

2015 IEEE Conference on Control Applications (CCA 2015)

**Sydney, Australia
21-23 September 2015**

Pages 1-1031



**IEEE Catalog Number: CFP15CCA-POD
ISBN: 978-1-4799-7797-0**

TABLE OF CONTENTS

A TUTORIAL INTRODUCTION TO QUANTUM FEEDBACK CONTROL	1
<i>Matthew R. James, Hendra I Nurdin</i>	
DIRECT AND INDIRECT COUPLINGS IN THE INTERCONNECTION OF OPEN TWO LEVEL QUANTUM SYSTEMS	13
<i>Zibo Miao, Matthew R. James</i>	
QUANTUM FILTER FOR A NON-MARKOVIAN SINGLE QUBIT SYSTEM	19
<i>Shibeí Xue, Matthew R. James, alireza shabani, Valery Ugrinovskii, Ian R. Petersen</i>	
GUARANTEED COST DYNAMIC COHERENT CONTROL FOR A CLASS OF UNCERTAIN LINEAR QUANTUM SYSTEMS	24
<i>Chengdi Xiang, Ian R. Petersen, Daoyi Dong</i>	
A TRANSVERSE HAMILTONIAN VARIATIONAL TECHNIQUE FOR OPEN QUANTUM STOCHASTIC SYSTEMS AND ITS APPLICATION TO COHERENT QUANTUM CONTROL	29
<i>Igor G. Vladimirov</i>	
CONTROL OF A MAGNETIC LEVITATION SYSTEM VIA OUTPUT FEEDBACK BASED TWO DOF CONTROL WITH AN ADAPTIVE PREDICTIVE FEEDFORWARD INPUT	71
<i>Ikuro Mizumoto, Seiya Fujii, Masataka Ikejiri</i>	
PERFORMANCE-ASSESSMENT OF WEIGH FEEDER USING STEADY-STATE PREDICTIVE OUTPUT	77
<i>Takao Sato, Yoshihiro Ohnishi, Toru Yamamoto, Yasuo Konishi</i>	
DATA-DRIVEN GENERALIZED MINIMUM VARIANCE REGULATORY CONTROL FOR MODEL-FREE PID GAIN TUNING	82
<i>Ryoko Yokoyama, Shiro Masuda, Manabu Kano</i>	
FICTITIOUS REFERENCE ITERATIVE TUNING OF INTERNAL MODEL CONTROLLERS FOR A CLASS OF NONLINEAR SYSTEMS	88
<i>Osamu Kaneko</i>	
IMPROVING THE ACCURACY OF INTERFEROMETRIC MEASUREMENTS THROUGH ADAPTIVE VIBRATION CANCELLATION	95
<i>Lorenzo Pettazzi, Riccardo Muradore, Enrico Fedrigo, Pierre Haguenauer, Laurent Pallanca</i>	
ROBUST ADAPTIVE FUZZY OUTPUT FEEDBACK CONTROL STRATEGY FOR UNCERTAIN PERTURBED NONLINEAR SYSTEM	101
<i>Dohee Kim</i>	
GLOCAL (GLOBAL/LOCAL) CONTROL SYNTHESIS FOR HIERARCHICAL NETWORKED SYSTEMS	107
<i>Shinji Hara, Jun-ichi Imura, Koji Tsumura, Takayuki Ishizaki, Tomonori Sadamoto</i>	
PREDICTOR-BASED CONSENSUS CONTROL OF A MULTI-AGENT SYSTEM WITH TIME-DELAYS	113
<i>Yiran Cao, Toshiki Oguchi, Paul Bart Verhoeckx, Hendrik Nijmeijer</i>	
DECENTRALIZED ROBUST OUTPUT FEEDBACK CONTROL FOR MULTI-MACHINE POWER SYSTEM	119
<i>Wei Wang, Hiromitsu Ohmori</i>	
DECENTRALIZED CONTROL OF MOBILE THREE-DIMENSIONAL SENSOR NETWORKS FOR COMPLETE COVERAGE SELF-DEPLOYMENT AND FORMING SPECIFIC SHAPES	127
<i>Valimohammad Nazarzehi Had, Andrey V. Savkin</i>	
DISSIPATIVITY BASED FAULT DETECTION AND DIAGNOSIS FOR LINEAR SYSTEMS	133
<i>Qingyang Lei, Jie Bao</i>	
FAULT DETECTION BY LOCAL GROUPING BASED ON MEWMA CONTROL CHARTS	139
<i>Thomas Friebe, Robert Haber</i>	
BUILT-IN STEPPED-SINE MEASUREMENTS FOR DIGITAL CONTROL SYSTEMS	145
<i>Daniel Y. Abramovitch</i>	
CONSISTENT ESTIMATE OF KALMAN GAIN IN SUBSPACE IDENTIFICATION METHOD	151
<i>Kenji Ikeda</i>	
NEW PARAMETER ESTIMATION METHOD OF LINEAR ADAPTIVE FILTER FOR MODELING KINEMATIC MOTION PRIMITIVE OF EFFECTIVE DOF OF HAND	157
<i>Mahmood Lahroodi, Ilhan KONUKSEVEN</i>	
MPC FOR A CLASS OF NONLINEAR SYSTEMS WITH GUARANTEED IDENTIFIABILITY	163
<i>Eva Zacekova, Matej Pcolka, Michael Sebek, Sergej Celikovskiy</i>	
EVALUATION OF EXPERIMENT DESIGNS FOR MIMO SYSTEM IDENTIFICATION BY MODEL PREDICTIVE CONTROL	169
<i>Kurt E. Haggblom</i>	
CLOSED-LOOP IDENTIFICATION OF PLANT AND DISTURBANCE MODELS BASED ON GENERALIZED MINIMUM VARIANCE EVALUATION	175
<i>Ryota Uematsu, Shiro Masuda, Manabu Kano</i>	
COMMUNICATION DELAY ROBUSTNESS FOR MULTI-AGENT STATE OF CHARGE BALANCING BETWEEN DISTRIBUTED AC MICROGRID STORAGE SYSTEMS	181
<i>Thomas Morstyn, Branislav Hredzak, Vassilios G Agelidis</i>	
INTEGRATION OF DAY-AHEAD ENERGY MARKET USING VCG TYPE MECHANISM UNDER EQUALITY AND INEQUALITY CONSTRAINTS	187
<i>Yusuke Okajima, Toshiyuki Murao, Kenji Hirata, Kenko Uchida</i>	

VOLTAGE STABILITY OF DISTRIBUTED GENERATORS BY MEANS OF DISCRETE ABSTRACTION	195
<i>Marjorie Cosson, Herve Gueguen, Didier Dumur, Cristina Nicoleta Stoica Maniu, Vincent Gabrion, Gilles Malarange</i>	
SMALL-DISTURBANCE ANGLE STABILITY ANALYSIS OF MICROGRIDS: A GRAPH THEORY VIEWPOINT	201
<i>Yue Song, David J. Hill, Tao Liu</i>	
POLE-PLACEMENT BASED NONLINEAR STATE-FEEDBACK CONTROL OF THE DC-LINK VOLTAGE IN GRID-CONNECTED VOLTAGE SOURCE POWER CONVERTERS: A PRELIMINARY STUDY	207
<i>Christian Dirscherl, Christoph M. Hackl, Korbinian Schechner</i>	
STATE-FEEDBACK CONTROLLER AND OBSERVER DESIGN FOR GRID-CONNECTED VOLTAGE SOURCE POWER CONVERTERS WITH LCL-FILTER	215
<i>Christian Dirscherl, Josef Fessler, Christoph M. Hackl, Hanko Ipach</i>	
TRYING TO KEEP IT REAL: 25 YEARS OF TRYING TO GET THE STUFF I LEARNED IN GRAD SCHOOL TO WORK ON MECHATRONIC SYSTEMS	223
<i>Daniel Y. Abramovitch</i>	
ADAPTIVE NON-HOMOGENEOUS HIGHER ORDER SLIDING MODE CONTROL WITHOUT SWITCHING GAIN OVERESTIMATION	251
<i>Peng Li, Jianjun Ma, Lina Geng, Zhiqiang Zheng</i>	
STABILIZATION OF ARTSTEIN'S CIRCLE BY CONTINUOUS STOCHASTIC FEEDBACK	257
<i>Kenta Hoshino, Yuki Nishimura, Yuh Yamashita, Jun Yoneyama</i>	
FEEDBACK CONTROL OF NONLINEAR SYSTEMS USING PASSIVITY INDICES	263
<i>Diego de S. Madeira, Jurgen Adamy</i>	
ON THE USE OF FLAME ANALYSIS AND OPTICAL VARIABLES FOR AN OPTIMIZED OPERATION IN LADLE FURNACE PREHEATING PROCESS	269
<i>Hugo Garces, Alejandro J. Rojas, Luis Arias, Claudia A Carrasco</i>	
CONSTRUCTION OF LYAPUNOV FUNCTIONS FOR COMPLEX INTERCONNECTIONS WITH IRREGULAR COMMUNICATION DELAYS	275
<i>Sergey Dashkovskiy, Bernd Nieberding, Iliia G. Polushin, Rattaprom Promkam</i>	
VIBRATION-SUPPRESSION AND FAST-POSITIONING CONTROL OF ELASTIC-JOINT ROBOT ARM UTILIZING NONLINEAR-MODEL-BASED PHASE-LEAD COMPENSATOR	281
<i>Junji Oaki, Shuichi Adachi</i>	
DEVELOPMENT OF THE LASER BEAM SCANNER WHICH USES THE PRISM CUBE MIRROR WITH DMD	288
<i>Takaaki Itoh, Shoma Matsunaga, Nobuhiro Okada</i>	
CONTROL OF A PERTURBED UNDER-ACTUATED MECHANICAL SYSTEM	294
<i>Chadia Zayane-Aissa, Taous Meriem Laleg-Kirati, Ahmed Chemori</i>	
ENHANCING FLEXIBILITY OF THE DUAL-MASTER-DUAL-SLAVE MULTILATERAL TELEOPERATION SYSTEM	300
<i>Da Sun, Fazel Naghdy, Haiping Du</i>	
AN ANALYTIC SOLUTION TO FIXED-TIME POINT-TO-POINT TRAJECTORY PLANNING	306
<i>M. Mahdi Ghazaei Ardakani, Meike Stemann, Anders Robertsson, Rolf Johansson</i>	
CONTINUOUS ROBUST TASK-SPACE TRACKING CONTROL OF ROBOTIC MANIPULATORS WITH UNCERTAIN DYNAMICS	312
<i>Kamil Cetin, Enver Tatlicioglu, Erkan Zergeroglu</i>	
MODEL PREDICTIVE CONTROL OF A WIND TURBINE BASED ON LINEAR PARAMETER-VARYING MODELS	318
<i>Abdelrahman Morsi, Hossam Seddik Abbas, Abdelfatah M. Mohamed</i>	
PREDICTIVE FUNCTIONAL CONTROL OF TANDEM COLD METAL ROLLING	324
<i>Thomas Friebel, Khaled Ramadan Zabet, Robert Haber, Mohieddine Jelali</i>	
MODEL PREDICTIVE OBSTACLE AVOIDANCE CONTROL WITH PASSAGE WIDTH CONSTRAINTS FOR LEG/WHEEL ROBOTS	330
<i>Naito Suzuki, Kenichiro Nonaka, Kazuma Sekiguchi</i>	
THERMAL-AWARE LOAD PROVISIONING FOR SERVER CLUSTERS BY USING MODEL PREDICTIVE CONTROL	336
<i>Han Zhu, Jun Wang, Mengxuan Song, Qiu Fang</i>	
LINEAR FINITE FRACTIONAL DIFFERENCE PREDICTORS FOR MODEL PREDICTIVE CONTROL	341
<i>R. Stanislawski, Krzysztof J. Latawiec, Marian Lukaszyn, Marcin Galek</i>	
QUANTIZED NONLINEAR MODEL PREDICTIVE CONTROL FOR A BUILDING	347
<i>Matej Pcolka, Eva Zacekova, Rush Robinett, Sergej Celikovskiy, Michael Sebek</i>	
H_∞ FILTER DESIGN FOR T-S NONLINEAR DISCRETE-TIME STATE-DELAYED SYSTEMS IN FINITE FREQUENCY DOMAIN	353
<i>Doha El Hellani, Ahmed El Hajjaji, Roger Ceschi</i>	
ROBUST OUTPUT FEEDBACK LINEARIZING SPEED SENSORLESS CONTROL OF PMSM	359
<i>Attallah Memon, Syed Ali Asad Rizvi</i>	
UNKNOWN TIME-VARYING INPUT DELAY COMPENSATION FOR NEUROMUSCULAR ELECTRICAL STIMULATION	365
<i>Serhat Obuz, Ryan J. Downey, Justin R. Klotz, Warren E. Dixon</i>	
DESIGN AND IMPLEMENTATION OF A HYBRID SOLAR WIND ENERGY TOWER	371
<i>Vinesh Thiruchelvam, Jun Ao Tan</i>	

ERROR DETECTION FOR CHEMICAL PLANT AUTOMATION LOGIC USING SUPERVISORY CONTROL THEORY	376
<i>Blake C. Rawlings, John Wassick, B. Erik Ydstie</i>	
COMPUTATIONAL METHODS FOR DIAGNOSABILITY VERIFICATION OF HYBRID SYSTEMS	382
<i>Oumar Diene, Marcos Vicente Moreira, Victor Ruas Alvarez, Eduardo Alexandre dos Reis Silva</i>	
JOINT ESTIMATION OF THE FRACTIONAL DIFFERENTIATION ORDERS AND THE UNKNOWN INPUT FOR LINEAR FRACTIONAL NON-COMMENSURATE SYSTEM	388
<i>Zehor Belkhatir, Taous Meriem Laleg Kirati</i>	
FINITE-TIME SIMULTANEOUS PARAMETER AND STATE ESTIMATION USING MODULATING FUNCTIONS	394
<i>Jerome Jouffroy, Johann Reger</i>	
SELF-TUNING DISTURBANCE FEEDFORWARD CONTROL WITH DRIFT PREVENTION FOR AIR MOUNT SYSTEMS	400
<i>Michiel Beijen, Marcel Heertjes, Hans Butler</i>	
IMAGE-BASED POSITION ESTIMATION OF UAV USING KALMAN FILTER	406
<i>Takaaki Kojima, Toru Namerikawa</i>	
A TWO FILTER PARTICLE SMOOTHER FOR WIENER STATE-SPACE SYSTEMS	412
<i>Roland Hostettler</i>	
OPTIMAL SENSOR PLACEMENT FOR MODAL BASED ESTIMATION OF DEFORMABLE MIRROR SHAPE	418
<i>Michael Bohm, Oliver Sawodny</i>	
ACCELEROMETER-BASED ONLINE RECONSTRUCTION OF VIBRATIONS FROM DELAYED MEASUREMENTS	424
<i>Alexander Keck, Jorg-Uwe Pott, Oliver Sawodny</i>	
IDENTIFYING PARAMETERS IN ACTIVE MAGNETIC BEARING SYSTEM USING LFT FORMULATION AND YOULA FACTORIZATION	430
<i>Jonas Lauridsen, Andre Sekunda, Ilmar F. Santos, Henrik Niemann</i>	
A CLOSED-LOOP PHASE-LOCKED INTERFEROMETER FOR WIDE BANDWIDTH POSITION SENSING	436
<i>Andrew J. Fleming, Ben Routley, John L. Holdsworth</i>	
PARAMETRIC MODAL ANALYSIS OF MECHANICAL SYSTEMS WITH AN APPLICATION TO A BALL SCREW MODEL	441
<i>Philipp Wittmuess, Benjamin Henke, Cristina Tarin, Oliver Sawodny</i>	
MODEL-LESS FIR REPETITIVE CONTROL WITH CONSIDERATION OF UNCERTAINTY	447
<i>Yik R Teo, Arnfinn Aas Eielson, Andrew J. Fleming</i>	
SYSTEM IDENTIFICATION USING IN SITU EXPERIMENTAL DATA FOR THE DEVELOPMENT OF AN HEXAPOD SURFING SIMULATOR	453
<i>Kevin Lestrade, Sandra Guerard, Patrick Lanusse, Philippe Viot</i>	
TIME-OPTIMAL TRAJECTORY GENERATION, PATH PLANNING AND CONTROL FOR A WOOD PATCHING ROBOT	459
<i>Matthias Hofmair, Martin Bock, Andreas Kugi</i>	
ESTIMATING THE OUTLET TEMPERATURE OF A PLATE HEAT EXCHANGER: APPLICATION OF BILINEAR OBSERVERS	466
<i>Tim Grunert, Sven Fielsch, Matthias Stursberg</i>	
DISTRIBUTED COORDINATION OF LINEAR SECOND-ORDER MULTI-AGENT SYSTEMS WITH COMMUNICATION CONSTRAINTS	472
<i>Abdelkader Abdessameud, Iliia G. Polushin, Abdelhamid Tayebi</i>	
ROBUST TUNING OF CURRENT SELF-CONTROLLED SINGLE-PHASE PFC BOOST CONVERTERS	478
<i>Jonatas Roschild, Daniel Coutinho, Carlos E. de Souza</i>	
IMPROVED ICA-BASED MIXTURE CONTROL CHART PATTERNS RECOGNITION USING SHAPE RELATED FEATURES	484
<i>Rungchat Chompu-inwai, Trasapong Thaiupathump</i>	
ROAD TYPE DETECTION BASED ON IMPULSIVE OBSERVER WITH SYNCHRONOUS AND ASYNCHRONOUS MEASUREMENTS	490
<i>Essaid Edjekouane, Yassine Khaled, Malek Ghanes, Jean Pierre Barbot</i>	
OPERATIONAL ASSISTANCE SYSTEM WHILE CONSIDERING OPERATORS ABILITY ON MANUAL GUIDED TRANSFER SYSTEM WITH VIBRATIONAL ELEMENTS	495
<i>Daiki Suzuki, Yoshiyuki Noda</i>	
TASK-ORIENTED TELEOPERATION SYSTEMS FOR GROUPS OF MOBILE ROBOTS WITH TIME-VARYING COMMUNICATION DELAYS	501
<i>Chao-Wei Lin, Yen-Chen Liu</i>	
CONTROL OF BILATERAL TELEOPERATION SYSTEMS USING SINGLE CONTROLLER OVER DELAYED COMMUNICATION NETWORK	507
<i>Mun-Hooi Khong, Yen-Chen Liu</i>	
3D INVERTED PENDULUM STABILIZATION ON A QUADROTOR VIA BILINEAR SYSTEM APPROXIMATIONS	513
<i>Tatsuya Ibuki, Yuichi Tadokoro, Yuki Fujita, Mitsuji Sampei</i>	
PERFORMANCE OPTIMIZATION OF A MULTI-DOF BILATERAL ROBOT FORCE AMPLIFICATION USING COMPLEMENTARY STABILITY	519
<i>Pascal Labrecque, Clement Gosselin</i>	

OPERATIONAL/TASK SPACE LEARNING CONTROL OF ROBOT MANIPULATORS WITH DYNAMICAL UNCERTAINTIES.....	527
<i>Kadriye Merve Dogan, Enver Tatlicioglu, Erkan Zergeroglu</i>	
EVALUATION OF OPTIMIZATION SOLVERS ON PROGRAMMABLE LOGIC CONTROLLER.....	533
<i>Amit Purohit, Jyot Buch</i>	
C-ABT: A CONTINUOUS CONTROL LAYER FOR INTER-AGENT COLLISION AVOIDANCE BASED ON ASYNCHRONOUS BACKTRACKING.....	539
<i>Joachim Carsten Mueller, Alberto Viseras Ruiz, Christoph Manss, Thomas Wiedemann</i>	
DIFFUSION BIAS-COMPENSATED LMS ESTIMATION FOR MULTITASK ADAPTIVE NETWORKS.....	545
<i>Xiaoling Xu, Li-juan Jia, Tingting XU, Hui Wan, Shunshoku Kanae</i>	
APPLICATION OF ADJOINT METHOD FOR ESTIMATING MANNING-STRICKLER COEFFICIENT IN TONDI KIBORO CATCHMENT.....	551
<i>Van Tri NGUYEN, Didier Georges, Gildas Besancon</i>	
COLLABORATIVE CONTROL FOR STRUCTURES SUBJECTED TO TRAVELING LOADS.....	557
<i>Dominik Pisarski</i>	
IMPROVED DELAY-FRACTIONAL-DEPENDENT STABILITY CRITERIA FOR SYSTEMS WITH NONLINEAR PERTURBATIONS.....	563
<i>Jiyao An</i>	
LOW-FREQUENCY LIMITATIONS IN SATURATED AND DELAYED NETWORKED CONTROL.....	569
<i>Torbjorn Wigren</i>	
BOUNDARY CONTROL OF LINEAR ONE-DIMENSIONAL PARABOLIC PDE USING NEURO-DYNAMIC PROGRAMMING.....	577
<i>behzad talaei, Sarangapani Jagannathan, John Singler</i>	
INDICATORS TO ASSESS SOCIAL SUSTAINABILITY ASPECTS - RESEARCH IN INDUSTRIES OF THE ELECTRICAL AND ELECTRONIC SECTOR IN BRAZIL.....	583
<i>Fernanda Lopes, Adriana de Paula Lacerda Santos, Mauro Lacerda Santos Filho</i>	
TUNING METHOD FOR DOUBLE-LOOP CONTROL STRUCTURE FOR NONMINIMUM-PHASE INTEGRATING SYSTEMS.....	589
<i>Qiuhan Seer, Jobrun Nandong</i>	
COMPARISON OF VIBRATION ANALYSIS FOR A BRIDGE USING ACCELEROMETERS AND A PIEZOELECTRIC CABLE SENSOR.....	595
<i>Nobuhiro Shimoi, Carlos Cuadra</i>	
DELAY-COMPENSATED MAXIMUM LIKELIHOOD ESTIMATION METHOD FOR QUADROTOR UAV.....	601
<i>Ryosuke Adachi, Yuh Yamashita</i>	
SMALL DATA-SET EKF-BASED PARAMETER ESTIMATION FOR A BEHAVIOR-MODIFICATION MODEL.....	607
<i>Nikesh Parsotam, Daniel E. Davison</i>	
DESCRIPTOR APPROACH FOR ATTITUDE ESTIMATION.....	614
<i>Aida Makni, Alain Kibangou, hassen Fourati, Jonathan Dumon</i>	
FUNCTIONAL OBSERVER DESIGN WITH APPLICATION TO PRE-COMPENSATED MULTI-VARIABLE SYSTEMS.....	620
<i>Shabnam Nazmi, Reza Mohajerpour, Hamid Abdi, Saeid Nahavandi</i>	
RELATIVE NAVIGATION FOR A MALFUNCTIONED SPACECRAFT BY USING AN ADAPTIVE STATE OBSERVER.....	626
<i>Feng Yu, Zhen He</i>	
HELICOPTER HOVERING ATTITUDE CONTROL USING A DIRECT FEEDTHROUGH SIMULTANEOUS STATE AND DISTURBANCE OBSERVER.....	633
<i>David Conal Robinson, Kris Ryan, Hoam Chung</i>	
ROBUST ADAPTIVE BACKSTEPPING EXCITATION CONTROLLER DESIGN FOR SIMPLE POWER SYSTEM MODELS WITH EXTERNAL DISTURBANCES.....	715
<i>Tushar Kanti Roy, Md. Apel Mahmud, weixiang shen, Amanullah M. T. Oo</i>	
DIFFERENTIAL FLATNESS-BASED CONTROL OF A STAND-ALONE SOLAR-PV ENERGY GENERATING SYSTEM.....	721
<i>Ehsan Jamshidpour, Philippe Poure, Babak Nahid-Mobarakeh, Shahrokh Saadate</i>	
MODEL PREDICTIVE CONTROL OF ELECTRICITY MARKET ORIENTED WIND FARM DISPATCH WITH A BATTERY ENERGY STORAGE SYSTEM.....	727
<i>Mohammad Taghi Zareifard</i>	
A STABILITY VULNERABILITY IN THE INTERACTION BETWEEN VOLT-VAR AND VOLT-WATT RESPONSE FUNCTIONS FOR SMART INVERTERS.....	733
<i>Julio H. Braslavsky, John Kelvin Ward, Lyle Collins</i>	
OPTIMIZATION OF A POWER SYSTEM CONSISTING OF WIND AND SOLAR POWER PLANTS AND BATTERY ENERGY STORAGE FOR OPTIMAL MATCHING OF SUPPLY AND DEMAND.....	739
<i>Muhammad Khalid, Andrey V. Savkin, Vassilios G Agelidis</i>	
SUPERMARKET DEFROST CYCLES AS FLEXIBLE RESERVE.....	744
<i>Rasmus Pedersen, Christoffer Sloth, Rafal Wisniewski, Torben Green</i>	
L1 FAULT TOLERANT ADAPTIVE CONTROL OF A HEXACOPTER WITH CONTROL DEGRADATION.....	750
<i>Maximilian Muhlegg, Philipp Niermeyer, Guillermo P. Falconi, Florian Holzapfel</i>	
SELECTION OF OPTIMAL TIME-TO-GO IN GENERALIZED VECTOR EXPLICIT GUIDANCE.....	756
<i>Sabyasachi Mondal, Radhakant Padhi</i>	

DEVELOPMENT AND EVALUATION OF AN LPV INTEGRAL SLIDING MODE FAULT TOLERANT FLIGHT CONTROL SCHEME ON THE SIMONA RESEARCH SIMULATOR	762
<i>Halim Alwi, Christopher Edwards, Olaf Stroosma, J.A. Mulder</i>	
INVERSE POLYNOMIAL BASED EXPLICIT GUIDANCE FOR LUNAR SOFT LANDING DURING POWERED BRAKING	768
<i>Avijit Banerjee, Radhakant Padhi</i>	
STRUCTURAL OPTIMIZATION OF HEXROTORS BASED ON DYNAMIC MANIPULABILITY AND THE MAXIMUM TRANSLATIONAL ACCELERATION	774
<i>Katsuyuki Kiso, Tatsuya Ibuki, Masahiro Yasuda, Mitsuji Sampei</i>	
HYBRID CONTROL AND STEERING LOGIC FOR THE CMG-BASED SPACECRAFT ATTITUDE CONTROL SYSTEM	780
<i>Xing Xin, Zhen Li, Xiangdong Liu, Zhen Chen</i>	
DIGITAL-TO-ANALOG CONVERTER CONSIDERATIONS FOR ACHIEVING A DYNAMIC RANGE OF 1 PPM IN PRECISION MECHATRONICS SYSTEMS	786
<i>Timothy D. Godfrey, Arnfinn Aas Eielsen, Andrew J. Fleming</i>	
TWO-DEGREES-OF-FREEDOM CONTROLLER DELIVERING ZERO-ERROR TRACKING OF RAMP-LIKE TRAJECTORIES FOR NANOPositionING SYSTEMS	792
<i>Andres San-Millan, Sumeet Aphale, Vicente Feliu</i>	
CASCADED LINE-OF-SIGHT PATH-FOLLOWING AND SLIDING MODE CONTROLLERS FOR FIXED-WING UAVS.....	798
<i>Joao Fortuna, Thor I. Fossen</i>	
MODEL PREDICTIVE PARKING CONTROL WITH ON-LINE PATH GENERATIONS AND MULTIPLE SWITCHING MOTIONS.....	804
<i>Kuniyuki Sakaeta, Takatsugu Oda, Kenichiro Nonaka, Kazuma Sekiguchi</i>	
TEMPERATURE REGULATION IN MULTICORE PROCESSORS USING ADJUSTABLE-GAIN INTEGRAL CONTROLLERS	810
<i>Karthik Rao, William Song, Sudhakar Yalamanchili, Yorai Wardi</i>	
PINNING CONTROL OF A NEW CAR-FOLLOWING MODEL WITH THE CONSIDERATION OF PRECEDING AND FOLLOWING CARS.....	816
<i>Jing Yao, Qiong Jia, Lijuan Shen</i>	
PERFORMANCE EVALUATION OF NONLINEAR SURFACES FOR SLIDING MODE CONTROL OF A HYDRAULIC VALVE	822
<i>Christoph Krimpmann, Georg Schoppel, Ingo Glowatzky, Torsten Bertram</i>	
FINITE-TIME OBSERVATION AND TRAJECTORY TRACKING FOR A DIRECT WAVE ENERGY CONVERTER.....	828
<i>Emmanuel Bernuau, Alain Glumineau, Franck Plestan</i>	
RELAY SLIDING MODE CONTROL OF MULTILoop SYSTEMS BASED ON THE INPUT-OUTPUT MODEL	834
<i>Solen Kumbay Yildiz, Huseyin demircioglu</i>	
PROXIMATE TIME-OPTIMAL CONTROL OF A SECOND-ORDER FLEXIBLE STRUCTURE.....	840
<i>Roger A Braker, Lucy Y. Pao</i>	
A NOVEL PREDICTOR FEEDBACK DESIGN APPROACH FOR DYNAMICAL SYSTEMS WITH INPUT DELAY	846
<i>Amir Hossein Abolmasoumi</i>	
ROBUST SPIRAL POSITIONING CONTROL OF A PIEZOELECTRIC TUBE SCANNER	852
<i>Habibullah Habibullah, Hemanshu R. Pota, Ian R. Petersen</i>	
FIELD WEAKENING IN FLATNESS-BASED TORQUE CONTROL OF SATURATED SURFACE-MOUNTED PERMANENT MAGNET SYNCHRONOUS MACHINES.....	858
<i>David Faustner, Wolfgang Kemmetmueller, Andreas Kugi</i>	
FORCED COMMUTATION FOR FED CURRENT SELF CONTROLLED SYNCHRONOUS MOTOR	864
<i>Saber Laamiri, Malek Ghanes</i>	
FES KNEE BENDING AND STRETCHING SYSTEM WITH RISE-BASED TRACKING CONTROL FOR HUMAN LIMB.....	870
<i>Yoshihiro Kushima, Kotaro Kawataka, Hiroyuki Kawai, Yasunori Kawai, Warren E. Dixon</i>	
ONLINE OPTIMIZATION OF DIFFERENT OBJECTIVES IN ROBOTIC SAILING: SIMULATIONS AND EXPERIMENTS.....	876
<i>Daniel Wrede, Jost Adam, Jerome Jouffroy</i>	
POSITION CONTROL OF TWO-WHEELS MOBILE ROBOT VIA SEMICONCAVE FUNCTION BACKSTEPPING.....	882
<i>Ryo Matsumoto, Hisakazu Nakamura, Yasuyuki Satoh, Shunsuke Kimura</i>	
FUEL-OPTIMAL G-MPSP GUIDANCE FOR POWERED DESCENT PHASE OF SOFT LUNAR LANDING	924
<i>Kapil Sachan, Radhakant Padhi</i>	
ADAPTIVE FINITE-TIME ATTITUDE TRACKING CONTROL OF AN UNCERTAIN SPACECRAFT WITH INPUT SATURATION.....	930
<i>Jianjun Ma, Peng Li, Lina Geng, Zhiqiang Zheng</i>	
AN ADAPTIVE CONTROL ALGORITHM FOR WIND POWER DISPATCH USING A BATTERY ENERGY STORAGE SYSTEM.....	936
<i>Muhammad Khalid, Andrey V. Savkin, Vassilios G Agelidis</i>	

REINFORCEMENT LEARNING NEURAL NETWORK (RLNN) BASED ADAPTIVE CONTROL OF FINE HAND MOTION REHABILITATION ROBOT	941
<i>Xianwei Huang, Fazel Naghdy, Haiping Du, Golshah Naghdy, C. Todd</i>	
NONLINEAR MISSILE AUTOPILOT DESIGN USING A DENSITY FUNCTION-BASED SUM-OF-SQUARES OPTIMIZATION APPROACH	947
<i>Min-Won Seo, Hyuck-Hoon Kwon, Han-Lim Choi</i>	
A ROBUST OPTIMAL NONLINEAR CONTROL FOR UNCERTAIN SYSTEMS: APPLICATION TO A ROBOT MANIPULATOR	953
<i>Catalin Stefan Teodorescu, Steve Vandenplas</i>	
ACTUATORS ADDITIVE SVD-BASED FAULT-TOLERANT CONTROL FOR A COMBAT AIRCRAFT	960
<i>Adrien Drouot, Hassan Noura, Laurent Goerig, Pascal Piot</i>	
A DATA-DRIVEN APPROACH FOR FAULT DIAGNOSIS IN HVAC CHILLER SYSTEMS	966
<i>Alessandro Beghi, Riccardo Brignoli, Luca Cecchinato, Gabriele Menegazzo, Mirco Rampazzo</i>	
AN ITERATIVE PRINCIPAL COMPONENT TEST FOR FAULT DETECTION AND ISOLATION	972
<i>Y. V. Sagar, A. P. Tiwari, S. B. Degweker</i>	
MODEL-BASED ACTUATOR FAULT ACCOMMODATION FOR DISTRIBUTED PARAMETER SYSTEMS REPRESENTED BY COUPLED LINEAR PDES	978
<i>Jia Cai, Hasan Ferdowsi, Sarangapani Jagannathan</i>	
ICING DETECTION IN UNMANNED AERIAL VEHICLES WITH LONGITUDINAL MOTION USING AN LPV UNKNOWN INPUT OBSERVER	984
<i>Damiano Rotondo, Andrea Cristofaro, Tor Arne Johansen, Fatiha Nejjari, Vicenc Puig</i>	
EVENT-TRIGGERED FAULT DETECTION FOR DISCRETE-TIME LINEAR SYSTEMS	990
<i>Shahram Hajshirmohamadi, Mohammadreza Davoodi, Nader Meskin</i>	
ACTUATOR FAULT-TOLERANT CONTROL OF THE STUTTGART SMARTSHELL	996
<i>Michael Heidingsfeld, Eckhard Arnold, Cristina Tarin, Oliver Sawodny</i>	
FRAMEWORK FOR IMPLEMENTATION OF HIGHER-LEVEL CONTROL FOR OVER-ACTUATED ELECTRIC VEHICLES	1002
<i>Sean Christfor McTrusty, Phillip Commins, Haiping Du</i>	
A NOVEL DISTRIBUTED OPTIMAL APPROACH TO POWER COORDINATION IN WIND POWER PLANTS	1008
<i>Dinh Hoa Nguyen, Tatsuo Narikiyo, Michihiro Kawanishi</i>	
TRACKING OF SPIRAL TRAJECTORIES BEYOND SCANNER RESONANCE FREQUENCY BY A MEMS NANOPositionER	1014
<i>Ali Bazaei, Anthony Fowler, Mohammad Maroufi, S.O. Reza Moheimani</i>	
A REAL-TIME CURB DETECTION AND TRACKING METHOD FOR UGVs BY USING A 3D-LIDAR SENSOR	1020
<i>Yihuan Zhang, Jun Wang, Xiaonian Wang, Chaocheng Li, liang Wang</i>	
SPEED CONTROL OF VEHICLES WITH VARIABLE VALVE LIFT ENGINE BY NMPC BASED ON APPLICATION OF SDAGM WITH CONTINUATION METHOD	1026
<i>Hiroyuki Oyama, Masaki Yamakita</i>	
METHOD OF DESIGNING INVERSE SYSTEM FOR BINAURAL REPRODUCTION OVER LOUDSPEAKERS BY USING DIAGONALIZATION METHOD	1032
<i>Maho Sugaya, Kentaro Matsui, Yasushige Nakayama, Shuichi Adachi</i>	
MODELLING A COMBUSTION CHAMBER ACTING AS A HELMHOLTZ RESONATOR USING THE TWO-MICROPHONE-METHOD AND DESIGN OF A LQR	1038
<i>Sadaf Shariati, Alexander Adamski, Raimund Noske, andreas brockhinke, Dirk Abel</i>	
REDUCED LPV MODEL DEVELOPMENT AND CONTROL OF A SOLUTION COPOLYMERIZATION REACTOR	1044
<i>Sandy Rahme, Hossam Seddik Abbas, Nader Meskin, Roland Toth, Javad Mohammadpour</i>	
MODELLING AND CONTROL OF WIRELESS NETWORKED CONTROL SYSTEMS: A FIXED STRUCTURE APPROACH	1051
<i>Ahmad Al-Dabbagh, Tongwen Chen</i>	
STIFFNESS GRADIENT DETECTION FOR TISSUE DISCRIMINATION BASED ON IDENTIFICATION OF MASS-SPRING-DAMPER MODELS	1057
<i>Franziska Schlagenhauf, Philipp Wittmuess, Cristina Tarin, Tanja Teutsch, Oliver Sawodny</i>	
IMAGE-BASED ESTIMATION AND NONPARAMETRIC MODELING: TOWARDS ENHANCED GEOMETRIC CALIBRATION OF AN X-RAY SYSTEM	1063
<i>Rolf Gaasbeek, Rick van der Maas, Bram de Jager, Mark den Hartog</i>	
CONSENSUS PROBLEMS IN NETWORKS OF AGENTS WITH COMMUNICATION DELAY	1069
<i>Zhenhua Wang, Huanshui Zhang, Minyue Fu</i>	
SUFFICIENT CONDITIONS FOR CONTROLLABILITY OF AFFINE CONTROL SYSTEMS	1074
<i>Rachida El Assoudi</i>	
AN INTELLIGENT Q-PARAMETERIZATION CONTROL DESIGN THAT CAPTURES NON-LINEARITY AND FUZZINESS OF UNCERTAIN MAGNETIC BEARING SYSTEM	1078
<i>Mohamed Fekry, Abdelfatah M. Mohamed, Mohamed Fanni</i>	
A MAJORITY VOTING CLASSIFIER WITH PROBABILISTIC GUARANTEES	1084
<i>Giorgio Manganini, Alessandro Falsone, Maria Prandini</i>	
A STOCHASTIC DENSITY MATRIX APPROACH TO APPROXIMATION OF PROBABILITY DISTRIBUTIONS AND ITS APPLICATION TO NONLINEAR SYSTEMS	1090
<i>Igor G. Vladimirov</i>	

COMMAND GOVERNOR ADAPTIVE CONTROL FOR AN UNMANNED UNDERWATER VEHICLE	1096
<i>Charita Darshana Makavita, Hung Duc Nguyen, Dev Ranmuthugala, Shantha Gamini Jayasinghe</i>	
A CONTROL-THEORETICAL APPROACH TO THREAD SCHEDULING FOR MULTICORE PROCESSORS	1103
<i>Alessandro Vittorio Papadopoulos, Roberto Carone, Martina Maggio, Alberto Leva</i>	
INVARIANCE-BASED ANALYSIS OF CANCER CHEMOTHERAPY	1111
<i>Rachid Riahi, Mirko Fiacchini, Mazen Alamir</i>	
FEASIBILITY OF 2 °C AS A POST-2020 WARMING THRESHOLD VIA INPUT-CONSTRAINED OPTIMAL CONTROL	1117
<i>Steven R. Weller, Salman Hafeez, Christopher M. Kellett</i>	
COOPERATION PATTERNS BETWEEN FLEET OWNERS FOR TRANSPORT ASSIGNMENTS	1124
<i>Farhad Farokhi, Kuo-Yun Liang, Karl Henrik Johansson</i>	
FINITE-TIME ORIENTATION CONTROL OF ROBOT MANIPULATORS VIA HOMOGENEOUS APPROXIMATION	1130
<i>Yasuyuki Satoh, Naoki Sugito, Hisakazu Nakamura</i>	
MODEL PREDICTIVE TRAJECTORY TRACKING CONTROL FOR HYDRAULIC EXCAVATOR ON DIGGING OPERATION	1136
<i>Takumi Tomatsu, Kenichiro Nonaka, Kazuma Sekiguchi, Katsumasa Suzuki</i>	
AUTO-GENERATING FUZZY SYSTEM MODELLING OF PHYSICAL SYSTEMS	1142
<i>Osama Hassanein, Sreenatha Anavatti, Hyungbo Shim, Shaaban Ali Salman</i>	
RESIDUAL VIBRATION SUPPRESSION OF PLANAR ROBOTIC MANIPULATORS USING TRAPEZOIDAL/S-CURVE BASED VELOCITY PROFILES	1148
<i>Jan El Hussein, Naoki Uchiyama, Shigenori Sano, Oliver Sawodny</i>	
POSTURAL ADJUSTMENT CONTROL OF A CLIMBING ROBOT HAVING STATICALLY INDETERMINATE STRUCTURE	1154
<i>Haruhisa Kawasaki, Tomonori Miura, Hironori Kondo, Satoshi Ueki</i>	
FAST NONLINEAR MODEL PREDICTIVE CONTROL FOR MULTICOPTER ATTITUDE TRACKING ON SO(3)	1160
<i>Mina Kamel, Kostas Alexis, Markus Wilhelm Achtelik, Roland Siegwart</i>	
NONLINEAR MODEL PREDICTIVE CONTROLLER DESIGN FOR EXTREME LOAD MITIGATION IN TRANSITION OPERATION REGION IN WIND TURBINES	1167
<i>Elham mohammadalipour tofighi, David Schlipf, Christopher M. Kellett</i>	
SCALABILITY OF QP-SOLVERS FOR EMBEDDED MODEL PREDICTIVE CONTROL APPLIED TO A SUBSEA PETROLEUM PRODUCTION SYSTEM	1173
<i>Benjamin Julian TÄmte Binder, Dzordzoenyenye Kwame Minde Kufoalor, Tor Arne Johansen</i>	
A DATA-DRIVEN SUBSPACE PREDICTIVE CONTROLLER DESIGN FOR ARTIFICIAL GAS-LIFT PROCESS	1179
<i>Shi Jing, rachid errouissi, Ahmed Al-Durra, Igor Boiko</i>	
SYSTEM IDENTIFICATION AND MODEL PREDICTIVE CONTROL DESIGN FOR TONER SUPPLY SYSTEM OF PHOTOCOPIER	1185
<i>Shoko Nagai, Hideo Muroi, Yu Takeshita, makoto komatsu, Shinji Kato, Shuichi Adachi</i>	
IMPROVED DISTURBANCE REJECTION FOR HIGH PRECISION SYSTEMS THROUGH ESTIMATION OF THE FLEXIBLE MODES	1191
<i>K.W. Verkerk, Hans Butler, P. P. J. van den Bosch</i>	
REUNDERSTANDING SLICE SAMPLING AS PARALLEL MCMC	1197
<i>Khoa Tran, Brett Ninness</i>	
ONLINE PARAMETER AND PROCESS COVARIANCE ESTIMATION USING ADAPTIVE EKF AND SRCUKF APPROACHES	1203
<i>Mauro H. Riva, Daniel Beckmann, Matthias Dagen, Tobias Ortmaier</i>	
VEHICLE STATE ESTIMATION BY MOVING HORIZON ESTIMATION CONSIDERING OCCLUSION AND OUTLIER ON 3D STATIC CAMERAS	1211
<i>Manami Takahashi, Kenichiro Nonaka, Kazuma Sekiguchi</i>	
SEMIDEFINITE REPRESENTATION OF SEQUENTIAL RATE-DISTORTION FUNCTION FOR STATIONARY GAUSS-MARKOV PROCESSES	1217
<i>Takashi Tanaka</i>	
PID CONTROL WITH ROBUST DISTURBANCE FEEDBACK CONTROL	1223
<i>Fukiko Kawai, Kasper Vinther, Palle Andersen, Jan Dimon Bendtsen</i>	
ROBUSTNESS/PERFORMANCE TRADEOFF FOR ANISOCHRONIC PLANTS WITH TWO DEGREES OF FREEDOM PID CONTROLLERS	1230
<i>Mauricio Espinoza, Jose David Rojas, Ramon Vilanova, Orlando Arrieta</i>	
MULTIVARIABLE PID CONTROLLER SYNTHESIS OF DISCRETE LINEAR SYSTEMS BASED ON LMIS	1236
<i>Robert Dehnert, Bernd Tibken, Thomas Paradowski, Robert Swiatlak</i>	
SERVO/REGULATION INTERMEDIATE TUNING FOR FRACTIONAL ORDER PID CONTROLLERS	1242
<i>Orlando Arrieta, Luis Andres Urvina Savelli, Antonio Visioli, Ramon Vilanova, Fabrizio Padula</i>	
SELF-TUNING PID CONTROL BASED ON GENERALIZED MINIMUM VARIANCE EVALUATION	1248
<i>Satoki Makino, Shiro Masuda</i>	
ĆUK CONVERTER FULL STATE ADAPTIVE OBSERVER DESIGN	1254
<i>Anton Pyrkin, Romeo Ortega, Alexey Bobtsov, Stanislav Aranovskiy, Dmitry Gerasimov</i>	
ON OBSERVER PERFORMANCE FOR AN ELECTROCHEMICAL SUPERCAPACITOR MODEL	1260
<i>Ross Drummond, Stephen Duncan</i>	

MINIMAL MULTI-FUNCTIONAL OBSERVERS FOR LINEAR SYSTEMS USING A DIRECT APPROACH	1266
<i>Reza Mohajerpoor, Hamid Abdi, Saeid Nahavandi</i>	
MODEL-FREE OBSERVER FOR MIMO SYSTEMS	1272
<i>Younes Al Younes, Hassan Noura, abdelhamid rabhi, Ahmed El Hajjaji</i>	
A NEW CONTINUOUS VELOCITY OBSERVER FORMULATION FOR A CLASS OF UNCERTAIN NONLINEAR MECHANICAL SYSTEMS	1278
<i>Alper Bayrak, Enver Tatlicioglu, Erkan Zergeroglu, Meryem Deniz</i>	
MODEL BASED OPTIMIZATION AND ESTIMATION OF THE FIELD MAP DURING THE BREAKDOWN PHASE IN THE ITER TOKAMAK	1284
<i>Roberto Ambrosino, Massimiliano Mattei, Alfredo Pironi, Giannaria De Tommasi</i>	
DESIGN AND NONLINEAR VALIDATION OF THE ITER MAGNETIC CONTROL SYSTEM	1290
<i>Roberto Ambrosino, Marco Ariola, Giannaria De Tommasi, Massimiliano Mattei, Alfredo Pironi, Mario Cavinato</i>	
OPTIMAL ALLOCATION OF THE DIAGNOSTIC SIGNALS FOR THE ITER MAGNETIC CONTROL SYSTEM	1296
<i>Giannaria De Tommasi, A. Neto, Alfredo Pironi, Claudio Sterle</i>	
FIRST-PRINCIPLES-DRIVEN MODEL-BASED OPTIMAL CONTROL OF THE CURRENT PROFILE IN NSTX-U	1303
<i>Zeki Okan Ilhan, William Wehner, Justin Barton, Eugenio Schuster</i>	
POLOIDAL FLUX PROFILE RECONSTRUCTION FROM POINTWISE MEASUREMENTS VIA EXTENDED KALMAN FILTERING IN THE DIII-D TOKAMAK	1309
<i>Hexiang Wang, Justin Barton, Eugenio Schuster</i>	
REALIZATION OF PRESSURE STEADY CONTROL FOR AN AUTOMATIC HYDRAULIC TESTING SYSTEM BASED ON PROPORTIONAL PRESSURE REDUCING VALVE	1315
<i>Yonglin Bao, Hong Chen</i>	
RANK AND ORDER CONDITIONS FOR IDENTIFIABILITY ANALYSIS OF LINEAR SYSTEMS WITH STANDARD PARAMETERIZED CONTROL AND OBSERVATION MATRICES	1321
<i>Tatiana Avdeenko</i>	
APPLICATION OF FADING-MEMORY POLYNOMIAL FILTERS TO THE CONTROL OF AN ELECTRIC MOTOR	1327
<i>Hugh Lachlan Kennedy</i>	
MODELING AND ROBUST NONLINEAR CONTROL OF A FIXED-WING UAV	1334
<i>J. Lesprier, Jean-Marc Biannic, C. Roos</i>	
NONLINEAR IDENTIFICATION OF NEURON MODELS	1340
<i>Torbjorn Wigren</i>	
MODELING OF INVERTER BASED AC MICROGRIDS FOR CONTROL DEVELOPMENT	1347
<i>Trever Hassell, Wayne Weaver, Rush Robinett, Gordon G. Parker, David G. Wilson</i>	
COOPERATIVE PATH-FOLLOWING FOR MULTIROTOR UAVS WITH A SUSPENDED PAYLOAD	1354
<i>Kristian Klausen, Thor I. Fossen, Tor Arne Johansen, A. Pedro Aguiar</i>	
COLLECTIVE CONTROL OF MULTIPLE UNICYCLE AGENTS WITH NON-IDENTICAL CONSTANT SPEEDS: TRACKING CONTROL AND PERFORMANCE LIMITATION	1361
<i>Zhiyong Sun, Georg Sebastian Seyboth, Brian D.O. Anderson</i>	
OPTIMAL STEP-SIZE OF A LOCAL VOTING PROTOCOL FOR DIFFERENTIATED CONSENSUSES ACHIEVEMENT IN A STOCHASTIC NETWORK WITH COST CONSTRAINTS	1367
<i>Yury Ivanskiy, Natalia Amelina, Oleg Granichin, Yuming Jiang, Olga Granichina</i>	
DISTRIBUTED FILTER DESIGN FOR COOPERATIVE H_{∞}-TYPE ESTIMATION	1373
<i>Jingbo Wu, Li Li, Valery Ugrinovskii, Frank Allgower</i>	
MOTION CONTROL FOR UAV-UGV COOPERATION WITH VISIBILITY CONSTRAINT	1379
<i>Lukas Klodt, Saman Khodaverdian, Volker Willert</i>	
STABILIZATION OF NON-PLANAR MULTI-AGENT LAYERED FORMATIONS WITH DOUBLE INTEGRATOR MODEL	1386
<i>Saba Ramazani, Rastko R. Selmic, Marcio de Queiroz</i>	
DESIGN OF ANTI-WINDUP GAINS FOR MARKOVIAN JUMP SYSTEMS SUBJECT TO PARAMETRIC UNCERTAINTY AND ACTUATOR SATURATION	1392
<i>Yunliang Wei, Wei Xing Zheng</i>	
ROBUST VISUAL FEEDBACK CONTROL DESIGN USING DRIVING DATA ON STRAIGHT AND CURVED COURSES	1398
<i>Koichi Hidaka</i>	
PERFORMANCE ANALYSIS OF RESILIENT DYNAMIC FEEDBACK H_2 CONTROLLERS	1404
<i>Fan Feng, Jennifer Bonniwell, Susan Schneider, Edwin Yaz</i>	
L_1 ANALYSIS OF LTI SYSTEMS VIA PIECEWISE HIGHER-ORDER APPROXIMATION	1410
<i>Yong Woo Choi, Tomomichi Hagiwara, Jung Hoon Kim</i>	
DECENTRALIZED CONTROL OF POLYNOMIAL SYSTEMS USING DIFFERENTIAL DISSIPATIVITY	1416
<i>Ruiqiang Wang, Jie Bao</i>	
THE QUADRATIC STABILIZATION PROBLEM FOR LTV PLANTS WITH ARBITRARY MODE-SWITCH DYNAMICS AND NON UNIFORMLY BOUNDED PARAMETRIC UNCERTAINTIES	1422
<i>L. Jetto, Valentina Orsini, Raffaele Romagnoli</i>	
SLIDING MODE-BASED AUTO-ALIGNMENT OF MULTIROTOR HELICOPTERS FOR LASER INTERFEROMETRY-BASED LOCALISATION	1428
<i>Robert Porter, Bijan Shirinzadeh, Man Ho Choi, Umesh Bhagat</i>	

DECENTRALIZED CONTROL OF MOBILE ROBOTIC SENSORS: VICSEK'S MODEL WITH COSINE SIMILARITY MEASURE	1434
<i>Waqas Ahmad</i>	
OPTIMAL CONTROL AND OPTIMAL SENSOR ACTIVATION FOR MARKOV DECISION PROBLEMS WITH COSTLY OBSERVATIONS	1440
<i>Rene K. Boel, Jan H. van Schuppen</i>	
MEASUREMENT AND CONTROL OF VARIABLE GEOMETRY DURING RING ROLLING	1448
<i>Matthew Arthington, Christopher Cleaver, Jullian Allwood, Stephen Duncan</i>	
DESIGN AND CONTROL OF A MEMS NANOPositionER WITH BULK PIEZORESISTIVE SENSORS	1455
<i>Mohammad Maroufi, Yuen Kuan Yong, S.O. Reza Moheimani</i>	
OPTO-ACOUSTIC DISTANCE MEASUREMENT USING SPREAD SPECTRUM TECHNIQUES AND CARRIER PHASE MEASUREMENTS	1461
<i>Philipp Rapp, Oliver Sawodny, Cristina Tarin</i>	
PHASE-INDEXED ILC FOR CONTROL OF UNDERACTUATED WALKING ROBOTS	1467
<i>Felix Kong, A. Mounir Boudali, Ian R. Manchester</i>	
MITIGATING ROTATIONAL DISTURBANCES ON A DISK DRIVE WITH MISMATCHED LINEAR ACCELEROMETERS	1473
<i>Daniel Y. Abramovitch, George Hsu</i>	
MODEL BASED LANDING CONTROL FOR A BISTABLE ELECTROMAGNETIC ACTUATOR WITH DISCONTINUOUS DYNAMICS	1479
<i>Rajan Gill, Arne Wahrburg, Octavian Craciun, Kim Daniel Listmann, Christian Reuber</i>	
USING MODEL ORDER REDUCTION FOR DISTURBANCE FEED FORWARD CONTROL BASED ON TRANSIENT THERMAL FINITE ELEMENT MODELS	1486
<i>Daniela Oetinger, Oliver Sawodny</i>	
A UNIFIED FRAMEWORK FOR ANALOG AND DIGITAL PID CONTROLLERS	1492
<i>Daniel Y. Abramovitch</i>	
REGENERATIVELY-CONSTRAINED LQG CONTROL OF VIBRATION NETWORKS WITH POLYTOPIC MODEL UNCERTAINTY	1498
<i>Eric Warner, Jeff Scruggs</i>	
CONTROL SYSTEMS TECHNOLOGY IN THE ADVANCED MANUFACTURING OF BIOLOGIC DRUGS	1505
<i>Richard D. Braatz</i>	
AIR FLOW CONTROL OF OWC WAVE POWER PLANTS USING FOPID CONTROLLER	1516
<i>Sunil Kumar Mishra, Shubhi Purwar, Nand Kishor</i>	
OPENBUILD : AN INTEGRATED SIMULATION ENVIRONMENT FOR BUILDING CONTROL	1522
<i>Tomasz Gorecki, Faran Ahmed Qureshi, Colin N. Jones</i>	
CONVEX RELAXATION OF POWER DISPATCH FOR VOLTAGE STABILITY IMPROVEMENT	1528
<i>Andreas S. Pedersen, Mogens Blanke, H. Johansson</i>	
TIME-SHIFTED REQUEST SCHEDULING FOR SUPPLY-DEMAND-STORAGE BALANCING UNDER PREDICTION UNCERTAINTY OF PHOTOVOLTAICS	1534
<i>Masakazu Koike, Takayuki Ishizaki, Tomonori Sadamoto, Jun-ichi Imura</i>	
MODEL PREDICTIVE CONTROL OF A WAVE ENERGY CONVERTER	1540
<i>Palle Andersen, Tom S. Pedersen, Kirsten Nielsen, Enrique Vidal</i>	
ON DESIGN OF A NON-LINEAR SLIDING MODE LOAD FREQUENCY CONTROL OF INTERCONNECTED POWER SYSTEM WITH COMMUNICATION TIME DELAY	1546
<i>Sheetla Prasad, Shubhi Purwar, Nand Kishor</i>	
AN IMPROVED HAMMERSTEIN-WIENER SYSTEM IDENTIFICATION WITH APPLICATION TO VIRTUALIZED SOFTWARE SYSTEM	1552
<i>Dharma Aryani, Liuping Wang, Tharindu Patikirikorala</i>	
VOCAL FOLD MODELING THROUGH THE PORT-HAMILTONIAN SYSTEMS APPROACH	1558
<i>Marco A. Encina, Juan I. Yuz, Matias Zanartu, Gabriel Galindo</i>	
SEMPARAMETRIC DENSITY FORECASTING OF ELECTRICITY LOAD FOR SMART CHARGING OF ELECTRIC VEHICLES	1564
<i>Can Bikcora, Lennart Verheijen, Siep Weiland</i>	
HYBRID NONLINEAR MODEL OF MCKIBBEN PNEUMATIC ARTIFICIAL MUSCLE SYSTEMS INCORPORATING A PRESSURE-DEPENDENT COULOMB FRICTION COEFFICIENT	1571
<i>Kentaro Urabe, Kiminao Kogiso</i>	
MODELING AND CONTROL OF FLOW WITH DYNAMICAL BOUNDARY ACTIONS	1579
<i>Andre F. Caldeira, Christophe Prieur, Daniel Coutinho, Valter J. S. Leite</i>	
A CONTROL-ORIENTED MODEL OF UNDERWATER SNAKE ROBOTS EXPOSED TO CURRENTS	1585
<i>Anna M. Kohl, Eleni Kelasidi, Kristin Y. Pettersen, Jan Tommy Gravdahl</i>	
FICTITIOUS REFERENCE ITERATIVE TUNING BASED ON VARIANCE EVALUATION FOR DISTURBANCE ATTENUATION IN NON-MINIMUM PHASE PLANTS	1593
<i>Yuki Ishii, Shiro Masuda, Manabu Kano</i>	
COEFFICIENT OF PERFORMANCE OPTIMIZATION OF SINGLE-EFFECT LITHIUM-BROMIDE ABSORPTION CYCLE HEAT PUMPS	1599
<i>Kasper Vinther, Rene Just Nielsen, Kirsten Nielsen, Palle Andersen, Tom S. Pedersen, Jan Dimon Bendtsen</i>	
CONTROL CONFIGURATION SELECTION FOR INTEGRATING PROCESSES USING GRAPHS	1606
<i>Miguel Castano Arranz, Wolfgang Birk, Petter Asplund</i>	

RELATIVE GAIN ARRAY OF WEAKLY NONLINEAR SYSTEMS USING A NONPARAMETRIC IDENTIFICATION APPROACH	1612
<i>Ali Kadhim, Miguel Castano Arranz, Wolfgang Birk, Thomas Gustafsson</i>	
REAL TIME OPTIMIZATION OF SOLAR POWERED DIRECT CONTACT MEMBRANE DISTILLATION BASED ON MULTIVARIABLE EXTREMUM SEEKING	1618
<i>Ayman Karam, Taous Meriem Laleg-Kirati</i>	
FEEDBACK CONTROL FOR DISTRIBUTED HEAT TRANSFER MECHANISMS IN DIRECT-CONTACT MEMBRANE DISTILLATION SYSTEM	1624
<i>Fadi Eleiwi, Ibrahima N'Doye, Taous Meriem Laleg-Kirati</i>	
A DISTRIBUTED MULTI-OBJECTIVE OPTIMISATION FRAMEWORK FOR ENERGY EFFICIENCY IN MOBILE BACKHAUL NETWORKS	1630
<i>Tao Lin, Tansu Alpcan, Kerry Hinton, Arun Vishwanath</i>	
SIGNAL-TO-NOISE RATIO FOR IRRIGATION CANAL NETWORKED CONTROL SYSTEM	1637
<i>Lai Nguyen, Alejandro J. Rojas, Denis Genon-Catalot, Andre Lagreze, Laurent Lefevre</i>	
DECENTRALISED INTERMITTENT CONTROL	1644
<i>Peter Gawthrop, Liuping Wang, Erik Weyer</i>	
NETWORK BASED H_∞ FILTERING VIA IMPERFECT MEASUREMENT OUTPUT	1650
<i>Tae H. Lee, Ju H. Park</i>	
LEADERLESS AND LEADER-FOLLOWING CONSENSUS FOR NETWORKED MOBILE MANIPULATORS WITH COMMUNICATION DELAYS	1656
<i>Gong-Bo Dai, Yen-Chen Liu</i>	
DATA DRIVEN MRAC WITH PARAMETER CONVERGENCE	1662
<i>Arun Kumar Kantheti, Shubhendu Bhasin</i>	
SIMPLE ADAPTIVE CONTROL OF LINEAR SYSTEMS WITH ARBITRARY RELATIVE DEGREE	1668
<i>Dmitry Gerasimov, Mariia Lyzlova, Vladimir O. Nikiforov</i>	
ADAPTIVE TRACKING CONTROL FOR WHEELED MOBILE ROBOTS WITH UNKNOWN SKIDDING	1674
<i>Xiang Li, Zhuping Wang, Jin Zhu, Qijun Chen</i>	
NONLINEAR ADAPTIVE CONTROL OF INTERIOR PERMANENT MAGNET SYNCHRONOUS MOTOR WITH DYNAMICS COPPER LOSS MINIMIZATION	1680
<i>Natsuki Hamano, Daigo Fujimoto, Yoshinori Aoki, Hisakazu Nakamura</i>	
ADAPTIVE TRACKING CONTROL OF UNCERTAIN NONLINEAR SYSTEMS WITH UNKNOWN INPUT DELAY	1686
<i>Ashish Kumar Jain, Shubhendu Bhasin</i>	
ADAPTIVE DISTURBANCE COMPENSATION IN DELAYED LINEAR SYSTEMS: INTERNAL MODEL APPROACH	1692
<i>Dmitry Gerasimov, Vladimir O. Nikiforov, Alexei Paramonov</i>	
A RECEDING HORIZON YAW MOMENT CONTROL LAW FOR STEER-BY-WIRE AND INDEPENDENT DRIVE VEHICLES	1697
<i>Soohee Han</i>	
PATH PLANNING FOR AUTONOMOUS CAR TO AVOID MOVING OBSTACLES BY STEERING USING TANGENT-ARC-TANGENT-ARC-TANGENT MODEL	1702
<i>Gaku Takano, Makoto Obayashi, Keisuke Uto</i>	
MULTI-OBJECTIVE H_∞ CONTROL OF A LABORATORY MODEL OF ACTIVE SUSPENSION SYSTEM	1710
<i>Tiago Gaiba de Oliveira, Eduardo Nunes Goncalves, Giovanni G. Rodrigues</i>	
TAKAGI-SUGENO FUZZY H_∞ TRACKING CONTROL FOR STEER-BY-WIRE SYSTEMS	1716
<i>Chao Huang, Haiping Du, Fazel Naghdy, Weihua Li</i>	
LEARNING-BASED CONTROL STRATEGIES FOR HYBRID ELECTRIC VEHICLES	1722
<i>Sascha Geulen, Martina Josevski, Johanna Nellen, Janosch Fuchs, Lukas Netz, Benedikt Wolters, Dirk Abel, Erika Abraham, Walter Unger</i>	
DYNAMIC MODELING OF ENGINE COMBUSTION SYSTEM USING APPROXIMATED KERNEL METHOD	1729
<i>Kanako Shimojo, Kotaro Morikawa, Yusuke Kashima, Masaki Inoue, Shuichi Adachi</i>	
NUMERICAL DERIVATION OF FADING-MEMORY POLYNOMIAL AND SINUSOIDAL FILTERS FOR DISCRETE-TIME CONTROL SYSTEMS	1735
<i>Hugh Lachlan Kennedy</i>	
DESIGN OF A NEW PHASE LEAD REPETITIVE COMPENSATOR FOR FAST TRANSIENT RESPONSE	1743
<i>Maria Mitrevska, Zhenwei Cao, Jinchuan Zheng, Edi Kurniawan</i>	
LMI CONSTRAINTS ON SYSTEM EIGENVALUES PLACEMENT IN DYNAMIC OUTPUT CONTROL DESIGN	1749
<i>Dusan Krokavec, Anna Filasova</i>	
SIGNAL-TO-NOISE RATIO REQUIREMENTS SUBJECT TO A PID CONTROLLER DESIGN	1755
<i>Alejandro J. Rojas</i>	
STABILISATION OVER SIGNAL-TO-NOISE RATIO CONSTRAINED CHANNELS: ROBUST ANALYSIS FOR THE DISCRETE-TIME CASE	1761
<i>Alejandro J. Rojas, Francisco J. Vargas</i>	
SNR LIMITATION FOR AMPLITUDE-BOUNDED NOISE IN CONTROL OVER CHANNELS WITH FEEDBACK	1767
<i>Hidenori Shingiri, Yoshito Ohta</i>	
ADAPTIVE DWELL-TIME SWITCHING IN UNFALSIFIED CONTROL	1773
<i>Kiran S. Sajjanshetty, Michael G. Safonov</i>	

INTERVAL EXPONENTIAL INPUT-TO-STATE STABILITY FOR SWITCHING IMPULSIVE SYSTEMS WITH APPLICATION TO HYBRID CONTROL FOR MICRO-GRIDS	1779
<i>Bin Liu, David J. Hill</i>	
PARAMETER ESTIMATION IN SWITCHED SYSTEMS.....	1786
<i>Anders Bech Borchersen, Rafal Wisniewski, Jesper Abildgaard Larsen</i>	
INVESTIGATION OF RANDOM SWITCHING DRIVEN BY A POISSON POINT PROCESS	1792
<i>Maria Simonsen, Henrik Schioler, John Leth</i>	
RUN-TO-RUN DISTURBANCE REJECTION FOR FEEDFORWARD PATH FOLLOWING OF AN ADAPTIVELY CONTROLLED UNMANNED HELICOPTER.....	1798
<i>Johann C. Dauer, Timm Faulwasser, Sven Lorenz</i>	
NEW RESULTS ON ADMISSIBILITY AND L_2 GAIN PROPERTY OF DISCRETE-TIME SWITCHED SINGULAR STATE-DELAYED SYSTEMS.....	1805
<i>Jinxing Lin</i>	
COMPLEX LAPLACIAN BASED ALGORITHM FOR OUTPUT SYNCHRONIZATION OF MULTI-AGENT SYSTEMS USING INTERNAL MODEL PRINCIPLE	1811
<i>P. Jagtap, Aniket Deshpande, Navdeep Singh, Faruk Kazi</i>	
CONSENSUS OF MULTI-AGENT SYSTEMS WITH DOUBLE-INTEGRATOR DYNAMICS IN THE PRESENCE OF MOVING OBSTACLES	1817
<i>Noushin Mehdipour, Farzaneh Abdollahi, Morteza Mirzaei</i>	
NEAR OPTIMAL H_∞ PERFORMANCE IN THE DECENTRALIZED SETTING.....	1823
<i>Thananjayan Ranganathan, Daniel E. Miller</i>	
DYNAMIC OPTIMIZATION OF INDUCTION HEAT-UP AND SURFACE HARDENING PROCESSES ON COMPLEX SPATIAL DOMAINS.....	1829
<i>S. Rhein, Knut Graichen</i>	
DISTRIBUTED DESIGN OF LOCALLY STABILIZING CONTROLLERS FOR LARGE-SCALE NETWORKED LINEAR SYSTEMS.....	1835
<i>Tomonori Sadamoto, Takayuki Ishizaki, Jun-ichi Imura, Bart Besselink, Henrik Sandberg, Karl Henrik Johansson</i>	
A DECOHERENCE THEOREM IN QUANTUM-NETWORK SYNCHRONIZATION	1841
<i>Shuangshuang Fu, Guodong Shi, Ian R. Petersen</i>	
POWER OPTIMIZATION MODEL OF ADJUSTABLE GUIDE-VANE FOR AN EXHAUST WIND ENERGY RECOVERY SYSTEM.....	1847
<i>Sook Yee Yip, Chee Pin Tan, Wen Tong Chong, Wooi Ping Hew</i>	
WIND FARM MICRO-SITING BASED ON AUTO-REGRESSIVE WIND PREDICTION	1853
<i>Weiting Qiao, Jun Wang, Mengxuan Song, Y. Wen</i>	
NEW CONDITION FOR INVARIANCE OF ELLIPSOIDAL SETS FOR DISCRETE-TIME SATURATED SYSTEMS.....	1856
<i>Rachid Riaj, Mirko Fiacchini</i>	
OPTIMIZED GENERATOR MODES FOR BIPOLAR VESSEL SEALING	1862
<i>Jay Wagenpfeil, Manuel Jung, Bernhard Nold, Alexander Neugebauer, Michael Ederer, Bernhard Kramer, Ralf Rothmund, Christian Schwentner, Diethelm Wallwiener, Arnulf Stenzl, Martin Schenk, Markus Enderle, Oliver Sawodny, Ronny Feuer</i>	
OPTIMIZATION AND SIMULATION OF EXPOSURE PATTERN FOR SCANNING LASER LITHOGRAPHY	1868
<i>Omid Tayefeh Ghalehbeygi, Garth Berriman, Andrew J. Fleming, John L. Holdsworth</i>	
MAXIMUM POWER POINT TRACKING FOR MICRO HYDRO POWER PLANTS USING EXTREMUM SEEKING CONTROL.....	1874
<i>Khalid Atta, Andreas Johansson, Michel J. Cervantes, Thomas Gustafsson</i>	
UAV FAULT-TOLERANT CONTROL BY COMBINED L_1 ADAPTIVE BACKSTEPPING AND FAULT-DEPENDENT CONTROL ALLOCATION	1880
<i>Mikkel Sorensen, Morten Brevik</i>	
FAULT TOLERANCE FOR INDUSTRIAL ACTUATORS IN ABSENCE OF ACCURATE MODELS AND HARDWARE REDUNDANCY	1887
<i>Dimitrios Papageorgiou, Mogens Blanke, Henrik Niemann, Jan Richter</i>	
PRACTICAL FAULT-TOLERANT CONTROL TO PROTECT STEER-BY-WIRE SYSTEMS AGAINST SENSOR FAULTS	1895
<i>Akira Ito, Yoshikazu Hayakawa</i>	
AN ONLINE CONTROLLER REDESIGN BASED FAULT-TOLERANT STRATEGY FOR THERMAL COMFORT IN A MULTI-ZONE BUILDING	1901
<i>Joseph Julien Yame, Tushar Jain, Dominique D.J. Sauter</i>	
PASSIVE AND ACTIVE FAULT TOLERANT CONTROL OF OCTOROTOR UAV USING SECOND ORDER SLIDING MODE CONTROL	1907
<i>Abdel-Razzak Merheb, Hassan Noura, Francois Bateman</i>	
A COMPARISON STUDY BETWEEN TWO SLIDING MODE BASED CONTROLS FOR VOLTAGE SAG MITIGATION IN GRID CONNECTED WIND TURBINES	1913
<i>Mohammad Javad Morshed, Afef Fekih</i>	
LYAPUNOV FUNCTIONS FOR A PLANAR SWARM MODEL WITH APPLICATION TO NONHOLONOMIC PLANAR VEHICLES.....	1919
<i>Sandeep Ameet Kumar, Jito Vanualailai, Bibhya Sharma</i>	
SENSOR RANGE SENSITIVITY OF PREDICTIVE ENERGY MANAGEMENT IN PLUG-IN HYBRID VEHICLES.....	1925
<i>Martin Hofstetter, Martin Ackerl, Mario Hirz, Harald Kraus, Paul Karoshi, J. Fabian</i>	

ECO-CRUISE CONTROL USING ECONOMIC MODEL PREDICTIVE CONTROL.....	1933
<i>Bassam Alrifaae, yang liu, Dirk Abel</i>	
CONTINUOUS-TIME SYSTEM IDENTIFICATION OF RECHARGEABLE BATTERY IN ELECTRIC VEHICLES IN CONSIDERATION OF TEMPERATURE CHARACTERISTICS	1939
<i>Sosaburo Hikono, Ayane Sugiura, Takahiro Kawaguchi, Atsushi Baba, Ichiro Maruta, Shuichi Adachi</i>	
JOINT UNSCENTED KALMAN FILTER FOR STATE AND PARAMETER ESTIMATION IN VEHICLE DYNAMICS	1945
<i>Mark Wielitzka, Matthias Dagen, Tobias Ortmaier</i>	
ROBUST H_2 CONTROL OF ACTIVE SUSPENSION -IMPROVEMENT OF RIDE COMFORT AND DRIVING STABILITY-	1951
<i>Kohei Suzuki, Tatsuo Toda, Gan Chen, Isao Takami</i>	
Author Index	