pol. Univ. of Timisoara
Precup, Radu-Emil — Pol. Univ. of Timisoara
Petriu, Emil — Univ. of Ottawa

18:20-18:40 ThC10.5

Motion Control of a Robotic Transtibial Prosthesis During Transitions between Level Ground and Stairs, pp. 2040-2045.

Yuan, Kebin — Peking Univ.
Wang, Qining — Peking Univ.
Zhu, Jinying — Peking Univ.
Wang, Long — Peking Univ.

18:40-19:00 ThC10.6

An Experimental Study of Extended Linearisation Approaches for a Hydrostatic Transmission with Unknown Disturbances, pp. 2046-2051.

Aschemann, Harald	Univ. of Rostock
Sun, Hao	Univ. of Rostock
Meinlschmidt, Thomas	Univ. of Rostock

FrA1 Arp 3 Room

Identification, Modeling and Control (Regular Session)

Chair: Adachi, Shuichi — Keio Univ.
Co-Chair: Skataric, Maja — Rutgers Univ.

10:00-10:20 FrA1.1

Remarks on Model-Based Estimation of Nonhomogeneous Poisson Processes and Applications to Biological Systems, pp. 2052-2057.

Skataric, Maja — Rutgers Univ.
Sontag, Eduardo D. — Rutgers Univ.

10:20-10:40 FrA1.2

Plug-In Feedback Using Physically Parameterized Observer for Vibration-Suppression Control of Elastic-Joint Robot, pp. 2058-2065.

Oaki, Junji — Toshiba Corp.
Adachi, Shuichi — Keio Univ.

10:40-11:00 FrA1.3

Adaptive Learning Control for Non-Minimum Phase Linear Systems, pp. 2066-2071.

Tomei, Patrizio — Univ. of Roma Tor Vergata
Verrelli, Cristiano Maria — Univ. Di Roma

11:00-11:20 FrA1.4

Self-Adaptive Simulation Time for Sensitivity Analysis of a Stochastic Computational Model, pp. 2072-2077.

Maj, Carlo — Univ. of Milano-Bicocca
Raibulet, Claudia — Univ. of Milano-Bicocca
Mauri, Giancarlo — Univ. of Milano-Bicocca

11:20-11:40 FrA1.5

Estimation and Indirect Adaptive Control for Nonlinearly Parameterized Systems, pp. 2078-2083.

Flores, Anahí — Facultad de Ingeniería, UNAM
Grave, Ileana — Facultad de Ingenieria, UNAM
Tang, Yu — National Univ. of Mexico

11:40-12:00 FrA1.6

Model-Based Coupling Approach for Non-Iterative Real-Time Co-Simulation, pp. 2084-2089.

Stettinger, Georg — Graz Univ. of Tech.
Horn, Martin — Klagenfurt Univ.
Benedikt, Martin — Virtual Vehicle Res. Center
Zehetner, Josef — Virtual Vehicle Res. Center

FrA2 Leicester Room

Adaptive Control (Regular Session)

Chair: Mizumoto, Ikuro — Kumamoto Univ.
Co-Chair: Koropouli, Vasiliki — Tech. Univ. Muenchen

10:00-10:20 FrA2.1

ASPR Based Adaptive Output Feedback Control System Design Via T-S Fuzzy Model for Nonlinear Systems, pp. 2090-2095.

Mizumoto, Ikuro — Kumamoto Univ.
Takagi, Taro — Maizuru National Coll. of Tech.

10:20-10:40 FrA2.2

Continuous Objective-Based Control for Self-Optimizing Systems with Changing Operation Modes, pp. 2096-2102.

Keßler, Jan Henning — Univ. of Paderborn, Heinz Nixdorf Inst.
Krueger, Martin — Fraunhofer Inst. for Production Tech. IPT
Traechtler, Ansgar — Univ. of Paderborn

10:40-11:00 FrA2.3

Policy Iteration Algorithm Based on Experience Replay to Solve H∞ Control Problem of Partially-Unknown Nonlinear Systems, pp. 2103-2108.

Yasini, Sholeh	Ferdowsi Univ. of Mashhad, Mashhad, Iran
Naghibi Sistani, Mohammad Bagher	Ferdowsi Univ. of Mashhad
Karimpour, Ali	Ferdowsi Univ. of Mashhad, Mashhad, Iran

11:00-11:20 FrA2.4

ESC-MRAC of MIMO Systems for Constrained Robotic Motion Tasks in Deformable Environments, pp. 2109-2114.

Koropouli, Vasiliki	Tech. Univ. Muenchen
Gusrialdi, Azwirman	Univ. of Central Florida
Lee, Dongheui	Tech. Univ. of Munich

11:20-11:40 FrA2.5

On the Convergence Rate of Extremum Seeking Control, pp. 2115-2120.

Trollberg, Olle	Royal Inst. of Tech. KTH
Jacobsen, Elling W.	KTH Royal Inst. of Tech.

11:40-12:00 FrA2.6

Adaptive Control of a Boost-Buck Converter for Thermoelectric Generators, pp. 2121-2126.

Carstens, Jan Hendrik	Tech. Univ. Berlin
Gühmann, Clemens	Tech. Univ. Berlin

FrA3 Oberlin Room

Distributed-Parameter Systems (Regular Session)

Chair: D'Andrea-Novel, Brigitte	Ec. des Mines de Paris
Co-Chair: Bamieh, Bassam	Univ. of California at Santa Barbara

10:00-10:20 FrA3.1

Refined IV-Based Method for LPV Partial Differential Equation Model Identification, pp. 2127-2132.

Schorsch, Julien	nancy-Univ.
Laurain, Vincent	Univ. de Lorraine
Gilson, Marion	Univ. de Lorraine
Garnier, Hugues	Univ. of Lorraine

10:20-10:40 FrA3.2

Distributed Control of Spatially Invariant Systems Over Sobolev Spaces, pp. 2133-2138.

Epperlein, Jonathan Peter	Univ. of California, Santa Barbara
Bamieh, Bassam	Univ. of California at Santa Barbara

10:40-11:00 FrA3.3

On-Line Identification of Temperature-Dependent Thermal Conductivity, pp. 2139-2144.

Vergnaud, Alban	LISA - ISTIA - Univ. of Angers
Beaugrand, Guerric	LISA - Univ. of Angers
Gaye, Oumar	MIS - Univ. of Picardie Jules Verne
Perez, Laetitia	Lab. de Thermocinétique de Nantes
Lucidarme, Philippe	LISA - Univ. of Angers
Autrique, Laurent	Univ. of Angers

11:00-11:20 FrA3.4

Fault Detection and Isolation of Riesz Spectral Systems: A Geometric Approach, pp. 2145-2152.

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

11:20-11:40 FrA3.5

Stability Analysis of Switching Hyperbolic Systems: The Example of SMB Chromatography, pp. 2153-2157.

Bastin, Georges	Univ. Catholique de Louvain
Coron, Jean-michel	Univ. Paris 6
D'Andrea-Novel, Brigitte	Ec. des Mines de Paris
Suvarov, Paul	Univ. of Mons; Max-Planck-Inst. - Magdeburg

Vande Wouwer, Alain — Univ. de Mons
Kienle, Achim — OvGU Magdeburg

FrA4 — Arp 1 Room

Constrained Control II (Regular Session)

Chair: Olaru, Sorin — SUPELEC
Co-Chair: Gutman, Per-Olof — Tech.

10:00-10:20 — FrA4.1

More Efficient Interpolating Control, pp. 2158-2163.

Nguyen, Hoai-Nam — Tech.
Gutman, Per-Olof — Tech.
Bourdais, Romain — Supélec

10:20-10:40 — FrA4.2

On the Lifting Problems and Their Connexions with Piecewise Affine Control Law Design, pp. 2164-2169.

Nguyen, Ngoc Anh — Supélec Sciences des Systèmes (E3S), SUPELEC
Olaru, Sorin — SUPELEC
Rodriguez-Ayerbe, Pedro — Supelec
Hovd, Morten — Norwegian Univ. of Science and Tech.
Necoara, Ion — Univ. Pol. Bucharest

10:40-11:00 — FrA4.3

Robust Constrained Stabilization of a Boost DC-DC Converter with Lyapunov-Based Control and Piecewise-Linear Lyapunov Functions, pp. 2170-2175.

Yfoulis, Christos — Alexander Tech. Inst.
Giaouris, Damian — Centre for Res. and Tech. Hellas
Stergiopoulos, Fotis — Centre for Res. and Tech. Hellas (CERTH)
Ziogou, Chrysovalantou — Centre for Res. and Tech. Hellas (CERTH)
Voutetakis, Spyridon — Centre for Res. and Tech. Hellas (CERTH)
Papadopoulou, Simira — Alexander Tech. Educational Inst.

11:00-11:20 — FrA4.4

Cyber-Attack Detection Based on Controlled Invariant Sets, pp. 2176-2181.

Rosich, Albert — Univ. of Luxembourg
Voos, Holger — Univ. of Luxembourg
Darouach, Mohamed — CRAN CNRS UMR 7039, Nancy Univ.

11:20-11:40 — FrA4.5

A Prescribed Performance Robust Nonlinear Model Predictive Control Framework, pp. 2182-2187.

Marantos, Panos — National Tech. Univ. of Athens
Eqtami, Alina — Children's Hospital Boston, Harvard Medical School
Bechlioulis, Charalampos — National Tech. Univ. of Athens
Kyriakopoulos, Kostas J. — National Tech. Univ. of Athens

11:40-12:00 — FrA4.6

Robustness under Saturated Feedback: Strong Iiss for a Class of Nonlinear Systems, pp. 2188-2193.

Azouit, Remi — Univ. Paris Sud 11 - ENS Cachan
Chaillet, Antoine — Univ. Paris Sud
Greco, Luca — Univ. Paris Sud

FrA5 — Arp 5 Room

Statistical Learning and Randomized Algorithms (Regular Session)

Chair: Poland, Jan — ABB Switzerland Ltd. Corp. Res.
Co-Chair: Wada, Takayuki — Osaka Univ.

10:00-10:20 — FrA5.1

Application of the Mirror Descent Method to Minimize Average Losses Coming by a Poisson Flow, pp. 2194-2197.

Nazin, Alexander V. — V.A.Trapeznikov Inst. of Control Sciences, RAS

Anulova, Svetlana	Inst. for Control Sciences RAS
Tremba, Andrey	Inst. of Control Sciences RAS

10:20-10:40 FrA5.2

Probabilistic Analytic Center Cutting Plane Method with Multiple Cuts, pp. 2198-2203.

Wada, Takayuki	Osaka Univ.
Fujisaki, Yasumasa	Osaka Univ.

10:40-11:00 FrA5.3

Empirical Cost Distribution: A Scenario Approach to the Construction of Probability Boxes with Application to Channel Equalization, pp. 2204-2209.

Carè, Algo	The Univ. of Melbourne - Department of Electrical and Elect
Garatti, Simone	Pol. di Milano
Campi, M. C.	Univ. di Brescia

11:00-11:20 FrA5.4

Algorithmic Models of Human Decision Making in Gaussian Multi-Armed Bandit Problems, pp. 2210-2215.

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

11:20-11:40 FrA5.5

Near-Ideal Behavior of Some Compressed Sensing Algorithms, pp. 2216-2218.

Vidyasagar, Mathukumalli	The Univ. of Texas at Dallas
Ahsen, Mehmet Eren	Univ. of Texas at Dallas

11:40-12:00 FrA5.6

Bayesian Model Update in a Horizon Estimation Framework, pp. 2219-2224.

Poland, Jan	ABB Switzerland Ltd. Corp. Res.
Bordonali, Francesca	Univ. of Pavia

FrA6 Arp 2 Room

Sampled Data and Switched Systems (Regular Session)

Chair: Hetel, Laurentiu	CNRS
Co-Chair: Zattoni, Elena	Alma Mater Studiorum - Univ. of Bologna

10:00-10:20 FrA6.1

On Relay Control for Discrete Time Systems Using Linear Matrix Inequalities, pp. 2225-2230.

Govindaswamy, Srinath	Univ. of Kent
Hetel, Laurentiu	CNRS
Polyakov, Andrey	INRIA Lille Nord-Europe
Floquet, Thierry	Ec. Centrale de Lille

10:20-10:40 FrA6.2

How to Control Linear Systems with Switching Delays, pp. 2231-2236.

Jungers, Raphaël	Univ. catholique de Louvain
D'Innocenzo, Alessandro	Univ. degli Studi dell'Aquila
Di Benedetto, M. Domenica	Univ. of L'Aquila

10:40-11:00 FrA6.3

H2 and H-Infinity State-Feedback Control of Continuous-Time MJLS with Uncertain Transition Rates, pp. 2237-2241.

Cardeliquio, Caetano	UNICAMP Univ. of Campinas
Fioravanti, Andre Ricardo	INRIA Roquencourt
Gonçalves, Alim P. C.	UNICAMP

11:00-11:20 FrA6.4

Measurable Disturbance Rejection with Stability in Continuous-Time Switched Linear Systems under Dwell-Time Switching, pp. 2242-2247.

Zattoni, Elena	Alma Mater Studiorum - Univ. of Bologna

11:20-11:40 FrA6.5

Robust H_inf Tracking Control Design for a Class of Switched Linear Systems Using Descriptor Redundancy Approach, pp. 2248-2253.

Belkhiat, Djamel Eddine Chouaib	Ferhat Abbas Univ. Setif 1
Jabri, Dalel	ENIG
Fourati, Hassen	Univ. Joseph Fourrier, GIPSA-Lab.

11:40-12:00 FrA6.6

Internal Stability of a Class of Switched Systems Designed by Implicit Control Techniques, pp. 2254-2259.

Bonilla, Moises E.	CINVESTAV-IPN
Alvarez Jarquin, Nohemi	SUPELEC
Malabre, Michel	IRCCyN - CNRS
Azhmyakov, Vadim	Younicos AG

FrA7 Orangerie Room

Traffic Control (Tutorial Session)

Chair: De Schutter, Bart	Delft Univ. of Tech.
Co-Chair: Hegyi, Andreas	Delft Univ. of Tech.
Organizer: De Schutter, Bart	Delft Univ. of Tech.
Organizer: Hegyi, Andreas	Delft Univ. of Tech.
Organizer: Geroliminis, Nikolas	Ec. Pol. Fédérale de Lausanne (EPFL), Urban Transport Systems Lab.

10:00-10:40 FrA7.1

Model Predictive Traffic Control for Green Mobility (I), pp. 2260-2263.

De Schutter, Bart	Delft Univ. of Tech.

10:40-11:20 FrA7.2

An Overview of Speed Control Approaches to Improve Freeway Traffic Flow (I), pp. 2264-2267.

Hegyi, Andreas	Delft Univ. of Tech.

11:20-12:00 FrA7.3

Large-Scale Hierarchical Control for Congested Urban Networks (I), pp. 2268-2271.

Geroliminis, Nikolas	Ec. Pol. Fédérale de Lausanne (EPFL), Urban Transport

FrA8 Arp 4 Room

Sliding Mode Control – State of the Art with Applications (Tutorial Session)

Chair: Spurgeon, Sarah K.	Univ. of Kent
Co-Chair: Edwards, Christopher	Univ. of Exeter
Organizer: Spurgeon, Sarah K.	Univ. of Kent

10:00-10:40 FrA8.1

Sliding Mode Control: A Tutorial (I), pp. 2272-2277.

Spurgeon, Sarah K.	Univ. of Kent

10:40-11:00 FrA8.2

Modeling and Discrete Time SMC of Inventory Systems (I), pp. 2278-2283.

Bartoszewicz, Andrzej	Tech. Univ. of Lodz

11:00-11:20 FrA8.3

Application of Second-Order Sliding-Mode Control Algorithms in Continuous Cycling Tests for PID Tuning (I), pp. 2284-2290.

Boiko, Igor	Petroleum Inst.

11:20-11:40 FrA8.4

Fault Tolerant Control Using Integral Sliding Modes (I), pp. 2291-2296.

Edwards, Christopher	Univ. of Exeter
Alwi, Halim	Univ. of Exeter
Hamayun, Mirza Tariq	Univ. of Leicester

11:40-12:00 FrA8.5

Second Order Sliding Mode Approaches to Fault Detection and Control of Infinite Dimensional Systems (I), pp. 2297-2303.

Pisano, Alessandro	Univ. di Cagliari
Caponetto, Riccardo	Univ. of Catania
Usai, Elio	Univ. degli Studi di Cagliari

FrA9 Boston Room

Hybrid Systems (Regular Session)

Chair: Medvedev, Alexander V.	Uppsala Univ.
Co-Chair: Schreiter, Luzie	Karlsruhe Inst. of Tech. (KIT)

10:00-10:20 FrA9.1

Time Delay Induced Bistability and Quasiperiodic Dynamics in an Impulsive Model of Endocrine Regulation, pp. 2304-2309.

Zhusubaliev, Zhanybai	South-West State Univ.
Churilov, Alexander	St.Petersburg State Univ.
Medvedev, Alexander V.	Uppsala Univ.

10:20-10:40 FrA9.2

Application of Contract-Based Verification Techniques for Hybrid Automata to Surgical Robotic Systems, pp. 2310-2315.

Schreiter, Luzie	Karlsruhe Inst. of Tech. (KIT)
Bresolin, Davide	Univ. of Verona
Capiluppi, Marta	Univ. of Verona
Raczkowsky, Jörg	Karlsruhe Inst. of Tech. - KIT
Fiorini, Paolo	Univ. of Verona
Woern, Heinz	Karlsruhe Inst. for Tech. (KIT)

10:40-11:00 FrA9.3

Stochastic Event-Based Control and Scheduling of Large-Scale Networked Control Systems, pp. 2316-2321.

Al-Areqi, Sanad	Univ. of Kaiserslautern
Görges, Daniel	Univ. of Kaiserslautern
Liu, Steven	Tech. Univ. Kaiserslautern

11:00-11:20 FrA9.4

Trajectory Tracking for Inertial Systems Using a Right Inverse Approach, pp. 2322-2327.

Bonilla, Moises E.	CINVESTAV-IPN
Salazar-Cruz, Sergio	Univ. de Tech. de Compiegne
Lozano, Rogelio	Univ. de Tech. de Compiegne

11:20-11:40 FrA9.5

Hybrid Modeling and Predictive Control for Hydrometallurgical Processes, pp. 2328-2333.

Karelovic, Pablo	Pontificia Univ. Católica de Chile
Cipriano, Aldo	Pontificia Univ. Catolica de Chile

11:40-12:00 FrA9.6

Output Feedback Reset Control of General MIMO LTI Systems, pp. 2334-2339.

Yuan, Chengzhi	North Carolina State Univ.
Wu, Fen	North Carolina State Univ.

FrA10 Dresde Room

An Integrated Approach for Observation and Control of Vehicle Dynamics: Recent Results and Trends from the INOVE/ANR 2010 BLAN 0308 Project (Invited Session)

Chair: Sename, Olivier	INPG
Co-Chair: Basset, Michel	Univ. de Haute Alsace - ENSISA
Organizer: Sename, Olivier	Grenoble INP / GIPSA-Lab.
Organizer: Basset, Michel	Univ. de Haute Alsace - ENSISA
Organizer: Tudon-Martinez, Juan Carlos	Tecnológico de Monterrey
Organizer: Menhour, Lghani	Mines ParisTech
Organizer: Varrier, Sébastien	LCIS

Organizer: Fergani, Soheib	Grenoble Univ.

10:00-10:20 FrA10.1

The INOVE ANR 2010 Blan 0308 Project: Integrated Approach for Observation and Control of Vehicle Dynamics (I), pp. 2340-2345.

Sename, Olivier	Grenoble INP / GIPSA-Lab.
Basset, Michel	Univ. de Haute Alsace - ENSISA
Talon, Benjamin	SOBEN S.A.S.
D'Andrea-Novel, Brigitte	Ec. des Mines de Paris
Koenig, Damien	Grenoble - Inp
Martinez, John-Jairo	Gipsa-Lab. INP-Grenoble

10:20-10:40 FrA10.2

Full Vehicle Dynamics Control Based on LPV/Hinf and Flatness Approaches (I), pp. 2346-2351.

Fergani, Soheib	Grenoble Univ.
Menhour, Lghani	Mines ParisTech
Sename, Olivier	Grenoble INP / GIPSA-Lab.
Dugard, Luc	CNRS-INPG
D'Andrea-Novel, Brigitte	Ec. des Mines de Paris

10:40-11:00 FrA10.3

Detection of Critical Situations for Vehicle Longitudinal Dynamics (I), pp. 2352-2357.

Varrier, Sébastien	LCIS
Koenig, Damien	Grenoble - Inp
Martinez, John-Jairo	Gipsa-Lab. INP-Grenoble
D'Andrea-Novel, Brigitte	Ec. des Mines de Paris

11:00-11:20 FrA10.4

Continuous-Time Switched H$_{infty}$ Proportional-Integral Observer: Application for Sideslip and Road Bank Angles Estimation (I), pp. 2358-2363.

Menhour, Lghani	Mines ParisTech
Koenig, Damien	Grenoble - Inp
D'Andrea-Novel, Brigitte	Ec. des Mines de Paris

11:20-11:40 FrA10.5

Hinfinity-Controller Order Reduction for Active Suspension System (I), pp. 2364-2369.

Zebiri, Hossni	Univ. Haute Alsace UHA Mulhouse
Mourllion, Benjamin	Univ. de Haute-Alsace
Basset, Michel	Univ. de Haute Alsace - ENSISA

11:40-12:00 FrA10.6

Online Road Profile Estimation in Automotive Vehicles (I), pp. 2370-2375.

Tudon-Martinez, Juan Carlos	Tecnológico de Monterrey
Fergani, Soheib	Grenoble Univ.
Sename, Olivier	Grenoble INP / GIPSA-Lab.
Morales-Menendez, Ruben	Tecnológico de Monterrey
Dugard, Luc	CNRS-INPG

FrB1 Arp 3 Room

New Developments in Systems Identification (Tutorial Session)

Chair: Chiuso, Alessandro	Univ. di Padova
Co-Chair: Hjalmarsson, Håkan	Royal Inst. of Tech.
Organizer: Chiuso, Alessandro	Univ. di Padova

13:30-14:10 FrB1.1

Bayesian and Nonparametric Methods for System Identification and Model Selection (I), pp. 2376-2381.

Chiuso, Alessandro	Univ. di Padova
Pillonetto, Gianluigi	Univ. of Padova

14:10-14:50 FrB1.2

Model Structure Selection -- an Update (I), pp. 2382-2385.

Hjalmarsson, Håkan	Royal Inst. of Tech.
Rojas, Cristian R.	KTH Royal Inst. of Tech.

14:50-15:10 FrB1.3

Tuning Complexity in Kernel-Based Linear System Identification: The Robustness of the Marginal Likelihood Estimator (I), pp. 2386-2391.

Pillonetto, Gianluigi	Univ. of Padova
Chiuso, Alessandro	Univ. di Padova

15:10-15:30 FrB1.4

Parsimonious Model Identification Via Atomic Norm Minimization (I), pp. 2392-2397.

Bekiroglu, Korkut	Penn State Univ.
Yilmaz, Burak	Northeastern Univ.
Lagoa, Constantino M.	Pennsylvania State Univ.
Sznaier, Mario	Northeastern Univ.

FrB2 Leicester Room

Control of Adaptive Optics Systems (Invited Session)

Chair: Beghi, Alessandro	Univ. di Padova
Co-Chair: Raynaud, Henri-François	Inst. d'Optique
Organizer: Beghi, Alessandro	Univ. di Padova
Organizer: Cenedese, Angelo	Univ. of Padova
Organizer: Raynaud, Henri-François	Inst. d'Optique

13:30-13:50 FrB2.1

Fast Finite-Horizon Kalman Filter in Wavefront Estimation for Adaptive Optics (I), pp. 2398-2403.

Massioni, Paolo	INSA de Lyon
Di Loreto, Michael	Ampere

13:50-14:10 FrB2.2

Mirrors' Dynamics: A Plague for Adaptive Optics Systems Performance? (I), pp. 2404-2411.

Nechak, Lyes	Inst. d'optique
Raynaud, Henri-François	Inst. d'Optique
Kulcsar, Caroline	Univ. Paris 13
Conan, Jean-Marc	ONERA

14:10-14:30 FrB2.3

Wavefront Reconstruction Using Intensity Measurements for Real-Time Adaptive Optics (I), pp. 2412-2417.

Lopes e Silva, João Pedro	TU Delft
Brunner, Elisabeth	Delft Univ. of Tech.
Polo, Alessandro	Delft Univ. of Tech.
de Visser, Cornelis. C.	Delft Univ. of Tech.
Verhaegen, Michel	Delft Univ. of Tech.

14:30-14:50 FrB2.4

Adaptive Vibration Cancellation in Adaptive Optics: An Experimental Validation (I), pp. 2418-2423.

Muradore, Riccardo	Univ. of Verona
Pettazzi, Lorenzo	ESO
Fedrigo, Enrico	European Southern Observatory

14:50-15:10 FrB2.5

Distributed Wavefront Reconstruction Using Measurements of the Spatial Derivatives of the Wavefront for Real-Time Large Scale Adaptive Optics Control (I), pp. 2424-2429.

de Visser, Cornelis. C.	Delft Univ. of Tech.
Verhaegen, Michel	Delft Univ. of Tech.

15:10-15:30 FrB2.6

Efficient Algorithms for the Reconstruction and Prediction of Atmospheric Turbulence in AO Systems (I), pp. 2430-2435.

Beghi, Alessandro	Univ. di Padova
Cenedese, Angelo	Univ. of Padova
Masiero, Andrea	Univ. di Padova

FrB3 Oberlin Room

Algebraic/Geometric Methods for Finite and Infinite-Dimensional Systems (Regular Session)

Chair: Quadrat, Alban — INRIA Saclay
Co-Chair: Franch, Jaume — Univ. Pol. de Catalunya

13:30-13:50 FrB3.1

On Computing Flat Outputs through Goursat Normal Form, pp. 2436-2441.
Franch, Jaume — Univ. Pol. de Catalunya
Manzanera, Ana — Univ. Pol. de Catalunya-BarcelonaTech
Valero, Gemma — Univ. Pol. de Catalunya-BarcelonaTech

13:50-14:10 FrB3.2

Control Systems on Three-Dimensional Lie Groups, pp. 2442-2447.
Biggs, Rory — Rhodes Univ.
Remsing, Claudiu — Rhodes Univ.

14:10-14:30 FrB3.3

Normal Forms for Flat Control-Affine Systems Linearizable Via One-Fold Prolongation, pp. 2448-2453.
Nicolau, Florentina — INSA-Rouen
Respondek, Witold — INSA de Rouen

14:30-14:50 FrB3.4

Realization of a Vector Field Via State Feedback for Polynomial Dynamical Systems, pp. 2454-2459.
Yuno, Tsuyoshi — Osaka Univ.
Ohtsuka, Toshiyuki — Kyoto Univ.

14:50-15:10 FrB3.5

Noncommutative Geometric Structures on Stabilizable Infinite-Dimensional Linear Systems, pp. 2460-2465.
Quadrat, Alban — INRIA Saclay

15:10-15:30 FrB3.6

Optimal Control of Drift-Free Invariant Control Systems on the Group of Motions of the Minkowski Plane, pp. 2466-2471.
Barrett, Dennis — Rhodes Univ.
Biggs, Rory — Rhodes Univ.
Remsing, Claudiu — Rhodes Univ.

FrB4 Arp 1 Room

Fast MPC: Fundamentals for Breaking the Speed Barrier (Tutorial Session)

Chair: Alamir, Mazen — CNRS-Gipsa-Lab.
Co-Chair: Jones, Colin N — EPFL, Lausanne
Organizer: Alamir, Mazen — CNRS-Gipsa-Lab.
Organizer: Diehl, Moritz — Albert-Ludwigs-Univ. Freiburg
Organizer: Jones, Colin N — EPFL, Lausanne
Organizer: Kerrigan, Eric C. — Imperial Coll. London
Organizer: Zavala, Victor — Argonne National Lab.

13:30-14:10 FrB4.1

Fast NMPC: A Reality Steered Paradigm. Key Properties of Fast NMPC Algorithms (I), pp. 2472-2477.
Alamir, Mazen — CNRS-Gipsa-Lab.

14:10-14:30 FrB4.2

*Nonlinear MPC Algorithms (I)**.
Diehl, Moritz — Albert-Ludwigs-Univ. Freiburg

14:30-14:50 FrB4.3

*Penalty Approaches for Fast Model Predictive Control (I)**.
Zavala, Victor — Argonne National Lab.

14:50-15:10 FrB4.4

Splitting Methods in Control (I), pp. 2478-2483.

Stathopoulos, Georgios	EPFL
Szucs, Alexander	Slovak Univ. of Tech. in Bratislava
Pu, Ye	EPFL Lausanne
Jones, Colin N	EPFL, Lausanne

15:10-15:30 FrB4.5

Co-Design of Hardware and Algorithms for Real-Time Optimization (I), pp. 2484-2489.

Kerrigan, Eric C. — Imperial Coll. London

FrB5 Arp 5 Room

Optimization Methods in Dynamical Systems (Regular Session)

Chair: Tzes, Anthony	Univ. of Patras
Co-Chair: Ostertag, Eric	Univ. of Strasbourg

13:30-13:50 FrB5.1

Design of Predictive Optimization Method for Energy-Efficient Operation of Trains, pp. 2490-2495.

Aradi, Szilárd	Budapest Univ. of Tech. and Ec.
Bécsi, Tamás	Budapest Univ. of Tech. and Ec.
Gaspar, Peter	Computer & Automation Inst. of HAS

13:50-14:10 FrB5.2

On the Optimization of Flux Distribution in Solar Tower Plants with Flat Receivers, pp. 2496-2501.

Gallego, Antonio J.	Escuela Superior de Ingenieros
Camacho, Eduardo F.	Univ. of Sevilla
Fele, Filiberto	Univ. de Sevilla

14:10-14:30 FrB5.3

Reduced-Conservatism Design of Triple-Objective Dynamic Output-Feedback Controller Via Path-Following, pp. 2502-2507.

Ostertag, Eric — Univ. of Strasbourg

14:30-14:50 FrB5.4

Adversary Control Strategies for Discrete-Time Systems, pp. 2508-2513.

Kontouras, Efstathios	Univ. of Patras
Tzes, Anthony	Univ. of Patras
Dritsas, Leonidas	Univ. of Patras

14:50-15:10 FrB5.5

Characterising the Probability Profile of Performance Degradation of a Darwin Satellite Controller, pp. 2514-2519.

Mujumdar, Anusha	Univ. of Exeter
Prathyush, Purushothama Menon	Univ. of Exeter
Edwards, Christopher	Univ. of Exeter
Bennani, Samir	ESA/ESTEC (TEC-Ec.

15:10-15:30 FrB5.6

Trajectory Design for a Nonlinear System to Insure Observability, pp. 2520-2525.

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

FrB6 Arp 2 Room

Switched Systems (Regular Session)

Chair: Hetel, Laurentiu	CNRS
Co-Chair: Bacciotti, Andrea	Pol. Di Torino

13:30-13:50 FrB6.1

Optimal Control of Elastic Joints with Variable Damping, pp. 2526-2533.

Özparpucu, Mehmet Can	DLR
Haddadin, Sami	Leibniz Univ. Hanover

13:50-14:10 FrB6.2

Hybrid State Estimation for a Class of Switched System Using Petri Nets, pp. 2534-2539.

Arichi, Fayssal	Univ. of Tlemcen
Van Gorp, Jeremy	Univ. of Reims Champagne Ardenne
Djemai, Mohamed	LAMIH
Defoort, Michael	Valenciennes Univ.
Cherki, Brahim	Tlemcen Aboubekr Belkaid Univ.

14:10-14:30 FrB6.3

Dwell-Time Min-Switching for Discrete-Time Switched Linear Systems, pp. 2540-2545.

Duan, Chang	North Carolina State Univ.
Wu, Fen	North Carolina State Univ.

14:30-14:50 FrB6.4

Stability of Switched Linear Systems: New Results, pp. 2546-2551.

Kundu, Atreyee	Indian Inst. of Tech. Bombay
Chatterjee, Debasish	Indian Inst. of Tech. Bombay

14:50-15:10 FrB6.5

Mode Detection and Discernability As a Framework for the Estimation of Time-Varying Delays, pp. 2552-2557.

Halimi, Meriem	Univ. de Lorraine
Millerioux, Gilles	Univ. de Lorraine
Daafouz, Jamal	Univ. de Lorraine - CNRS

15:10-15:30 FrB6.6

Open-Loop Stabilization and Destabilization of Switched Systems in the Plane, pp. 2558-2562.

Bacciotti, Andrea	Pol. Di Torino

FrB7 Orangerie Room

Traffic Control and Estimation: New Trends and Opportunities (Invited Session)

Chair: Morbidi, Fabio	Inria, Grenoble - Rhone-Alpes
Co-Chair: Ferrara, Antonella	Univ. of Pavia
Organizer: Morbidi, Fabio	Inria, Grenoble - Rhone-Alpes
Organizer: Ferrara, Antonella	Univ. of Pavia

13:30-13:50 FrB7.1

Robust Control Design for a Perimeter Traffic Flow Controller at an Urban Region (I), pp. 2563-2568.

Shraiber, Arie	Tech. Inst. of Tech.
Haddad, Jack	Tech. - Israel Inst. of Tech.

13:50-14:10 FrB7.2

Perimeter Flow Control of Bi-Modal Urban Road Networks: A Robust Feedback Control Approach (I), pp. 2569-2574.

Ampountolas, Konstantinos	Univ. of Glasgow
Zheng, Nan	École Pol. Fédérale de Lausanne (EPFL)
Geroliminis, Nikolas	Ec. Pol. Fédérale de Lausanne (EPFL), Urban Transport

14:10-14:30 FrB7.3

A New Robust Approach for Highway Traffic Density Estimation (I), pp. 2575-2580.

Morbidi, Fabio	Inria, Grenoble - Rhone-Alpes
Leon Ojeda, Luis Ramon	INRIA, Grenoble. Univ. de Grenoble
Canudas-de-Wit, Carlos	CNRS-GIPSA-Lab.
Bellicot, Iker	Inria

14:30-14:50 FrB7.4

Urban Traffic Eco-Driving: A Macroscopic Steady-State Analysis (I), pp. 2581-2587.

De Nunzio, Giovanni	IFPen
Canudas-de-Wit, Carlos	CNRS-GIPSA-Lab.
Moulin, Philippe	IFP

14:50-15:10 FrB7.5

Ramp Metering Control for Two Vehicle Classes to Reduce Traffic Emissions in Freeway Systems (I), pp. 2588-2593.

Pasquale, Cecilia	Univ. of Genova

Sacone, Simona — Univ. of Genova
Siri, Silvia — Univ. of Genova

15:10-15:30 — FrB7.6

Event-Triggered Strategies for the Networked Control of Freeway Traffic Systems (I), pp. 2594-2599.

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

FrB8 — Arp 4 Room

Chattering-Free Sliding Modes (Invited Session)

Chair: Zheng, Gang — INRIA, Lille-Nord
Co-Chair: Polyakov, Andrey — INRIA Lille Nord-Europe
Organizer: Zheng, Gang — INRIA, Lille-Nord
Organizer: Polyakov, Andrey — INRIA Lille Nord-Europe

13:30-13:50 — FrB8.1

*ChaSliM, towards Efficient Sliding-Mode Control: Chattering Reduction, Disturbance Rejection and Numerical Toolbox (I)**.

Brogliato, Bernard — UR Rhone-Alpes

13:50-14:10 — FrB8.2

Continuous Second Order Sliding Mode Based Robust Finite Time Tracking of a Fully Actuated Biped Robot (I), pp. 2600-2605.

Oza, Harshal — Univ. of Kent
Orlov, Yury — CICESE
Spurgeon, Sarah K. — Univ. of Kent
Aoustin, Yannick — Univ. de Nantes
Chevallereau, Christine — Ec. Centrale Nantes

14:10-14:30 — FrB8.3

Enhanced Matching Perturbation Attenuation with Discrete-Time Implementations of Sliding-Mode Controllers (I), pp. 2606-2611.

Huber, Olivier — INRIA Grenoble
Acary, Vincent — INRIA
Brogliato, Bernard — UR Rhone-Alpes

14:30-14:50 — FrB8.4

Sliding Mode Control Design for MIMO Systems: Implicit Lyapunov Function Approach (I), pp. 2612-2617.

Polyakov, Andrey — INRIA Lille Nord-Europe
Efimov, Denis — Inria
Perruquetti, Wilfrid — Ec. Centrale de Lille

14:50-15:10 — FrB8.5

Perturbation Observer for a Pneumatic System : High Gain versus Higher Order Sliding Mode Solutions (I), pp. 2618-2623.

Yan, Xinming — LUNAM Univ. - Ec. Centrale de Nantes - IRCCyN
Plestan, Franck — Ec. Centrale De Nantes-CNRS
Primot, Muriel — LUNAM Univ. - Univ. de Nantes - IRCCyN

15:10-15:30 — FrB8.6

Robustness of Homogeneous and Locally Homogeneous Differential Inclusions (I), pp. 2624-2629.

Bernuau, Emmanuel — Faculty of Engineering, Univ. of Pisa
Efimov, Denis — INRIA - LNE
Perruquetti, Wilfrid — Ec. Centrale de Lille

FrB9 — Boston Room

Petri Net Approaches for Discrete Event Systems (Tutorial Session)

Chair: Giua, Alessandro — Univ. of Cagliari, Italy / Aix-Marseille Univ. France
Co-Chair: Seatzu, Carla — Univ. of Cagliari
Organizer: Giua, Alessandro — Univ. of Cagliari, Italy / Aix-Marseille Univ. France

Organizer: Li, Zhiwu — SEME, Xidian Univ.
Organizer: Seatzu, Carla — Univ. of Cagliari

13:30-14:10 — FrB9.1

A Survey on State Estimation Using Petri Nets (I), pp. 2630-2635.
Giua, Alessandro — Univ. of Cagliari, Italy / Aix-Marseille Univ. France
Seatzu, Carla — Univ. of Cagliari

14:10-14:30 — FrB9.2

Overview of Fault Diagnosis Methods Based on Petri Net Models (I), pp. 2636-2642.
Basile, Francesco — Univ. Degli Studi Di Salerno

14:30-14:50 — FrB9.3

*Deadlock Prevention: From Structural Analysis to Reachability Analysis (I)**.
Li, Zhiwu — SEME, Xidian Univ.

14:50-15:30 — FrB9.4

From Discrete to Continuous Models: A Perspective on Fluidization of Petri Nets (I), pp. 2643-2648.
Silva, Manuel — Univ. De Zaragoza
Mahulea, Cristian — Univ. of Zaragoza

FrB10 — Dresde Room

Automotive III (Regular Session)

Chair: Bratcu, Antoneta Iuliana — Grenoble Inst. of Tech.
Co-Chair: Grossi, Federica — Univ. of Modena and Reggio Emilia

13:30-13:50 — FrB10.1

LPV Control for Power Source Coordination -- Application to Electric Vehicles Energy Management Systems, pp. 2649-2654.
Nwesaty, Waleed — Grenoble Inst. of Tech. Gipsa-Lab. Lab. Control
Bratcu, Antoneta Iuliana — Grenoble Inst. of Tech.
Sename, Olivier — Grenoble INP / GIPSA-Lab.

13:50-14:10 — FrB10.2

State Feedback Synthesis for Homogenous Platoons under the Leader and Predecessor Following Scheme, pp. 2655-2660.
Koroglu, Hakan — Chalmers Univ. of Tech.
Falcone, Paolo — Chalmers Univ. of Tech.

14:10-14:30 — FrB10.3

Dynamic Modeling of a Full Toroidal Variator: The Power-Oriented Graphs Approach, pp. 2661-2666.
Zanasi, Roberto — Univ. of Modena and Reggio Emilia
Grossi, Federica — Univ. of Modena and Reggio Emilia
Fei, Marco — Univ. of Modena and Reggio Emilia

14:30-14:50 — FrB10.4

Lateral Vehicle Guidance Control for Autonomous and Cooperative Driving, pp. 2667-2672.
Walter, Marcus — BMW AG
Odenthal, Dirk — BMW AG
Nitzsche, Norbert — BMW AG

14:50-15:10 — FrB10.5

Battery Modelling Methods for Electric Vehicles - a Review, pp. 2673-2678.
Zhang, Cheng — queen's Univ. belfast
Li, Kang — Queen's Univ. Belfast
Mcloone, Sean — queen's Univ. belfast
Yang, Zhile — Queen's Univ. Belfast

15:10-15:30 — FrB10.6

Input-Output Linearisation with Input Constraints for an Innovative Engine Cooling System, pp. 2679-2684.
Butt, Saif Siddique — Univ. of Rostock
Prabel, Robert — Univ. of Rostock

FrC1 — Arp 3 Room

Topics in Optimization and Control (Regular Session)

Chair: Szederkényi, Gábor — Computer and Automation Res. Inst.
Co-Chair: Sawada, Kenji — The Univ. of Electro-Communications

17:00-17:20 — FrC1.1

Disclosing and Overcoming Inexact Nonlinearity Cancellation Issues, pp. 2685-2690.
Paoletti, Paolo — School of Engineering, Univ. of Liverpool
Innocenti, Giacomo — Univ. degli Studi di Firenze

17:20-17:40 — FrC1.2

Kinetic Feedback Computation for Polynomial Systems to Achieve Weak Reversibility and Minimal Deficiency, pp. 2691-2696.
Liptak, Gyorgy — MTA SZTAKI
Szederkényi, Gábor — Pazmany Peter Catholic Univ.
Hangos, Katalin M. — Computer & Automation Rsrch. Inst. of the HungarianAcademyof Sci

17:40-18:00 — FrC1.3

Output Feedback Controller Synthesis for Continuous-Time Discrete-Valued Input Systems: Model Following Control Case, pp. 2697-2702.
Sawada, Kenji — The Univ. of Electro-Communications
Shin, Seiichi — the Univ. of Electro-Communications

18:00-18:20 — FrC1.4

Rigidity Theory in SE(2) for Unscaled Relative Position Estimation Using Only Bearing Measurements (I), pp. 2703-2708.
Zelazo, Daniel — Tech. - Israel Inst. of Tech.
Franchi, Antonio — Centre National de la Recherche Scientifique (CNRS)
Robuffo Giordano, Paolo — IRISA / INRIA Rennes

18:20-18:40 — FrC1.5

Optimal Joint Probabilistic Data Association Filter Avoiding Coalescence in Close Proximity, pp. 2709-2714.
Kaufman, Evan — The George Washington Univ.
Lovell, Thomas Alan — Air Force Res. Lab.
Lee, Taeyoung — George Washington Univ.

18:40-19:00 — FrC1.6

Bottom-Up Approach to Multilevel Supervisory Control with Coordination, pp. 2715-2720.
Komenda, Jan — Czech Acad. of Sciences
Masopust, Tomas — Acad. of Sciences of the Czech Republic
van Schuppen, Jan H. — Van Schuppen Control Res.

FrC2 — Leicester Room

Model and Controller Reduction II (Regular Session)

Chair: Marinescu, Bogdan — RTE
Co-Chair: Ragnoli, Emanuele — IBM Res.

17:00-17:20 — FrC2.1

A Mix Balanced-Modal Truncations for Power Systems Model Reduction, pp. 2721-2726.
Belhocine, Mohamed — ENS Cachan and RTE R&D
Marinescu, Bogdan — RTE

17:20-17:40 — FrC2.2

Parametric Model Order Reduction by Sparse-Grid-Based Interpolation on Matrix Manifolds for Multidimensional Parameter Spaces, pp. 2727-2732.
Geuss, Matthias — TU München
Butnaru, Daniel — Tech. Univ. of Munich
Peherstorfer, Benjamin — Tech. Univ. München

Bungartz, Hans-Joachim	Tech. Univ. München
Lohmann, Boris	Tech. Univ. Muenchen

17:40-18:00 FrC2.3

Domain Decomposition for a Linear Advection-Diffusion Equation by Means of Minimax Filtering, pp. 2733-2738.

Ragnoli, Emanuele	IBM Res.

18:00-18:20 FrC2.4

Model Reduction for Complex Hyperbolic Networks, pp. 2739-2743.

Himpe, Christian	WWU Muenster
Ohlberger, Mario	WWU Muenster

18:20-18:40 FrC2.5

Parameter Set-Mapping Using Kernel-Based PCA for Linear Parameter-Varying Systems, pp. 2744-2749.

Rizvi, Syed Z.	Univ. of Georgia
Mohammadpour, Javad	Univ. of Georgia
Tóth, Roland	Eindhoven Univ. of Tech.
Meskin, Nader	Qatar Univ.

18:40-19:00 FrC2.6

On the Application of a Novel Model Order Reduction Algorithm for Sequentially Semi-Separable Matrices to the Identification of One-Dimensional Distributed Systems, pp. 2750-2755.

Qiu, Yue	Delft Center for System and Control,(Delft Univ. of Tech.
van Gijzen, Martin B.	Delft Univ. of Tech.
van Wingerden, Jan-Willem	Delft Univ. of Tech.
Verhaegen, Michel	Delft Univ. of Tech.

FrC3 Oberlin Room

PID Control (Regular Session)

Chair: Alexandridis, Antonios	Univ. of Patras
Co-Chair: Malaterre, Pierre-Olivier	Irstea

17:00-17:20 FrC3.1

PID Robust Gain-Scheduled Controller Design, pp. 2756-2761.

Vesely, Vojtech	Slovak Univ. of Tech. in Bratislava
Ilka, Adrian	Slovak Univ. of Tech. in Bratislava, Faculty of Electr

17:20-17:40 FrC3.2

Design of Missile Autopilot Using PI and Approximate Feedback Linearization Control with Time-Delay Adaptation Scheme, pp. 2762-2767.

Lee, Chang-Hun	Agency for Defense Development (ADD)
Lee, Yongwoo	Seoul National Univ.
Jun, Byung-Eul	Agency for Defense Development
Tahk, Min-Jea	KAIST

17:40-18:00 FrC3.3

PI Controller for SISO Linear Systems Based on Neural Linear PCA, pp. 2768-2773.

Brito Palma, Luis F. F.	Univ. Nova de Lisboa
Coito, Fernando José	Faculty of Sciences and Tech. - Univ. Nova de
Gil, Paulo	Faculdade de Ciências e Tecnologia, Univ. Nova de Lisboa

18:00-18:20 FrC3.4

Nonlinear Stability Analysis for Ac/dc Voltage Source Converters Driven by PI Current-Mode Controllers, pp. 2774-2779.

Krommydas, Konstantinos	Univ. of Patras
Alexandridis, Antonios	Univ. of Patras

18:20-18:40 FrC3.5

Automatic Tuning of Robust PI Controllers for a Cascade of Rivers or Irrigation Canals Pools (I), pp. 2780-2785.

Malaterre, Pierre-Olivier	Irstea
Dorchies, David	Irstea
Baume, Jean-Pierre	Irstea

FrC4 Arp 1 Room

Control Applications II (Regular Session)

Chair: Fedele, Giuseppe — Univ. of Calabria
Co-Chair: De Miras, J. — UMR CNRS 6599

17:00-17:20 FrC4.1

Improved Tracking Control in Hard-Disk Drive Servo Systems: A Benchmark Case Study, pp. 2786-2791.
Schmid, Robert — Univ. of Melbourne
Goel, Amish — Department of Electrical Engineering, Indian Inst. of Tech.

17:20-17:40 FrC4.2

Torque Ripple Suppression Control for Permanent Magnet Motors, pp. 2792-2797.
Fedele, Giuseppe — Univ. of Calabria
Ferrise, Andrea — Univ. della Calabria, Dip. Elettronica, Informatica e Siste

17:40-18:00 FrC4.3

Nonlinear PWM Controller for a Single-Phase Half Bridge AC-DC Converter, pp. 2798-2803.
Lachkar, Ibtissam — EMI
Giri, Fouad — Univ. of Caen
Abouloifa, Abdemajid — EMI
Chaoui, F.Z. — ENSET - Rabat

18:00-18:20 FrC4.4

Safety Study of the Industrial System with FMEA(C): Applied on the Storage Tank TK102, pp. 2804-2809.
Zennir, Youcef — Univ. 20 Aout 1955 Skikda
Bouras, Lakhdar — Univ. 20 aout 1955 Skikda
Mechhoud, El-ARKAM — Univ. 20 Aout 1955 Skikda
Bouras, Lakhdar — Univ. 20 Aout 1955 skikda

18:20-18:40 FrC4.5

Nonlinear Control of a Magnetic Levitation Shaft by Numerical Inversion of Its Behavioral Model, pp. 2810-2815.
Bonnet, Stéphane — Univ. de Tech. de Compiegne
De Miras, Jérôme — Univ. de Tech. de Compiègne

18:40-19:00 FrC4.6

An Anticipative Reactive Control Strategy to Deal with Unforeseen Obstacles During a Multi-Sensor-Based Navigation Task, pp. 2816-2821.
Durand Petiteville, Adrien — Univ. of California Davis
Cadenat, Viviane — LAAS-CNRS

FrC5 Arp 5 Room

Randomization and Averaging in Control of Systems and Networks (Tutorial Session)

Chair: Fradkov, Alexander L. — Acad. of Sciences of Russia
Co-Chair: Proskurnikov, Anton — St.-Petersburg State Univ.
Organizer: Fradkov, Alexander L. — Acad. of Sciences of Russia
Organizer: Granichin, Oleg — Saint Petersburg State Univ.
Organizer: Proskurnikov, Anton — Univ. of Groningen
Organizer: Amelina, Natalia — St. Petersburg State Univ.

17:00-17:40 FrC5.1

Averaged Continuous-Time Models in Identification and Control (I), pp. 2822-2826.
Fradkov, Alexander L. — Acad. of Sciences of Russia

17:40-18:20 FrC5.2

Randomized Stochastic Approximation Algorithms (I), pp. 2827-2832.
Granichin, Oleg — Saint Petersburg State Univ.
Amelin, Konstantin — SPBSU
Granichina, Olga — Herzen State Pedagogical Univ. of Russia

18:20-18:40 FrC5.3

Approximate Consensus in Multi-Agent Nonlinear Stochastic Systems (I), pp. 2833-2838.

Amelina, Natalia — St. Petersburg State Univ.
Fradkov, Alexander L. — Acad. of Sciences of Russia

18:40-19:00 FrC5.4

Average Consensus for Nonlinearly Coupled Agents: Quadratic Criteria (I), pp. 2839-2844.

Proskurnikov, Anton — Univ. of Groningen

FrC6 Arp 2 Room

Distributed and Real-Time Control (Regular Session)

Chair: Diehl, Moritz — Albert-Ludwigs-Univ. Freiburg
Co-Chair: Cela, Arben — Groupe ESIEE

17:00-17:20 FrC6.1

Refinement of a Bidirectional Platooning Controller by Wave Absorption at the Leader, pp. 2845-2850.

Martinec, Dan — Czech Tech. Univ. in Prague
Herman, Ivo — Czech Tech. Univ. in Prague, Faculty of Electrical Engi
Hurak, Zdenek — Czech Tech. Univ. in Prague
Sebek, Michael — Czech Tech. Univ. in Prague

17:20-17:40 FrC6.2

Team Optimality Conditions of Differential Decision Systems with Nonclassical Information Structures, pp. 2851-2856.

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

17:40-18:00 FrC6.3

Distributed Building Temperature Control with Power Constraints, pp. 2857-2862.

Obando, German — Univ. de los Andes
Quijano, Nicanor — Univ. de Los Andes
Rakoto-Ravalontsalama, Naly — Ec. des Mines de Nantes

18:00-18:20 FrC6.4

Scalable Stability Conditions for Heterogeneous Networks Via Integral Quadratic Constraints, pp. 2863-2867.

Khong, Sei Zhen — Lund Univ.
Rantzer, Anders — Lund Univ.

18:20-18:40 FrC6.5

Optimization for Networked Control Systems under the Hyper-Sampling Period, pp. 2868-2873.

Li, Xu-Guang — Northeastern Univ.
Cela, Arben — Groupe ESIEE
Niculescu, Silviu-Iulian — UMR CNRS 8506, CNRS-SUPELEC
Wen, Shi-Guang — Northeastern Univ.

18:40-19:00 FrC6.6

Linear Convergence of Distributed Multiple Shooting, pp. 2874-2879.

Kungurtsev, Vyacheslav — KU Leuven
Kozma, Attila — KU Leuven
Diehl, Moritz — KU Leuven

FrC7 Orangerie Room

Topics in Traffic Control (Regular Session)

Chair: Charalampidis, Alexandros — Swiss Federal Inst. of Tech. in Lausanne (EPFL)
Co-Chair: Gregoire, Jean — Mines ParisTech

17:00-17:20 FrC7.1

Optimal Traffic Control in Highway Transportation Networks Using Linear Programming, pp. 2880-2887.

Li, Yanning — King Abdullah Univ. of Science and Tech.

Canepa, Edward	King Abdullah Univ. of Science and Tech.
Claudel, Christian	KAUST

17:20-17:40 FrC7.2

Immersion and Invariance vs Sliding Mode Control for Reference Trajectory Tracking of Autonomous Vehicles, pp. 2888-2893.

Tagne, Gilles	Heudiasyc, Univ. of Tech. of Compiègne
Talj, Reine	Lab. HEUDIASYC, Univ. of Tech. of Compiègne
Charara, Ali	UMR CNRS 7253

17:40-18:00 FrC7.3

Speed Profile Optimization for Vehicles Crossing an Intersection under a Safety Constraint, pp. 2894-2901.

Charalampidis, Alexandros	Swiss Federal Inst. of Tech. in Lausanne (EPFL)
Gillet, Denis	Ec. Pol. Fédérale de Lausanne (EPFL)

18:00-18:20 FrC7.4

Priority-Based Intersection Management with Kinodynamic Constraints, pp. 2902-2907.

Gregoire, Jean	Mines ParisTech
Bonnabel, Silvere	Ec. des mines de paris
de La Fortelle, Arnaud	Mines ParisTech

18:20-18:40 FrC7.5

Integrated Traffic Flow and Emission Control Based on FASTLANE and the Multi-Class VT-Macro Model, pp. 2908-2913.

Liu, Shuai	Delft Univ. of Tech.
De Schutter, Bart	Delft Univ. of Tech.
Hellendoorn, Hans	Delft Univ. of Tech.

18:40-19:00 FrC7.6

Distributed Local Stabilization in Formation Control (I), pp. 2914-2919.

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

FrC8 Arp 4 Room

Sliding Mode Control (Regular Session)

Chair: Drakunov, Sergey V.	Embry-Riddle Aeronautical Univ.
Co-Chair: Levant, Arie	Tel - Aviv Univ.

17:00-17:20 FrC8.1

Skid Detection of an Autonomous Vehicle under Extreme Driving Conditions Using a Sliding Mode Observer, pp. 2920-2924.

Alvarado Valverde, Juan Alonso	Embry-Riddle Aeronautical Univ.
Drakunov, Sergey V.	Embry-Riddle Aeronautical Univ.

17:20-17:40 FrC8.2

Globally Convergent Fast Exact Differentiator with Variable Gains, pp. 2925-2930.

Levant, Arie	Tel - Aviv Univ.

17:40-18:00 FrC8.3

Model Based Event Triggered Robust MPC/ISM, pp. 2931-2936.

Ferrara, Antonella	Univ. of Pavia
Incremona, Gian Paolo	Univ. of Pavia
Magni, Lalo	Univ. of Pavia

18:00-18:20 FrC8.4

Evaluation of Acceleration-Based Disturbance Observation for Multicopter Control, pp. 2937-2944.

Tomic, Teodor	German Aerospace Center (DLR)

18:20-18:40 FrC8.5

An Induction Motor Sensor FDI Based on Higher Order Sliding Mode Decoupled Current Controller, pp. 2945-2950.

Kommuri, Suneel Kumar	Kyungpook National Univ. South Korea
Rath, Jagat Jyoti	Kyungpook National Univ.
Veluvolu, Kalyana C	Kyungpook National Univ.

Defoort, Michael — Valenciennes Univ.

18:40-19:00 — FrC8.6

Sliding Mode Based Attitude and Acceleration Controller for a Velocity-Varying Skid-To-Turn Missile, pp. 2951-2956.

Lee, Yongwoo — Seoul National Univ.
Kim, Youdan — Seoul National Univ.
Moon, Gwanyoung — ADD
Jun, Byung-Eul — Agency for Defense Development

FrC9 — Boston Room

Observers for Dynamical Systems II (Regular Session)

Chair: Zasadzinski, Michel — CRAN
Co-Chair: Boutat-Baddas, Latifa — Centre de Recherche d'Automatique de Nancy (CRAN)

17:00-17:20 — FrC9.1

Both Vehicle State and Driver's Torque Estimation Using Unknown Input Proportional Multi-Integral T-S Observer, pp. 2957-2962.

Soualmi, Boussaad — IRT SystemX
Sentouh, Chouki — LAMIH - Univ. of Valenciennes
Popieul, Jean-Christophe — Uniuversité de Valenciennes

17:20-17:40 — FrC9.2

H Dynamical Observer-Based Control for Descriptor Systems, pp. 2963-2968.

Osorio-Gordillo, Gloria-Lilia — Centro Nacional de Investigación y Desarrollo Tecnológico
Darouach, Mohamed — CRAN CNRS UMR 7039, Nancy Univ.
Boutat-Baddas, Latifa — Centre de Recherche d'Automatique de Nancy (CRAN)
Astorga-Zaragoza, Carlos — National Center for Res. and Tech. Development

17:40-18:00 — FrC9.3

Projective State Observers for Large-Scale Linear Systems, pp. 2969-2974.

Sadamoto, Tomonori — Tokyo Inst. of Tech.
Ishizaki, Takayuki — Tokyo Inst. of Tech.
Imura, Jun-ichi — Tokyo Inst. of Tech.

18:00-18:20 — FrC9.4

H-Infinity Observer Design for Linear Fractional-Order Systems in Time and Frequency Domains, pp. 2975-2980.

Boukal, Yassine — Lab. Physique et Matériaux Microélectonique, Automatique
Darouach, Mohamed — CRAN CNRS UMR 7039, Nancy Univ.
Zasadzinski, Michel — Univ. de Lorraine, CRAN, CNRS UMR 7039
Radhy, Nour-Eddine — Lab. Physique et Matériaux Microélectonique,Automatique e

18:20-18:40 — FrC9.5

Sliding-Mode Observer Based Synchronization of Interconnected Heterogeneous Systems with Measurement Uncertainty, pp. 2981-2985.

Lee, Sang-Chul — Gwangju Inst. of Science and Tech. (GIST)
Lee, Seung-Ju — Gwangju Inst. of Science and Tech. (GIST)
Ahn, Hyo-Sung — Gwangju Inst. of Sci & Tech.
Oh, Kwang-Kyo — Gwangju Inst. of Science and Tech. (GIST)

FrC10 — Dresde Room

Maritime and Aerospace Applications (Regular Session)

Chair: Fossen, Thor I. — Norwegain Univ. of Sci and Tech.
Co-Chair: Canuto, Enrico — Pol. di Torino

17:00-17:20 — FrC10.1

Stable and Reactive Centering in Conduits for Karstic Exploration, pp. 2986-2991.

Lasbouygues, Adrien — LIRMM
Lapierre, Lionel — LIRMM
Andreu, David — LIRMM-INRIA

Lopez Hermoso, Josue	LIRMM
Jourde, Hervé	HydroSciences Montpellier
Ropars, Benoit	Ciscrea - LIRMM

17:20-17:40 FrC10.2

Damage Detection Based on Wavelet Transform and Artificial Intelligence for Underwater Metallic Structures, pp. 2992-2997.

Lefebvre, Dimitri	Univ. Le Havre
Druaux, Fabrice	Univ. LE HAVRE
Sidibe, Yaya	Univ. du Havre
Leon, Fernand	Univ. du Havre
Maze, Gerard	Univ. du Havre

17:40-18:00 FrC10.3

Stochastic Methods for the Control of Crane Systems in Marine Applications, pp. 2998-3003.

Rauh, Andreas	Univ. of Rostock
Senkel, Luise	Univ. of Rostock, Chair of Mechatronics
Gebhardt, Jovanka	Univ. of Rostock, Chair of Mechatronics
Aschemann, Harald	Univ. of Rostock

18:00-18:20 FrC10.4

Minimization of Cross-Track and Along-Track Errors for Path Tracking of Marine Underactuated Vehicles, pp. 3004-3010.

Lekkas, Anastasios	Norwegian Univ. of Science and Tech.
Fossen, Thor I.	Norwegain Univ. of Sci and Tech.

18:20-18:40 FrC10.5

GES Long Baseline Navigation with Clock Offset Estimation, pp. 3011-3016.

Batista, Pedro	Inst. Superior Técnico

18:40-19:00 FrC10.6

Angular Drag-Free Control and Fine Satellite-To-Satellite Pointing for the Next Generation Gravity Missions (I), pp. 3017-3022.

Canuto, Enrico	Pol. di Torino
Colangelo, Luigi	Pol. di Torino