

# **2019 18th European Control Conference (ECC 2019)**

**Naples, Italy  
25-28 June 2019**

**Pages 1-715**



**IEEE Catalog Number: CFP1990U-POD  
ISBN: 978-1-7281-1314-2**

**Copyright © 2019, European Control Association (EUCA)  
All Rights Reserved**

***\*\*\* This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.***

|                         |                   |
|-------------------------|-------------------|
| IEEE Catalog Number:    | CFP1990U-POD      |
| ISBN (Print-On-Demand): | 978-1-7281-1314-2 |
| ISBN (Online):          | 978-3-907144-00-8 |

**Additional Copies of This Publication Are Available From:**

Curran Associates, Inc  
57 Morehouse Lane  
Red Hook, NY 12571 USA  
Phone: (845) 758-0400  
Fax: (845) 758-2633  
E-mail: [curran@proceedings.com](mailto:curran@proceedings.com)  
Web: [www.proceedings.com](http://www.proceedings.com)

CURRAN ASSOCIATES INC.  
**proceedings**  
.com

# TABLE OF CONTENTS

|  |     |
|--|-----|
| <b>KNOWLEDGE TRANSFER BETWEEN ROBOTS WITH SIMILAR DYNAMICS FOR HIGH-ACCURACY IMPROMPTU TRAJECTORY TRACKING</b> .....   | 1   |
| <i>Siqi Zhou ; Mohamed K. Helwa ; Angela P. Schoellig ; Andriy Sarabakha ; Erdal Kayacan</i>   |     |
| <b>LEARNING TO COMPENSATE PHOTOVOLTAIC POWER FLUCTUATIONS FROM IMAGES OF THE SKY BY IMITATING AN OPTIMAL POLICY</b> .....                                      | 9   |
| <i>Robin Spiess ; Felix Berkenkamp ; Andreas Krause ; Jan Poland</i>   |     |
| <b>LEARNING-BASED APPROXIMATION OF ROBUST NONLINEAR PREDICTIVE CONTROL WITH STATE ESTIMATION APPLIED TO A TOWING KITE</b> .....                                | 16  |
| <i>Benjamin Karg ; Sergio Lucia</i>  |     |
| <b>DATA DRIVEN CONTROL: AN OFFSET FREE APPROACH</b> .....  | 23  |
| <i>Jose R. Salvador ; D. R. Ramirez ; Teodoro Alamo ; D. Muñoz De La Peña ; G. García-Marín</i>  |     |
| <b>DATA-DRIVEN INFERENCE OF PASSIVITY PROPERTIES VIA GAUSSIAN PROCESS OPTIMIZATION</b> .....   | 29  |
| <i>Anne Romer ; Sebastian Trimpe ; Frank Allgöwer</i>  |     |
| <b>SET MEMBERSHIP IDENTIFICATION AND CONTROL OF AN ITERATIVE PROCESS</b> .....   | 36  |
| <i>Amin Rezaeizadeh</i>  |     |
| <b>ON SEPARABLE QUADRATIC LYAPUNOV FUNCTIONS FOR CONVEX DESIGN OF DISTRIBUTED CONTROLLERS</b> .....  | 42  |
| <i>Luca Furiieri ; Yang Zheng ; Antonis Papachristodoulou ; Maryam Kamgarpour</i>  |     |
| <b>ACCELERATED AVERAGE CONSENSUS ALGORITHM USING OUTDATED FEEDBACK</b> .....   | 50  |
| <i>Hossein Moradian ; Solmaz S. Kia</i>  |     |
| <b>ROBUST DISTRIBUTED MPC FOR DISTURBED AFFINE SYSTEMS USING PREDICTIONS OF TIME-VARYING COMMUNICATION</b> .....   | 56  |
| <i>Jannik Hahn ; Olaf Stursberg</i>  |     |
| <b>NETWORKED EVENT-BASED COLLISION AVOIDANCE OF MOBILE OBJECTS</b> .....   | 63  |
| <i>Michael Schwung ; Felix Hagedorn ; Jan Lunze</i>  |     |
| <b>GENERALIZED COVERAGE CONTROL FOR TIME-VARYING DENSITY FUNCTIONS</b> .....   | 71  |
| <i>James Kennedy ; Airlie Chapman ; Peter M. Dower</i>   |     |
| <b>PRIMAL DECOMPOSITION AND CONSTRAINT GENERATION FOR ASYNCHRONOUS DISTRIBUTED MIXED-INTEGER LINEAR PROGRAMMING</b> .....                                      | 77  |
| <i>Andrea Camisa ; Giuseppe Notarstefano</i>   |     |
| <b>FORMATION CONTROL ON JORDAN CURVES BASED ON NOISY PROXIMITY MEASUREMENTS</b> .....  | 83  |
| <i>Pietro Delellis ; Franco Garofalo ; Francesco Lo Iudice</i>   |     |
| <b>DECENTRALIZED CONTROL BARRIER FUNCTIONS FOR COUPLED MULTI-AGENT SYSTEMS UNDER SIGNAL TEMPORAL LOGIC TASKS</b> .....   | 89  |
| <i>Lars Lindemann ; Dimos V. Dimarogonas</i>   |     |
| <b>A VIRTUAL FORCE INTERACTION SCHEME FOR MONITORING COMPLEX UNKNOWN ENVIRONMENTS BY AUTONOMOUS MOBILE ROBOTS</b> .....  | 95  |
| <i>Kang Ji ; Qian Zhang ; Hui Cheng ; Dingli Yu</i>  |     |
| <b>EXTENSION OF THE CUCKER-DONG FLOCKING WITH A VIRTUAL LEADER AND A REACTIVE CONTROL LAW</b> .....  | 101 |
| <i>Ertug Olcay ; Boris Lohmann</i>   |     |
| <b>FORMATION CONTROL FOR FULLY ACTUATED SYSTEMS: A QUATERNION-BASED BEARING RIGIDITY APPROACH</b> .....  | 107 |
| <i>Giulia Michieletto ; Angelo Cenedese</i>  |     |
| <b>ASYMPTOTIC ANALYSIS OF THE FRIEDKIN-JOHNSEN MODEL WHEN THE MATRIX OF THE SUSCEPTIBILITY WEIGHTS APPROACHES THE IDENTITY MATRIX</b> .....                    | 113 |
| <i>Alfredo Pironti</i>   |     |
| <b>ACTIVE FLUTTER SUPPRESSION BY MEANS OF FIXED-ORDER <math>H_\infty</math> CONTROL: RESULTS FOR THE BENCHMARK ACTIVE CONTROL TECHNOLOGY (BACT) WING</b> ..... | 119 |
| <i>Filip Svoboda ; Martin Hromcik</i>  |     |
| <b>FEASIBILITY OF USING FLUSH AIR DATA SENSORS FOR REAL-TIME AERODYNAMIC LOAD ESTIMATION FOR USE IN AIRCRAFT CONTROL</b> .....                                 | 125 |
| <i>R. Goswami ; A. Kelkar ; J. Vogel ; D. Chaussee</i>   |     |

|   |     |
|---|-----|
| <b>COMBINING TIRE-WEAR AND BRAKING CONTROL FOR AERONAUTICAL APPLICATIONS</b> .....  | 131 |
| <i>L. D'Avico ; M. Tanelli ; S. M. Savaresi</i>   |     |
| <b>DETECTABILITY ANALYSIS OF FAULTS AFFECTING ACTUATORS AND SENSORS OF FLEXIBLE SPACE STRUCTURES</b> .....                          | 137 |
| <i>P. Castaldi ; A. Macchelli ; N. Mimmo</i>  |     |
| <b>IMPACT TIME CONTROL GUIDANCE WITH FINITE-TIME CONVERGENCE BASED ON PURE PROPORTIONAL NAVIGATION</b> .....                        | 143 |
| <i>Jinrae Kim ; Youdan Kim</i>  |     |
| <b>FAULT ESTIMATION AND FAULT-TOLERANT STEERING LAW FOR SINGLE GIMBAL CONTROL MOMENT GYRO SYSTEMS</b> .....                         | 149 |
| <i>Chengfei Yue ; Qiang Shen ; Goh Cher Hiang ; Tong Heng Lee</i>   |     |
| <b>THE USE OF PARTIAL STABILITY IN THE ANALYSIS OF INTERCONNECTED SYSTEMS</b> .....   | 155 |
| <i>Sergey G. Nersesov ; Hashem Ashrafiuon</i>   |     |
| <b>CAUSALLY STABLE APPROXIMATION OF OPTIMAL MAPS IN MAXIMAL VALUE CONSTRAINED LEAST-SQUARES OPTIMIZATION</b> .....                  | 160 |
| <i>Omer Tanovic ; Alexandre Megretski</i>   |     |
| <b>PARAMETRIC DEPENDENCE OF LARGE DISTURBANCE RESPONSE FOR VECTOR FIELDS WITH EVENT-SELECTED DISCONTINUITIES</b> .....              | 166 |
| <i>Michael W. Fisher ; Ian A. Hiskens</i>   |     |
| <b>A NOVEL PASSIVITY BASED CONTROLLER FOR A PIEZOELECTRIC BEAM</b> .....  | 174 |
| <i>Krishna C. Kosaraju ; Matthijs C. De Jong ; Jacquelin M. A. Scherpen</i>   |     |
| <b>A DISCONTINUOUS CONSENSUS ALGORITHM WITH NEIGHBOR COUNTING</b> .....   | 180 |
| <i>Arijit Sen ; Soumya Ranjan Sahoo ; Mangal Kothari</i>  |     |
| <b>ON NOTIONS OF OUTPUT FINITE-TIME STABILITY</b> .....   | 186 |
| <i>Konstantin Zimenko ; Denis Efimov ; Andrey Polyakov ; Artem Kremlev</i>  |     |
| <b>CO-ACTIVATION AND EEMG-FEEDBACK FOR RESTORING HAND-FUNCTIONS</b> .....   | 191 |
| <i>Christian Klauer ; Emilia Ambrosini ; Simona Ferrante ; Alessandra Pedrocchi</i>   |     |
| <b>STATE ESTIMATION FOR STOCHASTIC NONLINEAR SYSTEMS WITH APPLICATIONS TO VIRAL INFECTIONS</b> .....                                | 197 |
| <i>Miguel Hernandez-Gonzalez ; Gustavo Hernandez-Mejia ; Alma Y. Alanis ; Esteban A. Hernandez-Vargas</i>                           |     |
| <b>OPTIMIZED TUNING OF AN IMC SCHEME FOR DEPTH OF HYPNOSIS CONTROL</b> .....  | 203 |
| <i>L. Merigo ; F. Padula ; N. Latronico ; M. Paltenghi ; A. Visioli</i>   |     |
| <b>SEBARES - DESIGN AND EVALUATION OF A CONTROLLER FOR A NOVEL EXTERNALLY GUIDED SELF-BALANCING PATIENT RESCUE AID</b> .....        | 209 |
| <i>Mark Verjans ; Lovis Phlippen ; Philipp Schleer ; Klaus Radermacher</i>  |     |
| <b>REPLICATING HUMAN BRAIN MECHANISMS TOWARDS BALANCING</b> .....   | 215 |
| <i>Hedyeh Jafari ; George Nikolakopoulos ; Thomas Gustafsson</i>  |     |
| <b>PHYSIOLOGICAL CONTROL APPROACH FOR HEART PUMP</b> .....  | 221 |
| <i>Mohsen Bakouri</i>   |     |
| <b>OPTIMAL COORDINATION OF AUTOMATED VEHICLES AT INTERSECTIONS WITH TURNS</b> .....   | 225 |
| <i>Robert Hult ; Mario Zanon ; Sébastien Gros ; Paolo Falcone</i>   |     |
| <b>BAYESIAN TIRE-FRICTION LEARNING BY GAUSSIAN-PROCESS STATE-SPACE MODELS</b> .....   | 231 |
| <i>Karl Berntorp</i>  |     |
| <b>FREQUENCY DOMAIN IDENTIFICATION AND IDENTIFIABILITY ANALYSIS OF A NONLINEAR VEHICLE DRIVETRAIN MODEL</b> .....                   | 237 |
| <i>Eduard Popp ; Mathias Tantau ; Mark Wielitzka ; Tobias Ortmaier ; Dennis Giebert</i>   |     |
| <b>A STOCHASTIC MODEL PREDICTIVE CONTROL APPROACH FOR DRIVER-AIDED INTERSECTION CROSSING WITH UNCERTAIN DRIVER TIME DELAY</b> ..... | 243 |
| <i>Alexander Katriniok ; Stefan Kojchev ; Erjen Lefeber ; Henk Nijmeijer</i>  |     |
| <b>MAXIMIZING AUTONOMOUS IN-WHEEL ELECTRIC VEHICLE BATTERY STATE OF CHARGE WITH OPTIMAL CONTROL ALLOCATION</b> .....                | 250 |
| <i>András Mihály ; Péter Gáspár ; Hakan Basargan</i>  |     |
| <b>REAL-TIME CONSTRAINED TRAJECTORY PLANNING AND VEHICLE CONTROL FOR PROACTIVE AUTONOMOUS DRIVING WITH ROAD USERS</b> .....         | 256 |
| <i>Ivo Batkovic ; Mario Zanon ; Mohammad Ali ; Paolo Falcone</i>  |     |
| <b>CONTRACTS AS SPECIFICATIONS FOR DYNAMICAL SYSTEMS IN DRIVING VARIABLE FORM</b> .....   | 263 |
| <i>Bart Besselink ; Karl H. Johansson ; Arjan Van Der Schaft</i>  |     |

|   |     |
|---|-----|
| <b>UNKNOWN-INPUT STATE OBSERVERS WITH MINIMAL ORDER FOR LINEAR IMPULSIVE SYSTEMS</b> .....  | 269 |
| <i>Giuseppe Conte ; Anna Maria Perdon ; Elena Zattoni</i>   |     |
| <b>SYMBOLIC MODELS APPROXIMATING POSSIBLY UNSTABLE TIME-DELAY SYSTEMS WITH APPLICATION TO THE ARTIFICIAL PANCREAS</b> .....                 | 275 |
| <i>Giordano Pola ; Alessandro Borri ; Pierdomenico Pepe ; Pasquale Palumbo ; Maria D. Di Benedetto</i>                                      |     |
| <b>HYBRID CONTROL LAW FOR A THREE-LEVEL NPC RECTIFIER</b> .....   | 281 |
| <i>S. Hadjeras ; C. Albea Sanchez ; F. Gomez-Estern Aguilar ; F. Gordillo ; G. Garcia</i>   |     |
| <b><math>\varepsilon</math> -APPROXIMATE OUTPUT REGULATION OF LINEAR STOCHASTIC SYSTEMS: A HYBRID APPROACH</b> .....                        | 287 |
| <i>Alberto Mellone ; Giordano Scarciotti</i>  |     |
| <b>STATE AND MODE ESTIMATION FOR PIECEWISE LINEAR SYSTEMS</b> .....   | 293 |
| <i>Manuel Mera ; Héctor Ríos ; Francisco Javier Bejarano</i>  |     |
| <b>REDUCED ORDER MODEL PREDICTIVE CONTROL FOR SETPOINT TRACKING</b> .....   | 299 |
| <i>Joseph Lorenzetti ; Benoit Landry ; Sumeet Singh ; Marco Pavone</i>  |     |
| <b>DATA-ENABLED PREDICTIVE CONTROL: IN THE SHALLOWS OF THE DEEPC</b> .....  | 307 |
| <i>Jeremy Coulson ; John Lygeros ; Florian Dörfler</i>  |     |
| <b>FAST SEPARABLE TERMINAL COST SYNTHESIS FOR DISTRIBUTED MPC</b> .....   | 313 |
| <i>Giuliano Costantini ; Ramin Rostami ; Daniel Görge</i>   |     |
| <b>OPTIMAL CONTROL WITH MEMORY EFFECTS: THEORY AND APPLICATION TO WINGS</b> .....   | 319 |
| <i>Elena Paijelman ; Gianluca Pepe ; Antonio Carcaterra</i>   |     |
| <b>EFFICIENT COMPUTATION OF RPI SETS FOR TUBE-BASED ROBUST MPC</b> .....  | 325 |
| <i>Moritz Schulze Darup ; Dieter Teichrib</i>   |     |
| <b>ROBUST TUBE-ENHANCED MULTI-STAGE OUTPUT FEEDBACK MPC FOR LINEAR SYSTEMS WITH ADDITIVE AND PARAMETRIC UNCERTAINTIES</b> .....             | 331 |
| <i>Sankaranarayanan Subramanian ; Mohamed Aboelnour ; Sebastian Engell</i>  |     |
| <b>KERNELIZED IDENTIFICATION OF LINEAR PARAMETER-VARYING MODELS WITH LINEAR FRACTIONAL REPRESENTATION</b> .....                             | 337 |
| <i>Manas Mehari ; Dario Piga ; Roland Tóth ; Alberto Bemporad</i>   |     |
| <b>ON THE ACCURACY OF DRUG-RESISTANT CELL POPULATION ESTIMATION FROM TOTAL CANCER SIZE MEASUREMENTS</b> .....                               | 343 |
| <i>Mahsa Doosthosseini ; Elsa Hansen ; Hosam K. Fathy</i>   |     |
| <b>INFORMATIVITY: HOW TO GET JUST SUFFICIENTLY RICH FOR THE IDENTIFICATION OF MISO FIR SYSTEMS WITH MULTISINE EXCITATION?</b> .....         | 351 |
| <i>Kevin Colin ; Xavier Bombois ; Laurent Bako ; Federico Morelli</i>   |     |
| <b>A DATA SELECTION METHOD FOR LARGE DATABASES BASED ON RECURSIVE INSTRUMENTAL VARIABLES FOR SYSTEM IDENTIFICATION OF MISO MODELS</b> ..... | 357 |
| <i>David Arengas ; Andreas Kroll</i>  |     |
| <b>OPTIMAL EXPERIMENT DESIGN FOR THE IDENTIFICATION OF ONE MODULE IN THE INTERCONNECTION OF LOCALLY CONTROLLED SYSTEMS</b> .....            | 363 |
| <i>F. Morelli ; X. Bombois ; H. Hjalmarsson ; L. Bako ; K. Colin</i>  |     |
| <b>RESIDUAL ANALYSIS OF NESTED NARIMA MODELS OF THE ATMOSPHERIC DISTILLATION COLUMN</b> .....   | 369 |
| <i>Michal Falkowski ; Pawel D. Domanski</i>   |     |
| <b>RISK-AVERSE RISK-CONSTRAINED OPTIMAL CONTROL</b> .....   | 375 |
| <i>Pantelis Sopasakis ; Mathijs Schuurmans ; Panagiotis Patrinos</i>  |     |
| <b>GEOMETRY-DRIVEN DETERMINISTIC SAMPLING FOR NONLINEAR BINGHAM FILTERING</b> .....   | 381 |
| <i>Kailai Li ; Daniel Frisch ; Benjamin Noack ; Uwe D. Hanebeck</i>   |     |
| <b>ON A SOLUTION TO THE PROBLEM OF TIME-VARYING ZERO-SUM LQ STOCHASTIC DIFFERENCE GAME: A RICCATI EQUATION APPROACH</b> .....               | 388 |
| <i>Samir Aberkane ; Vasile Dragan</i>   |     |
| <b>ANNULAR FINITE-TIME STABILITY AND STABILIZATION OF CONTINUOUS-TIME MARKOV JUMP LINEAR SYSTEMS</b> .....                                  | 394 |
| <i>Gaetano Tartaglione ; Marco Ariola ; Gianmaria De Tommasi ; Francesco Amato</i>  |     |
| <b>SEMIALGEBRAIC OUTER APPROXIMATIONS FOR SET-VALUED NONLINEAR FILTERING</b> .....  | 400 |
| <i>Dario Piga ; Alessio Benavoli</i>  |     |
| <b>SPARSITY-CONSTRAINED OPTIMIZATION OF INPUTS TO SECOND-ORDER SYSTEMS</b> .....  | 406 |
| <i>Olof Troeng ; Mattias Fält</i>   |     |

|  |     |
|--|-----|
| <b>ACTIVE DAMPING OF A DC NETWORK WITH A CONSTANT POWER LOAD: AN ADAPTIVE OBSERVER-BASED DESIGN</b> .....  | 411 |
| <i>Juan E. Machado ; Romeo Ortega ; Alessandro Astolfi ; José Arocas-Pérez ; Robert Griñó ; Anton Pyrkin ; Alexey Bobtsov</i>                        |     |
| <b>ADAPTIVE METHOD FOR CONTROL TUNING OF GRID-CONNECTED INVERTER BASED ON GRID MEASUREMENTS DURING START-UP</b> .....                                | 417 |
| <i>Roni Luhtala ; Tommi Reinikka ; Henrik Alenius ; Tomi Roinila ; Tuomas Messo</i>  |     |
| <b>LOW-COST HARDWARE IN THE LOOP IMPLEMENTATION OF A BOOST CONVERTER</b> .....   | 423 |
| <i>Daniel S. Castro ; Rafael F. Q. Magossi ; Renan F. Bastos ; Vilma A. Oliveira ; Ricardo Q. Machado</i>  |     |
| <b>A NEW FRAMEWORK FOR DEALING WITH INPUT CONSTRAINTS ON PARALLEL INTERCONNECTION OF BUCK CONVERTERS</b> .....                                       | 429 |
| <i>Jérémie Kreiss ; Jean-François Tréguët ; Romain Delpoux ; Jean-Yves Gauthier ; Xuefang Lin-Shi</i>  |     |
| <b>PARTIAL HARMONIC CURRENT DISTORTION MITIGATION IN MICROGRIDS USING PROPORTIONAL RESONANT CONTROLLER</b> .....                                     | 435 |
| <i>Augusto S. Padula ; Elian J. Agnoletto ; Rodolpho V. A. Neves ; Rafael F. Q. Magossi ; Ricardo Q. Machado ; Vilma A. Oliveira</i>                 |     |
| <b>ADAPTIVE ONLINE PARAMETER ESTIMATION ALGORITHM OF PEM FUEL CELLS</b> .....  | 441 |
| <i>Yashan Xing ; Jing Na ; Ramon Costa-Castelló</i>  |     |
| <b>ROBUST STABILIZATION OF DIFFERENTIAL-ALGEBRAIC SYSTEMS PERTURBED ON NORMALIZED COPRIME FACTORS</b> .....  | 447 |
| <i>Sebastian Florin Tudor ; Cristian Oara</i>  |     |
| <b>BICOPRIME FACTOR ROBUST CONTROL SYNTHESIS VIA REDUCED DIMENSION ALGEBRAIC RICCATI EQUATIONS</b> .....   | 453 |
| <i>Mihalis Tsiakkas ; Alexander Lanzon</i>   |     |
| <b>ROBUST CONTROL DESIGN FOR ELECTRICALLY DRIVEN HIGH-PRESSURE PUMPS USING <math>H_{\infty}</math> APPROACH WITH JOINT SHAPING FUNCTIONS</b> .....   | 459 |
| <i>Stefan Niederberger ; Rodolfo Orjuela ; Michel Basset</i>   |     |
| <b>ROBUST PRINCIPAL COMPONENT ALGORITHMS FOR HIGH-ORDER FAST-SAMPLED SYSTEMS</b> .....   | 465 |
| <i>Hao Yang ; Rafael M. Morales ; Matthew C. Turner</i>  |     |
| <b>ROBUSTIFICATION OF SAMPLE-AND-HOLD CONTROLLERS FOR THE CONSENSUS PROBLEM</b> .....  | 471 |
| <i>F. Cesarone ; P. Pepe</i>   |     |
| <b>A ROBUST DESIGN STRATEGY FOR STOCK TRADING VIA FEEDBACK CONTROL</b> .....   | 477 |
| <i>Gabriele Maroni ; Simone Formentin ; Fabio Previdi</i>  |     |
| <b>CONTROL BY NEUROMODULATION: A TUTORIAL</b> .....  | 483 |
| <i>Rodolphe Sepulchre ; Timothy O'Leary ; Guillaume Drion ; Alessio Franci</i>   |     |
| <b>A PREDICTIVE LEARNING APPROACH TO OPTIMAL LOAD SHARING IN ENERGY MANAGEMENT SYSTEMS</b> .....   | 498 |
| <i>Elene M. Espeland ; Byung K. Jung ; David A. Anisi</i>  |     |
| <b>DISTRIBUTED VALUE-FUNCTION LEARNING WITH LINEAR CONVERGENCE RATES</b> .....   | 505 |
| <i>Lucas Cassano ; Kun Yuan ; Ali H. Sayed</i>   |     |
| <b>A COMBINED SUPPORT VECTOR MACHINE AND SUPPORT VECTOR REPRESENTATION MACHINE METHOD FOR PRODUCTION CONTROL</b> .....                               | 512 |
| <i>Antonio Acernese ; Carmen Del Vecchio ; Luigi Glielmo ; Gianfranco Fenu ; Felice Andrea Pellegrino</i>  |     |
| <b>A NAVIGATION SCHEME FOR A RANDOM MAZE USING REINFORCEMENT LEARNING WITH QUADROTOR VISION</b> .....  | 518 |
| <i>Xinglin Yu ; Yuhu Wu ; Xi-Ming Sun</i>  |     |
| <b>APPROXIMATE DYNAMIC PROGRAMMING FOR LINEAR SYSTEMS WITH STATE AND INPUT CONSTRAINTS</b> .....   | 524 |
| <i>Ankush Chakrabarty ; Rien Quirynen ; Claus Danielson ; Weinan Gao</i>   |     |
| <b>LEARNING CONTINUOUS Q-FUNCTIONS USING GENERALIZED BENDERS CUTS</b> .....  | 530 |
| <i>Joseph Warrington</i>   |     |
| <b>A QUANTITATIVE APPROACH ON ASSUME-GUARANTEE CONTRACTS FOR SAFETY OF INTERCONNECTED SYSTEMS</b> .....  | 536 |
| <i>Alina Eqtami ; Antoine Girard</i>   |     |
| <b>A CONSENSUS-BASED VOLTAGE CONTROL FOR REACTIVE POWER SHARING AND PCC VOLTAGE REGULATION IN MICROGRIDS WITH PARALLEL-CONNECTED INVERTERS</b> ..... | 542 |
| <i>Ajay Krishna ; Johannes Schiffer ; Nima Monshizadeh ; Jörg Raisch</i>   |     |
| <b>NASH EQUILIBRIUM SEEKING IN POTENTIAL GAMES WITH DOUBLE-INTEGRATOR AGENTS</b> .....   | 548 |
| <i>Filippo Fabiani ; Andrea Caii</i>   |     |

|   |     |
|---|-----|
| <b>A SPARSE POLYTOPIC LPV CONTROLLER FOR FULLY-DISTRIBUTED NONLINEAR OPTIMAL CONTROL</b> .....  | 554 |
| <i>Sarnavi Mahesh ; Sara Spedicato ; Giuseppe Notarstefano</i>  |     |
| <b>A SCENARIO APPROACH TO ROBUST DISTRIBUTED CONTROL FOR PLANTWIDE PROCESS SYSTEMS</b> .....  | 560 |
| <i>Yitao Yan ; Jie Bao</i>  |     |
| <b>DISTRIBUTED MINIMUM ENERGY LEADER-FOLLOWER ALGORITHM FOR MULTI-AGENT SYSTEMS WITH AN ACTIVE NON-HOMOGENOUS LEADER</b> .....                                  | 566 |
| <i>Yi-Fan Chung ; Solmaz S. Kia</i>   |     |
| <b>MULTI-AGENT ADAPTIVE ESTIMATION WITH CONSENSUS IN REPRODUCING KERNEL HILBERT SPACES</b> .....  | 572 |
| <i>Parag Bobade ; Dimitra Panagou ; Andrew J. Kurdila</i>   |     |
| <b>LEADER SELECTION FOR MINIMUM TIME CONSENSUS IN NETWORKS OF DISCRETE TIME SYSTEMS</b> .....   | 578 |
| <i>Ameer K. Mulla</i>   |     |
| <b>CONSENSUS TRACKING IN MULTI-DIMENSIONAL SYSTEMS</b> .....  | 584 |
| <i>Souradip De ; Soumya Ranjan Sahoo ; Pankaj Wahi</i>  |     |
| <b>A DISTRIBUTED STRATEGY TO DETECT WHEN TO STOP THE CONTINUOUS-TIME AVERAGE CONSENSUS PROTOCOL</b> .....   | 590 |
| <i>Antonio Petitti ; Annalisa Milella ; Alessandro Rizzo</i>  |     |
| <b>PARTIAL CONTAINMENT CONTROL OVER SIGNED GRAPHS</b> .....   | 596 |
| <i>Pietro Delellis ; Anna Dimeglio ; Franco Garofalo ; Francesco Lo Iudice</i>  |     |
| <b>THE SHANNON CAPACITY OF LINEAR DYNAMICAL NETWORKS</b> .....  | 602 |
| <i>Giacomo Baggio ; Vaibhav Katewa ; Fabio Pasqualetti ; Sandro Zampieri</i>  |     |
| <b>SIMULTANEOUS DESIGN OF POSITIVE ACCELERATION VELOCITY AND POSITION FEEDBACK BASED COMBINED DAMPING AND TRACKING CONTROL SCHEME FOR NANOPositionERS</b> ..... | 608 |
| <i>Adedayo K. Babarinde ; Li-Min Zhu ; Sumeet S. Aphale</i>   |     |
| <b>IDA-PBC FOR UNDERACTUATED MECHANICAL SYSTEMS IN IMPLICIT PORT-HAMILTONIAN REPRESENTATION</b> .....   | 614 |
| <i>Oscar B. Cieza ; Johann Reger</i>  |     |
| <b>FEEDFORWARD CONTROL OF A HYDRAULIC CLUTCH ACTUATION PATH</b> .....   | 620 |
| <i>Felix Mesmer ; Tomas Szabo ; Knut Graichen</i>   |     |
| <b>GAUSSIAN PROCESS BASED MULTI-RATE OBSERVER FOR THE DYNAMIC POSITIONING ERROR OF A MEASURING MACHINE</b> .....  | 627 |
| <i>Michael Ringkowski ; Oliver Sawodny</i>  |     |
| <b>MODEL PREDICTIVE TORQUE CONTROL OF A WIND TURBINE SYSTEM TEST BENCH IN HARDWARE-IN-THE-LOOP OPERATION</b> .....  | 633 |
| <i>Christian Leisten ; Lennard Kavenl ; Uwe Jassmann ; Dirk Abel</i>  |     |
| <b>MODEL BASED DESIGN AND STABILITY ANALYSIS OF A CASCADED CONTROLLED ELECTRIC VEHICLE MOTION AND STORAGE SYSTEM</b> .....                                      | 639 |
| <i>Jemma J. Makrygiorgou ; Antonio T. Alexandridis</i>  |     |
| <b>ON FINITE-TIME STABILITY OF HOMOGENEOUS SYSTEMS WITH MULTIPLICATIVE BOUNDED FUNCTION</b> .....   | 645 |
| <i>Y. Braidiz ; W. Perruquetti ; A. Polyakov ; D. Efimov</i>  |     |
| <b>QUADROTOR CONTROL DESIGN UNDER TIME AND STATE CONSTRAINTS: IMPLICIT LYAPUNOV FUNCTION APPROACH</b> .....   | 650 |
| <i>Siyuan Wang ; Andrey Polyakov ; Gang Zheng</i>   |     |
| <b>STABILIZATION OF NON-ADMISSIBLE CURVES FOR A CLASS OF NONHOLONOMIC SYSTEMS</b> .....   | 656 |
| <i>Victoria Grushkovskaya ; Alexander Zuyev</i>   |     |
| <b>A LINEAR INTEGRAL RESONANT CONTROLLER FOR SUPPRESSING JUMP-PHENOMENA IN MEMS</b> .....   | 662 |
| <i>James Maclean ; Sumeet S. Aphale</i>   |     |
| <b>ROBUST FINITE-TIME STABILITY OF HOMOGENEOUS SYSTEMS WITH RESPECT TO MULTIPLICATIVE DISTURBANCES</b> .....  | 668 |
| <i>Y. Braidiz ; D. Efimov ; A. Polyakov ; W. Perruquetti</i>  |     |
| <b>ANALYSIS OF COUPLED GENETIC OSCILLATORS WITH DELAYED POSITIVE FEEDBACK INTERCONNECTIONS</b> .....  | 674 |
| <i>Giulia Giordano ; Abhyudai Singh ; Franco Blanchini</i>  |     |

|  |     |
|--|-----|
| <b>IN-SILICO FEEDBACK CONTROL OF A MIMO SYNTHETIC TOGGLE SWITCH VIA PULSE-WIDTH MODULATION</b> .....                         | 680 |
| <i>Agostino Guarino ; Davide Fiore ; Mario Di Bernardo</i>   |     |
| <b>LOCALIZED SPATIAL EMERGENT BEHAVIOUR IN BACTERIAL CELLS VIA BAND-DETECT NETWORK MOTIF</b> .....                           | 686 |
| <i>Irene Zorzan</i>  |     |
| <b>PRACTICAL DIFFERENTIATION USING ULTRASENSITIVE MOLECULAR CIRCUITS</b> .....   | 692 |
| <i>Christian Cuba Samaniego ; Giulia Giordano ; Elisa Franco</i>   |     |
| <b>NOISE INDUCED BIMODALITY IN GENETIC CIRCUITS WITH MONOSTABLE POSITIVE FEEDBACK</b> .....                                  | 698 |
| <i>Pavol Bokes ; Abhyudai Singh</i>  |     |
| <b>NOISE PROPAGATION IN CHEMICAL REACTION NETWORKS: ANALYSIS OF A MOLECULAR SUBTRACTOR MODULE</b> .....                      | 704 |
| <i>Carlo Cosentino ; Costanzo Manes ; Giovanni Palombo ; Pasquale Palumbo</i>  |     |
| <b>AUTOMATIC DRIVER PHONE HAND-USAGE DETECTION: A CEPSTRUM-BASED APPROACH</b> .....  | 710 |
| <i>Simone Gelmini ; Simone Formentin ; Silvia Strada ; Mara Tanelli ; Sergio Savaresi</i>                                    |     |
| <b>COMPARISON OF TWO ROBUST STATIC OUTPUT FEEDBACK <math>H_2</math> DESIGN APPROACHES FOR CAR LATERAL CONTROL</b> .....      | 716 |
| <i>Simon Mustaki ; Anh-Tu Nguyen ; Philippe Chevrel ; Mohamed Yagoubi ; François Fauvel</i>                                  |     |
| <b>ANTICIPATORY AND COMPENSATORY E-ASSISTANCE FOR HAPTIC SHARED CONTROL OF THE STEERING WHEEL</b> .....                      | 724 |
| <i>Béatrice Pano ; Philippe Chevrel ; Fabien Claveau</i>   |     |
| <b>AN EXPERIMENTALLY VALIDATED LQR APPROACH TO AUTONOMOUS DRIFTING STABILIZATION</b> .....                                   | 732 |
| <i>Marco Baur ; Luca Bascetta</i>  |     |
| <b>TRUNCATED BATTERY POWER FOLLOWING STRATEGY FOR ENERGY MANAGEMENT CONTROL OF SERIES HYBRID ELECTRIC VEHICLES</b> .....     | 738 |
| <i>Boli Chen ; Simos A. Evangelou</i>  |     |
| <b>MODEL PREDICTIVE CONTROL DESIGN FOR OVERTAKING MANEUVERS FOR MULTI-VEHICLE SCENARIOS</b> .....                            | 744 |
| <i>Balázs Németh ; Tamás Hegedus ; Péter Gáspár</i>  |     |
| <b>THE PROBABILISTIC CONVOLUTION REGULARIZATION OF ZENO HYBRID SYSTEMS</b> .....   | 750 |
| <i>Ismail Belgacem ; Hamid Bensalah ; Brahim Cherki ; Roderick Edwards</i>   |     |
| <b>TRAJECTORY OPTIMIZATION AND ORBITAL STABILIZATION OF UNDERACTUATED EULER-LAGRANGE SYSTEMS WITH IMPACTS</b> .....          | 758 |
| <i>Christian Fredrik Sætre ; Anton Shiriaev ; Torleif Anstensrud</i>   |     |
| <b>A HYBRID CONTROLLER FOR OBSTACLE AVOIDANCE IN AN N-DIMENSIONAL EUCLIDEAN SPACE</b> .....                                  | 764 |
| <i>Soulaimane Berkane ; Andrea Bisoffi ; Dimos V. Dimarogonas</i>  |     |
| <b>GENERALIZED SWITCHED SYSTEMS WITH APPLICATION TO HYBRID SYSTEMS</b> .....   | 770 |
| <i>Ti-Chung Lee ; Ying Tan ; Iven Mareels</i>  |     |
| <b>SAFETY VERIFICATION OF NONLINEAR SWITCHED SYSTEMS VIA BARRIER FUNCTIONS AND BARRIER DENSITIES</b> .....                   | 776 |
| <i>Aysegül Kivilcim ; Özkan Karabacak ; Rafael Wisniewski</i>  |     |
| <b>ROBUST MULTI-STAGE NMPC UNDER STRUCTURAL PLANT-MODEL MISMATCH WITHOUT FULL-STATE MEASUREMENTS</b> .....                   | 781 |
| <i>Sakthi Thangavel ; Sankaranarayan Subramanian ; Radoslav Paulen ; Sebastian Engell</i>                                    |     |
| <b>APPROXIMATE DISSIPATIVITY AND PERFORMANCE BOUNDS FOR INTERCONNECTED SYSTEMS</b> .....                                     | 787 |
| <i>Philipp N. Köhler ; Matthias A. Müller ; Frank Allgöwer</i>   |     |
| <b>A SIMPLE FRAMEWORK FOR NONLINEAR ROBUST OUTPUT-FEEDBACK MPC</b> .....   | 793 |
| <i>Johannes Köhler ; Frank Allgöwer ; Matthias A. Müller</i>   |     |
| <b>ECHO STATE NETWORKS: ANALYSIS, TRAINING AND PREDICTIVE CONTROL</b> .....  | 799 |
| <i>Luca Bugliari Armenio ; Enrico Terzi ; Marcello Farina ; Riccardo Scattolini</i>  |     |
| <b>EARLY TERMINATION OF NMPC INTERIOR POINT SOLVERS: RELATING THE DUALITY GAP TO STABILITY</b> .....                         | 805 |
| <i>Andrei Pavlov ; Iman Shames ; Chris Manzie</i>  |     |
| <b>COLLISION AVOIDANCE FOR UNCERTAIN NONLINEAR SYSTEMS WITH MOVING OBSTACLES USING ROBUST MODEL PREDICTIVE CONTROL</b> ..... | 811 |
| <i>Raffaele Soloperto ; Johannes Köhler ; Frank Allgöwer ; Matthias A. Müller</i>  |     |



|   |     |
|---|-----|
| <b>ROBUST ESTIMATION OF A SOPDT MODEL FROM HIGHLY CORRUPTED STEP RESPONSE DATA</b> .....                                | 818 |
| <i>Robin De Keyser ; Cristina I. Muresan</i>  |     |
| <b>DELAY-STATE DYNAMICS TO FILTERING GAUSSIAN SYSTEMS WITH MARKOVIAN DELAYED MEASUREMENTS</b> .....                     | 824 |
| <i>Stefano Battilotti ; Massimiliano D'Angelo</i>   |     |
| <b>AN INTEGRATED FORECASTING SYSTEM FOR AIR QUALITY CONTROL</b> .....   | 830 |
| <i>Claudio Carnevale ; Elena De Angelis ; Giovanna Finzi ; Enrico Turrini ; Marialuisa Volta</i>                        |     |
| <b>IDENTIFICATION OF SECOND-ORDER KAUTZ MODELS BY TWO-STEP POLE LOCATION OPTIMISATION</b> .....                         | 836 |
| <i>Renato Augusto Lira De Andrade ; Péricles Rezende Barros ; Rafael Bezerra Correia Lima</i>                           |     |
| <b>BAYESIAN IDENTIFICATION OF DISTRIBUTED VECTOR AUTOREGRESSIVE PROCESSES</b> .....                                     | 842 |
| <i>Angelo Coluccia ; Fabrizio Dabbene ; Chiara Ravazzi</i>  |     |
| <b>BAYESIAN FREQUENCY ESTIMATION</b> .....  | 848 |
| <i>Giorgio Picci ; Bin Zhu</i>  |     |
| <b>STATIC PARAMETER ESTIMATION ON SO(3) USING STOCHASTIC GRADIENT DESCENT FOR VISUAL TRACKING</b> .....                 | 854 |
| <i>Torstein A. Myhre</i>  |     |
| <b>ADAPTIVE GAUSSIAN MIXTURE-PROBABILITY HYPOTHESIS DENSITY BASED MULTI SENSOR MULTI-TARGET TRACKING</b> .....          | 862 |
| <i>Chinmay Shinde ; Kaushik Das ; Rolif Lima ; Madhu Babu Vankadari ; Swagat Kumar</i>                                  |     |
| <b>DRIVING AN ORNSTEIN-UHLENBECK PROCESS TO DESIRED FIRST-PASSAGE TIME STATISTICS</b> .....                             | 869 |
| <i>Khem Raj Ghusinga ; Abhyudai Singh ; Vaibhav Srivastava</i>  |     |
| <b>VARIATION BASED EXTENDED KALMAN FILTER ON S2</b> .....   | 875 |
| <i>Prasanth Kotaru ; Koushil Sreenath</i>   |     |
| <b>SEQUENTIAL DETECTION OF DECEPTION ATTACKS IN NETWORKED CONTROL SYSTEMS WITH WATERMARKING</b> .....                   | 883 |
| <i>Somayeh Salimi ; Subhrakanti Dey ; Anders Ahlén</i>  |     |
| <b>A RESILIENT APPROACH FOR DISTRIBUTED MPC-BASED ECONOMIC DISPATCH IN INTERCONNECTED MICROGRIDS</b> .....              | 891 |
| <i>Wicak Ananduta ; José María Maestre ; Carlos Ocampo-Martinez ; Hideaki Ishii</i>                                     |     |
| <b>SECONDARY CONTROL STRATEGIES FOR DC ISLANDED MICROGRIDS OPERATION</b> .....  | 897 |
| <i>Andrea Martinelli ; Alessio La Bella ; Riccardo Scattolini</i>   |     |
| <b>A SYMBOLIC APPROACH TO VOLTAGE STABILITY AND POWER SHARING IN TIME-VARYING DC MICROGRIDS</b> .....                   | 903 |
| <i>Daniele Zonetti ; Adnane Saoud ; Antoine Girard ; Laurent Fribourg</i>   |     |
| <b>FOURIER SERIES-BASED KERNEL FOR FREQUENCY CONTROL PERFORMANCE MONITORING OF HYDROELECTRIC GENERATING UNITS</b> ..... | 910 |
| <i>G. Robert ; G. Besançon</i>  |     |
| <b>OPTIMAL CHARGING OF ELECTRIC VEHICLES IN MICROGRIDS THROUGH DISCRETE EVENT OPTIMIZATION</b> .....                    | 916 |
| <i>G. Ferro ; F. Laureri ; R. Minciardi ; M. Robba</i>  |     |
| <b>HYBRID METHOD OF TWO-STAGE STOCHASTIC AND ROBUST UNIT COMMITMENT</b> .....   | 922 |
| <i>Youngchae Cho ; Takayuki Ishizaki ; Jun-Ichi Imura</i>   |     |
| <b>A NONLINEAR <math>W_\infty</math> CONTROLLER OF A TILT-ROTOR UAV FOR TRAJECTORY TRACKING</b> .....                   | 928 |
| <i>Daniel N. Cardoso ; Sergio Esteban ; Guilherme V. Raffo</i>  |     |
| <b>ROBUST DAY-AHEAD ENERGY SCHEDULING OF A SMART RESIDENTIAL USER UNDER UNCERTAINTY</b> .....                           | 935 |
| <i>Seyed Mohsen Hosseini ; Raffaele Carli ; Mariagrazia Dotoli</i>  |     |
| <b>ON <math>l_1</math> PERFORMANCE AND ROBUST FILTERING FOR A CLASS OF BERNOULLI SWITCHING LINEAR SYSTEMS</b> .....     | 941 |
| <i>Marcos Todorov</i>   |     |
| <b>ROBUST TRACKING CONTROLLER DESIGN FOR UNCERTAIN NONLINEAR SELF-DRIVING CARS</b> .....                                | 947 |
| <i>Laura Celentano ; Stefania Santini ; Alberto Petrillo</i>  |     |
| <b>HIERARCHICAL COMPOSITE NONLINEAR FEEDBACK CONTROL APPROACH AND APPLICATIONS FOR QUADROTORS</b> .....                 | 955 |
| <i>Kemao Peng ; Feng Lin ; Tianshu Yuan</i>   |     |
| <b>A SYMBOLIC LFT APPROACH FOR ROBUST FLUTTER ANALYSIS OF HIGH-ORDER MODELS</b> .....                                   | 961 |
| <i>Andrea Iannelli ; Andres Marcos ; Rocco Bombardieri ; Rauno Cavallaro</i>  |     |

|  |      |
|--|------|
| <b>A TUTORIAL INTRODUCTION TO SECURITY AND PRIVACY FOR CYBER-PHYSICAL SYSTEMS</b> .....  | 968  |
| <i>Michelle S. Chong ; Henrik Sandberg ; André M. H. Teixeira</i>  |      |
| <b>A TUTORIAL ON DETECTING SECURITY ATTACKS ON CYBER-PHYSICAL SYSTEMS</b> .....  | 979  |
| <i>Paul Griffioen ; Sean Weerakkody ; Bruno Sinopoli ; Omur Ozel ; Yilin Mo</i>  |      |
| <b>LOCALISED KINKY INFERENCE</b> .....   | 985  |
| <i>A. Blaas ; J. M. Manzano ; D. Limon ; J. Calliess</i>   |      |
| <b>RANDOM GRADIENT ALGORITHMS FOR CONVEX MINIMIZATION OVER INTERSECTION OF SIMPLE SETS</b> .....                                     | 993  |
| <i>Ion Necoara</i>   |      |
| <b>A CONCAVE VALUE FUNCTION EXTENSION FOR THE DYNAMIC PROGRAMMING APPROACH TO REVENUE MANAGEMENT IN ATTENDED HOME DELIVERY</b> ..... | 999  |
| <i>Denis Lebedev ; Paul Goulart ; Kostas Margellos</i>   |      |
| <b>RECURRENT NEURAL NETWORK BASED MPC FOR PROCESS INDUSTRIES</b> .....   | 1005 |
| <i>Nicolas Lanzetti ; Ying Zhao Lian ; Andrea Cortinovis ; Luis Dominguez ; Mehmet Mercangöz ; Colin Jones</i>                       |      |
| <b>RELEVANCE VECTOR MACHINE AS DATA-DRIVEN METHOD FOR MEDICAL DECISION MAKING</b> .....  | 1011 |
| <i>Z. Haddi ; B. Ananou ; Y. Trardi ; M. Ouladsine ; J-F. Pons ; S. Delliaux ; J-C. Deharo</i>                                       |      |
| <b>ANOMALY DETECTION FOR INSERTION TASKS IN ROBOTIC ASSEMBLY USING GAUSSIAN PROCESS MODELS</b> .....                                 | 1017 |
| <i>Diego Romeres ; Devesh K. Jha ; William Yerazunis ; Daniel Nikovski ; Hoang Anh Dau</i>   |      |
| <b>NETWORKED BIO-INSPIRED EVOLUTIONARY DYNAMICS ON A MULTI-POPULATION</b> .....  | 1023 |
| <i>Wouter Baar ; Dario Bauso</i>   |      |
| <b>DYNAMIC NASH EQUILIBRIUM SEEKING FOR HIGHER-ORDER INTEGRATORS IN NETWORKS</b> .....   | 1029 |
| <i>Andrew R. Romano ; Lacra Pavel</i>  |      |
| <b>CONTROL OF PARAMETRIC GAMES</b> .....   | 1036 |
| <i>Carmel Fisco ; Brian Swenson ; Soumya Kar ; Bruno Sinopoli</i>  |      |
| <b>MULTIAGENT MAXIMUM COVERAGE PROBLEMS: THE TRADE-OFF BETWEEN ANARCHY AND STABILITY</b> .....                                       | 1043 |
| <i>Vinod Ramaswamy ; Dario Paccagnan ; Jason R. Marden</i>   |      |
| <b>A FAST ALGORITHM TO REDUCE <math>2 \times N</math> BIMATRIX GAMES TO RANK-1 GAMES</b> .....                                       | 1049 |
| <i>Joseph Heyman ; Abhishek Gupta</i>  |      |
| <b>DATA-DRIVEN VARIABLE SPEED LIMIT DESIGN FOR HIGHWAYS VIA DISTRIBUTIONALLY ROBUST OPTIMIZATION</b> .....                           | 1055 |
| <i>D. Li ; D. Fooladivanda ; S. Martínez</i>   |      |
| <b>CONSENSUS IN THE PRESENCE OF COMMUNICATION FAULTS</b> .....   | 1062 |
| <i>Maria Elena Valcher</i>   |      |
| <b>COOPERATIVE CIRCUMNAVIGATION OF A HOST SPACECRAFT BY MULTIPLE MICROSATELLITES</b> .....   | 1068 |
| <i>Dongyu Li ; Chuanjiang Li ; Guangfu Ma ; Yueyong Lv ; Wei He ; Shuzhi Sam Ge</i>  |      |
| <b>IMPLEMENTATION OF MIN-MAX TIME CONSENSUS TRACKING ON A MULTI-QUADROTOR TESTBED</b> .....  | 1073 |
| <i>Apurva Joshi ; Vishal Sawant ; Debraj Chakraborty ; Hoam Chung</i>  |      |
| <b>COLLABORATIVE VISUAL AREA COVERAGE USING AERIAL AGENTS EQUIPPED WITH PTZ-CAMERAS UNDER LOCALIZATION UNCERTAINTY</b> .....         | 1079 |
| <i>Nikolaos Bousias ; Sotiris Papatheodorou ; Mariliza Tzes ; Anthony Tzes</i>   |      |
| <b>CONSENSUS OF MULTI-AGENT SYSTEMS IN CLUSTERED NETWORKS</b> .....  | 1085 |
| <i>Thiem V. Pham ; Nadhir Messai ; Noureddine Manamanni</i>  |      |
| <b>ATTACK DETECTION IN A CLUSTER DIVIDED CONSENSUS NETWORK</b> .....   | 1091 |
| <i>Marcos Cesar Bragagnolo ; Nadhir Messai ; Noureddine Manamanni</i>  |      |
| <b>MODELING AND IDENTIFICATION OF A SHAPE MEMORY ALLOY ROBOTIC FINGER ACTUATOR</b> .....   | 1097 |
| <i>Filomena Simone ; Gianluca Rizzello ; Stefan Seelecke ; Simone Borreggine ; David Naso</i>  |      |
| <b>A NOVEL ALGORITHM BASED ON BAYESIAN OPTIMIZATION FOR RUN-TO-RUN CONTROL OF SHORT-STROKE RELUCTANCE ACTUATORS</b> .....            | 1103 |
| <i>Eduardo Moya-Lasheras ; Edgar Ramirez-Laboreo ; Carlos Sagues</i>   |      |
| <b>TRACKING CONTROLLER WITH HARMONIC DISTURBANCE CANCELLATION</b> .....  | 1110 |
| <i>Dmitrii Dobriborsci ; Alexey Margun ; Sergey Kolyubin</i>   |      |
| <b>MODELING, CONTROL, AND WHEEL-TERRAIN INTERACTION DYNAMICS OF THE UGV ARGO J5</b> .....  | 1116 |
| <i>Mohammed N. Alghanim ; Kimon P. Valavanis ; Matthew J. Rutherford</i>   |      |

|   |      |
|---|------|
| <b>COMPOSITE NONLINEAR FEEDBACK CONTROL OF A JIB TROLLEY OF A TOWER CRANE BEHAVIORS</b> .....   | 1124 |
| <i>Veli-Pekka Pyrhonen ; Matti K. Vilkkö</i>  |      |
| <b>A MULTI-TASK VELOCITY-BASED REDUNDANCY RESOLUTION STRATEGY FOR UNMANNED AERIAL MANIPULATORS</b> .....  | 1130 |
| <i>Nursultan Imanberdiyev ; Josephine Monica ; Erdal Kayacan</i>  |      |
| <b>NUMERICAL ODE SOLVERS AND INTEGRATION METHODS IN THE COMPUTATION OF CPA LYAPUNOV FUNCTIONS</b> .....   | 1136 |
| <i>Sigurdur Freyr Hafstein</i>  |      |
| <b><math>L_2</math> OBSERVERS FOR A CLASS OF NONLINEAR SYSTEMS WITH UNKNOWN INPUTS</b> .....  | 1142 |
| <i>Martin Corless ; Ankush Chakrabarty</i>  |      |
| <b>ROBUST OUTPUT-FEEDBACK PRESCRIBED-TIME STABILIZATION OF A CLASS OF NONLINEAR STRICT-FEEDBACK-LIKE SYSTEMS</b> .....  | 1148 |
| <i>P. Krishnamurthy ; F. Khorrami ; M. Krstic</i>   |      |
| <b>STABILIZATION OF DIFFERENTIAL-ALGEBRAIC SYSTEMS WITH LIPSCHITZ NONLINEARITIES VIA FEEDBACK DECOMPOSITION</b> .....   | 1154 |
| <i>Pierluigi Di Franco ; Giordano Scarciotti ; Alessandro Astolfi</i>   |      |
| <b>A PROCEDURE TO ESTIMATE PITCH ANGLE FOR RUNAWAYS ELECTRONS CONTROL IN FUSION REACTORS</b> .....  | 1159 |
| <i>Concetta Barcellona ; Arturo Buscarino ; Claudia Corradino ; Luigi Fortuna ; Federica Causa ; Basilio Esposito ; Giuseppe Mazzitelli ; Giuliano Rocchi ; Valerio Piergotti ; Alessandro Sibio ; Mateusz Gospodarczyk</i> |      |
| <b>STOCHASTIC LYAPUNOV STABILITY FOR ROUGH DIFFERENTIAL EQUATIONS</b> .....   | 1164 |
| <i>Yûki Nishimura</i>   |      |
| <b>ESTIMATING THE INFECTION RATE OF A SIR EPIDEMIC MODEL VIA DIFFERENTIAL ELIMINATION</b> .....   | 1170 |
| <i>Rosane Ushirobira ; Denis Efimov ; Pierre-Alexandre Blirnan</i>  |      |
| <b>CAN OPTIMAL EXPERIMENTAL DESIGN SERVE AS A TOOL TO CHARACTERIZE HIGHLY NON-LINEAR SYNTHETIC CIRCUITS?</b> .....  | 1176 |
| <i>Maxim Kryukov ; Arthur Carcano ; Gregory Batt ; Jakob Ruess</i>  |      |
| <b>PRESCRIPTIVE CLUSTER-DEPENDENT SUPPORT VECTOR MACHINES WITH AN APPLICATION TO REDUCING HOSPITAL READMISSIONS</b> .....   | 1182 |
| <i>Taiyao Wang ; Ioannis Ch. Paschalidis</i>  |      |
| <b>MODEL-BASED DESIGN OF A CONTROL SYSTEM FOR THE UPGRADE OF BIOGAS WITH ZEOLITE SORBENT REACTORS</b> .....   | 1188 |
| <i>Luigi Bisone ; Sergio Bittanti ; Silvia Canevese ; Elahe Davarpanah ; Antonio De Marco ; Maurizio Notaro ; Valter Prandoni</i>   |      |
| <b>A META-HEURISTIC APPROACH TO IDENTIFICATION OF RENAL BLOOD FLOW</b> .....  | 1195 |
| <i>Faizal Hafiz ; Akshya Swain</i>  |      |
| <b>LOCALIZATION SYSTEM IN GPS-DENIED ENVIRONMENTS USING RADAR AND IMU MEASUREMENTS: APPLICATION TO A SMART WHITE CANE</b> .....   | 1201 |
| <i>Jeremy Barra ; Suzanne Leseq ; Mykhailo Zarudniev ; Olivier Debicki ; Nicolas Mareau ; Laurent Ouvry</i>   |      |
| <b>MODELLING AND CONTROL OF A HEAVY-DUTY DIESEL ENGINE GAS PATH WITH GAUSSIAN PROCESS REGRESSION</b> .....  | 1207 |
| <i>Daniel Bergmann ; Roman Geiselhart ; Knut Graichen</i>   |      |
| <b>ROBUST ECO ADAPTIVE CRUISE CONTROL FOR COOPERATIVE VEHICLES</b> .....  | 1214 |
| <i>Yeojun Kim ; Jacopo Guanetti ; Francesco Borrelli</i>  |      |
| <b>ACHIEVING AN <math>L_2</math> STRING STABLE ONE VEHICLE LOOK-AHEAD PLATOON WITH HETEROGENEITY IN TIME-DELAYS</b> .....   | 1220 |
| <i>Deesh Dileep ; Wim Michiels ; Mauro Fusco ; Jan Verhaegh ; Laurentiu Hetel ; Jean-Pierre Richard</i>   |      |
| <b>HIERARCHICAL OPTIMIZATION OF OPERATIONAL COSTS OF A HEAVY-DUTY DIESEL ENGINE AND AN EXHAUST AFTERTREATMENT SYSTEM</b> .....  | 1227 |
| <i>Roman Geiselhart ; Daniel Bergmann ; Jens Niemeyer ; Jörg Remele ; Knut Graichen</i>   |      |
| <b>PLANETARY GEAR MODELING USING THE POWER-ORIENTED GRAPHS TECHNIQUE</b> .....  | 1233 |
| <i>Roberto Zanasi ; Davide Tebaldi</i>  |      |
| <b>ADAPTIVE MODEL PREDICTIVE TRACTION CONTROL FOR ELECTRIC VEHICLES</b> .....   | 1239 |
| <i>Alexander Busch ; Mark Wielitzka ; Tobias Ortmaier ; Viktoria Kleymann</i>   |      |
| <b>A SEPARATION PROCEDURE STRATEGY FOR THE <math>H_\infty</math> DYNAMIC OUTPUT FEEDBACK CONTROL OF HIDDEN MARKOV JUMP SYSTEM</b> .....   | 1245 |
| <i>A. M. De Oliveira ; O. L. V. Costa</i>   |      |
| <b>COMPOSITIONAL ABSTRACTIONS OF INTERCONNECTED DISCRETE-TIME SWITCHED SYSTEMS</b> .....  | 1251 |
| <i>Abdalla Swikir ; Majid Zamani</i>  |      |

|   |             |
|---|-------------|
| <b>INITIAL STATE DESIGN FOR CONTROLLER SWITCHES BY USING STATE-DEPENDENT SWITCHING L2 GAIN .....</b>  | <b>1257</b> |
| <i>Koichi Suyama ; Noboru Sebe</i>  |             |
| <b>A CONVERSE LYAPUNOV THEOREM FOR P-DOMINANT SWITCHED LINEAR SYSTEMS .....</b>   | <b>1263</b> |
| <i>Guillaume O. Berger ; Raphaël M. Jungers</i>   |             |
| <b>SAFETY CONTROLLER DESIGN FOR INCREMENTALLY STABLE SWITCHED SYSTEMS USING EVENT-BASED SYMBOLIC MODELS.....</b>  | <b>1269</b> |
| <i>Zohra Kader ; Adnane Saoud ; Antoine Girard</i>  |             |
| <b>ROBUSTLY STABILIZING SWITCHING SIGNALS FOR SWITCHED SYSTEMS UNDER RESTRICTED SWITCHING .....</b>   | <b>1275</b> |
| <i>Atreyee Kundu</i>  |             |
| <b>PROJECTION-BASED ANTI-WINDUP FOR MULTIVARIABLE CONTROL WITH HEAT PUMP APPLICATION .....</b>  | <b>1281</b> |
| <i>Paul Schwerdtmer ; Scott A. Bortoff ; Claus Danielson ; Stefano Di Cairano</i>   |             |
| <b>EXPERIMENTAL VERIFICATION OF SUM-OF-SQUARES-BASED CONTROLLER TUNING TECHNIQUE WITH EXTENSION TO PARALLEL MULTIMODEL UNCERTAINTY PROCESSING .....</b> | <b>1288</b> |
| <i>Ivan Pejcic ; Colin N. Jones</i>   |             |
| <b>AN EXPLICIT REFERENCE GOVERNOR SCHEME FOR CLOSED-LOOP ANESTHESIA .....</b>   | <b>1294</b> |
| <i>Mehdi Hosseinzadeh ; Klaske Van Heusden ; Guy A. Dumont ; Emanuele Garone</i>  |             |
| <b>PREDICTOR-BASED CONTROL OF EXCITEMENT AS HUMAN RESPONSE SIGNAL TO A DYNAMIC VIRTUAL 3D FACE.....</b>   | <b>1300</b> |
| <i>V. Kaminskas ; E. Sciglinskas</i>  |             |
| <b>EVENT-TRIGGERED DISTRIBUTED FORMATION CONTROL OF SECOND-ORDER NONLINEAR MULTI-AGENT SYSTEMS SUBJECTED TO INPUT CONSTRAINTS.....</b>                  | <b>1306</b> |
| <i>Yaohua Guo ; Jun Zhou</i>  |             |
| <b>LOGARITHMIC QUANTIZATION BASED SYMBOLIC ABSTRACTIONS FOR NONLINEAR CONTROL SYSTEMS .....</b>   | <b>1312</b> |
| <i>Wei Ren ; Dimos V. Dimarogonas</i>   |             |
| <b>GRAMMAR-BASED REPRESENTATION AND IDENTIFICATION OF DYNAMICAL SYSTEMS.....</b>  | <b>1318</b> |
| <i>Dhruv Khandelwal ; Maarten Schoukens ; Roland Tóth</i>   |             |
| <b>OPTIMAL EXPERIMENT DESIGN FOR STATIC POLYNOMIAL APPROXIMATION OF NONLINEAR SYSTEMS .....</b>   | <b>1324</b> |
| <i>Patrick Schrangl ; Luigi Del Re ; Laura Giarré</i>   |             |
| <b>ONLINE K-STEP MODEL IDENTIFICATION WITH DIRECTIONAL FORGETTING .....</b>   | <b>1330</b> |
| <i>Patrick Schrangl ; Luigi Del Re ; Laura Giarré</i>   |             |
| <b>SEPARABLE LEAST SQUARES IDENTIFICATION OF A WIENER MODEL WITH APPLICATION TO POWERED AIR PURIFYING RESPIRATORS .....</b>                             | <b>1336</b> |
| <i>Jonathan Thompson ; Steve McDonald ; Barrie Mecrow ; Simon Lambert</i>   |             |
| <b>FEEDBACK FOR NONLINEAR SYSTEM IDENTIFICATION .....</b>   | <b>1344</b> |
| <i>Thiago Burghi ; Maarten Schoukens ; Rodolphe Sepulchre</i>   |             |
| <b>INTERVAL OBSERVERS FOR A CLASS OF NONLINEAR SYSTEMS USING GAUSSIAN PROCESS MODELS.....</b>   | <b>1350</b> |
| <i>Alexandre Capone ; Sandra Hirche</i>   |             |
| <b>ON THE CONVERGENCE OF STOCHASTIC MPC TO TERMINAL MODES OF OPERATION .....</b>  | <b>1356</b> |
| <i>Diego Muñoz-Carpintero ; Mark Cannon</i>   |             |
| <b>DISTRIBUTED STOCHASTIC MODEL PREDICTIVE CONTROL FOR DYNAMICALLY COUPLED LINEAR SYSTEMS USING PROBABILISTIC REACHABLE SETS .....</b>                  | <b>1362</b> |
| <i>Christoph Mark ; Steven Liu</i>  |             |
| <b>AN EMPIRICAL RELATIVE VALUE LEARNING ALGORITHM FOR NON-PARAMETRIC MDPS WITH CONTINUOUS STATE SPACE.....</b>  | <b>1368</b> |
| <i>Hiteshi Sharma ; Rahul Jain ; Abhishek Gupta</i>   |             |
| <b>PREDICTIVE AND ANISOTROPIC CONTROL DESIGN FOR ROBOT MOTION UNDER STOCHASTIC DISTURBANCES.....</b>  | <b>1374</b> |
| <i>Kvetoslav Belda ; Michael Tchaikovsky</i>  |             |
| <b>SAFE APPROXIMATIONS OF CHANCE CONSTRAINED SETS BY PROBABILISTIC SCALING.....</b>   | <b>1380</b> |
| <i>Teodoro Alamo ; Victor Mirasierra ; Fabrizio Dabbene ; Matthias Lorenzen</i>   |             |
| <b>COMPLEXITY-BASED MODULATION OF THE DATA-SET IN SCENARIO OPTIMIZATION.....</b>  | <b>1386</b> |
| <i>Simone Garatti ; Marco C. Campi</i>  |             |
| <b>A DEMAND-RESPONSE FRAMEWORK IN BALANCE GROUPS THROUGH DIRECT BATTERY-STORAGE CONTROL .....</b>   | <b>1392</b> |
| <i>Georgios C. Chasparis ; Mario Pichler ; Thomas Natschläger</i>   |             |

|  |      |
|--|------|
| <b>PERFORMANCE OF DROOP-CONTROLLED MICROGRIDS WITH HETEROGENEOUS INVERTER RATINGS</b> .....  | 1398 |
| <i>H. Giray Oral ; Dennice F. Gayme</i>  |      |
| <b>PERFORMANCE LIMITS OF LOW INERTIA POWER SYSTEMS BASED ON MINIMUM ENERGY CONTROL</b> .....                                       | 1406 |
| <i>Yoash Levron ; Ron Ofir ; Juri Belikov</i>  |      |
| <b>SET MEMBERSHIP ESTIMATION OF DAY-AHEAD MICROGRIDS SCHEDULING</b> .....  | 1412 |
| <i>Alessio La Bella ; Lorenzo Fagiano ; Riccardo Scattolini</i>  |      |
| <b>POWER MANAGEMENT FOR A DC MICROGRID IN A SMART RAILWAY STATION INCLUDING RECOVERY BRAKING</b> .....                             | 1418 |
| <i>Zeqin Sheng ; Alessio Iovine ; Gilney Damm ; Lilia Galai-Dol</i>  |      |
| <b>POWER SYSTEM UPGRADE PLANNING WITH ON-LOAD TAP-CHANGING TRANSFORMERS, SWITCHABLE TOPOLOGY AND OPERATING POLICIES</b> .....      | 1424 |
| <i>Sandro Merkli ; Roy S. Smith</i>  |      |
| <b>SYNTHESIS OF A ROBUST LINEAR STRUCTURAL FEEDBACK LINEARIZATION SCHEME FOR AN EXPERIMENTAL QUADROTOR</b> .....                   | 1431 |
| <i>L. A. Blas ; M. Bonilla ; S. Salazar ; M. Malabre ; V. Azhmyakov</i>  |      |
| <b>A NOVEL SET-BASED REACHABILITY METHOD FOR OPTIMAL ROBUST CONTROL OF CONSTRAINED LINEAR SYSTEMS</b> .....                        | 1437 |
| <i>Riccardo Desimani ; Maria Prandini</i>  |      |
| <b>MULTISTAGE MODEL PREDICTIVE CONTROL WITH ONLINE SCENARIO TREE UPDATE USING RECURSIVE BAYESIAN WEIGHTING</b> .....               | 1443 |
| <i>Dinesh Krishnamoorthy ; Sigurd Skogestad ; Johannes Jaschke</i>   |      |
| <b>A NOVEL NETWORKED CONTROL SCHEME WITH SAFETY GUARANTEES FOR DETECTION AND MITIGATION OF CYBER-ATTACKS</b> .....                 | 1449 |
| <i>Kian Gheitani ; Mohsen Ghaderi ; Walter Lucia</i>   |      |
| <b>CONTROL FOR PERFORMANCE OF LADDER CIRCUITS WITH NONLINEAR ELEMENTS</b> .....  | 1455 |
| <i>Bartlomiej Sulikowski ; Krzysztof Galkowski ; Eric Rogers ; Anton Kummert</i>   |      |
| <b>RISK-COHERENT <math>H_{\infty}</math>-OPTIMAL FILTER DESIGN UNDER MODEL UNCERTAINTY WITH APPLICATIONS TO MISO CONTROL</b> ..... | 1461 |
| <i>Matias I. Müller ; Cristian R. Rojas</i>  |      |
| <b>CONTROLLER TUNING BY BAYESIAN OPTIMIZATION AN APPLICATION TO A HEAT PUMP</b> .....  | 1467 |
| <i>Mohammad Khosravi ; Annika Eichler ; Nicolas Schmid ; Roy S. Smith ; Philipp Heer</i>   |      |
| <b>OPTIMALITY INTERPRETATIONS FOR ATOMIC NORMS</b> .....   | 1473 |
| <i>Christian Grussler ; Pontus Giselsson</i>   |      |
| <b>A CONTINUOUS TIME DYNAMICAL SYSTEM APPROACH FOR SOLVING ROBUST OPTIMIZATION</b> .....   | 1479 |
| <i>Keivan Ebrahimi ; Nicola Elia ; Umesh Vaidya</i>  |      |
| <b>ENERGY-OPTIMIZED TRAJECTORY PLANNING FOR HIGH ALTITUDE LONG ENDURANCE (HALE) AIRCRAFT</b> .....                                 | 1486 |
| <i>Hamidreza Bolandhemmat ; Benjamin Thomsen ; Jack Marriott</i>   |      |
| <b>LEARNING BINARY WARM STARTS FOR MULTIPARAMETRIC MIXED-INTEGER QUADRATIC PROGRAMMING</b> .....                                   | 1494 |
| <i>Daniele Masti ; Alberto Bemporad</i>  |      |
| <b>SUPERSCS: FAST AND ACCURATE LARGE-SCALE CONIC OPTIMIZATION</b> .....  | 1500 |
| <i>Pantelis Sotasakis ; Krina Menounou ; Panagiotis Patrinos</i>   |      |
| <b>AVERAGE OBSERVABILITY OF LARGE-SCALE NETWORK SYSTEMS</b> .....  | 1506 |
| <i>Muhammad Umar B. Niazi ; Carlos Canudas-De-Wit ; Alain Y. Kibangou</i>  |      |
| <b>EFFECT OF SELF-EXCITEMENT AND BEHAVIORAL FACTORS ON EPIDEMICS ON ACTIVITY DRIVEN NETWORKS</b> .....                             | 1512 |
| <i>Lorenzo Zino ; Alessandro Rizzo ; Maurizio Porfiri</i>  |      |
| <b>COMBINING CENTRALITY MEASURES FOR CONTROL ENERGY REDUCTION IN NETWORK CONTROLLABILITY PROBLEMS</b> .....                        | 1518 |
| <i>Gustav Lindmark ; Claudio Altafini</i>  |      |
| <b>ON THE STABILITY OF THE FOSCHINI-MILJANIC ALGORITHM WITH UNCERTAINTY OVER CHANNEL GAINS</b> .....                               | 1524 |
| <i>Giannis Moutsinas ; Weisi Guo ; Themistoklis Charalambous</i>   |      |
| <b>DIRECT RECIPROCITY AND MODEL-PREDICTIVE RATIONALITY: A SETUP FOR NETWORK RECIPROCITY OVER SOCIAL TIES</b> .....                 | 1531 |
| <i>Anna Dimeglio ; Fabio Della Rossa ; Fabio Dercole</i>   |      |

|  |      |
|--|------|
| <b>ASSESSING NODE CRITICALITY IN DYNAMICAL DISTRIBUTED SYSTEMS</b> .....   | 1537 |
| <i>L. Faramondi ; S. Panzieri ; R. Setola ; G. Oliva</i>   |      |
| <b>TRIANGULAR FORMATION MANEUVER USING DESIGNED MISMATCHED ANGLES</b> .....  | 1544 |
| <i>Liangming Chen ; Ming Cao ; Hector Garcia De Marina ; Yanning Guo ; Yuri Kapitanyuk</i>   |      |
| <b>ON THE DISTRIBUTED ESTIMATION FROM RELATIVE MEASUREMENTS: A GRAPH-BASED CONVERGENCE ANALYSIS</b> .....  | 1550 |
| <i>Marco Fabris ; Giulia Michieletto ; Angelo Cenedese</i>   |      |
| <b>OPTIMAL TIME-INVARIANT FORMATION TRACKING FOR A SECOND-ORDER MULTI-AGENT SYSTEM</b> .....   | 1556 |
| <i>Marco Fabris ; Angelo Cenedese ; John Hauser</i>  |      |
| <b>TRACKING CONTROL BY THE NEWTON-RAPHSON FLOW: APPLICATIONS TO AUTONOMOUS VEHICLES</b> .....  | 1562 |
| <i>S. Shivam ; I. Buckley ; Y. Wardi ; C. Seatzu ; M. Egerstedt</i>  |      |
| <b>HOMOTOPY AWARE KINODYNAMIC PLANNING USING RRT-BASED PLANNERS</b> .....  | 1568 |
| <i>Basak Sakcak ; Luca Bascetta ; Gianni Ferretti</i>  |      |
| <b>MULTI-VEHICLE REFERENCE TRACKING WITH GUARANTEED COLLISION AVOIDANCE</b> .....  | 1574 |
| <i>Maryam Bagherzadeh ; Walter Lucia</i>   |      |
| <b>CLOSED-LOOP CONTROL OF A NONPREHENSILE MANIPULATION SYSTEM INSPIRED BY THE PIZZA-PEEL MECHANISM</b> .....   | 1580 |
| <i>Alejandro Gutiérrez-Giles ; Fabio Ruggiero ; Vincenzo Lippiello ; Bruno Siciliano</i>   |      |
| <b>ROBOT KINEMATIC STRUCTURE CLASSIFICATION FROM TIME SERIES OF VISUAL DATA</b> .....  | 1586 |
| <i>Alberto Dalla Libera ; Matteo Terzi ; Alessandro Rossi ; Gian Antonio Susto ; Ruggero Carli</i>   |      |
| <b>ENERGY-BASED STABILITY ANALYSIS FOR GRASP SELECTION WITH COMPLIANT MULTI-FINGERED HANDS</b> .....   | 1592 |
| <i>Ugo Vollhardt ; Maria Makarov ; Alex Caldas ; Mathieu Grossard ; Pedro Rodriguez-Ayerbe</i>   |      |
| <b>AN INTEGRATED MOTION PLANNER/CONTROLLER FOR HUMANOID ROBOTS ON UNEVEN GROUND</b> .....  | 1598 |
| <i>Paolo Ferrari ; Nicola Scianca ; Leonardo Lanari ; Giuseppe Oriolo</i>  |      |
| <b>STABILITY OF ACTIVE CONSTRAINTS ENFORCEMENT IN SENSITIVE REGIONS DEFINED BY POINT-CLOUDS FOR ROBOTIC SURGICAL PROCEDURES</b> .....  | 1604 |
| <i>Theodora Kastritsil ; Dimitrios Papageorgiou ; Jason Sarantopoulosr ; Zoe Doulgeri ; George A. Rovithakis</i>   |      |
| <b>DEVELOPMENT AND CONTROL OF A DIFFERENTIAL WALL CLIMBING ROBOT BASED ON VORTEX ADHESION</b> .....  | 1610 |
| <i>Andreas Papadimitriou ; George Andrikopoulos ; George Nikolakopoulos</i>  |      |
| <b>CONSISTENT DISCRETIZATION OF LOCALLY HOMOGENEOUS FINITE-TIME STABLE CONTROL SYSTEMS</b> .....   | 1616 |
| <i>Andrey Polyakov ; Denis Efimov ; Bernard Brogliato ; Markus Reichhartinger</i>  |      |
| <b>IMPROVED ESTIMATION OF THE CHAIN-RECURRENT SET</b> .....  | 1622 |
| <i>Carlos Argáez ; Peter Giesl ; Sigurdur Freyr Hafstein</i>   |      |
| <b>CRANE LOAD POSITION CONTROL USING LYAPUNOV-BASED PENDULUM DAMPING AND NONLINEAR MPC POSITION CONTROL</b> .....  | 1628 |
| <i>Geir Ole Tysse ; Olav Egeland</i>   |      |
| <b>TRACKING CONTROL OF MARINE CRAFT IN THE PORT-HAMILTONIAN FRAMEWORK: A VIRTUAL DIFFERENTIAL PASSIVITY APPROACH</b> .....   | 1636 |
| <i>Rodolfo Reyes-Báez ; Arjan Van Der Schaft ; Bayu Jayawardhana ; Alejandro Donaire ; Tristán Pérez</i>   |      |
| <b>NONLINEAR PI CONTROLLER FOR SYSTEMS WITH STATE CONSTRAINT REQUIREMENTS</b> .....  | 1642 |
| <i>George C. Konstantopoulos ; Pablo R. Baldívieso-Monasterios</i>   |      |
| <b>TRAJECTORY TRACKING OF A KNIFE-EDGE ON A FLAT SURFACE</b> .....   | 1648 |
| <i>Muhammad Rehan ; Mahmut Reyhanoglu ; Jari Van Steen</i>   |      |
| <b>MATHEMATICAL MODEL OF THE RELEASE OF THE CTNT AND CK-MB CARDIAC BIOMARKERS IN PATIENTS WITH ACUTE MYOCARDIAL INFARCTION</b> .....   | 1653 |
| <i>Anna Procopio ; Salvatore De Rosa ; Caterina Covello ; Alessio Merola ; Jolanda Sabatino ; Alessia De Luca ;</i><br><i>Ciro Indolfi ; Francesco Amato ; Carlo Cosentino</i> |      |
| <b>FEEDBACK CONTROL PRINCIPLES FOR BIOLOGICAL CONTROL OF DENGUE VECTORS</b> .....  | 1659 |
| <i>Pierre-Alexandre Bliman</i>   |      |
| <b>ASYMPTOTIC OBSERVERS AND INTEGER PROGRAMMING FOR FUNCTIONAL CLASSIFICATION OF A MICROBIAL COMMUNITY IN A CHEMOSTAT</b> .....  | 1665 |
| <i>Pablo Ugalde-Salas ; Jérôme Harmand ; Elie Desmond-Le Quémener</i>  |      |

|   |      |
|---|------|
| <b>A SIMPLE POSITIVE STATE OBSERVER FOR MULTIDIMENSIONAL GOODWIN'S OSCILLATOR.....</b>  | 1671 |
| <i>Anton V. Proskurnikov ; Alexander Medvedev</i>   |      |
| <b>SUMMARIZING COMPLEX ASYNCHRONOUS BOOLEAN ATTRACTORS, APPLICATION TO THE ANALYSIS OF A MAMMALIAN CELL CYCLE MODEL .....</b>   | 1677 |
| <i>Ousmane Diop ; Laurent Tourniel ; Vincent Fromion</i>  |      |
| <b>ON ROBUST STABILITY OF MULTISTABLE PASSIVE SYSTEMS.....</b>  | 1683 |
| <i>N. De Figueiredo Barroso ; R. Ushirobira ; D. Efimov ; A. L. Fradkov</i>   |      |
| <b>STABILIZATION OF MATCHING VIA NEGOTIATION FOR SHARING SYSTEMS AND ITS APPLICATION TO A RIDE-SHARE PROBLEM.....</b>   | 1689 |
| <i>Kazuma Takeuchi ; Tomohisa Hayakawa ; Jun-Ichi Imura ; Masakazu Adachi ; Hideaki Tanaka ; Yawen Huang</i>  |      |
| <b>VEHICLES PLATOONING IN URBAN ENVIRONMENTS: INTEGRATED CONSENSUS-BASED LONGITUDINAL CONTROL WITH GAP CLOSURE MANEUVERING AND COLLISION AVOIDANCE CAPABILITIES .....</b> | 1695 |
| <i>Ahmed Khalifa ; Olivier Kermorgant ; Salvador Dominguez ; Philippe Martinet</i>  |      |
| <b>DATA-DRIVEN REGRET MINIMIZATION IN ROUTING GAMES UNDER UNCERTAINTY.....</b>  | 1702 |
| <i>Jonathan Dietrich ; Ashish R. Hota ; Ashish Cherukuri</i>  |      |
| <b>MODELING AND CONTROL OF AN AERIAL MULTI-CARGO SYSTEM: ROBUST ACQUIRING AND TRANSPORT OPERATIONS .....</b>  | 1708 |
| <i>J. J. Castillo-Zamora ; J. Escareno ; I. Boussaada ; O. Labbani ; K. Camarillo</i>   |      |
| <b>ONE-SHOT COORDINATION OF FEEDER VEHICLES FOR MULTI-MODAL TRANSPORTATION.....</b>   | 1714 |
| <i>Subhajit Goswami ; Pavankumar Tallapragada</i>   |      |
| <b>A COORDINATION MECHANISM FOR THE FREIGHT ROUTING PROBLEM WITH DISCRETE TIME INTERVALS .....</b>  | 1720 |
| <i>Aristotelis-Angelos Papadopoulos ; Maged Dessouky ; Petros Ioannou ; Ioannis Kordonis</i>  |      |
| <b>VERIFICATION OF CODIAGNOSABILITY FOR DECENTRALIZED DIAGNOSIS OF DISCRETE EVENT SYSTEMS SUBJECT TO PERMANENT SENSOR FAILURES .....</b>                                  | 1726 |
| <i>Akihito Wada ; Shigemasa Takai</i>   |      |
| <b>SUPERVISORY CONTROL OF DISCRETE-EVENT SYSTEMS UNDER ATTACKS: AN OVERVIEW AND OUTLOOK.....</b>  | 1732 |
| <i>Aida Rashidinejad ; Bart Wetzels ; Michel Reniers ; Liyong Lin ; Yuting Zhu ; Rong Su</i>  |      |
| <b>EXPOSURE TIME AS A MEASURE OF OPACITY IN TIMED DISCRETE EVENT SYSTEMS.....</b>   | 1740 |
| <i>Dimitri Lefebvre ; Christoforos N. Hadjicostis</i>   |      |
| <b>SUPERVISORY CONTROL OF RECONFIGURABLE MANUFACTURING SYSTEMS BASED ON NCESS .....</b>   | 1746 |
| <i>Jiafeng Zhang ; Shuo Tang ; Zhiwu Li</i>   |      |
| <b>COMPARATIVE CASE STUDIES OF REACTIVE SYNTHESIS AND SUPERVISORY CONTROL .....</b>   | 1752 |
| <i>Zahra Ramezani ; Jonas Krook ; Zhennan Fei ; Martin Fabian ; Knut Akesson</i>  |      |
| <b>SUPERVISOR OBFUSCATION AGAINST ACTUATOR ENABLEMENT ATTACK.....</b>   | 1760 |
| <i>Yuting Zhu ; Liyong Lin ; Rong Su</i>  |      |
| <b>RECURSIVE FEASIBILITY AND STABILITY OF MPC WITH TIME-VARYING AND UNCERTAIN STATE CONSTRAINTS .....</b>   | 1766 |
| <i>Zonglin Liu ; Olaf Stursberg</i>   |      |
| <b>NAVIGATION IN A MULTI-OBSTACLE ENVIRONMENT. FROM PARTITION OF THE SPACE TO A ZONOTOPIC-BASED MPC.....</b>  | 1772 |
| <i>Daniel Ioan ; Sorin Olaru ; Silviu-Iulian Niculescu ; Ionela Prodan ; Florin Stoican</i>   |      |
| <b>COMBINED CONTROL AND COMMUNICATION SCHEDULING FOR CONSTRAINED SYSTEM USING ROBUST OUTPUT FEEDBACK MPC.....</b>   | 1778 |
| <i>Markus Kögel ; Daniel Quevedo ; Rolf Findeisen</i>   |      |
| <b>MODELICA IMPLEMENTATION OF CENTRALIZED MPC CONTROLLER FOR A MULTI-ZONE HEAT PUMP .....</b>   | 1784 |
| <i>Pablo Krupa ; Claus Danielson ; Chris Laughman ; Scott A. Bortoff ; Daniel J. Burns ; Stefano Di Cairano ; Daniel Limon</i>  |      |
| <b>A PROXIMITY MOVING HORIZON ESTIMATOR BASED ON BREGMAN DISTANCES AND RELAXED BARRIER FUNCTIONS .....</b>  | 1790 |
| <i>Meriem Gharbi ; Christian Ebenbauer</i>  |      |
| <b>FAST CHARGE OF LI-ION BATTERIES USING A TWO-LAYER DISTRIBUTED MPC WITH ELECTRO-CHEMICAL AND THERMAL CONSTRAINTS.....</b>   | 1796 |
| <i>Alberto Romero ; Alejandro Goldar ; Luis D. Couto ; Emanuele Garone ; José M. Maestre</i>  |      |

|  |             |
|--|-------------|
| <b>DECENTRALIZED MULTI-SENSOR SCHEDULING FOR MULTI-TARGET TRACKING AND IDENTITY MANAGEMENT .....</b>   | <b>1804</b> |
| <i>Chiyu Zhang ; Inseok Hwang</i>  |             |
| <b>ELLIPSOIDAL SET MEMBERSHIP FILTERING WITH REDUCED CONSERVATISM APPLIED TO RELATIVE LOCALIZATION BETWEEN AIRCRAFT BASED ON GNSS AND UWB RANGING.....</b> | <b>1810</b> |
| <i>J. Bolting ; S. Fergani</i>   |             |
| <b>DESIGN OF A DISTRIBUTED FINITE-TIME OBSERVER USING OBSERVABILITY DECOMPOSITIONS .....</b>   | <b>1816</b> |
| <i>Haik Silm ; Rosane Ushirobira ; Denis Efimov ; Wim Michiels ; Jean-Pierre Richard</i>   |             |
| <b>DISTRIBUTED ESTIMATION WITH PARTIALLY OVERLAPPING STATES BASED ON DETERMINISTIC SAMPLE-BASED FUSION.....</b>  | <b>1822</b> |
| <i>Susanne Radtke ; Benjamin Noack ; Uwe D. Hanebeck</i>   |             |
| <b>STRUCTURED MOVING HORIZON ESTIMATION FOR LINEAR SYSTEM CHAINS.....</b>  | <b>1830</b> |
| <i>Meichen Guo ; Adair Lang ; Michael Cantoni</i>  |             |
| <b>DISTRIBUTED DUAL QUATERNION BASED LOCALIZATION OF VISUAL SENSOR NETWORKS.....</b>   | <b>1836</b> |
| <i>Luca Varotto ; Marco Fabris ; Giulia Michieletto ; Angelo Cenedese</i>  |             |
| <b>LQ OPTIMAL PREFILTERING FOR FAST TRACKING AND ROBUST VIBRATION SUPPRESSION.....</b>   | <b>1842</b> |
| <i>Nikolas Tekles ; Sabin-Mihai Gînta</i>  |             |
| <b>UNKNOWN INPUT KALMAN FILTERING FOR LINEAR DISCRETE-TIME FRACTIONAL ORDER SYSTEMS WITH DIRECT FEEDTHROUGH.....</b>                                       | <b>1848</b> |
| <i>Martin Kupper ; Martin Pfeifer ; Stefan Krebs ; Sören Hohmann</i>   |             |
| <b>EVENT-BASED STATE ESTIMATION USING THE AUXILIARY PARTICLE FILTER .....</b>  | <b>1854</b> |
| <i>Johan Ruuskanen ; Anton Cervin</i>  |             |
| <b>AUTOMATIC NUMERICAL DIFFERENTIATION BY MAXIMUM LIKELIHOOD ESTIMATION OF A LINEAR GAUSSIAN STATE SPACE MODEL .....</b>                                   | <b>1861</b> |
| <i>Robert Piché</i>  |             |
| <b>RECURSIVE BAYESIAN INFERENCE AND LEARNING OF GAUSSIAN-PROCESS STATE-SPACE MODELS .....</b>  | <b>1866</b> |
| <i>Karl Berntorp</i>   |             |
| <b>SOME NEW ARRAY INFORMATION FORMULATIONS OF THE UD-BASED KALMAN FILTER .....</b>   | <b>1872</b> |
| <i>Julia V. Tsyganova ; Maria V. Kulikova ; Andrey V. Tsyganov</i>   |             |
| <b>TOPOLOGICAL GEOMETRIC EXTENSION OF STOKES-DIRAC STRUCTURES FOR GLOBAL ENERGY FLOWS.....</b>   | <b>1878</b> |
| <i>Gou Nishida ; Bernhard Maschke</i>  |             |
| <b>SIMULTANEOUS DESIGN OF POWER FLOW AND CONTROLLER TO ENHANCE DAMPING PERFORMANCE OF POWER SYSTEMS.....</b>   | <b>1884</b> |
| <i>Mitsuru Arahata ; Masaki Inoue ; Tomonori Sadamoto ; Mizuki Suzumura</i>  |             |
| <b>PASSIVITY-BASED VOLTAGE AND FREQUENCY STABILIZATION IN AC MICROGRIDS.....</b>   | <b>1890</b> |
| <i>Pulkit Nahata ; Giancarlo Ferrari-Trecate</i>   |             |
| <b>MODELING OF A HYDROGEN STORAGE WIND PLANT FOR MODEL PREDICTIVE CONTROL MANAGEMENT STRATEGIES.....</b>   | <b>1896</b> |
| <i>Muhammad Faisal Shehzad ; Muhammad Bakr Abdelghany ; Davide Liuzza ; Luigi Glielmo</i>  |             |
| <b>COMMUNITY ENERGY MANAGEMENT REFLECTING CONSUMERS' PREFERENCES: PREFERENCE-INDEPENDENT CONTROL SYSTEM DESIGN.....</b>                                    | <b>1902</b> |
| <i>Keisuke Yoshida ; Masaki Inoue ; Takeshi Hatanaka</i>   |             |
| <b>GREY WOLF OPTIMISATION OF AN OPERATING STRATEGY FOR ENERGY STORAGE SYSTEMS IN ELECTRICALLY DRIVEN RAILWAY VEHICLES .....</b>                            | <b>1908</b> |
| <i>Lukas Pröhl ; Harald Aschemann</i>  |             |
| <b>A LEVEL-SET BASED APPROACH FOR THE PATH PLANNING OF HUMAN EVACUATIONS IN CONTAMINATED INDOOR ENVIRONMENTS .....</b>                                     | <b>1914</b> |
| <i>Michael A. Demetriou ; Marios Kontopyrgos</i>   |             |
| <b>DOMAIN DECOMPOSITION METHODS FOR THE STATE ESTIMATION OF PARABOLIC PDES IN 2D RECTANGULAR DOMAINS: WELL-POSEDNESS AND CONVERGENCE .....</b>             | <b>1920</b> |
| <i>Weiwei Hu ; Michael A. Demetriou</i>  |             |
| <b>WAVE EQUATIONS WITH KELVIN-VOIGT DAMPING AND BOUNDARY DISTURBANCE: A STUDY OF THE ASYMPTOTIC GAIN PROPERTIES .....</b>                                  | <b>1926</b> |
| <i>Iasson Karafyllis ; Maria Kontorinaki ; Miroslav Krstic</i>   |             |



|  |      |
|--|------|
| <b>PRESCRIBED-TIME <math>H^1</math>-STABILIZATION OF REACTION-DIFFUSION EQUATIONS BY MEANS OF OUTPUT FEEDBACK.....</b>   | 1932 |
| <i>Drew Steeves ; Miroslav Krstic ; Rafael Vazquez</i>   |      |
| <b>DISTRIBUTED OPTIMAL CONTROL OF DEGENERATE REACTION-DIFFUSION EQUATIONS.....</b>                                       | 1938 |
| <i>Laura Aquilanti ; Andrea Cristofaro</i>   |      |
| <b>MODEL REDUCTION OF SEMISTABLE DISTRIBUTED PARAMETER SYSTEMS.....</b>  | 1944 |
| <i>Ingvar Ziemann ; Yishao Zhou</i>  |      |
| <b>COSMO: A CONIC OPERATOR SPLITTING METHOD FOR LARGE CONVEX PROBLEMS.....</b>   | 1951 |
| <i>Michael Garstka ; Mark Cannon ; Paul Goulart</i>  |      |
| <b>DESIGNING OPTIMAL CONTROL MAPS FOR DIESEL ENGINES FOR HIGH EFFICIENCY AND EMISSION REDUCTION.....</b>                 | 1957 |
| <i>Hoang Nguyen Khac ; Kai Zenger</i>  |      |
| <b>PREDICTION-CORRECTION SPLITTINGS FOR NONSMOOTH TIME-VARYING OPTIMIZATION.....</b>                                     | 1963 |
| <i>Nicola Bastianello ; Andrea Simonetto ; Ruggero Carli</i>   |      |
| <b>RESTART FISTA WITH GLOBAL LINEAR CONVERGENCE.....</b>   | 1969 |
| <i>Teodoro Alamo ; Daniel Limon ; Pablo Krupa</i>  |      |
| <b>VOLUME OF SUB-LEVEL SETS OF POLYNOMIALS.....</b>  | 1975 |
| <i>Jean B. Lasserre</i>  |      |
| <b>BLOCK FACTOR-WIDTH-TWO MATRICES IN SEMIDEFINITE PROGRAMMING.....</b>  | 1981 |
| <i>Aivar Sootla ; Yang Zheng ; Antonis Papachristodoulou</i>   |      |
| <b>STOCHASTIC PHASE-COHESIVENESS OF DISCRETE-TIME KURAMOTO OSCILLATORS IN A FREQUENCY-DEPENDENT TREE NETWORK.....</b>    | 1987 |
| <i>Matin Jafarian ; Mohammad H. Mamduhi ; Karl H. Johansson</i>  |      |
| <b>NETWORK EQUILIBRIUM STABILIZATION VIA SINGLE-NODE INSERTION.....</b>  | 1993 |
| <i>Giorgio Battistelli ; Giulia Cencetti ; Luigi Chisci ; Duccio Fanelli</i>   |      |
| <b>CONTROL OF SWITCHED BOOLEAN CONTROL NETWORKS BY STATE FEEDBACK.....</b>   | 1999 |
| <i>Amol Yerudkar ; Carmen Del Vecchio ; Luigi Glielmo</i>  |      |
| <b>REDUCED ORDER MODELING OF LINEAR CONSENSUS NETWORKS USING WEIGHT ASSIGNMENTS.....</b>                                 | 2005 |
| <i>Xiaodong Cheng ; Lanlin Yu ; Jacquelin M. A. Scherpen</i>   |      |
| <b>MODELLING OF INDIVIDUAL BEHAVIOUR IN THE DEGROOT-FRIEDKIN SELF-APPRAISAL DYNAMICS ON SOCIAL NETWORKS.....</b>         | 2011 |
| <i>Mengbin Ye ; Brian D. O. Anderson</i>   |      |
| <b>NETWORKED INFECTIOUS DISEASE-CONTAMINATED WATER MODEL.....</b>  | 2018 |
| <i>Philip E. Paré ; Ji Liu ; Carolyn L. Beck ; Tamer Basar</i>   |      |
| <b>OPTIMAL LOOK-AHEAD VEHICLE LANE CENTERING CONTROL DESIGN AND APPLICATION FOR MID-HIGH SPEED AND CURVED ROADS.....</b> | 2024 |
| <i>E. Raffone ; C. Rei ; M. Rossi</i>  |      |
| <b>IMAGE-BASED MOTION PLANNING FOR HIGH-SPEED FLIGHT IN UNKNOWN CLUTTERED ENVIRONMENT.....</b>                           | 2030 |
| <i>Fang Liao ; Pengfei Wang ; Kemaoy Peng ; Rodney Teo ; Feng Lin ; Jianliang Wang</i>                                   |      |
| <b>MAXIMIZING THE TARGET'S LONGEVITY IN THE ACTIVE TARGET DEFENSE DIFFERENTIAL GAME.....</b>                             | 2036 |
| <i>Meir Pachter ; Eloy Garcia ; Roger Anderson ; David W. Casbeer ; Khanh Pham</i>                                       |      |
| <b>INTEGRATED MOTION PLANNING AND CONTROL UNDER METRIC INTERVAL TEMPORAL LOGIC SPECIFICATIONS.....</b>                   | 2042 |
| <i>Fernando S. Barbosa ; Lars Lindemann ; Dimos V. Dimarogonas ; Jana Tumova</i>   |      |
| <b>SAFE AUTONOMOUS OVERTAKING WITH INTENTION ESTIMATION.....</b>   | 2050 |
| <i>Vishnu S. Chipade ; Qiang Shen ; Lixing Huang ; Necmiye Ozay ; Sze Zheng Yong ; Dimitra Panagou</i>                   |      |
| <b>INTERACTIVE PLANNING AND SENSING IN SPATIOTEMPORALLY VARYING UNCERTAIN ENVIRONMENTS.....</b>                          | 2058 |
| <i>Benjamin Cooper ; Raghvendra V. Cowlagi</i>   |      |
| <b>ANT-BASED MULTI-ROBOT EXPLORATION IN NON-CONVEX SPACE WITHOUT GLOBAL-CONNECTIVITY CONSTRAINTS.....</b>                | 2065 |
| <i>Gustavo A. Cardona ; David Yanguas-Rojas ; Miguel F. Arevalo-Castiblanco ; Eduardo Mojica-Nava</i>                    |      |
| <b>AN OPTIMAL TASK ALLOCATION STRATEGY FOR HETEROGENEOUS MULTI-ROBOT SYSTEMS.....</b>                                    | 2071 |
| <i>Gennaro Notomista ; Siddharth Mayya ; Seth Hutchinson ; Magnus Egerstedt</i>  |      |

|  |      |
|--|------|
| <b>A COMPARATIVE ANALYSIS ON RIGID AND FLEXIBLE FORMATIONS OF MULTIPLE DIFFERENTIAL-DRIVE MOBILE ROBOTS: A MOTION CAPABILITY PERSPECTIVE</b> ..... | 2077 |
| <i>Yuanzhe Wang ; Mao Shan ; Danwei Wang</i>   |      |
| <b>SENSOR-BASED OBSTACLES AVOIDANCE USING SPIRAL CONTROLLERS FOR AN AIRCRAFT MAINTENANCE INSPECTION ROBOT</b> .....                                | 2083 |
| <i>D. Leca ; V. Cadenat ; T. Sentenac ; A. Durand-Petiteville ; F. Gouaisbaut ; E. Le Flécher</i>  |      |
| <b>LMI BASED ROBUST H2 CONTROL OF A BALL BALANCING ROBOT WITH OMNI-WHEELS</b> .....  | 2090 |
| <i>Flávio H. B. Lima ; Eduardo Poleze ; Gabriel P. Das Neves ; Bruno A. Angélico</i>   |      |
| <b>TRANSPARENT MASTER-SLAVE TELEOPERATION WITHOUT FORCE NOR VELOCITY MEASUREMENTS</b> .....  | 2096 |
| <i>Alejandro Gutiérrez-Giles ; Marco Arteaga-Pérez ; Alejandro Rodríguez-ángels</i>  |      |
| <b>SAMPLED-DATA OBSERVERS FOR SEMILINEAR DAMPED WAVE EQUATIONS UNDER POINT MEASUREMENTS</b> .....  | 2102 |
| <i>Maria Terushkin ; Emilia Fridman</i>  |      |
| <b>FINITE-TIME ESTIMATION OF TIME-VARYING FREQUENCY SIGNALS IN LOW-INERTIA POWER SYSTEMS</b> .....   | 2108 |
| <i>Juan G. Rueda-Escobedo ; Jaime A. Moreno ; Johannes Schiffer</i>  |      |
| <b>STATE OBSERVER DESIGN FOR QUADRATIC PARAMETER VARYING (QPV) SYSTEMS</b> .....   | 2115 |
| <i>Damiano Rotondo ; Tor Arne Johansen</i>   |      |
| <b>A GYROLESS ADAPTATION OF ATTITUDE COMPLEMENTARY FILTERING</b> .....   | 2121 |
| <i>Aurélien Fiot ; Christophe Combettes ; Sébastien Changey ; Nicolas Petit</i>  |      |
| <b>OBSERVER BASED EVENT-TRIGGERED SLIDING MODE CONTROL FOR UNCERTAIN CHAIN OF INTEGRATORS SYSTEM</b> .....   | 2128 |
| <i>Kiran Kumari ; Bijnan Bandyopadhyay</i>   |      |
| <b>ORIENTATION AND VELOCITY OBSERVERS FOR UNICYCLE MOBILE ROBOTS</b> .....   | 2134 |
| <i>Javier Pliego-Jiménez ; Rigoberto Martínez-Clark ; César Cruz-Hernández</i>   |      |
| <b>UNRAVELING ENERGY HOMEOSTASIS IN A DYNAMIC MODEL OF GLYCOLYSIS IN ESCHERICHIA COLI</b> .....  | 2140 |
| <i>Giulia Giordano ; Lotte M. De Graaf ; Eleni Vasilakou ; S. Aljoscha Wahl</i>  |      |
| <b>A MOLECULAR DEVICE FOR FREQUENCY DOUBLING ENABLED BY MOLECULAR SEQUESTRATION</b> .....  | 2146 |
| <i>Christian Cuba Samaniego ; Elisa Franco</i>   |      |
| <b>MODEL OF PARADOXICAL SIGNALING REGULATED T-CELL POPULATION CONTROL FOR DESIGN OF SYNTHETIC CIRCUITS</b> .....                                   | 2152 |
| <i>Michaëlle N. Mayalu ; Harman Mehta ; Richard M. Murray</i>  |      |
| <b>EXTREMUM SEEKING FOR OPTIMAL ENZYME PRODUCTION UNDER CELLULAR FITNESS CONSTRAINTS</b> .....   | 2159 |
| <i>Wolfgang Halter ; Simon Michalowsky ; Frank Allgöwer</i>  |      |
| <b>QUANTIFICATION OF LOADING EFFECTS IN INTERCONNECTIONS OF STOCHASTIC REACTION NETWORKS</b> .....   | 2165 |
| <i>Ankit Gupta ; Patrik Dürrenberger ; Mustafa Khammash</i>  |      |
| <b>AN AUTOMATIC SPARSE MODEL ESTIMATION METHOD GUIDED BY CONSTRAINTS THAT ENCODE SYSTEM PROPERTIES</b> .....                                       | 2171 |
| <i>Zoltan A. Tuza ; Guy-Bart Stan</i>  |      |
| <b>SIMULTANEOUS PLANNING OF CONTAINER AND VEHICLE-ROUTES USING MODEL PREDICTIVE CONTROL</b> .....  | 2177 |
| <i>Rie B. Larsen ; Bilge Atasoy ; Rudy R. Negenborn</i>  |      |
| <b>JOINT ROUTE GUIDANCE AND DEMAND MANAGEMENT FOR MULTI-REGION TRAFFIC NETWORKS</b> .....  | 2183 |
| <i>C. Menelaou ; S. Timotheou ; P. Kolios ; C. G. Panayiotou</i>   |      |
| <b>PATH-INTEGRAL CONTROL FOR OPTIMAL VEHICLE ROUTING OVER NONLINEAR AND DYNAMIC TRAFFIC NETWORKS</b> .....   | 2189 |
| <i>Yasuaki Wasa ; Takashi Tanaka</i>   |      |
| <b>BALANCING SAFETY AND TRAFFIC THROUGHPUT IN COOPERATIVE VEHICLE PLATOONING</b> .....   | 2197 |
| <i>Stanley W. Smith ; Yeojun Kim ; Jacopo Guanetti ; Alexander A. Kurzhanskiy ; Murat Arcak ; Francesco Borrelli</i>                               |      |
| <b>VACS EQUIPPED VEHICLES FOR CONGESTION DISSIPATION IN MULTI-CLASS CTM FRAMEWORK</b> .....  | 2203 |
| <i>G. Piacentini ; M. Cicic ; A. Ferrara ; K. H. Johansson</i>   |      |
| <b>ON ROBUSTNESS OF EQUILIBRIA IN DYNAMICAL TRANSPORTATION NETWORKS</b> .....  | 2209 |
| <i>Rasmus Stalberg ; Gustav Nilsson ; Giacomo Como</i>   |      |

|   |      |
|---|------|
| <b>SAFETY AND LIVENESS OF SOFTWARE REJUVENATION FOR SECURE TRACKING CONTROL</b> .....   | 2215 |
| <i>Raffaele Romagnoli ; Bruce H. Krogh ; Bruno Sinopoli</i>   |      |
| <b>OPTIMIZING ROBUSTNESS AGAINST CASCADING FAILURES UNDER MAX-LOAD TARGETED ATTACK</b> .....  | 2221 |
| <i>Omur Ozel ; Bruno Sinopoli ; Osman Yagan</i>   |      |
| <b>DESIGN OF ATTACK-RESILIENT CONSENSUS DYNAMICS: A GAME-THEORETIC APPROACH</b> .....   | 2227 |
| <i>Mohammad Pirani ; Ehsan Nekouei ; Seyed Mehran Dibaji ; Henrik Sandberg ; Karl Henrik Johansson</i>  |      |
| <b>DATA INJECTION ATTACKS AGAINST FEEDFORWARD CONTROLLERS</b> .....   | 2233 |
| <i>André M. H. Teixeira</i>   |      |
| <b>DISTRIBUTED DETECTION OF COVERT ATTACKS FOR INTERCONNECTED SYSTEMS</b> .....   | 2240 |
| <i>Angelo Barboni ; Hamed Rezaee ; Francesca Boem ; Thomas Parisini</i>   |      |
| <b>DRIVER-NODE BASED SECURITY ANALYSIS FOR NETWORK CONTROLLABILITY</b> .....  | 2246 |
| <i>Shuo Zhang ; Stephen D. Wolthusen</i>  |      |
| <b>DYNAMIC EVOLUTION OF DISTRIBUTIONAL AMBIGUITY SETS AND PRECISION TRADEOFFS IN DATA ASSIMILATION</b> .....                                    | 2252 |
| <i>Dimitris Boskos ; Jorge Cortés ; Sonia Martínez</i>  |      |
| <b>PRACTICAL REINFORCEMENT LEARNING OF STABILIZING ECONOMIC MPC</b> .....   | 2258 |
| <i>Mario Zanon ; Sébastien Gros ; Alberto Bemporad</i>  |      |
| <b>USING UNCERTAINTY DATA IN CHANCE-CONSTRAINED TRAJECTORY PLANNING</b> .....   | 2264 |
| <i>Vasileios Lefkopoulos ; Maryam Kamgarpour</i>  |      |
| <b>LEAST SQUARES REALIZATION OF LTI MODELS IS AN EIGENVALUE PROBLEM</b> .....   | 2270 |
| <i>Bart De Moor</i>   |      |
| <b>TOWARDS PREDICTIVE ANTI-SWAY CONTROL OF HANGING LOADS: MODEL-BASED CONTROLLER DESIGN FOR A KNUCKLE BOOM CRANE</b> .....                      | 2276 |
| <i>Philipp Schubert ; Sebastian Stemmler ; Dirk Abel</i>  |      |
| <b>EXTREMUM SEEKING-BASED OPTIMAL SETTING OF THE AIR TEMPERATURE IN INDUSTRIAL TEXTILE DRYERS</b> .....   | 2283 |
| <i>Fabiana Federica Ferro ; Mirco Rampazzo ; Alessandro Beghi</i>   |      |
| <b>MODEL ORDER REDUCTION OF BILINEAR TIME-DELAY SYSTEMS</b> .....   | 2289 |
| <i>Ion Victor Gosea ; Igor Pontes Duff ; Peter Benner ; Athanasios C. Antoulas</i>  |      |
| <b>CONTROL-ORIENTED MODEL OF A MOLTEN SALT SOLAR POWER CENTRAL RECEIVER</b> .....   | 2295 |
| <i>Rudolf Popp ; Robert Flesch ; Thomas Konrad ; Uwe Jassmann ; Dirk Abel</i>   |      |
| <b>PARAMETER SELECTION FOR BEST H<sub>2</sub> MOMENT MATCHING-BASED MODEL APPROXIMATION THROUGH GRADIENT OPTIMIZATION</b> .....                 | 2301 |
| <i>I. Necoara ; T. C. Ionescu</i>   |      |
| <b>SIMULATION-DRIVEN FIXED-ORDER CONTROLLER TUNING VIA MOMENT MATCHING</b> .....  | 2307 |
| <i>Valentina Breschi ; Simone Formentin ; Giordano Scarciotti ; Alessandro Astolfi</i>  |      |
| <b>THE PRICE OF CONNECTEDNESS IN GRAPH PARTITIONING PROBLEMS</b> .....  | 2313 |
| <i>Nicolas Martin ; Paolo Frasca ; Takayuki Ishizaki ; Jun-Ichi Imura ; Carlos Canudas-De-Wit</i>   |      |
| <b>MODEL REDUCTION BY MOMENT MATCHING: CASE STUDY OF A FIR SYSTEM</b> .....   | 2319 |
| <i>T. C. Ionescu ; O. V. Iftime ; Q.-C. Zhong</i>   |      |
| <b>MINIMUM TIME BILATERAL OBSERVER DESIGN FOR 2 X 2 LINEAR HYPERBOLIC SYSTEMS</b> .....   | 2325 |
| <i>Nils Christian A. Wilhelmsen ; Henrik Anfinsen ; Ole Morten Aamo</i>   |      |
| <b>A BOUNDARY OBSERVER FOR TWO PHASE HEAT EXCHANGERS</b> .....  | 2332 |
| <i>Mohammad Ghousein ; Emmanuel Witrant</i>   |      |
| <b>A UNIFIED FRAMEWORK OF FULLY DISTRIBUTED TIME-VARYING FORMATION CONTROL FOR LARGE-SCALE MULTI-AGENT SYSTEMS: AN OBSERVER VIEWPOINT</b> ..... | 2338 |
| <i>Wei Jiang</i>  |      |
| <b>INPUT AND STATE ESTIMATION EXPLOITING INPUT SPARSITY</b> .....   | 2344 |
| <i>Sophie M. Fosson ; Federica Garin ; Sebin Gracy ; Alain Y. Kibangou ; Dennis Swart</i>   |      |
| <b>OBSERVABILITY ANALYSIS OF DISCONTINUOUS DYNAMICAL SYSTEMS VIA ALGEBRAIC GEOMETRY</b> .....   | 2350 |
| <i>Laura Menini ; Corrado Possieri ; Antonio Tornambè</i>   |      |
| <b>SPATIAL DISCRETIZATION AND KALMAN FILTERING FOR IDEAL PACKED-BED CHROMATOGRAPHY</b> .....  | 2356 |
| <i>Alexander Hørsholt ; Lasse Hjuler Christiansen ; Kristian Meyer ; Jakob Kjøbsted Huusom ; John Bagterp Jørgensen</i>                         |      |

|  |             |
|--|-------------|
| <b>AN OPTIMAL CONTROL OF START-UP FOR NONLINEAR FIRE-TUBE BOILERS WITH THERMAL STRESS CONSTRAINTS .....</b>                                    | <b>2362</b> |
| <i>Stefano Spinelli ; Marcello Farina ; Andrea Ballarino</i>   |             |
| <b>THERMAL COMFORT CONTROL IN AIR-CONDITIONED BUILDINGS: NEW DATA-DRIVEN APPROACHES TO NEUTRAL TEMPERATURE ESTIMATION .....</b>                | <b>2368</b> |
| <i>Federica Acerbi ; Giuseppe De Nicolao ; Mirco Rampazzo</i>  |             |
| <b>MODELLING AND STRUCTURE-TAILORED CONTROL OF BIOGAS PLANTS FED ON AGRO-FOOD RESIDUES.....</b>  | <b>2374</b> |
| <i>Viola Corbellini ; Gianni Ferretti ; Elena Ficara ; Alberto Leva ; Francesca Malpei ; Alessandro Negri</i>                                  |             |
| <b>EXPLORING THE DEPENDENCE OF CELL AGING DYNAMICS ON THERMAL GRADIENT IN BATTERY MODULES: A PDE-BASED TIME SCALE SEPARATION APPROACH.....</b> | <b>2380</b> |
| <i>Anirudh Allam ; Simona Onori</i>  |             |
| <b>H-INFINITY LOOP-SHAPED MODEL PREDICTIVE CONTROL WITH HEAT PUMP APPLICATION .....</b>  | <b>2386</b> |
| <i>Scott A. Bortoff ; Paul Schwerdtner ; Claus Danielson ; Stefano Di Cairano</i>  |             |
| <b>A SCALABLE CONTRACT BASED APPROACH FOR INTEGRATING BUILDING FLEXIBILITY TO ENERGY GRIDS .....</b>   | <b>2394</b> |
| <i>K. Bekiroglu ; S. Srinivasan ; R. Su ; K. Poolla</i>  |             |
| <b>ISS OF A CLAMPED-FREE DAMPED STRING FOR THE CONFIGURATIONS ASSOCIATED WITH THE LOSS OF THE RIESZ-SPECTRAL PROPERTIES .....</b>              | <b>2400</b> |
| <i>Hugo Lhachemi ; Robert Shorten</i>  |             |
| <b>CONTROL-ORIENTED MODELING AND ANALYSIS OF A FLEXIBLE BEAM CARRYING A MOVING MASS.....</b>   | <b>2406</b> |
| <i>Jawad Ismail ; Steven Liu</i>   |             |
| <b>BOUNDARY CONTROL DESIGN FOR LINEAR 1-D BALANCE LAWS IN THE PRESENCE OF IN-DOMAIN DISTURBANCES .....</b>                                     | <b>2412</b> |
| <i>Francesco Ferrante ; Christophe Prieur</i>  |             |
| <b>BOUNDARY OBSERVER DESIGN FOR COUPLED ODES–HYPERBOLIC PDES SYSTEMS.....</b>  | <b>2418</b> |
| <i>Francesco Ferrante ; Andrea Cristofaro</i>  |             |
| <b>MULTI-AGENT DEPLOYMENT UNDER THE LEADER DISPLACEMENT MEASUREMENT: A PDE-BASED APPROACH .....</b>  | <b>2424</b> |
| <i>Jieqiang Wei ; Emilia Fridman ; Anton Selivanov ; Karl H. Johansson</i>   |             |
| <b>MULTI-AGENT SYSTEM MODELING OF ADVECTION-DIFFUSION-REACTION EQUATIONS.....</b>  | <b>2430</b> |
| <i>Alessandro Borri ; Valerio Cusimano ; Simona Panunzi ; Andrea De Gaetano</i>  |             |
| <b>DISTRIBUTED CONTROL AND OPTIMIZATION FOR AUTONOMOUS POWER GRIDS.....</b>  | <b>2436</b> |
| <i>Florian Dörfler ; Saverio Bolognani ; John W. Simpson-Porco ; Sergio Grammatico</i>   |             |
| <b>LEARNING MODELS FOR WRITING BETTER DOCTOR PRESCRIPTIONS .....</b>   | <b>2454</b> |
| <i>Tingting Xu ; Ioannis Ch. Paschalidis</i>   |             |
| <b>ON ROBUST STABILITY OF FULLY PROBABILISTIC CONTROL WITH RESPECT TO DATA-DRIVEN MODEL UNCERTAINTIES .....</b>                                | <b>2460</b> |
| <i>Bernat Guillen Pegueroles ; Giovanni Russo</i>  |             |
| <b>SORTING OBJECTS FROM A CONVEYOR BELT USING ACTIVE PERCEPTION WITH A POMDP MODEL .....</b>   | <b>2466</b> |
| <i>Ady-Daniel Mezei ; Levente Tamás ; Lucian Busoniu</i>   |             |
| <b>LEARNING PROBABILISTIC MODELS FOR SAFE PREDICTIVE CONTROL IN UNKNOWN ENVIRONMENTS .....</b>   | <b>2472</b> |
| <i>Christopher D. McKinnon ; Angela P. Schoellig</i>   |             |
| <b>ONLINE OPTIMISATION FOR ONLINE LEARNING AND CONTROL - FROM NO-REGRET TO GENERALISED ERROR CONVERGENCE .....</b>                             | <b>2480</b> |
| <i>J. Calliess</i>   |             |
| <b>SYNTHESIS OF OPTIMAL FEEDBACK CONTROLLERS FROM DATA VIA STOCHASTIC GRADIENT DESCENT .....</b>   | <b>2486</b> |
| <i>Laura Ferrarotti ; Alberto Bemporad</i>   |             |
| <b>CONTROL DESIGN AND ANALYSIS OF AN EPIDEMIC SEIV MODEL UPON ADAPTIVE NETWORK.....</b>  | <b>2492</b> |
| <i>Zhixun Li ; Jie Hong ; Jonghyuk Kim ; Changbin Yu</i>   |             |
| <b>ON-OFF DUAL CHANNEL CODING AS A TEAM DECISION PROBLEM .....</b>   | <b>2498</b> |
| <i>Franco Davoli ; Maurizio Mongelli</i>   |             |
| <b>ON USING GATED RECURRENT UNITS FOR NONLINEAR SYSTEM IDENTIFICATION .....</b>  | <b>2504</b> |
| <i>Alexander Rehmer ; Andreas Kroll</i>  |             |
| <b>INTERPOLATING CONTROL TOOLBOX (ICT).....</b>  | <b>2510</b> |
| <i>Sheila Scialanga ; Konstantinos Ampountolas</i>   |             |

|   |      |
|---|------|
| <b>STRONGLY STRUCTURAL INPUT AND STATE OBSERVABILITY FOR LINEAR TIME INVARIANT NETWORK SYSTEMS</b> .....                        | 2516 |
| <i>Sebin Gracy ; Federica Garin ; Alain Y. Kibangou</i>   |      |
| <b>ENERGY-OPTIMIZED HYBRID COLLISION AVOIDANCE FOR ASVS</b> .....   | 2522 |
| <i>Glenn Bitar ; Bjørn-Olav H. Eriksen ; Anastasios M. Lekkas ; Morten Breivik</i>  |      |
| <b>A COLREG-COMPLIANT SHIP COLLISION AVOIDANCE ALGORITHM</b> .....  | 2530 |
| <i>Raphael Zaccone ; Michele Martelli ; Massimo Figari</i>  |      |
| <b>AUTONOMOUS COLREGS-COMPLIANT DECISION MAKING USING MARITIME RADAR TRACKING AND MODEL PREDICTIVE CONTROL</b> .....            | 2536 |
| <i>D. K. M. Kufoalor ; E. Wilthil ; I. B. Hagen ; E. F. Brekke ; T. A. Johansen</i>   |      |
| <b>ECO-VTF: FUEL-EFFICIENT VESSEL TRAIN FORMATIONS FOR ALL-ELECTRIC AUTONOMOUS SHIPS</b> .....                                  | 2543 |
| <i>Linying Chen ; Ali Haseltalab ; Vittorio Garofano ; Rudy R. Negenborn</i>  |      |
| <b>PATH FOLLOWING CONTROL OF UNDERACTUATED SURFACE VESSELS IN THE PRESENCE OF MULTIPLE DISTURBANCES</b> .....                   | 2551 |
| <i>Walter Caharija ; Asgeir J. Sørensen ; Kristin Y. Pettersen ; Marilena Greco ; Jan T. Gravdahl</i>                           |      |
| <b>MULTI-VEHICLE GUIDANCE, NAVIGATION AND CONTROL TOWARDS AUTONOMOUS SHIP MANEUVERING IN CONFINED WATERS</b> .....              | 2559 |
| <i>Martin Kurowski ; Sylvain Roy ; Jan-Jöran Gehrt ; Robert Damerius ; Christof Büskens ; Dirk Abel ; Torsten Jeinsch</i>       |      |
| <b>SAFETY BARRIER FUNCTIONS FOR HUMAN-ROBOT INTERACTION WITH INDUSTRIAL MANIPULATORS</b> .....                                  | 2565 |
| <i>Chiara Talignani Landi ; Federica Ferraguti ; Silvia Costi ; Marcello Bonfè ; Cristian Secchi</i>                            |      |
| <b>UNIMANUAL ASSEMBLY BY DEFORMATION AND INSERTION</b> .....  | 2571 |
| <i>George S. Kanakis ; Lampros N. Bikas ; George A. Rovithakis</i>  |      |
| <b>TRAJECTORY GENERATION USING SEMIDEFINITE PROGRAMMING FOR MULTI-ROTORS</b> .....  | 2577 |
| <i>Xiao Hu ; Daniel Olesen ; Per Knudsen</i>  |      |
| <b>HUMAN-ROBOT COLLABORATIVE OBJECT TRANSFER USING HUMAN MOTION PREDICTION BASED ON DYNAMIC MOVEMENT PRIMITIVES</b> .....       | 2583 |
| <i>Antonis Sidiropoulos ; Yiannis Karayiannidis ; Zoe Doulgeri</i>  |      |
| <b>DYNAMIC WALKING WITH COMPLIANCE ON A CASSIE BIPEDAL ROBOT</b> .....  | 2589 |
| <i>Jacob Reher ; Wen-Loong Ma ; Aaron D. Ames</i>   |      |
| <b>CONTROLLABILITY AND ACCESSIBILITY RESULTS FOR AN N-LINK HORIZONTAL PLANAR PENDUBOT</b> .....                                 | 2596 |
| <i>Tan Chen ; Bill Goodwine</i>   |      |
| <b>CHAOTIC BEHAVIORS IN A SYSTEM WITH A LINE EQUILIBRIUM</b> .....  | 2603 |
| <i>Viet-Thanh Pham ; Christos Volos ; Sajad Jafari ; Adel Ouamas ; Toan Thanh Dao</i>   |      |
| <b>A CHARACTERIZATION OF FINITE-TIME STABILITY WITH DENSITY FUNCTIONS</b> .....   | 2608 |
| <i>Kenta Hoshino</i>  |      |
| <b>A FEEDBACK LINEARIZATION BASED APPROACH FOR FULLY AUTONOMOUS ADAPTIVE CRUISE CONTROL</b> .....                               | 2614 |
| <i>Antonino Trotta ; Andrea Cirillo ; Michele Giorelli</i>  |      |
| <b>CONTROL OF PAINLEVÉ PARADOX IN A ROBOTIC SYSTEM</b> .....  | 2620 |
| <i>Davide Marchese ; Marco Coraggio ; S. John Hogan ; Mario Di Bernardo</i>   |      |
| <b>DESIGN AND IMPLEMENTATION OF ROBUST GENERALIZED DYNAMIC INVERSION CONTROL FOR STABILIZING ROTARY INVERTED PENDULUM</b> ..... | 2626 |
| <i>Uzair Ansari ; Ibrahim Mustafa Mehedi ; Abdulrahman H. Bajodah ; Ubaid M. Al-Saggaf</i>                                      |      |
| <b>DERIVATION AND MATHEMATICAL ANALYSIS OF PIECEWISE AFFINE OSCILLATORS WITH DESIRED POLYGONAL LIMIT CYCLES</b> .....           | 2632 |
| <i>Tatsuya Kai ; Shingo Chiku ; Koushi Maehara</i>  |      |
| <b>MITIGATING BIOLOGICAL SIGNALLING CROSS-TALK WITH FEEDBACK CONTROL</b> .....  | 2638 |
| <i>Harrison Steel ; Aivar Sootla ; Nicolas Delalez ; Antonis Papachristodoulou</i>  |      |
| <b>TOWARDS FEEDBACK CONTROL OF THE CELL-CYCLE ACROSS A POPULATION OF YEAST CELLS</b> .....                                      | 2644 |
| <i>Giansimone Perrino ; Davide Fiore ; Sara Napolitano ; Mario Di Bernardo ; Diego Di Bernardo</i>                              |      |
| <b>COOPERATION ENHANCES ROBUSTNESS OF COEXISTENCE IN SPATIALLY STRUCTURED CONSORTIA</b> .....                                   | 2651 |
| <i>Xinying Ren ; Richard M. Murray</i>  |      |
| <b>OPTIMAL CONTROL OF BACTERIAL GROWTH FOR METABOLITE PRODUCTION: THE ROLE OF TIMING AND COSTS OF CONTROL</b> .....             | 2657 |
| <i>E. Cinquemani ; F. Mairet ; I. Yegorov ; H. De Jong ; J.-L. Gouzé</i>  |      |

|   |      |
|---|------|
| <b>OPTIMAL CONTROL OF AN ARTIFICIAL MICROBIAL DIFFERENTIATION SYSTEM FOR PROTEIN BIOPRODUCTION.....</b>   | 2663 |
| <i>Élise Weill ; Virgile Andréani ; Chetan Aditya ; Pierre Martinon ; Jakob Ruess ; Grégory Batt ; Frédéric Bonnans</i>                                 |      |
| <b>A STRATEGY FOR MULTICELLULAR FEEDBACK CONTROL IN MAMMALIAN CELLS.....</b>  | 2669 |
| <i>L. Postiglione ; J. Wan ; M. Di Bernardo ; L. Marucci</i>  |      |
| <b>A HIERARCHICAL CONTROL SYSTEM FOR SMART PARKING LOTS WITH AUTOMATED VEHICLES: IMPROVE EFFICIENCY BY LEVERAGING PREDICTION OF HUMAN DRIVERS .....</b> | 2675 |
| <i>Yuchao Li ; Karl H. Johansson ; Jonas Mårtensson</i>   |      |
| <b>ADAPTIVE ALGORITHM FOR DIAL-A-RIDE PROBLEM WITH VEHICLE BREAKDOWN .....</b>  | 2682 |
| <i>Ramesh Ramasamy Pandi ; Song Guang Ho ; Sarat Chandra Nagavarapu ; Justin Dauwels</i>  |      |
| <b>OPTIMAL LONGITUDINAL TRAJECTORY PLANNING FOR A QUADROTOR UAV INCLUDING LINEAR DRAG EFFECTS.....</b>  | 2689 |
| <i>Bruno Carvalho ; Luis Rodrigues</i>  |      |
| <b>AUTONOMOUS WAYPOINT PLANNING, OPTIMAL TRAJECTORY GENERATION AND NONLINEAR TRACKING CONTROL FOR MULTI-ROTOR UAVS.....</b>                             | 2695 |
| <i>Hossein Eslamiat ; Yilan Li ; Ningshan Wang ; Amit K. Sanyal ; Qinru Qiu</i>   |      |
| <b>GEOMETRIC TRACKING CONTROL OF AERIAL ROBOTS BASED ON CENTROID VECTORING .....</b>  | 2701 |
| <i>Lovro Markovic ; Antun Ivanovic ; Marko Car ; Matko Orsag ; Stjepan Bogdan</i>   |      |
| <b>LYAPUNOV-BASED HIERARCHICAL CONTROL DESIGN OF A QUAD-ROTORCRAFT WITH SINGULARITY AVOIDANCE.....</b>  | 2707 |
| <i>Ranjan Dasgupta ; Sayan Basu Roy ; Shubhendu Bhasin</i>  |      |
| <b>EVENT-TRIGGERED COMMUNICATIONS FOR THE SYNCHRONIZATION OF NONLINEAR MULTI AGENT SYSTEMS ON WEIGHT-BALANCED DIGRAPHS.....</b>                         | 2713 |
| <i>Nguyen T. Hung ; Francisco C. Rego ; Antonio M. Pascoal</i>  |      |
| <b>AN EVENT-TRIGGERED APPROACH TO QUANTIZED RESILIENT CONSENSUS .....</b>   | 2719 |
| <i>Yuan Wang ; Hideaki Ishii</i>  |      |
| <b>A SCALABLE ALGORITHM FOR SELF-ORGANIZATION IN EVENT-TRIGGERED NETWORKED CONTROL SYSTEMS.....</b>   | 2725 |
| <i>Andreea Ion ; Monica Patrascu</i>  |      |
| <b>EVENT-TRIGGERED DISTRIBUTED BAYES FILTER.....</b>  | 2731 |
| <i>Giorgio Battistelli ; Luigi Chisci ; Lin Gao ; Daniela Selvi</i>   |      |
| <b>OPTIMIZATION OF RELATIVE AND ABSOLUTE THRESHOLDING PARAMETERS IN EVENT-TRIGGERED CONTROL.....</b>  | 2737 |
| <i>Akshit Saradagi ; Arun D. Mahindrakar ; Shravan Mohan</i>  |      |
| <b>ACTIVE SET UPDATES IN EVENT-TRIGGERED NETWORKED MPC.....</b>   | 2743 |
| <i>Patrik Berner ; Kai König ; Michal Kvasnica ; Martin Mönnigmann</i>  |      |
| <b>A SEMISMOOTH PREDICTOR CORRECTOR METHOD FOR SUBOPTIMAL MODEL PREDICTIVE CONTROL .....</b>  | 2749 |
| <i>Dominic Liao-McPherson ; Marco M. Nicotra ; Ilya V. Kolmanovsky</i>  |      |
| <b>DETECTING AND EXPLOITING GENERALIZED NONLINEAR STATIC FEEDBACK STRUCTURES IN DAE SYSTEMS FOR MPC.....</b>  | 2756 |
| <i>Jonathan Frey ; Rien Quirynen ; Dimitris Kouzoupis ; Gianluca Frison ; Jens Geisler ; Axel Schild ; Moritz Diehl</i>                                 |      |
| <b>A STRUCTURE EXPLOITING BRANCH-AND-BOUND ALGORITHM FOR MIXED-INTEGER MODEL PREDICTIVE CONTROL .....</b>   | 2763 |
| <i>Pedro Hespanhol ; Rien Quirynen ; Stefano Di Cairano</i>   |      |
| <b>EFFICIENT ZERO-ORDER NMPC WITH FEASIBILITY AND STABILITY GUARANTEES.....</b>   | 2769 |
| <i>Andrea Zanelli ; Rien Quirynen ; Moritz Diehl</i>  |      |
| <b>PARTITION-BASED FEASIBLE INTEGER SOLUTION PRE-COMPUTATION FOR HYBRID MODEL PREDICTIVE CONTROL .....</b>  | 2776 |
| <i>Danylo Malyuta ; Behçet Açikmese ; Martin Cacan ; David S. Bayard</i>  |      |
| <b>NONLINEAR MODEL PREDICTIVE CONTROL OF A DISTRIBUTED PARAMETER SYSTEM WITH TIME-VARYING SOFT CONSTRAINTS .....</b>                                    | 2783 |
| <i>Jawad Ismail ; Steven Liu</i>  |      |
| <b>DECISION-MAKING IN COMPLEX DYNAMICAL SYSTEMS OF SYSTEMS WITH ONE OPPOSING SUBSYSTEM .....</b>  | 2789 |
| <i>Shahriar Talebi ; Marwan A. Simaan ; Zhihua Qu</i>   |      |
| <b>PERFORMANCE GUARANTEES FOR GREEDY MAXIMIZATION OF NON-SUBMODULAR CONTROLLABILITY METRICS .....</b>   | 2796 |
| <i>Tyler Summers ; Maryam Kamgarpour</i>  |      |

|   |             |
|---|-------------|
| <b>COMPOSITIONAL SYNTHESIS OF NOT NECESSARILY STABILIZABLE STOCHASTIC SYSTEMS VIA FINITE ABSTRACTIONS .....</b>                             | <b>2802</b> |
| <i>Abolfazl Lavaei ; Sadegh Soudjani ; Majid Zamani</i>   |             |
| <b>A LUMPED PARAMETER MODEL OF THE BOOM OF A MOBILE CONCRETE PUMP .....</b>   | <b>2808</b> |
| <i>Julian Wanner ; Oliver Sawodny</i>   |             |
| <b>BAYESIAN TOPOLOGY IDENTIFICATION OF LINEAR DYNAMIC NETWORKS .....</b>  | <b>2814</b> |
| <i>Shengling Shi ; Giulio Bottegal ; Paul M. J. Van Den Hof</i>   |             |
| <b>CONTROL OF SYNCHRONIZATION OF A GROUP OF NODES IN DIRECTED NETWORKS .....</b>  | <b>2820</b> |
| <i>Bruno Ursino ; Lucia Valentina Gambuzza ; Vito Latora ; Mattia Frasca</i>  |             |
| <b>SAMPLED-DATA CONTROL OF INTERVAL SYSTEMS WITH GUARANTEED <math>H_\infty</math> PERFORMANCE .....</b>                                     | <b>2826</b> |
| <i>Rafael M. Alves ; André R. Fioravanti ; Matheus Souza</i>  |             |
| <b>USING RADIAL BASIS FUNCTIONS TO APPROXIMATE THE LQG-OPTIMAL EVENT-BASED SAMPLING POLICY .....</b>  | <b>2832</b> |
| <i>Marcus Thelander Andrén</i>  |             |
| <b>GENERALIZATION OF PIECEWISE CONSTANT APPROXIMATION IN THE <math>L_\infty/L_2</math> OPTIMAL CONTROL OF SAMPLED-DATA SYSTEMS .....</b>    | <b>2839</b> |
| <i>Jung Hoon Kim ; Tomomichi Hagiwara</i>   |             |
| <b>SYNCHRONOUS SAMPLED DATA MODAL CONTROL AND STABILIZATION OF LINEAR PERIODIC PROCESSES WITH CONTROL SIGNAL DELAY .....</b>                | <b>2845</b> |
| <i>E. N. Rosenwasser ; B. P. Lampe ; W. Drewelow ; T. Jeinsch</i>   |             |
| <b>PROPERTIES OF THE QUASI <math>L_2/L_2</math> HANKEL NORMS AND THE <math>L_2/L_2</math> HANKEL OPERATOR OF SAMPLED-DATA SYSTEMS .....</b> | <b>2850</b> |
| <i>Hiroki Hara ; Tomomichi Hagiwara</i>   |             |
| <b>STABILIZING A LINEAR SYSTEM USING PHONE CALLS .....</b>  | <b>2856</b> |
| <i>Mohammad Javad Khojasteh ; Massimo Franceschetti ; Gireeja Ranade</i>  |             |
| <b>SUBSPACE CONTROLLABILITY OF QUANTUM ISING SPIN NETWORKS WITH A CENTRAL SPIN .....</b>  | <b>2862</b> |
| <i>Francesca Albertini ; Domenico D'Alessandro</i>  |             |
| <b>CONVERGENCE TO PURE STEADY STATES OF LINEAR QUANTUM SYSTEMS .....</b>  | <b>2868</b> |
| <i>Muhammad F. Emzir ; Ian R. Petersen ; Matthew J. Woolley</i>   |             |
| <b>CONTROL-ORIENTED MODELLING OF PROOF-OF-WORK BLOCKCHAINS .....</b>  | <b>2873</b> |
| <i>Alberto Leva ; Silvia Strada ; Mara Tanelli</i>  |             |
| <b>SELECTIVE EXCITATION OF IDENTICAL CONSERVATIVE PORT-HAMILTONIAN SYSTEMS BY A SINGLE CONTROL .....</b>                                    | <b>2879</b> |
| <i>Dmitry Gromov ; Alexander L. Fradkov ; Mikhail S. Ananyevskiy</i>  |             |
| <b>A RELAXED OPTIMIZATION APPROACH FOR CARDINALITY-CONSTRAINED PORTFOLIOS .....</b>   | <b>2885</b> |
| <i>Jize Zhang ; Tim Leung ; Aleksandr Aravkin</i>   |             |
| <b>STOP REPEATING YOURSELF: EXPLOITATION OF REPETITIVE SIGNAL PATTERNS TO REDUCE COMMUNICATION LOAD IN SENSOR NETWORKS .....</b>            | <b>2893</b> |
| <i>Tianyi Zhang ; Daniel Laidig ; Thomas Seel</i>   |             |
| <b>DISTRIBUTED OUTPUT FEEDBACK CONTROL OF DECOMPOSABLE LPV SYSTEMS WITH DELAY: APPLICATION TO MULTI-AGENT NONHOLONOMIC SYSTEMS .....</b>    | <b>2899</b> |
| <i>Muhammad Zakwan ; Saeed Ahmed</i>  |             |
| <b>IDENTIFICATION OF SENSORY DEAD ZONES IN HUMAN BALANCING ON BALANCE BOARD .....</b>   | <b>2904</b> |
| <i>Csenge A. Molnar ; Balazs Varszegi ; Tamas Insperger</i>   |             |
| <b>CONTROLLER DESIGN FOR DELAY MARGIN IMPROVEMENT .....</b>   | <b>2910</b> |
| <i>A. N. Gundes ; H. Özbay</i>  |             |
| <b>HIERARCHICAL ESTIMATION OF THE REGION OF ATTRACTION FOR SYSTEMS SUBJECT TO A STATE DELAY AND A SATURATED INPUT .....</b>                 | <b>2915</b> |
| <i>Alexandre Seuret ; Swann Marx ; Sophie Tarbouriech</i>   |             |
| <b>ON THE OBSERVABILITY AND DETECTABILITY OF NON-COMMENSURATE TIME-DELAY LINEAR SYSTEMS .....</b>   | <b>2921</b> |
| <i>Francisco Javier Bejarano ; Rosane Ushirobira ; Gang Zheng</i>   |             |
| <b>STATE-MULTIPLICATIVE RETARDED SYSTEMS - PREDICTOR-BASED STATE-FEEDBACK AND OUTPUT-FEEDBACK CONTROL .....</b>                             | <b>2926</b> |
| <i>Eli Gershon ; Uri Shaked</i>   |             |
| <b>ADAPTIVE CONTROL FOR SPACECRAFT AUTONOMOUS RENDEZVOUS AND DOCKING UNDER 6-DOF MOTION CONSTRAINTS .....</b>                               | <b>2932</b> |
| <i>Hongyang Dong ; Qinglei Hu ; Maruthi R. Akella</i>   |             |

|   |      |
|---|------|
| <b>ADAPTIVE HUMAN PILOT MODEL FOR UNCERTAIN SYSTEMS</b> .....   | 2938 |
| <i>S. S. Tohidi ; Y. Yildiz</i>   |      |
| <b>IMPROVING DISTRICT HEATING SYSTEM OPERATION THROUGH CONTROL CONFIGURATION SELECTION AND ADAPTIVE CONTROL</b> .....   | 2944 |
| <i>Wolfgang Birk ; Khalid Tourkey Atta ; Fredrik Udén</i>   |      |
| <b>PERFORMANCE IMPROVEMENT OF DISCRETE MRAC BY DYNAMIC AND MEMORY REGRESSOR EXTENSION</b> .....   | 2950 |
| <i>Dmitry N. Gerasimov ; Mikhail E. Belyaev ; Vladimir O. Nikiforov</i>   |      |
| <b>BLENDING BASED MULTIPLE-MODEL ADAPTIVE CONTROL FOR MULTIVARIABLE SYSTEMS AND APPLICATION TO LATERAL VEHICLE DYNAMICS</b> .....   | 2957 |
| <i>H. Zengin ; N. Zengin ; B. Fidan ; A. Khajepour</i>  |      |
| <b>FINITE-TIME PARAMETER ESTIMATION WITHOUT PERSISTENCE OF EXCITATION</b> .....   | 2963 |
| <i>J. Wang ; D. Efimov ; A. A. Bobtsov</i>  |      |
| <b>RECEDING-HORIZON ROBUST ONLINE COMMUNICATION SCHEDULING FOR CONSTRAINED NETWORKED CONTROL SYSTEMS</b> .....  | 2969 |
| <i>Masoud Bahraini ; Mario Zanon ; Alessandro Colombo ; Paolo Falcone</i>   |      |
| <b>TIMER-BASED DISTRIBUTED CHANNEL ACCESS FOR CONTROL OVER UNKNOWN UNRELIABLE TIME-VARYING COMMUNICATION CHANNELS</b> .....   | 2975 |
| <i>Tahmoores Farjam ; Themistoklis Charalambous ; Henk Wymeersch</i>  |      |
| <b>TIMER-BASED DISTRIBUTED CHANNEL ACCESS IN NETWORKED CONTROL SYSTEMS OVER KNOWN AND UNKNOWN GILBERT-ELLIOTT CHANNELS</b> .....  | 2983 |
| <i>Tahmoores Farjam ; Themistoklis Charalambous ; Henk Wymeersch</i>  |      |
| <b>DRIVE-BY-WI-FI: TESTING 1 KHZ CONTROL EXPERIMENTS OVER WIRELESS</b> .....  | 2990 |
| <i>Francesco Branz ; Matthias Pezzutto ; Riccardo Antonello ; Federico Tamarin ; Luca Schenato</i>  |      |
| <b>LOCAL SYNCHRONIZATION OF TWO DC/AC CONVERTERS VIA MATCHING CONTROL</b> .....   | 2996 |
| <i>Taouba Jouini ; Florian Dörfler</i>  |      |
| <b>NETWORKED CONTROL OF STOCHASTIC SYSTEMS WITH SCHEDULING PROTOCOLS</b> .....  | 3002 |
| <i>Jin Zhang ; Emilia Fridman</i>   |      |
| <b>TRAFFIC AUTOMATION IN URBAN ROAD NETWORKS USING CONSENSUS-BASED AUCTION ALGORITHMS FOR ROAD INTERSECTIONS</b> .....  | 3008 |
| <i>Fabio Molinari ; Alexander Martin Dethof ; Jörg Raisch</i>   |      |
| <b>HYBRID FORMALISM FOR CONSENSUS OF A GENERAL CLASS OF MULTI-AGENT SYSTEMS WITH BIASED MEASUREMENTS</b> .....  | 3016 |
| <i>T. Borzone ; I.-C. Morarcscu ; M. Jungers ; M. Boc ; C. Janneteau</i>  |      |
| <b>OPTIMAL MANEUVERING AND CONTROL OF COOPERATIVE VEHICLES AS CASE STUDY FOR MARITIME APPLICATIONS WITHIN HARBORS</b> .....   | 3022 |
| <i>R. Zweigel ; J. J. Gehrt ; S. Liu ; S. Roy ; C. Büskens ; M. Kurowski ; T. Jeinsch ; A. Schubert ; M. Gluch ; O. Simanski ; E. Pairet-Garcia ; F. Siemer ; D. Abel</i> |      |
| <b>PRACTICAL CONSENSUS TRACKING OF MULTI-AGENT SYSTEMS WITH LINEAR CONTROLLERS</b> .....  | 3028 |
| <i>Fayrouz Isfoula ; Patrick Coirault ; Emmanuel Bernuau ; Emmanuel Moulay ; Qishuai Liu ; Qing Hui</i>   |      |
| <b>ELECTRIC VEHICLE - POWER GRID INCORPORATION USING DISTRIBUTED RESOURCE ALLOCATION APPROACH</b> .....   | 3034 |
| <i>J. Moyalán ; M. Sawant ; U. Bhagyashree ; A. Sheikh ; S. Wagh ; N. Singh</i>   |      |
| <b>A CONGESTION-AWARE ROUTING SCHEME FOR AUTONOMOUS MOBILITY-ON-DEMAND SYSTEMS</b> .....  | 3040 |
| <i>Mauro Salazar ; Matthew Tsao ; Izabel Aguiar ; Maximilian Schiffer ; Marco Pavone</i>  |      |
| <b>TEACHING TO DESIGN CONTROL APPLICATIONS WITH COORDINATED MODULATING AND LOGIC FUNCTIONS</b> .....  | 3047 |
| <i>Alberto Leva ; Chiara Cimino</i>   |      |
| <b>USING SERVER-SENT EVENTS FOR EVENT-BASED CONTROL LABORATORY PRACTICES IN DISTANCE AND BLENDED LEARNING</b> .....   | 3053 |
| <i>Luis De La Torre ; Jesus Chacon ; Dictino Chaos ; Sebastian Dormido ; Jose Sanchez</i>   |      |
| <b>OPEN CONTENT DEVELOPMENT APPLIED IN LEARNING SYSTEMS AND CONTROL</b> .....   | 3059 |
| <i>A. Benedek ; T. Vámos ; R. Bars ; D. Sik</i>   |      |
| <b>A FIRST COURSE IN FEEDBACK, DYNAMICS AND CONTROL: PRELIMINARY FINDINGS OF A SURVEY FOR THE IFAC COMMUNITY</b> .....  | 3065 |
| <i>J. A. Rossiter ; K. Zakova ; M. Huba ; A. Serbezov ; A. Visioli</i>  |      |
| <b>A SIMPLE MECHATRONIC SYSTEM FOR TEACHING CONTROL CONCEPTS TO INDUSTRIAL AUTOMATION STUDENTS</b> .....  | 3070 |
| <i>Claudio Carnevale ; Giovanna Finzi ; Antonio Visioli ; Fabrizio Padula</i>   |      |



|  |      |
|--|------|
| <b>COURSES-CONCEPTS-GRAPHS AS A TOOL TO MEASURE THE IMPORTANCE OF CONCEPTS IN UNIVERSITY PROGRAMMES</b> .....                      | 3076 |
| <i>Eva Fjällström ; Christoffer Forsberg ; Felix Trulsson ; Steffi Knorn ; Kjell Staffas ; Damiano Varagnolo ; Tobias Wrigstad</i> |      |
| <b>DUAL LOOP SPEED TRACKING CONTROL FOR TORQUE MANAGEMENT OF GASOLINE ENGINES</b> .....  | 3084 |
| <i>R. Anjum ; A. Yar ; A. I. Bhatti ; I. K. Yousufzai ; Q. Ahmed</i>   |      |
| <b>FAULT DIAGNOSIS FOR ROBOT MANIPULATORS VIA VISION SERVOING BASED SUBOPTIMAL SECOND ORDER SLIDING MODE</b> .....                 | 3090 |
| <i>Gian Paolo Incremona ; Antonella Ferrara</i>  |      |
| <b>EXACT STATE RECONSTRUCTION FOR LTI-SYSTEMS WITH NON-DIFFERENTIABLE UNKNOWN INPUTS</b> .....                                     | 3096 |
| <i>Markus Tranninger ; Richard Seeber ; Martin Steinberger ; Martin Horn</i>   |      |
| <b>ADAPTIVE SLIDING MODE DYNAMIC POSITIONING CONTROL FOR A SEMI-SUBMERSIBLE OFFSHORE PLATFORM</b> .....                            | 3103 |
| <i>Dongya Zhao ; Shouli Gao ; Sarah K. Spurgeon ; Markus Reichhartinger</i>  |      |
| <b>ROBUST CONTROL SCHEMES BASED ON HIGHER ORDER SLIDING MODE WITH ENERGY REDUCTION</b> .....                                       | 3109 |
| <i>Elias Tahoumi ; Franck Plestan ; Malek Ghanes ; Jean-Pierre Barbot</i>  |      |
| <b>ADAPTIVE INTEGRAL SUPER-TWISTING SLIDING MODE CONTROL FOR UNCERTAIN STOCHASTIC SYSTEMS</b> .....                                | 3114 |
| <i>Ngo Phong Nguyen ; Hyun Jong Yang ; Hyondong Oh ; Jun Moon</i>  |      |
| <b>OBSERVER-BASED DIAGNOSIS IN CHEMICAL REACTION NETWORKS</b> .....  | 3120 |
| <i>Lorine Márton ; Gábor Szederkényi ; Katalin M. Hangos</i>   |      |
| <b>NON-LINEAR MODELLING AND VALIDATION OF AN INDUSTRIAL METHANE RICH GAS NETWORK FOR CONTROL APPLICATIONS</b> .....                | 3126 |
| <i>Andries J. Wiid ; Johan D. Le Roux ; Ian K. Craig</i>   |      |
| <b>APPLICATION OF A SYMMETRIC-SEND-ON-DELTA EVENT-BASED CONTROLLER FOR A MICROALGAL RACEWAY REACTOR</b> .....                      | 3132 |
| <i>E. Rodríguez-Miranda ; M. Beschi ; J. L. Guzmán ; M. Berenguel ; A. Visioli</i>   |      |
| <b>STABILIZATION OF TIME DELAYED NONNEGATIVE POLYNOMIAL SYSTEMS THROUGH KINETIC REALIZATION</b> .....                              | 3138 |
| <i>György Lipták ; Katalin M. Hangos ; Gábor Szederkényi</i>   |      |
| <b>OUTPUT FEEDBACK STOCHASTIC NONLINEAR MODEL PREDICTIVE CONTROL OF A POLYMERIZATION BATCH PROCESS</b> .....                       | 3144 |
| <i>Eric Bradford ; Marcus Reble ; Lars Imsland</i>   |      |
| <b>PAIRING MOVING HORIZON ESTIMATION AND MODEL PREDICTIVE CONTROL VIA CARLEMAN APPROXIMATION FOR OUTPUT FEEDBACK CONTROL</b> ..... | 3152 |
| <i>Yizhou Fang ; Antonios Armaou</i>   |      |
| <b>REDUCING TIME HEADWAY IN HOMOGENEOUS CACC VEHICLE PLATOONS IN THE PRESENCE OF PACKET DROPS</b> .....                            | 3159 |
| <i>Vamsi K. Vegamoor ; Dileep Kalathil ; Sivakumar Rathinam ; Swaroop Darbha</i>   |      |
| <b>HUMAN-ROBOT INTERACTION FOR TRUCK PLATOONING USING HIERARCHICAL DYNAMIC GAMES</b> .....   | 3165 |
| <i>Elis Stefansson ; Jaime F. Fisac ; Dorsa Sadigh ; S. Shankar Sastry ; Karl H. Johansson</i>                                     |      |
| <b>ON THE COEXISTENCE OF HUMAN-DRIVEN AND AUTOMATED VEHICLES WITHIN PLATOON SYSTEMS</b> .....                                      | 3173 |
| <i>Julien Monteil ; Giovanni Russo</i>   |      |
| <b>INTEGRATED RAMP METERING AND LANE-CHANGING FEEDBACK CONTROL AT MOTORWAY BOTTLENECKS</b> .....                                   | 3179 |
| <i>Farzam Tajdari ; Claudio Roncoli ; Nikolaos Bekiaris-Liberis ; Markos Papageorgiou</i>  |      |
| <b>AN AVERAGE STUDY OF THE SIGNALIZED LINK-TRANSMISSION-MODEL</b> .....  | 3185 |
| <i>Carlos Canudas-De-Wit</i>   |      |
| <b>LATERAL CONTROL OF AN AUTONOMOUS CAR WITH LIMITED PREVIEW INFORMATION</b> .....   | 3192 |
| <i>Mengke Liu ; S. Rathinam ; S. Darbha</i>  |      |
| <b>AUTONOMOUS NAVIGATION OF MULTIPLE ROBOTS USING SUPERVISORY CONTROL THEORY</b> .....   | 3198 |
| <i>J. A. Dulce-Galindo ; Marcelo A. Santos ; Guilherme V. Raffo ; Patricia N. Pena</i>   |      |

|  |             |
|--|-------------|
| <b>SUPERVISORY CONTROL OF MULTILEVEL DISCRETE-EVENT SYSTEMS WITH A BUS STRUCTURE .....</b>   | <b>3204</b> |
| <i>Martijn Goorden ; Calvin Dingemans ; Michel Reniers ; Joanna Van De Mortel-Fronczak ; Wan Fokkink ; Jacobus Rooda</i>                                   |             |
| <b>ABSTRACTION-BASED SYNTHESIS OF CONTINUOUS-TIME STOCHASTIC CONTROL SYSTEMS .....</b>   | <b>3212</b> |
| <i>Ameneh Nejati ; Sadegh Soudjani ; Majid Zamani</i>  |             |
| <b>ARBORESCENT ARCHITECTURE FOR DECENTRALIZED PROGNOSIS OF DISCRETE EVENT SYSTEMS .....</b>  | <b>3218</b> |
| <i>Ahmed Khoumsi</i>   |             |
| <b>GENERATION FILTERED BEAM SEARCH ALGORITHM FOR THE SCHEDULING OF HYBRID FMS USING T-TPN .....</b>  | <b>3225</b> |
| <i>G. Cherif ; E. Leclercq ; D. Lefebvre</i>   |             |
| <b>VISUAL SIGNAL REPRESENTATION FOR FAST AND ROBUST OBJECT RECOGNITION .....</b>   | <b>3231</b> |
| <i>Weibo Gong ; Patrick Kelly ; Christopher Hollot</i>   |             |
| <b>ANALYTICAL INFINITE-TIME OPTIMAL AND SUB-OPTIMAL CONTROLLERS FOR SCALAR NONLINEAR SYSTEMS USING KROTOV SUFFICIENT CONDITIONS .....</b>                  | <b>3237</b> |
| <i>Avinash Kumar ; Tushar Jain</i>   |             |
| <b>THE INFLUENCE OF THE CHOICE OF THE COST INDEX ON THE EFFECTIVENESS OF OPTIMAL RESOURCES ALLOCATION STRATEGIES FOR HEPATITIS B VIRUS TREATMENT .....</b> | <b>3242</b> |
| <i>Paolo Di Giamberardino ; Flavia Forconi ; Daniela Iacoviello ; Erika Pezzella ; Alessandra Pizzuti</i>  |             |
| <b>TIME OPTIMAL TOUR THROUGH A CLASS OF POINTS FOR A DOUBLE INTEGRATOR TRAVELING SALESMAN .....</b>  | <b>3248</b> |
| <i>Eswara Venkata Kumar Dhulipala ; Deepak Patil</i>   |             |
| <b>OPTIMAL TRAJECTORY PLANNING AND DECISION MAKING IN LANE CHANGE MANEUVERS NEAR A HIGHWAY EXIT .....</b>  | <b>3254</b> |
| <i>Johan Karlsson ; Nikolce Murgovski ; Jonas Sjöberg</i>  |             |
| <b>OPTIMAL OPEN-LOOP CONTROL POLICIES FOR A CLASS OF NONLINEAR ACTUATORS .....</b>   | <b>3261</b> |
| <i>Edgar Ramirez-Laboreo ; Eduardo Moya-Lasheras ; Carlos Sagues</i>   |             |
| <b>A NOVEL APPROACH IN OPTIMAL TRAJECTORY IDENTIFICATION FOR AUTONOMOUS DRIVING IN RACETRACK .....</b>   | <b>3267</b> |
| <i>D. Antonelli ; L. Nesi ; G. Pepe ; A. Carcaterra</i>  |             |
| <b>STRONGLY UNIMODAL SYSTEMS .....</b>   | <b>3273</b> |
| <i>Christian Grussler ; Rodolphe Sepulchre</i>   |             |
| <b>USING NEURAL NETWORKS FOR CLASSIFYING HUMAN-ROBOT CONTACT SITUATIONS .....</b>  | <b>3279</b> |
| <i>Nolwenn Briquet-Kerededjian ; Arne Wahrburg ; Mathieu Grossard ; Maria Makarov ; Pedro Rodriguez-Ayerbe</i>   |             |
| <b>SOFT-SENSOR BASED ON K-NN CLASSIFIERS IN AGRICULTURAL PEST CONTROL .....</b>  | <b>3286</b> |
| <i>Elmer A. G. Peñaloza ; Heitor V. Mercaldi ; Vilma A. Oliveira ; Paulo E. Cruvinel</i>   |             |
| <b>A PITCH WAVE FORCE PREDICTION ALGORITHM FOR THE INERTIAL SEA WAVE ENERGY CONVERTER .....</b>  | <b>3292</b> |
| <i>V. Cerone ; D. Regruto ; T. Abdalla ; G. Mattiazzo</i>  |             |
| <b>AUTO-ADAPTIVE AND DYNAMICAL CLUSTERING FOR OPEN-CIRCUIT FAULT DIAGNOSIS OF POWER INVERTERS .....</b>  | <b>3298</b> |
| <i>Thanh Hung Pham ; Sanda Lefteriu ; Cécile Labarre ; Eric Duviella ; Stéphane Lecoeuche</i>  |             |
| <b>AN RNN-BASED LEARNABLE EXTENDED KALMAN FILTER DESIGN AND APPLICATION .....</b>  | <b>3304</b> |
| <i>Tianyu Zheng ; Yu Yao ; Fenghua He ; Xinran Zhang</i>   |             |
| <b>COMBINED <math>H_{\infty}</math> LINEAR PARAMETER VARYING CONTROL DESIGN AND OPTIMAL SENSOR/ACTUATOR SELECTION .....</b>                                | <b>3310</b> |
| <i>Taranjitsingh Singh ; Zhongzhe Dong ; Massimo De Mauri ; Wilm Decré ; Jan Swevers ; Goele Pipeleers</i>   |             |
| <b>IDENTIFICATION OF LINEAR PARAMETER-VARYING SYSTEMS USING B-SPLINES .....</b>  | <b>3316</b> |
| <i>Dora Turk ; Laurens Jacobs ; Taranjitsingh Singh ; Wilm Decré ; Jan Swevers</i>   |             |
| <b>PARAMETER DEPENDENT STATIC OUTPUT FEEDBACK CONTROL - AN LPV APPROACH .....</b>  | <b>3322</b> |
| <i>Felix Gofmann ; Ferdinand Svaricek</i>  |             |
| <b>CONTROL OF WIND TURBINE BY LPV GAIN SCHEDULING WITH TOWER LOAD REDUCTION .....</b>  | <b>3328</b> |
| <i>Mourad Djamai</i>   |             |
| <b>A DECOMPOSITION ALGORITHM FOR ATTITUDE CONTROL OF THE REMOTELY OPERATED VEHICLE AT LARGE PITCH AND ROLL ANGLES .....</b>                                | <b>3334</b> |
| <i>E. A. Gavrilina ; V. N. Chestnov ; A. N. Kropotov</i>   |             |
| <b>REMARKS ON THE GEOMETRY OF THE FEEDBACK LOOP .....</b>  | <b>3340</b> |
| <i>Z. Szabó ; J. Bokor</i>   |             |

|  |      |
|--|------|
| <b>REQUIREMENTS ON SUPER-SHORT-TERM WIND SPEED PREDICTIONS FOR MODEL PREDICTIVE WIND TURBINE CONTROL</b> .....                                       | 3346 |
| <i>Sebastian Dickler ; Marcus Wiens ; Frederik Thönnißen ; Uwe Jassmann ; Dirk Abel</i>  |      |
| <b>A PERFORMANCE MONITORING ALGORITHM FOR SUSTAINED OPTIMAL OPERATION WITH ECONOMIC MPC</b> .....  | 3353 |
| <i>Marco Vaccari ; Gabriele Pannocchia</i>   |      |
| <b>IMPLEMENTATION AND ANALYSIS OF NONLINEAR MODEL PREDICTIVE CONTROLLER ON EMBEDDED SYSTEMS FOR REAL-TIME APPLICATIONS</b> .....                     | 3359 |
| <i>Saket Adhau ; Sayli Patil ; Deepak Ingole ; Dayaram Sonawane</i>  |      |
| <b>MATMPC - A MATLAB BASED TOOLBOX FOR REAL-TIME NONLINEAR MODEL PREDICTIVE CONTROL</b> .....  | 3365 |
| <i>Yutao Chen ; Mattia Bruschetta ; Enrico Picotti ; Alessandro Beghi</i>  |      |
| <b>DIRECT ONLINE RAINFLOW-COUNTING AND INDIRECT FATIGUE PENALIZATION METHODS FOR MODEL PREDICTIVE CONTROL</b> .....                                  | 3371 |
| <i>Stefan Loew ; Dragan Obradovic ; Carlo L. Bottasso</i>  |      |
| <b>DISTRIBUTED NONLINEAR OPTIMIZATION-BASED CONTROL FOR MULTI-AGENT SYSTEMS NAVIGATION IN A COASTAL ENVIRONMENT</b> .....                            | 3377 |
| <i>Ngo-Quoc-Huy Tran ; Ionela Prodan ; Esten Ingar Grøtli ; Laurent Leferve</i>  |      |
| <b>STRATEGIC BIDDING OF PRIVATE INFORMATION FOR PRINCIPAL-AGENT TYPE DYNAMIC LQ NETWORKS</b> .....   | 3383 |
| <i>Yasuaki Wasa ; Toshiyuki Murao ; Takashi Tanaka ; Kenko Uchida</i>  |      |
| <b>A DISTRIBUTED PROXIMAL-POINT ALGORITHM FOR NASH EQUILIBRIUM SEEKING IN GENERALIZED POTENTIAL GAMES WITH LINEARLY COUPLED COST FUNCTIONS</b> ..... | 3390 |
| <i>Giuseppe Belgioioso ; Sergio Grammatico</i>   |      |
| <b>ON THE FEASIBILITY OF LOCAL UTILITY REDESIGN FOR MULTIAGENT OPTIMIZATION</b> .....  | 3396 |
| <i>Philip N. Brown ; Jason R. Marden</i>   |      |
| <b>GAME-THEORETIC ROBUST ENERGY COORDINATION FOR A NEIGHBOURHOOD OF SMART HOMES</b> .....  | 3402 |
| <i>Suli Zou ; Joseph Warrington ; John Lygeros</i>   |      |
| <b>LINEAR QUADRATIC STACKELBERG DIFFERENCE GAMES WITH CONSTRAINTS</b> .....  | 3408 |
| <i>Subhajit Mondal ; P. Viswanadha Reddy</i>   |      |
| <b>DECENTRALIZED CHARGING COORDINATION OF PLUG-IN ELECTRIC VEHICLES BASED ON REVERSE STACKELBERG GAME</b> .....                                      | 3414 |
| <i>Mohammad Amin Tajeddini ; Hamed Kebriaei ; Luigi Glielmo</i>  |      |
| <b>CONTROL BARRIER FUNCTIONS: THEORY AND APPLICATIONS</b> .....  | 3420 |
| <i>Aaron D. Ames ; Samuel Coogan ; Magnus Egerstedt ; Gennaro Notomista ; Koushil Sreenath ; Paulo Tabuada</i>                                       |      |
| <b>ADAPTIVE BACKSTEPPING CONTROL WITH FAST PARAMETRIC CONVERGENCE FOR A CLASS OF NONLINEAR SYSTEMS</b> .....   | 3432 |
| <i>Dmitry N. Gerasimov ; Lulu Liu ; Vladimir O. Nikiforov</i>  |      |
| <b>ON THE ADAPTIVE CONTROL OF THE ACROBOT</b> .....  | 3438 |
| <i>Manuel Gnucci ; Riccardo Marino</i>   |      |
| <b>ADAPTIVE CONTROL OF A GENERAL CLASS OF UPPER TRIANGULAR SYSTEMS WITH PARAMETRIC UNCERTAINTY</b> .....   | 3444 |
| <i>Radom Pongvuthithum ; Kanya Rattanamongkhonkun ; Wei Lin</i>  |      |
| <b>ACTIVE VIBRATION SUPPRESSION PLATFORM FOR MILLING MACHINE</b> .....   | 3450 |
| <i>Cheng-Wei Yeh ; Nan-Chyuan Tsai ; Hsin-Lin Chiu ; Ping-Hsueh Hsieh</i>  |      |
| <b>ADAPTIVE BOARDING CONTROL SYSTEM IN SURFACE EFFECT SHIPS</b> .....  | 3456 |
| <i>Vahid Hassani ; Snorre Fjellvang ; Øyvind Auestad ; Jan Tommy Gravdahl</i>  |      |
| <b>HIGH PERFORMANCE ADAPTIVE ATTITUDE CONTROL OF A QUADROTOR</b> .....   | 3462 |
| <i>Dinu Mihailescu-Stoica ; Raul Acuna ; Jürgen Adamy</i>  |      |
| <b>TOWARDS SCALE FREE DISTURBANCE SUPPRESSION IN HETEROGENEOUS MASS CHAINS</b> .....   | 3470 |
| <i>Kaoru Yamamoto</i>  |      |
| <b>REALIZABILITY AND INTERNAL MODEL CONTROL ON NETWORKS</b> .....  | 3475 |
| <i>Anders Rantzer</i>  |      |
| <b>RESILIENT AND PRIVATE CONSENSUS IN MULTI-AGENT SYSTEMS</b> .....  | 3478 |
| <i>Davide Fiore ; Giovanni Russo</i>   |      |
| <b>TARGET CONTROLLABILITY OF STRUCTURED SYSTEMS</b> .....  | 3484 |
| <i>Shana Moothedath ; Kumar Yashashwi ; Prasanna Chaporkar ; Madhu N. Belur</i>  |      |
| <b>PRIVACY PRESERVING RECURSIVE LEAST SQUARES SOLUTIONS</b> .....  | 3490 |
| <i>Katrine Tjell ; Ignacio Cascudo ; Rafael Wisniewski</i>   |      |

|  |             |
|--|-------------|
| <b>COOPERATIVE DISTRIBUTED ENERGY SCHEDULING OF SMART HOMES APPLIANCES<br/>IN A SMART DISTRICT .....</b>   | <b>3496</b> |
| <i>Maria Pia Fanti ; Agostino Marcello Mangini ; Giovanni Pedroncelli ; Michele Roccotelli</i>   |             |
| <b>HETEROGENEOUS STOCHASTIC INTERACTIONS FOR MULTIPLE AGENTS IN A MULTI-<br/>ARMED BANDIT PROBLEM.....</b>   | <b>3502</b> |
| <i>Udari Madhushani ; Naomi Ehrich Leonard</i>   |             |
| <b>AN ASYNCHRONOUS, FORWARD-BACKWARD, DISTRIBUTED GENERALIZED NASH<br/>EQUILIBRIUM SEEKING ALGORITHM.....</b>  | <b>3508</b> |
| <i>Carlo Cenedese ; Giuseppe Belgioioso ; Sergio Grammatico ; Ming Cao</i>   |             |
| <b>A SWITCHED MODEL FOR MIXED COOPERATIVE-COMPETITIVE SOCIAL DYNAMICS .....</b>  | <b>3514</b> |
| <i>Franco Blanchini ; Daniele Casagrande ; Giulia Giordano ; Umberto Viaro</i>   |             |
| <b>ONLINE PRICING VIA STACKELBERG AND INCENTIVE GAMES IN A MICRO-GRID.....</b>   | <b>3520</b> |
| <i>Fernando Genis Mendoza ; Dario Bauso ; George Konstantopoulos</i>   |             |
| <b>LEARNING POLITICAL DNA IN THE ITALIAN SENATE.....</b>   | <b>3526</b> |
| <i>Antonio Longo ; Chiara Ravazzi ; Fabrizio Dabbene ; Giuseppe Calafiore</i>  |             |
| <b>STRATEGIC DIFFERENTIATION IN NON-COOPERATIVE GAMES ON NETWORKS.....</b>   | <b>3532</b> |
| <i>Alain Govaert ; Ming Cao</i>  |             |
| <b>AN INTEGRATED CONTROL ARCHITECTURE FOR A CLOUD-BASED UNMANNED AERIAL<br/>VEHICLE SYSTEM WITH LOSSY NETWORKS .....</b>   | <b>3538</b> |
| <i>Weibin Gu ; Carlos Perez-Montenegro ; Elisa Capello ; Alessandro Rizzo</i>  |             |
| <b>A SIMPLE AND EFFECTIVE STRATEGY OF A SUPERIOR EVADER IN A PURSUIT-EVASION<br/>GAME.....</b>   | <b>3544</b> |
| <i>János Szots ; István Harmati</i>  |             |
| <b>ON THE DEVELOPMENT AND UTILITY OF ACTION CONTROL INDIVIDUALITY FOR<br/>SEMI-AUTONOMOUS INTELLIGENT ROBOTS.....</b>  | <b>3550</b> |
| <i>Masakazu Suzuki ; Yu Yoshida</i>  |             |
| <b>AERIAL NAVIGATION IN OBSTRUCTED ENVIRONMENTS WITH EMBEDDED NONLINEAR<br/>MODEL PREDICTIVE CONTROL .....</b>   | <b>3556</b> |
| <i>Elias Small ; Pantelis Sopasakis ; Emil Fresk ; Panagiotis Patrinos ; George Nikolakopoulos</i>   |             |
| <b>BIPEDAL ROBOTIC RUNNING ON STOCHASTIC DISCRETE TERRAIN.....</b>   | <b>3564</b> |
| <i>Ayush Agrawal ; Koushil Sreenath</i>  |             |
| <b>TEMPORAL VIABILITY REGULATION FOR CONTROL AFFINE SYSTEMS WITH<br/>APPLICATIONS TO MOBILE VEHICLE COORDINATION UNDER TIME-VARYING MOTION<br/>CONSTRAINTS .....</b> | <b>3571</b> |
| <i>Marcus Greiff ; Zhiyong Sun ; Anders Robertsson ; Rolf Johansson</i>  |             |
| <b>VARIABLE GAINS DECENTRALIZED SUPER-TWISTING SLIDING MODE CONTROLLERS<br/>FOR LARGE-SCALE MODULAR SYSTEMS.....</b>   | <b>3577</b> |
| <i>Giannario Rinaldi ; Prathyush P. Menon ; Christopher Edwards ; Antonella Ferrara</i>  |             |
| <b><math>H_{\infty}</math> NORM OPTIMAL PARAMETERS FOR THE SUPER-TWISTING CONTROLLER WITH<br/>STATE DEPENDENT DISTURBANCE.....</b>                                   | <b>3583</b> |
| <i>Daipeng Zhang ; Johann Reger</i>  |             |
| <b>HIGHER ORDER SLIDING MODE CONTROL DESIGN WITH DESIRED DYNAMICS FOR<br/>MULTI-INPUT LTI SYSTEMS.....</b>   | <b>3589</b> |
| <i>Branislava Perunicic-Drazenovic ; Boban Veselic ; Senad Huseinbegovic ; Cedimir Milosavljevic</i>   |             |
| <b>ADAPTIVE INTEGRAL TERMINAL SLIDING MODE TRACKING CONTROL FOR A NON-<br/>LINEAR NUCLEAR REACTOR SYSTEM .....</b>   | <b>3595</b> |
| <i>Piyush V. Surjagade ; S. R. Shimjith ; A. P. Tiwari</i>   |             |
| <b>INTEGRAL SLIDING MODE CONTROL FOR FRACTIONAL ORDER DESCRIPTOR SYSTEMS.....</b>  | <b>3601</b> |
| <i>Praveen S Babu ; Nithin Xavier ; Bijnan Bandyopadhyay</i>   |             |
| <b>OPTIMAL TUNING OF THE SATURATED SUPER-TWISTING ALGORITHM.....</b>   | <b>3606</b> |
| <i>Richard Seeber ; Martin Horn</i>  |             |
| <b>A DEAD-TIME COMPENSATOR WITH DEAD-BEAT DISTURBANCE REJECTION RESPONSE.....</b>  | <b>3613</b> |
| <i>Andresa K. R. Sombra ; René D. O. Pereira ; Magno P. De Almeida Filho ; Thiago A. Lima ; Bismark C. Torrico ;<br/>Fabrício G. Nogueira</i>                        |             |
| <b>EXPERT CONTROL SYSTEM BASED HIERARCHICAL CONTROL STRATEGY FOR TUNNEL<br/>MICROWAVE RICE DRYING.....</b>   | <b>3619</b> |
| <i>Tong Liu ; Shan Liang ; Jinglu Hu</i>   |             |
| <b>EXTENDED GREY-BOX MODELING OF REAL-TIME HYDROCYCLONE SEPARATION<br/>EFFICIENCY .....</b>  | <b>3625</b> |
| <i>Mads Valentin Bram ; Leif Hansen ; Dennis Severin Hansen ; Zhenyu Yang</i>  |             |
| <b>A SELF LEARNING BINARY CONTROLLER FOR INCREASED CONTROL PERFORMANCE.....</b>  | <b>3632</b> |
| <i>Sebastian Leonow ; Martin Mönnigmann</i>  |             |

|   |      |
|---|------|
| <b>FIRST-ORDER DEAD-TIME COMPENSATION WITH FEEDFORWARD ACTION</b> .....   | 3638 |
| <i>Thiago A. Lima ; Bismark C. Torrico ; Magno P. De Almeida Filho ; Marcus D. N. Forte ; René D. O. Pereira ;<br/>Fabrício G. Nogueira</i> |      |
| <b>MODEL PREDICTIVE CONTROL BASED ON LPV MODELS WITH PARAMETER-VARYING DELAYS</b> .....   | 3644 |
| <i>Fatemeh Karimi Pour ; Vicenç Puig ; Carlos Ocampo-Martinez</i>   |      |
| <b>MOVING HORIZON DEMAND AND STATE ESTIMATION FOR MODEL PREDICTIVE PERIMETER CONTROL OF LARGE-SCALE URBAN NETWORKS</b> .....                | 3650 |
| <i>Isik Ilber Sirmatel ; Nikolas Geroliminis</i>  |      |
| <b>ROBUST INTERPOLATING TRAFFIC SIGNAL CONTROL FOR UNCERTAIN ROAD NETWORKS</b> .....  | 3656 |
| <i>Shimon Komarovsky ; Jack Haddad</i>  |      |
| <b>MULTIPLE MOVING BOTTLENECKS FOR TRAFFIC CONTROL IN FREEWAY SYSTEMS</b> .....   | 3662 |
| <i>G. Piacentini ; C. Pasquale ; S. Sacone ; S. Siri ; A. Ferrara</i>   |      |
| <b>A DECISION SUPPORT AND PLANNING MOBILITY METHOD FOR LARGE SCALE TRAFFIC NETWORKS</b> .....   | 3668 |
| <i>Stephane Mollier ; Maria Laura Delle Monache ; Carlos Canudas-De-Wit</i>   |      |
| <b>ENERGY-OPTIMAL PLATOON CATCH-UP IN MOVING BOTTLENECK FRAMEWORK</b> .....   | 3674 |
| <i>Mladen Cicic ; Karl Henrik Johansson</i>   |      |
| <b>OPTIMAL CONTROL OF MOTORWAY TIDAL FLOW</b> .....   | 3680 |
| <i>Konstantinos Ampountolas ; Rodrigo Castelan Carlson</i>  |      |
| <b>AVERAGE DWELL-TIME FOR IMPULSIVE CONTROL SYSTEMS POSSESSING ISS-LYAPUNOV FUNCTION WITH NONLINEAR RATES</b> .....                         | 3686 |
| <i>Petro Feketa ; Naim Bajcinca</i>   |      |
| <b>CONEWISE LINEAR SYSTEMS: A CHARACTERIZATION OF TRANSITIVE CONES IN 3D-SPACE</b> .....  | 3692 |
| <i>A. B. Özgüler ; M. Zakwan</i>  |      |
| <b>LESS CONSERVATIVE STATE FEEDBACK DESIGN CONDITIONS FOR SWITCHED TAKAGI-SUGENO FUZZY SYSTEMS</b> .....                                    | 3698 |
| <i>Flávio A. Faria ; Leandro J. Elias ; Rayza Araujo ; Vilma A. Oliveira</i>  |      |
| <b>STABLE DYNAMIC QUANTIZER DESIGN FOR MIMO NON-MINIMUM PHASE SYSTEMS BASED ON SERIAL SYSTEM DECOMPOSITION</b> .....                        | 3704 |
| <i>Taiki Kusui ; Yuki Minami ; Masato Ishikawa</i>  |      |
| <b>CURVE FORM BASED QUANTIZATION OF SHORT TIME SERIES DATA</b> .....  | 3710 |
| <i>Thomas Leifeld ; Benedikt Venn ; Shaoxuan Cui ; Zhihua Zhang ; Timo Mühlhaus ; Ping Zhang</i>  |      |
| <b>PRESCRIBED TRACKING PERFORMANCE UNDER STATE-FEEDBACK QUANTIZATION FOR UNCERTAIN NONLINEAR SYSTEMS</b> .....                              | 3716 |
| <i>Lampros N. Bikas ; George A. Rovithakis</i>  |      |
| <b>A CHARACTERIZATION OF BACKWARD REACHABLE SETS FOR NONLINEAR DYNAMICAL SYSTEMS VIA THE PSEUDOSPECTRAL LEGENDRE METHOD</b> .....           | 3722 |
| <i>Myoung Hoon Lee ; Jae Hwa Lee ; Jun Moon</i>   |      |
| <b>SPARSE OPTIMAL FEEDBACK CONTROL FOR CONTINUOUS-TIME SYSTEMS</b> .....  | 3728 |
| <i>Takuya Ikeda ; Kenji Kashima</i>   |      |
| <b>OPTIMALLY CONTROLLED STEADY-STATES FOR MULTI-INPUT UNDERACTUATED LINEAR SYSTEMS</b> .....  | 3734 |
| <i>Dario Corona ; Andrea Cristofaro</i>   |      |
| <b>FINITE-HORIZON COVARIANCE CONTROL OF STATE-AFFINE NONLINEAR SYSTEMS WITH APPLICATION TO PROTON BEAMLINE CALIBRATION</b> .....            | 3740 |
| <i>Zheming Wang ; Raphaël M. Jungers ; Quentin Flandroy ; Baptiste Herregods ; Cedric Hernalsteens</i>                                      |      |
| <b>PATH-CONSTRAINED TRAJECTORY TIME-OPTIMIZATION IN A THREE-DIMENSIONAL STEADY FLOW FIELD</b> .....   | 3746 |
| <i>Roman Chertovskih ; Dmitry Karamzin ; Nathalie T. Khalil ; Fernando L. Pereira</i>   |      |
| <b>NONLINEAR CONTROL OF QUADCOPTERS VIA APPROXIMATE DYNAMIC PROGRAMMING</b> .....   | 3752 |
| <i>Angel Romero ; Paul N. Beuchat ; Yvonne R. Stürz ; Roy S. Smith ; John Lygeros</i>   |      |
| <b>ATTENUATION ON NON-REPETITIVE DISTURBANCES IN ROBUST ITERATIVE LEARNING CONTROL SCHEMES DESIGNED OVER REPETITIVE SETTING</b> .....       | 3760 |
| <i>Wojciech Paszke ; Shoulin Hao ; Tao Liu</i>  |      |
| <b>ITERATIVE LEARNING CONTROL DESIGN FOR DISCRETE STOCHASTIC LINEAR SYSTEMS</b> .....   | 3766 |
| <i>Pavel Pakshin ; Julia Emelianova ; Krzysztof Galkowski ; Eric Rogers</i>   |      |

|  |             |
|--|-------------|
| <b>A SIMPLE NECESSARY AND SUFFICIENT CONDITION OF ASYMPTOTIC STABILITY FOR SCALAR FORNASINI-MARCHESINI MODELS .....</b>                      | <b>3772</b> |
| <i>Olivier Bachelier ; Ronan David ; Nima Yeganefar</i>  |             |
| <b>NEW LMI CONDITIONS FOR THE STABILITY OF 2D DISCRETE ROESSER MODELS .....</b>  | <b>3778</b> |
| <i>Olivier Bachelier ; Thomas Cluzeau ; Driss Mehdi ; Nima Yeganefar</i>   |             |
| <b>AN EIGENFUNCTION APPROACH TO PARAMETER ESTIMATION FOR 1D DIFFUSION PROBLEMS.....</b>  | <b>3784</b> |
| <i>Maximilian Schäfer ; Alexander Ruderer ; Rudolf Rabenstein</i>  |             |
| <b>ECONOMIC NORM-OPTIMAL ITERATIVE LEARNING CONTROL OF A LEFT VENTRICULAR ASSIST DEVICE.....</b>   | <b>3790</b> |
| <i>Maike Ketelhut ; Lisa Hellmold ; Moriz Habigt ; Marc Hein ; Dirk Abel</i>   |             |
| <b>H<sub>2</sub> STATE-FEEDBACK CONTROL FOR CONTINUOUS-TIME SYSTEMS UNDER POSITIVITY CONSTRAINT.....</b>                                     | <b>3797</b> |
| <i>Yoshio Ebihara ; Patrizio Colaneri ; José C. Geromel</i>  |             |
| <b>COMPUTATION OF THE MAXIMAL INVARIANT SET OF LINEAR SYSTEMS WITH QUASI-SMOOTH NONLINEAR CONSTRAINTS .....</b>                              | <b>3803</b> |
| <i>Zheming Wang ; Raphaël M. Jungers ; Chong-Jin Ong</i>   |             |
| <b>AN ALTERNATIVE PROOF OF THE KRONECKER/MORSE NORMAL FORM .....</b>   | <b>3809</b> |
| <i>Vladimír Kucera</i>   |             |
| <b>NEW RESULTS ON THE EIGENSTRUCTURE ASSIGNMENT IN THE COMPUTATION OF REACHABILITY OUTPUT NULLING SUBSPACES .....</b>                        | <b>3817</b> |
| <i>Fabrizio Padula ; Lorenzo Ntogramatzidis ; Augusto Ferrante</i>   |             |
| <b>ON THE SOLVABILITY OF THE GLOBAL MONOTONIC TRACKING FOR SUBSETS OF OUTPUT COMPONENTS .....</b>  | <b>3823</b> |
| <i>Lorenzo Ntogramatzidis ; Fabrizio Padula ; Emanuele Garone</i>  |             |
| <b>POWER FLOW EFFICIENCY OF LINEAR AND NONLINEAR PHYSICAL SYSTEMS .....</b>  | <b>3829</b> |
| <i>Roberto Zanasi ; Davide Tebaldi</i>   |             |
| <b>A NONLINEAR MODAL-BASED FRAMEWORK FOR LOW COMPUTATIONAL COST OPTIMAL CONTROL OF 3D VERY FLEXIBLE STRUCTURES .....</b>                     | <b>3836</b> |
| <i>Marc Artola ; Andrew Wynn ; Rafael Palacios</i>   |             |
| <b>DESIGN OF A MODEL BASED FEEDFORWARD CONTROLLER FOR ADDITIVE MANUFACTURING BY LASER METAL DEPOSITION.....</b>                              | <b>3842</b> |
| <i>David Dillkötter ; Martin Mönnigmann</i>  |             |
| <b>DEVIATION ANALYSIS AND INTERVAL MODELING AS COMPLEMENTARY TOOLS TO EVALUATE INSULIN DOSING ALGORITHMS IN DIABETES .....</b>               | <b>3848</b> |
| <i>D. Schauer ; F. Reiterer ; G. Freckmann ; L. Del Re</i>   |             |
| <b>STABILITY AND TRAJECTORIES ANALYSIS OF A FRACTIONAL GENERALIZATION OF SIMPLE PENDULUM DYNAMIC EQUATION.....</b>                           | <b>3854</b> |
| <i>Ibrahima N'Doye ; Taous-Meriem Laleg Kirati</i>   |             |
| <b>LUMPED-PARAMETERS CONTROL-ORIENTED GRAY-BOX MODELLING OF LIQUID IMMERSION COOLING SYSTEMS .....</b>                                       | <b>3861</b> |
| <i>Michele Lionello ; Mirco Rampazzo ; Alessandro Beghi ; Damiano Varagnolo ; Mattias Vesterlund</i>   |             |
| <b>QUALITY-AWARE CONTROL FOR OPTIMIZING MEAT SUPPLY CHAINS .....</b>   | <b>3867</b> |
| <i>J. P. Sprong ; X. Lin ; J. M. Maestre ; R. R. Negenborn</i>   |             |
| <b>QUALITY-RELATED FAULT DETECTION FOR PROCESSES WITH TIME-VARYING MEASUREMENTS.....</b>   | <b>3873</b> |
| <i>Bahador Rashidi ; Qing Zhao</i>   |             |
| <b>PARTITION-BASED PARAMETRIC ACTIVE MODEL DISCRIMINATION WITH APPLICATIONS TO DRIVER INTENTION ESTIMATION.....</b>                          | <b>3880</b> |
| <i>Ruochen Niu ; Qiang Shen ; Sze Zheng Yong</i>   |             |
| <b>DISTRIBUTIONALLY ROBUST ACTIVE FAULT DIAGNOSIS.....</b>   | <b>3886</b> |
| <i>Ioannis Tzortzis ; Marios M. Polycarpou</i>   |             |
| <b>OCTAROTOR FAULT TOLERANT CONTROL VIA DYNAMIC SURFACE CONTROL .....</b>  | <b>3892</b> |
| <i>A. Baldini ; R. Felicetti ; A. Freddi ; S. Longhi ; A. Monteriù</i>   |             |
| <b>ACTUATOR FAULT AND LINK FAILURE ACCOMMODATION FOR DISTURBED MULTI-USER TELEREHABILITATION SYSTEMS SUBJECT TO COMMUNICATION NOISE.....</b> | <b>3898</b> |
| <i>Abbas Tariverdi ; Mahdi Pourafzal ; Heidar A. Talebi ; Masoud Shafiee</i>   |             |
| <b>CONDITION MONITORING OF BALL BEARINGS USING ESTIMATED AR MODELS AS LOGISTIC REGRESSION FEATURES .....</b>                                 | <b>3904</b> |
| <i>Matteo Barbieri ; Roberto Diversi ; Andrea Tilli</i>  |             |

|   |      |
|---|------|
| <b>DAY-AHEAD STRATEGIC MARKETING OF ENERGY PROSUMPTION: A MACHINE LEARNING APPROACH BASED ON NEURAL NETWORKS</b> .....        | 3910 |
| <i>Fumiya Watanabe ; Takahiro Kawaguchi ; Takayuki Ishizaki ; Hideaki Takenaka ; Takashi Y. Nakajima ; Jun-Ichi Imura</i>     |      |
| <b>NONLINEAR ADAPTIVE CONTROL OF AN AERIAL MANIPULATION SYSTEM</b> .....  | 3916 |
| <i>Emre Yilmaz ; Hammad Zaki ; Mustafa Unel</i>   |      |
| <b>ADAPTIVE HESSIAN ESTIMATION BASED EXTREMUM LOCALIZATION</b> .....  | 3922 |
| <i>Huseyin Demircioglu ; Iman Fadakar ; Baris Fidan</i>   |      |
| <b>REINFORCEMENT LEARNING FOR CONDITION-BASED CONTROL OF GAS TURBINE ENGINES</b> .....  | 3928 |
| <i>Ibrahim Sanusi ; Andrew Mills ; Paul Trodden ; Visakan Kadirkamanathan ; Tony Dodd</i>                                     |      |
| <b>TOWARDS REINFORCEMENT LEARNING-BASED CONTROL OF AN ENERGY HARVESTING PENDULUM</b> .....                                    | 3934 |
| <i>Caralyn Cyr ; Leo Dostal ; Daniel A Duecker ; Edwin Kreuzer</i>  |      |
| <b>TOWARDS THE AUTOMATIC TUNING OF LINEAR CONTROLLERS USING ITERATIVE LEARNING CONTROL UNDER REPEATING DISTURBANCES</b> ..... | 3940 |
| <i>Oktay Koçan ; Charles Poussot-Vassal ; Augustin Manecy</i>   |      |
| <b>OPTIMUM DECENTRALIZED CONTROL OF A CMG WITH MINIMUM VARIANCE USING PARTICLE SWARM OPTIMIZATION</b> .....                   | 3946 |
| <i>Fabio Y. Toriumi ; Bruno A. Angélico</i>   |      |
| <b>GENERALIZED RIGIDITY AND STABILITY ANALYSIS ON FORMATION CONTROL SYSTEMS WITH MULTIPLE AGENTS</b> .....                    | 3952 |
| <i>Seong-Ho Kwon ; Hyo-Sung Ahn</i>   |      |
| <b>ENERGY TRADING OF ELECTRIC VEHICLES USING BLOCKCHAIN AND SMART CONTRACTS</b> .....   | 3958 |
| <i>U. Asfia ; V. Kamuni ; A. Sheikh ; S. Wagh ; D. Patel</i>  |      |
| <b>ONLINE MULTI-AGENT BASED COOPERATIVE EXPLORATION AND COVERAGE IN COMPLEX ENVIRONMENT</b> .....                             | 3964 |
| <i>Anton Koval ; Sina Sharif Mansouri ; George Nikolakopoulos</i>   |      |
| <b>EVENT-TRIGGER CONTROL OF DISCRETE TWO-TIME SCALE SYSTEM BY LEVERAGING ITS INTRINSIC PROPERTIES</b> .....                   | 3970 |
| <i>Poonam Sahu ; Manisha Bhandari ; Deepak Fulwani</i>  |      |
| <b>A MODEL ABSTRACTION METHOD FOR NETWORKED DISCRETE-EVENT SYSTEMS</b> .....  | 3976 |
| <i>Markus Zgorzelski ; Jan Lunze</i>  |      |
| <b>MOTION PLANNING FOR USVS WITH COMMUNICATION GUARANTEES: AN EXPERIMENTAL SETUP</b> .....                                    | 3984 |
| <i>Yoann Hervagault ; Ionela Prodan ; Laurent Lefèvre</i>   |      |
| <b>FAULT DETECTION OF A VTOL UAV USING ACCELERATION MEASUREMENTS</b> .....  | 3990 |
| <i>Alessandro Benini ; Francesco Ferracuti ; Andrea Moneriù ; Stephan Radensleben</i>   |      |
| <b>ONLINE NONLINEAR MODEL PREDICTIVE CONTROL FOR TETHERED UAVS TO PERFORM A SAFE AND CONSTRAINED MANEUVER</b> .....           | 3996 |
| <i>Enrica Rossi ; Mattia Bruschetta ; Ruggero Carli ; Yutao Chen ; Marcello Farina</i>  |      |
| <b>TRAJECTORY TRACKING FOR QUADROTORS WITH ATTITUDE CONTROL ON <math>S^2 \times S^1</math></b> .....                          | 4002 |
| <i>Dave Kooijman ; Angela P. Schoellig ; Duarte J. Antunes</i>  |      |
| <b>DEVELOPMENT OF A DYNAMIC ELECTRONIC SPEED CONTROLLER FOR MULTICOPTERS</b> .....  | 4010 |
| <i>Lukas Herrmann ; Tobias Bruckmann ; Markus Bröcker ; Dieter Schramm</i>  |      |
| <b>GUARANTEED VORONOI-BASED DEPLOYMENT FOR MULTI-AGENT SYSTEMS UNDER UNCERTAIN MEASUREMENTS</b> .....                         | 4016 |
| <i>Thomas Chevet ; Cristina Stoica Maniu ; Cristina Vlad ; Youmin Zhang</i>   |      |
| <b>LONG BASELINE AIDED INERTIAL NAVIGATION SYSTEM WITH CLOCK OFFSET ESTIMATION</b> .....                                      | 4022 |
| <i>Tiago Silva ; Pedro Batista</i>  |      |
| <b>POSITION, VELOCITY, ATTITUDE AND GYRO-BIAS ESTIMATION FROM IMU AND POSITION INFORMATION</b> .....                          | 4028 |
| <i>Soulaimane Berkane ; Abdelhamid Tayebi</i>   |      |
| <b>ATTITUDE OBSERVER ON <math>SO(3)</math> WITH TIME-VARYING REFERENCE DIRECTIONS</b> .....                                   | 4034 |
| <i>Kanishke Gamagedara ; Taeyoung Lee ; Dong Eui Chang</i>  |      |
| <b>GNSS-ANTENNA LEVER ARM COMPENSATION IN AIDED INERTIAL NAVIGATION OF UAVS</b> .....   | 4040 |
| <i>Bård N. Stovner ; Tor A. Johansen</i>  |      |

|   |      |
|---|------|
| <b>FINITE TIME STABLE ATTITUDE AND ANGULAR VELOCITY BIAS ESTIMATION FOR RIGID BODIES WITH UNKNOWN DYNAMICS</b> .....                          | 4047 |
| <i>Amit K. Sanyal ; Rakesh R. Warier ; Reza Hamrah</i>  |      |
| <b>A NONLINEAR CONTROL APPROACH FOR TRAJECTORY TRACKING OF SLENDER-BODY AXISYMMETRIC UNDERACTUATED UNDERWATER VEHICLES</b> .....              | 4053 |
| <i>Lam-Hung Nguyen ; Minh-Duc Hua ; Tarek Hamel</i>   |      |
| <b>SLIDING MODE CONTROL OF A DIFFERENTIAL-DRIVE MOBILE ROBOT FOLLOWING A PATH</b> .....   | 4061 |
| <i>Arnau Dòria-Cerezo ; Domingo Biel ; Josep M. Olm ; Víctor Repecho</i>  |      |
| <b>STRING STABILITY ANALYSIS FOR SLIDING MODE CONTROLLERS IN PLATOONS WITH UNMODELED ACTUATOR DYNAMICS: A FREQUENCY DOMAIN APPROACH</b> ..... | 4067 |
| <i>Astrid Rupp ; Markus Reichhartinger ; Martin Horn</i>  |      |
| <b>COMPARISON OF THREE CONTROL STRUCTURES FOR INDUCING HIGHER-ORDER SLIDING MODES</b> .....   | 4073 |
| <i>Xuerui Wang ; Erik-Jan Van Kampen ; Qiping Chu</i>   |      |
| <b>AUTONOMOUS HOMING IN 3D USING PARTIAL STATE FEEDBACK ON A NOVEL SLIDING SURFACE</b> .....  | 4081 |
| <i>G K Arunkumar ; Leena Vachhani</i>   |      |
| <b>FINITE TIME STABILIZATION OF NONLINEAR CASCADE SYSTEMS UNDER INPUT AND OUTPUT DISTURBANCES</b> .....                                       | 4088 |
| <i>I. Furtat ; Y. Orlov ; A. Fradkov</i>  |      |
| <b>LINEAR QUADRATIC REGULATION OF POLYTOPIC TIME-INHOMOGENEOUS MARKOV JUMP LINEAR SYSTEMS</b> .....   | 4094 |
| <i>Yuriy Zacchia Lun ; Alessandro Abate ; Alessandro D'Innocenzo</i>  |      |
| <b>FRACTIONAL AND DISTRIBUTED ORDER PID CONTROLLERS FOR PMSM DRIVES</b> .....   | 4100 |
| <i>Boris Jakovljevic ; Paolo Lino ; Guido Maione</i>  |      |
| <b>MODEL PREDICTIVE CONTROL FOR SIMULTANEOUS REGULATION OF HYPNOSIS AND HEMODYNAMIC STATES</b> .....  | 4106 |
| <i>Dana Copot ; Anca Maxim</i>  |      |
| <b>FREQUENCY DOMAIN BASED FRACTIONAL ORDER MODELING OF IPMC ACTUATORS FOR CONTROL</b> .....   | 4112 |
| <i>Inés Tejado ; José Emilio Traver ; Javier Prieto-Arranz ; Miguel Ángel López ; Blas M. Vinagre</i>   |      |
| <b>CARBON BLACK BASED FRACTIONAL ORDER ELEMENT: AN RC FILTER IMPLEMENTATION</b> .....   | 4118 |
| <i>A. Buscarino ; R. Caponetto ; S. Graziani ; E. Murgano</i>   |      |
| <b>LINEAR QUADRATIC CONTROL LAW DESIGN FOR COMMENSURATE FRACTIONAL ORDER MODELS</b> .....   | 4122 |
| <i>Mathieu Chevré ; Christophe Farges ; Jocelyn Sabatier</i>  |      |
| <b>PARALLEL REALIZATION OF THE VARIABLE-, FRACTIONAL-ORDER DIFFERENCE EQUATION</b> .....  | 4128 |
| <i>Piotr Ostalczyk</i>  |      |
| <b>ROBUST LPV DESIGN WITH NEURAL NETWORK FOR THE STEERING CONTROL OF AUTONOMOUS VEHICLES</b> .....  | 4134 |
| <i>Balázs Németh</i>  |      |
| <b>PERFORMANCE STUDY OF DETERMINISTIC AND UNCERTAINTY-AWARE PREDICTIVE ENERGY MANAGEMENT STRATEGIES FOR REAL-WORLD DRIVING CYCLES</b> .....   | 4140 |
| <i>Martina Joševski ; Dirk Abel ; Antonello Monti</i>   |      |
| <b>A VELOCITY-THRESHOLDS POWER SPLITTING OPTIMIZATION FOR HYBRID ELECTRIC VEHICLES</b> .....  | 4148 |
| <i>D. Natella ; E. Mostacciolo ; S. Baccari ; F. Vasca</i>  |      |
| <b>IMPACT OF BIG DATA ON THE DESIGN OF MPC CONTROL FOR AUTONOMOUS VEHICLES</b> .....  | 4154 |
| <i>Dániel Fényes ; Balázs Németh ; Péter Gáspár</i>   |      |
| <b>ENERGY SAVINGS FROM AN ECO-COOPERATIVE ADAPTIVE CRUISE CONTROL: A BEV PLATOON INVESTIGATION</b> .....                                      | 4160 |
| <i>Didier Rodrigues Lopes ; Simos A. Evangelou</i>  |      |
| <b>GENETIC ALGORITHM PARAMETERS ESTIMATION APPLIED TO VEHICLE POWERTRAIN DYNAMICS</b> .....   | 4168 |
| <i>Massimo Velon ; Stefano A. Malan ; Michele Giorelli ; Alessandro Irilli</i>  |      |
| <b>ABSTRACTION-BASED LOW COMPLEXITY CONTROLLER SYNTHESIS FOR INTERCONNECTED NON-DETERMINISTIC SYSTEMS</b> .....                               | 4174 |
| <i>W. A. Apaza-Perez ; C. Combastel ; A. Zolghadri</i>  |      |



|  |             |
|--|-------------|
| <b>TRACKING CONTROL FOR PETRI NETS BASED ON MONTE-CARLO TREE SEARCH.....</b>   | <b>4180</b> |
| <i>Raphael Fritz ; Juliver Napitupulu ; Ping Zhang</i>   |             |
| <b>OUTPUT-FEEDBACK CONTROL FOR DESCRIPTOR FUZZY SYSTEMS WITH MARKOVIAN JUMPS.....</b>  | <b>4186</b> |
| <i>In Seok Park ; Poogyeon Park</i>  |             |
| <b>SUPERVISORY CONTROL OF DISCRETE EVENT SYSTEMS UNDER NONDETERMINISTIC OBSERVATIONS .....</b>   | <b>4192</b> |
| <i>Lei Zhou ; Shaolong Shu ; Feng Lin</i>  |             |
| <b>A COMPARISON OF HARMONIC MODELING METHODS WITH APPLICATION TO CONTROL OF SWITCHED SYSTEMS WITH ACTIVE FILTERING.....</b>                        | <b>4198</b> |
| <i>Nicolas Blin ; Pierre Riedinger ; Jamal Daafouz ; Louis Grimaud ; Philippe Feyel</i>  |             |
| <b>UNCERTAINTY INTERVALS FOR ROBUST BOTTLENECK ASSIGNMENT .....</b>  | <b>4204</b> |
| <i>Elad Michael ; Tony A. Wood ; Chris Manzie ; Iman Shames</i>  |             |
| <b>ON K-P SUB-RIEMANNIAN PROBLEMS AND THEIR CUT LOCUS .....</b>  | <b>4210</b> |
| <i>Domenico D'Alessandro ; Benjamin Sheller</i>  |             |
| <b>DYNAMIC EXTENSION FOR DIRECT INTEGRABILITY OF SINGULAR SOLUTIONS IN OPTIMAL CONTROL PROBLEMS.....</b>   | <b>4216</b> |
| <i>Paolo Di Giamberardino</i>  |             |
| <b>A COMPUTATIONALLY EFFICIENT FEEDBACK SOLUTION FOR A PARTICULAR CASE OF THE GAME OF TWO CARS .....</b>   | <b>4222</b> |
| <i>Aditya Chaudhari ; Rishabh Chourasia ; Debraj Chakraborty</i>   |             |
| <b>AN ITERATIVE NEWTON'S METHOD FOR OUTPUT-FEEDBACK LQR DESIGN FOR LARGE-SCALE SYSTEMS WITH GUARANTEED CONVERGENCE.....</b>                        | <b>4228</b> |
| <i>Adrian Ilka ; Nikolce Murgovski ; Jonas Sjöberg</i>   |             |
| <b>OPTIMAL CONTROL OF MAXIMAL OUTPUT DEVIATIONS OVER A FINITE HORIZON .....</b>  | <b>4234</b> |
| <i>Dmitry V. Balandin ; Ruslan S. Biryukov ; Mark M. Kogan</i>   |             |
| <b>ON THE NON-OPTIMALITY OF LINEAR QUADRATIC GAUSSIAN BALANCED TRUNCATION FOR CONSTRAINED ORDER CONTROLLER DESIGN .....</b>                        | <b>4240</b> |
| <i>R. W. H. Merks ; M. Mirzakhali ; S. Weiland</i>   |             |
| <b>REAL-TIME OPTIMISATION OF CONTROL STRATEGY FOR A LOW FUEL CONSUMPTION VEHICLE ENGINE USING STM32 MICROCONTROLLER: PRELIMINARY RESULTS .....</b> | <b>4246</b> |
| <i>Jakub Sawulski ; Maciej Lawrynczuk</i>  |             |
| <b>A TOOLBOX FOR VIRTUAL REFERENCE FEEDBACK TUNING (VRFT) .....</b>  | <b>4252</b> |
| <i>Algo Carè ; Fabrizio Torricelli ; Marco C. Campi ; Sergio M. Savaresi</i>   |             |
| <b>A STRUCTURED APPROACH FOR INPUT DERIVATIVE INDEX-2 DESCRIPTOR DYNAMICAL MODEL CONTROL .....</b>   | <b>4258</b> |
| <i>C. Poussot-Vassal ; P. Vuillemin ; D. Quero</i>   |             |
| <b>TIME NETWORK FLOW GRAPH WITH VARYING CHARACTERISTICS FOR THE OPTIMAL MANAGEMENT OF CANALS .....</b>   | <b>4264</b> |
| <i>Eric Duviella ; Baya Hadid</i>  |             |
| <b>EFFICIENT ROBUST MODEL PREDICTIVE CONTROL USING CHORDALITY.....</b>   | <b>4270</b> |
| <i>Shervin Parvini Ahmadi ; Anders Hansson ; Sina Khoshfetrat Pakazad</i>  |             |
| <b>TOWARDS REAL-TIME ADMM FOR LINEAR MPC .....</b>   | <b>4276</b> |
| <i>Moritz Schulze Darup ; Gerrit Book ; Pontus Giselsson</i>   |             |
| <b>ADAPTIVE OUTPUT REGULATION FOR MULTIVARIABLE LINEAR SYSTEMS VIA SLOW IDENTIFIERS .....</b>  | <b>4283</b> |
| <i>Alessandro Melis ; Michelangelo Bin ; Lorenzo Marconi</i>   |             |
| <b>APPROXIMATING VIABILITY KERNELS OF HIGH-DIMENSIONAL LINEAR SYSTEMS .....</b>  | <b>4289</b> |
| <i>André M. Carvalho ; João S. Sequeira</i>  |             |
| <b>OBSERVER DESIGN WITH EXPLICIT CONSIDERATION OF PREDEFINED PERFORMANCE REQUIREMENTS BY UTILIZING THE PARAMETER SPACE APPROACH.....</b>           | <b>4295</b> |
| <i>Lorenz Pyta ; Rick Voßwinkel ; Frank Schrödel ; Dirk Abel</i>   |             |
| <b>PARABOLIC SET SIMULATION FOR REACHABILITY ANALYSIS OF LINEAR TIME INVARIANT SYSTEMS WITH INTEGRAL QUADRATIC CONSTRAINT.....</b>                 | <b>4301</b> |
| <i>Paul Rousse ; Pierre-Loïc Garoche ; Didier Henrion</i>  |             |
| <b>RANDOMIZED MPC WITH MODEL UNCERTAINTIES BASED ON LSCR APPROACH .....</b>  | <b>4307</b> |
| <i>Alexander Kalmbuk ; Kirill Tyushev ; Oleg Granichin ; Mingyue Ding ; Ming Yuchi</i>   |             |
| <b>MODEL-BASED PREDICTIVE FORCE CONTROL IN MILLING.....</b>  | <b>4313</b> |
| <i>Sebastian Stemmler ; Muzaffer Ay ; Max Schwenzer ; Dirk Abel ; Thomas Bergs</i>   |             |
| <b>PROBABILITY ESTIMATION IN AIRCRAFT CONFLICT DETECTION: A SIMPLE AND COMPUTATIONALLY EFFECTIVE METHOD WITH ACCURACY CERTIFICATES .....</b>       | <b>4319</b> |
| <i>Seyedhamed Seyedi Pour ; Hadi Nobahari ; Maria Prandini</i>   |             |

|   |             |
|---|-------------|
| <b>ON MOTIONS THAT ALLOW FOR IDENTIFICATION OF HINGE JOINT AXES FROM KINEMATIC CONSTRAINTS AND 6D IMU DATA .....</b>  | <b>4325</b> |
| <i>Danny Nowka ; Manon Kok ; Thomas Seel</i>  |             |
| <b>CONTROL DESIGN FOR TARGETING DYNAMICS OF MEMRISTOR MURALI-LAKSHMANAN-CHUA CIRCUIT .....</b>  | <b>4332</b> |
| <i>Mauro Di Marco ; Giacomo Innocenti ; Mauro Forti ; Alberto Tesi</i>  |             |
| <b>TOWARDS IN-FIELD AND ONLINE CALIBRATION OF INERTIAL NAVIGATION SYSTEMS USING MOVING HORIZON ESTIMATION .....</b>   | <b>4338</b> |
| <i>Fabian Gırrbach ; Raymond Zandbergen ; Manon Kok ; Tijmen Hageman ; Giovanni Bellusci ; Moritz Diehl</i>   |             |
| <b>PHENOMENOLOGICAL BASED MODEL OF HYDROGEN PRODUCTION USING AN ALKALINE SELF-PRESSURIZED ELECTROLYZER .....</b>  | <b>4344</b> |
| <i>M. David ; H. Alvarez ; C. Ocampo-Martinez ; R. Sánchez-Peña</i>   |             |
| <b>AN UNKNOWN INPUT MULTI-OBSERVER APPROACH FOR ESTIMATION, ATTACK ISOLATION, AND CONTROL OF LTI SYSTEMS UNDER ACTUATOR ATTACKS .....</b>   | <b>4350</b> |
| <i>Tianci Yang ; Carlos Murguía ; Margreta Kuijper ; Dragan Nešić</i>   |             |
| <b>MODEL-BASED FAULT DIAGNOSIS AND TOLERANT CONTROL: THE ESA'S E.DEORBIT MISSION .....</b>  | <b>4356</b> |
| <i>D. Henry ; J. Cieslak ; J. Zenteno Torres ; P. Colmenarejo ; J. Branco ; N. Santos ; P. Serra ; J. Telaard ; H. Strauch ; A. M. Giordano ; M. De Stefano ; C. Ott ; M. Reiner ; J. Jaworsk ; E. Papadopoulos ; G. Visentin ; F. Ankersen ; J. G. Fernandez</i> |             |
| <b>SLIDING MODE OBSERVERS FOR FAULT DIAGNOSIS IN LINEAR SYSTEMS .....</b>   | <b>4362</b> |
| <i>Alexey Zhirabok ; Alexander Zuev ; Alexey Shumsky</i>  |             |
| <b>MODELING OF CYBER ATTACKS AND A TIME GUARD DETECTION FOR ICS BASED ON DISCRETE EVENT SYSTEMS .....</b>   | <b>4368</b> |
| <i>Raphael Fritz ; Patrick Schwarz ; Ping Zhang</i>   |             |
| <b>ACTIVE FAULT DIAGNOSIS VIA REACHABLE SET SEPARATION USING INTERVAL METHODS .....</b>   | <b>4374</b> |
| <i>Mihalis Tsiakkas ; Pantelis Sopasakis ; Francesca Boem ; Christos Panayiotou ; Marios Polycarpou</i>   |             |
| <b>ON THE ESTIMATION OF SIGNAL ATTACKS: A DUAL RATE SD CONTROL FRAMEWORK .....</b>  | <b>4380</b> |
| <i>Nabil H. Hirzallah ; Petros G. Voulgaris ; Naira Hovakimyan</i>  |             |
| <b>Author Index</b>   |             |