

# **17th IFAC Symposium on System Identification (SYSID 2015)**

IFAC PapersOnline Volume 48, Issue 28

Beijing, China  
19 – 21 October 2015

Part 1 of 2

**Editor:**

**Yanlong Zhao**

ISBN: 978-1-5108-1937-5

**Printed from e-media with permission by:**

Curran Associates, Inc.  
57 Morehouse Lane  
Red Hook, NY 12571



**Some format issues inherent in the e-media version may also appear in this print version.**

Copyright© (2015) by Elsevier Limited  
All rights reserved.

Printed by Curran Associates, Inc. (2016)

For permission requests, please contact the publisher, Elsevier Limited  
at the address below.

Elsevier Limited  
360 Park Ave South  
New York, NY 10010

**Additional copies of this publication are available from:**

Curran Associates, Inc.  
57 Morehouse Lane  
Red Hook, NY 12571 USA  
Phone: 845-758-0400  
Fax: 845-758-2634  
Email: [curran@proceedings.com](mailto:curran@proceedings.com)  
Web: [www.proceedings.com](http://www.proceedings.com)

# TABLE OF CONTENTS

## PART 1

<b>PREDICTION OF PROTEIN-RNA INTERACTIONS USING SEQUENCE AND STRUCTURE DESCRIPTORS</b> .....	1
<i>Zhi-Ping Liu, Hongyu Miao</i>	
<b>INFERRING THE MIRNA-DISEASE ASSOCIATIONS BASED ON DOMAIN-DISEASE ASSOCIATIONS</b> .....	7
<i>Gui-Min Qin, Rui-Yi Li, Xing-Ming Zhao</i>	
<b>PREDICTING DRUG-TARGET INTERACTION BASED ON SEQUENCE AND STRUCTURE INFORMATION</b> .....	12
<i>Wei Lan, Jianxin Wang, Min Li, Fang-Xiang Wu, Yi Pan</i>	
<b>A NOVEL KINASE-SUBSTRATE RELATION PREDICTION METHOD BASED ON SUBSTRATE SEQUENCE SIMILARITY AND PHOSPHORYLATION NETWORK</b> .....	17
<i>Haichun Li, Xiaoyi Xu, Huanqing Feng, Minghui Wang</i>	
<b>EXTRACTING LNCRNA-PROTEIN INTERACTIONS FROM LITERATURE USING A TEXT FEATURE-BASED APPROACH</b> .....	22
<i>Qiguang Zang, Dongdong Sun, Huanqing Feng, Ao Li</i>	
<b>A BALANCED METHOD DETECTING DIFFERENTIALLY EXPRESSED GENES FOR RNA-SEQUENCING DATA</b> .....	27
<i>Jinyang Tang, Fei Wang</i>	
<b>DIRECT YAW-MOMENT ROBUST CONTROL FOR ELECTRIC VEHICLES BASED ON SIMPLIFIED LATERAL TIRE DYNAMIC MODELS AND VEHICLE MODEL</b> .....	33
<i>Y. F. Lian, X. Y. Wang, Y. Zhao, Y. T. Tian</i>	
<b>MODELLING OF THE SHULE SOUTHERN MAIN CHANNEL</b> .....	39
<i>Su Ki Ooi, Erik Weyer</i>	
<b>IDENTIFICATION OF NONLINEAR SOFT SENSOR MODELS OF INDUSTRIAL DISTILLATION PROCESS UNDER UNCERTAINTY</b> .....	45
<i>Andrei Torgashov, Konstantin Zmeu</i>	
<b>ADAPTIVE SOFT SENSOR BASED ON A MOVING WINDOW JUST-IN-TIME LEARNING LS-SVM FOR DISTILLATION PROCESSES</b> .....	51
<i>Qi Li, Liping Xing, Wenya Liu, Wei Ba</i>	
<b>CHOICE OF MODEL STRUCTURE FOR CONTROLLER DESIGN: A CASE STUDY</b> .....	57
<i>Matias Waller, Jonas B. Waller</i>	
<b>REAL-TIME DEMODULATION OF REAL POWER OSCILLATIONS</b> .....	63
<i>Xin Zhao, Maurice L. J. Van De Ven, Raymond A. De Callafon, William Torre</i>	
<b>ON IDENTIFICATION VIA EM WITH LATENT DISTURBANCES AND LAGRANGIAN RELAXATION</b> .....	69
<i>Jack Umenberger, Johan Wågberg, Ian R. Manchester, Thomas B. Schön</i>	
<b>MODEL ERROR MODELING AND STOCHASTIC EMBEDDING</b> .....	75
<i>Lennart Ljung, Graham C. Goodwin, Juan C. Agüero, Tianshi Chen</i>	
<b>ON THE SIGNIFICANCE OF CORRELATION FUNCTIONS</b> .....	80
<i>Matias Waller</i>	
<b>MODEL VALIDATION CRITERIA FOR SYSTEM IDENTIFICATION IN TIME DOMAIN</b> .....	86
<i>Hideo Muroi, Shuichi Adachi</i>	
<b>ON RE-WEIGHTING, REGULARIZATION SELECTION, AND TRANSIENT IN NUCLEAR NORM BASED IDENTIFICATION</b> .....	92
<i>Mohamed Abdalmoaty, Håkan Hjalmarsson</i>	
<b>A LEAST SQUARES METHOD FOR IDENTIFICATION OF FEEDBACK CASCADE SYSTEMS</b> .....	98
<i>Miguel Galrinho, Cristian R. Rojas, Håkan Hjalmarsson</i>	
<b>ON INDIRECT INPUT MEASUREMENTS</b> .....	104
<i>Jonas Linder, Martin Enqvist</i>	
<b>ASYMPTOTIC VARIANCE EXPRESSION IN OUTPUT OVER-SAMPLING BASED CLOSED-LOOP IDENTIFICATION</b> .....	110
<i>Mengyuan Fang, Yucai Zhu</i>	
<b>CLOSED-LOOP IDENTIFICATION OF A MULTIVARIABLE DYNAMIC KNEE RIG</b> .....	116
<i>Amélie Chevalier, Andres Hernandez, Clara M. Ionescu, Matthias Verstraete, Robin De Keyser</i>	

<b>STEP RESPONSE IDENTIFICATION OF A QUADCOPTER UAV USING FREQUENCY-SAMPLING FILTERS.....</b>	122
<i>Xi Chen, Liuping Wang</i>	
<b>DATA QUANTISATION AND CLOSED-LOOP SYSTEM IDENTIFICATION.....</b>	128
<i>Yuri A. W. Shardt, Steven X. Ding</i>	
<b>CONTROL STRATEGY FOR BOOST CONVERTER BASED ON PASSIVE SLIDING CONTROL MODE.....</b>	134
<i>Xiaoling Yuan, Linwei Cheng, Xuchang Wei</i>	
<b>STP APPROACH TO CONTROLLIABILITY OF FINITE STATE MACHINES.....</b>	138
<i>Yan Yongyi, Chen Zengqiang, Yue Jumei</i>	
<b>ON-LINE DIRECT CONTROL DESIGN FOR NONLINEAR SYSTEMS.....</b>	144
<i>Marko Tanaskovic, Lorenzo Fagiano, Carlo Novara, Manfred Morari</i>	
<b>SOME CONTRIBUTIONS TO ESTIMATION FOR MODEL-FREE CONTROL.....</b>	150
<i>Francisco Javier Carrillo, Frédéric Rotella</i>	
<b>CONTROL OF A CONSTRAINED FLEXIBLE ROTOR ON ACTIVE MAGNETIC BEARINGS.....</b>	156
<i>Jie Zhao, Hai-Tao Zhang, Ming-Can Fan, Yue Wu, Huan Zhao</i>	
<b>CONTROL STRATEGY OF ENERGY STORAGE FOR SMOOTHING PHOTOVOLTAIC POWER FLUCTUATIONS.....</b>	162
<i>Haoming Liu, Jianyu Peng, Qiyue Zang, Kelin Yang</i>	
<b>AN ALGORITHM FOR SYSTEM IDENTIFICATION OF A DISCRETE-TIME POLYNOMIAL SYSTEM WITHOUT INPUTS.....</b>	166
<i>Jana Němcová, Mihály Petreczky, Jan H. Van Schuppen</i>	
<b>SPARSE BAYESIAN IDENTIFICATION OF POLYNOMIAL NARX MODELS.....</b>	172
<i>William R. Jacobs, Tara Baldacchino, Sean R. Anderson</i>	
<b>SET-THEORETIC MEASURES AS EVOLUTIONARY FITNESS CRITERIA IN NONLINEAR SYSTEM IDENTIFICATION.....</b>	178
<i>Jinyao Yan, J. R. Deller</i>	
<b>A COMBINED GLOBAL AND LOCAL IDENTIFICATION APPROACH FOR LPV SYSTEMS.....</b>	184
<i>Dora Turk, Goele Pipeleers, Jan Swevers</i>	
<b>LPV SYSTEM COMMON STATE BASIS ESTIMATION FROM INDEPENDENT LOCAL LTI MODELS.....</b>	190
<i>Qinghua Zhang, Lennart Ljung</i>	
<b>AN INSTRUMENTAL VARIABLE APPROACH FOR THE IDENTIFICATION OF TIME-VARYING, HAMMERSTEIN SYSTEMS.....</b>	196
<i>Diego L. Guarin, Robert E. Kearney</i>	
<b>CONSENSUS OF DISCRETE-TIME MULTI-AGENT SYSTEMS WITH WHITE NOISE DISTURBANCE.....</b>	202
<i>Tingting Pan, Lipo Mo, Xianbing Cao</i>	
<b>COORDINATION OF LINEAR SYSTEMS WITH FINITE DATA RATE AND TIME-VARYING UNDIRECTED TOPOLOGIES.....</b>	206
<i>Yang Meng, Tao Li</i>	
<b>FINITE-HORIZON INDEFINITE MEAN-FIELD STOCHASTIC LINEAR-QUADRATIC OPTIMAL CONTROL.....</b>	211
<i>Yuan-Hua Ni, Xun Li, Ji-Feng Zhang</i>	
<b>CLOSED-LOOP SUBSPACE IDENTIFICATION ALGORITHMS FOR 2-D SEPARABLE-IN-DENOMINATOR SYSTEMS.....</b>	217
<i>Jinxu Cheng, Mengqi Fang, Youqing Wang</i>	
<b>A REVIEW OF EV LOAD SCHEDULING WITH WIND POWER INTEGRATION.....</b>	223
<i>Qilong Huang, Qing-Shan Jia, Xiaohong Guan</i>	
<b>ON THE CONVERGENCE OF SMOOTHED FUNCTIONAL STOCHASTIC OPTIMIZATION ALGORITHMS.....</b>	229
<i>Xing-Min Chen, Chao Gao</i>	
<b>INFERENCE OF CANCER PROGRESSION FROM SOMATIC MUTATION DATA.....</b>	234
<i>Hao Wu, Lin Gao, Nikola Kasabov</i>	
<b>PREDICTION OF PRE-MICRORNA SECONDARY STRUCTURE BASED ON REVERSE COMPLEMENTARY FOLDING.....</b>	239
<i>Jin Li, Chengzhen Xu, Lei Wang, Hong Liang, Weixing Feng, Zhongxi Cai, Ying Wang, Wang Cong, Yunlong Liu</i>	
<b>PREDICTING TRANSMEMBRANE <math>\beta</math>-BARREL SEGMENTS WITH CHAIN LEARNING AND SPARSE CODING.....</b>	245
<i>Yin Xi, Shen Hong-Bin</i>	

<b>RECONSTRUCTING LARGE-SCALE CELLULAR NETWORKS USING A SPARSE APPROXIMATION APPROACH</b> .....	251
<i>Wanhong Zhang, Yan Zhang, Tong Zhou</i>	
<b>IDENTIFIABILITY CHALLENGES IN MATHEMATICAL MODELS OF VIRAL INFECTIOUS DISEASES</b> .....	257
<i>Van Kinh Nguyen, Esteban A. Hernandez-Vargas</i>	
<b>CLOSED-LOOP IDENTIFICATION OF THE DYNAMIC RELATION BETWEEN SURFACE EMG AND TORQUE AT THE HUMAN ANKLE</b> .....	263
<i>Mahsa A. Golkar, Robert E. Kearney</i>	
<b>DESIGN AND IMPLEMENTATION OF LOW-POWER SRM CONTROL SYSTEM I</b> .....	269
<i>Cheng-Ling Lu, Gang Zhang, Cheng-Tao Du</i>	
<b>UNBALANCE IDENTIFICATION ALGORITHM FOR COUNTERSHAFT SYSTEM OF 2-DOF PRECISION CENTRIFUGE</b> .....	273
<i>Xin Huo, Minghao Han, Shuangpeng Zheng, Fenghua He, Weishan Chen</i>	
<b>PARAMETER ESTIMATION OF MEMS GYROSCOPE USING LOCAL STATE ESTIMATION METHODS</b> .....	279
<i>Ladislav Král, Miroslav Šimandl</i>	
<b>ROBUST ADAPTIVE INVERSE CONTROL BASED ON MAXIMUM CORRENTROPY CRITERION</b> .....	285
<i>Ren Wang, Xuelu Chen, Tong Jian, Badong Chen</i>	
<b>CONTROL ORIENTED MODELING OF A DE-OILING HYDROCYCLONE</b> .....	291
<i>Petar Durdevic, Simon Pedersen, Mads Bram, Dennis Hansen, Abdiladif Hassan, Zhenyu Yang</i>	
<b>STUDY ON COMPENSATION MECHANISM OF BLACK-START SERVICE FOR FCB UNITS</b> .....	297
<i>Haoming Liu, Jianchao Wu, Yan Yao, Jian Ning</i>	
<b>A METHOD OF ARX MODEL ESTIMATION OF ERRORS-IN-VARIABLES SYSTEMS</b> .....	302
<i>Xin Liu, Yucai Zhu</i>	
<b>UNDERGROUND RESERVOIR IDENTIFICATION USING GENERALIZED WELLBORE DATA</b> .....	307
<i>Mehdi Mansoori, Arne Dankers, Paul M. J. Van Den Hof, Jan-Dirk Jansen, Davood Rashtchian</i>	
<b>ERRORS-IN-VARIABLES IDENTIFICATION OF DYNAMIC SYSTEMS IN GENERAL CASES</b> .....	309
<i>E. Zhang, R. Pintelon</i>	
<b>ATTRACTION DOMAIN IN GRADIENT OPTIMIZATION-BASED SAMPLE MAXIMUM LIKELIHOOD ESTIMATION</b> .....	314
<i>Yiqun Zou, Xiafei Tang</i>	
<b>ACCURACY EVALUATION OF LEAST-SQUARES METHOD FOR A CLASS OF SYSTEMS WITH MULTI-ERRORS IN INPUT AND OUTPUT</b> .....	320
<i>Bai Wenyan, Su Qiya, Xue Wenchao, Huang Yi, Fang Haitao</i>	
<b>ON THE EFFECT OF NOISE CORRELATION IN PARAMETER IDENTIFICATION OF SIMO SYSTEMS</b> .....	326
<i>Niklas Everitt, Giulio Bottegal, Cristian R. Rojas, Håkan Hjalmarsson</i>	
<b>IDENTIFIABILITY AND PARAMETER ESTIMATION OF LINEAR CONTINUOUS-TIME SYSTEMS UNDER IRREGULAR AND RANDOM SAMPLING</b> .....	332
<i>Biqiang Mu, Jin Guo, Le Yi Wang, George Yin, Lijian Xu, Wei Xing Zheng</i>	
<b>SUBSPACE-BASED CONTINUOUS-TIME MODEL IDENTIFICATION USING NUCLEAR NORM MINIMIZATION</b> .....	338
<i>Yangsheng Hu, Yi Dai, Qing Liang, Yong Wang</i>	
<b>AN EXPLICIT OPTIMAL INPUT DESIGN FOR FIRST ORDER SYSTEMS IDENTIFICATION</b> .....	344
<i>Pascal Dufour, Madiha Nadri, Jun Qian</i>	
<b>IDENTIFYING DYNAMICAL MODELS OF NITRATE PROPAGATION IN AGRICULTURAL DRINKING WATER: HOW CAN WE HELP AGRONOMISTS?</b> .....	350
<i>V. Laurain, M. Gilson, M. Benoît</i>	
<b>GAUSSIAN PROCESS MODEL BASED PERFORMANCE ASSESSMENT OF CONTROL LOOP</b> .....	356
<i>Lester Lik, Teck Chan, Junghui Chen</i>	
<b>USING AN ITERATIVE AND AFFINE CLOSED-LOOP IDENTIFICATION AND CONTROLLER DESIGN SCHEME FOR LOCAL LINEAR MODELS</b> .....	362
<i>Alexander Schrodt, Andreas Kroll</i>	
<b>A SIMULTANEOUS ITERATIVE LEARNING CONTROL AND DYNAMIC MODELING APPROACH FOR A CLASS OF NONLINEAR SYSTEMS</b> .....	368
<i>Zhongsheng Hou, Qiongxia Yu, Jian-Xin Xu, Chenkun Yin</i>	
<b>RISK-SENSITIVE MODEL PREDICTIVE CONTROL WITH GAUSSIAN PROCESS MODELS</b> .....	374
<i>Xiaoke Yang, Jan Maciejowski</i>	

<b>DO-BASED DYNAMIC NEURAL NETWORK IDENTIFICATION AND ANTI-DISTURBANCE CONTROL WITH ASYMMETRICAL DEAD-ZONE CONSTRAINTS .....</b>	<b>380</b>
<i>Yang Yi, Wei Xing Zheng</i>	
<b>GLOBAL PRACTICAL TRACKING WITH PRESCRIBED TRANSIENT PERFORMANCE FOR HIGH-ORDER UNCERTAIN NONLINEAR SYSTEMS .....</b>	<b>386</b>
<i>Fengzhong Li, Yungang Liu</i>	
<b>NONPARAMETRIC SPECIFICATION TESTING FOR HAMMERSTEIN SYSTEMS.....</b>	<b>392</b>
<i>Miros Law Pawlak, Jiaqing Lv</i>	
<b>NEWTON-BASED MAXIMUM LIKELIHOOD ESTIMATION IN NONLINEAR STATE SPACE MODELS.....</b>	<b>398</b>
<i>Manon Kok, Johan Dahlin, Thomas B. Schön, Adrian Wills</i>	
<b>MODELING OF UNSTEADY AERODYNAMICS FOR A FLAPPING WING .....</b>	<b>404</b>
<i>Kai Liu, Andrea Da Ronch, Daochun Li, Jinwu Xiang</i>	
<b>NONLINEAR BLACK-BOX SYSTEM IDENTIFICATION THROUGH NEURAL NETWORKS OF A HYSTERETIC PIEZOELECTRIC ROBOTIC MICROMANIPULATOR .....</b>	<b>409</b>
<i>Helon V. Hultmann Ayala, Didace Habineza, Micky Rakotondrabe, Carlos E. Klein, Leandro S. Coelho</i>	
<b>PARTICLE FILTERING BASED IDENTIFICATION FOR AUTONOMOUS NONLINEAR ODE MODELS.....</b>	<b>415</b>
<i>Jerker Nordh, Torbjörn Wigren, Thomas B. Schön, Bo Bernhardsson</i>	
<b>TENSOR REGRESSION FOR LPV SUBSPACE IDENTIFICATION .....</b>	<b>421</b>
<i>Bilal Gunes, Jan-Willem Van Wingerden, Michel Verhaegen</i>	
<b>A HESITANT FUZZY MULTIPLE ATTRIBUTE DECISION MAKING METHOD BASED ON LINEAR PROGRAMMING AND TOPSIS .....</b>	<b>427</b>
<i>Yingjun Zhang, Ang Xie, Yuting Wu</i>	
<b>A LINK QUALITY ESTIMATION MODEL OF WIRELESS SENSOR NETWORKS FOR SMART DISTRIBUTION GRID .....</b>	<b>432</b>
<i>Wei Sun, Lu Wei, Jianping Wang, Daoming Mu, Qiyue Li, Xiaojing Yuan</i>	
<b>FLOCKING ANALYSIS AND COMPARISON IN SIMPLEX MULTI-AGENT SYSTEMS UNDER MATRIX-WEIGHTING HÖLDER NORMS.....</b>	<b>438</b>
<i>J. Jhang, J. Zhou, X. B. Lu</i>	
<b>GROUP CONSENSUS IN MULTI-AGENT SYSTEMS WITH SWITCHING TOPOLOGIES AND TIME DELAYS .....</b>	<b>444</b>
<i>Hong Xia, Jinliang Shao, Tingzhu Huang</i>	
<b>GROUP CONSENSUS FOR MULTI-AGENT SYSTEMS UNDER THE EFFECT OF COUPLING STRENGTH AMONG GROUPS.....</b>	<b>449</b>
<i>Yulan Gao, Junyan Yu, Jinliang Shao, Yuanfu Duan</i>	
<b>BAYESIAN KERNEL-BASED SYSTEM IDENTIFICATION WITH QUANTIZED OUTPUT DATA.....</b>	<b>455</b>
<i>Giulio Bottegal, Gianluigi Pillonetto, Håkan Hjalmarsson</i>	
<b>BAYESIAN PARAMETER ESTIMATION OF POWER SYSTEM PRIMARY FREQUENCY CONTROLS UNDER MODELING UNCERTAINTIES .....</b>	<b>461</b>
<i>Tetiana Bogodorova, Luigi Vanfretti, Konstantin Turitsyn</i>	
<b>BLIND SYSTEM IDENTIFICATION USING KERNEL-BASED METHODS.....</b>	<b>466</b>
<i>Giulio Bottegal, Riccardo S. Risuleo, Håkan Hjalmarsson</i>	
<b>PSEUDO-MARGINAL MCMC FOR PARAMETER ESTIMATION IN A-STABLE DISTRIBUTIONS .....</b>	<b>472</b>
<i>Marina Riabiz, Fredrik Lindsten, Simon Godsill</i>	
<b>A BAYESIAN NON-PARAMETRIC APPROACH TO FREQUENCY ESTIMATION.....</b>	<b>478</b>
<i>Martina Favaro, Giorgio Picci</i>	
<b>BLIND CHARACTERISATION OF SENSORS WITH SECOND-ORDER DYNAMIC RESPONSE .....</b>	<b>484</b>
<i>Philip D. Gillespie, Peter C. Hung, Robert J. Kee, Séán F. McLoone</i>	
<b>OBSTACLE AVOIDANCE FOR KINEMATICALLY REDUNDANT ROBOT.....</b>	<b>490</b>
<i>Xinyu Wang, Chenguang Yang, Junshen Chen, Hongbin Ma, Feng Liu</i>	
<b>ADAPTIVE INTEGRATED GUIDANCE AND CONTROL BASED ON BACKSTEPPING FOR THE LANDING OF REUSABLE LAUNCH VEHICLES.....</b>	<b>496</b>
<i>Han Yan, Yingzi He</i>	
<b>QUADRATIC OPTIMAL TRACKING CONTROL OF WIND TURBINE SYSTEMS.....</b>	<b>502</b>
<i>Feng Liu, Danyong Li, Peng Li, Yongduan Song</i>	
<b>ACTUATORS COUPLED DESIGN BASED ADAPTIVE BACKSTEPPING CONTROL OF AIR-BREATHING HYPERSONIC VEHICLE .....</b>	<b>508</b>
<i>Gongjun Li, Bin Meng</i>	
<b>IDENTIFICATION FOR SWITCHED SYSTEMS.....</b>	<b>514</b>
<i>Qiong Hu, Qing Fei, Hongbin Ma, Qinghe Wu, Qingbo Geng</i>	

<b>LEARNING TO WIN IN EVOLUTIONARY TWO-PERSON BOOLEAN GAME WITH FIXED STRATEGY UPDATING RULE .....</b>	<b>520</b>
<i>Dong Wang, Ma Hongbin</i>	
<b>GLOBAL EXTREMUM SEEKING BY KRIGING WITH A MULTI-AGENT SYSTEM.....</b>	<b>526</b>
<i>Arthur Kahn, Julien Marzat, Hélène Piet-Lahanier, Michel Kieffer</i>	
<b>A NOVEL SEQUENTIAL EXPLORATION-EXPLOITATION SAMPLING STRATEGY FOR GLOBAL METAMODELING.....</b>	<b>532</b>
<i>Ping Jiang, Leshi Shu, Qi Zhou, Hui Zhou, Xinyu Shao, Junnan Xu</i>	
<b>INTELLIGENT COMBINED PREDICTION OF WIND POWER BASED ON NUMERICAL WEATHER PREDICTION AND FUZZY CLUSTERING .....</b>	<b>538</b>
<i>Yang Jiaran, Wang Xingcheng, Luo Xiaofen, Jiang Cheng</i>	
<b>A GREY-BOX DISTRIBUTED PARAMETER MODELING APPROACH FOR A FLEXIBLE MANIPULATOR WITH NONLINEAR DYNAMICS.....</b>	<b>544</b>
<i>Chenkun Qi, Feng Gao, Xianchao Zhao, Yi Yue</i>	
<b>ON-LINE PARAMETER AND STATE ESTIMATION IN MEMBRANE BIOREACTOR SYSTEMS.....</b>	<b>550</b>
<i>Karel J. Keesman, Paula Van Den Brink</i>	
<b>A GREY-BOX MODEL IDENTIFICATION OF AN ADVANCED OXIDATION PROCESS FOR WASTEWATER TREATMENT .....</b>	<b>556</b>
<i>Manhal Abouzlam, Régis Ouvrard, Thierry Poinot, Driss Mehdi, Florence Pontlevoy, Bertrand Gombert, Nathalie Karpel Vel Leitner</i>	
<b>DISTRIBUTED WEIGHTED LEAST-SQUARES ESTIMATION FOR POWER NETWORKS .....</b>	<b>562</b>
<i>Damián Marelli, Brett Ninness, Minyue Fu</i>	
<b>PARAMETER OPTIMIZATION OF PV BASED ON HYBRID GENETIC ALGORITHM.....</b>	<b>568</b>
<i>Junfeng Rong, Bing Wang, Bo Liu, Xiaorui Zha</i>	
<b>PERFORMANCE EVALUATION OF A DISTRIBUTED HYBRID MPC STRATEGY APPLIED TO THE FOUR-TANK SYSTEM.....</b>	<b>573</b>
<i>Benjamín Lagos, Pablo Karelovic, Aldo Cipriano</i>	
<b>HYBRID DESCRIPTOR SYSTEM STATE ESTIMATION THROUGH AN IMM APPROACH.....</b>	<b>579</b>
<i>Liangquan Zhang, Qinghua Zhang</i>	
<b>LOCAL SUBSPACE IDENTIFICATION OF DISTRIBUTED HOMOGENEOUS SYSTEMS WITH GENERAL INTERCONNECTION PATTERNS.....</b>	<b>585</b>
<i>Chengpu Yu, Michel Verhaegen</i>	
<b>NETWORK-BASED FINITE-TIME SAMPLED-DATA OBSERVER DESIGN FOR SWITCHED LINEAR SYSTEMS .....</b>	<b>590</b>
<i>Shun Wang, Lixian Zhang, Ajay Jasra, Ming Zeng</i>	
<b>CHALLENGES IN THE IDENTIFICATION OF DISCRETE TIME BLOCK ORIENTED MODELS FOR CONTINUOUS TIME NONLINEAR SYSTEMS.....</b>	<b>596</b>
<i>J. Schoukens, M. Vaes, A. F. Esfahani, R. Relan</i>	
<b>WEIGHTED PRINCIPAL COMPONENT ANALYSIS FOR WIENER SYSTEM IDENTIFICATION - REGULARIZATION AND NON-GAUSSIAN EXCITATIONS .....</b>	<b>602</b>
<i>Qinghua Zhang, Vincent Laurain, Jiandong Wang</i>	
<b>IDENTIFICATION OF LINEAR BLOCK IN WIENER SYSTEM WITH NONPARAMETRIC NONLINEARITY .....</b>	<b>608</b>
<i>Pawel Wachel, Grzegorz Mzyk</i>	
<b>DESIGN OF GAUSSIAN INPUTS FOR WIENER MODEL IDENTIFICATION .....</b>	<b>614</b>
<i>Kaushik Mahata, Johan Schoukens, Alexander De Cock</i>	
<b>IDENTIFICATION OF STOCHASTIC WIENER SYSTEMS USING INDIRECT INFERENCE .....</b>	<b>620</b>
<i>Bo Wahlberg, James Welsh, Lennart Ljung</i>	
<b>CONVEX OPTIMIZATION FOR BLIND IDENTIFICATION OF MONOTONE WIENER SYSTEMS .....</b>	<b>626</b>
<i>Kristiaan Pelckmans</i>	
<b>MEMBRANE REFLECTOR SURFACE RECONSTRUCTION USING ZERNIKE POLYNOMIALS AND TWO-STAGE ALGORITHM.....</b>	<b>632</b>
<i>Zhenyu Chen, Yang Liu, Xiandong Xu, Kang Li, Xinglin Chen</i>	
<b>A SUBSPACE-BASED IDENTIFICATION OF TWO-CHANNEL WIENER SYSTEMS .....</b>	<b>638</b>
<i>Hajime Ase, Tohru Katayama</i>	
<b>NUCLEAR NORMS FOR SYSTEM IDENTIFICATION - A DIRECT INPUT-OUTPUT APPROACH .....</b>	<b>644</b>
<i>Kristiaan Pelckmans, Ruben Cubo</i>	
<b>RBFNN BASED LINEAR MOTOR COGGING FORCE IDENTIFICATION FOR LITHOGRAPHY MACHINES.....</b>	<b>650</b>
<i>Yang Liu, Xiandong Xu, Zhenyu Chen, Kang Li, Jiubin Tan</i>	

<b>AN EXTENDED MODAL IDENTIFICATION FOR LINEAR PERIODICALLY TIME-VARYING SYSTEMS BASED ON STABILITY-PRESERVING STATE TRANSFORMATION .....</b>	<b>656</b>
<i>Zhi-Sai Ma, Li Liu, Ward Heylen, Wim Desmet</i>	
<b>PARAMETER IDENTIFICATION OF GYRO USING RECURSIVE SUBSPACE ALGORITHM.....</b>	<b>662</b>
<i>Liwei Ren, Xiaojun Ban, Xianlin Huang, Shuchen Ding</i>	
<b>FINITE-HORIZON FILTERING FOR MARKOVIAN JUMP SYSTEMS WITH SENSOR SATURATION.....</b>	<b>668</b>
<i>Xianye Bu, Yang Lu, Gang Lu, Fan Yang, Yajing Yu</i>	
<b>IDENTIFICATION OF FIR SYSTEMS WITH QUANTIZED INPUTS AND OBSERVATIONS .....</b>	<b>674</b>
<i>Jin Guo, Le Yi Wang, George Yin, Yanlong Zhao, Ji-Feng Zhang</i>	
<b>IDENTIFICATION OF SWITCHED LINEAR SYSTEMS VIA SPARSE OPTIMIZATION .....</b>	<b>680</b>
<i>Weisen Jiang, Hai-Tao Fang</i>	
<b>ROAD CHARACTERISTIC BASED LOCATION TECHNIQUE FOR VEHICLE EXHAUST GAS DETECTION .....</b>	<b>686</b>
<i>Zerui Li, Yu Kang, Xin Wang, Xiaobin Tan, Yunbo Zhao</i>	
<b>DISCRETE-TIME STOCHASTIC LINEAR-QUADRATIC OPTIMAL CONTROL WITH TIME-INCONSISTENCY .....</b>	<b>691</b>
<i>Xun Li, Yuan-Hua Ni, Ji-Feng Zhang</i>	
<b>DATA-DRIVEN FILTER DESIGN FOR LINEAR SYSTEMS WITH QUANTIZED MEASUREMENTS .....</b>	<b>697</b>
<i>Yuanqing Xia, Li Dai, Wen Xie, Yulong Gao</i>	
<b>ONLINE SPARSE GAUSSIAN PROCESS REGRESSION USING FITC AND PITC APPROXIMATIONS .....</b>	<b>703</b>
<i>Hildo Bijl, Jan-Willem Van Wingerden, Thomas B. Schön, Michel Verhaegen</i>	
<b>BAYESIAN NONPARAMETRIC IDENTIFICATION OF PIECEWISE AFFINE ARX SYSTEMS .....</b>	<b>709</b>
<i>Johan Wågberg, Fredrik Lindsten, Thomas B. Schön</i>	
<b>KERNEL-BASED ESTIMATE OF THE INSULIN ACTION OF RAPID-ACTING INSULIN IN HOME-MONITORED DATA .....</b>	<b>715</b>
<i>Fredrik Ståhl, Erik Lindström, Mona Landin Olsson, Rolf Johansson</i>	
<b>IFT-LPV: DATA-BASED TUNING OF FIXED STRUCTURE CONTROLLERS FOR LPV SYSTEMS .....</b>	<b>721</b>
<i>Sachin T. Navalkar, Tom Oomen, Jan-Willem Van Wingerden</i>	
<b>ESTIMATION OF MODELS FOR THE UPPER PART OF MURRAY RIVER WITH FLOW DEPENDENT PARAMETERS.....</b>	<b>727</b>
<i>Hasan Arshad Nasir, Erik Weyer</i>	
<b>A NON-PARAMETRIC LINEAR PARAMETER VARYING APPROACH FOR IDENTIFICATION OF LINEAR TIME-VARYING SYSTEMS .....</b>	<b>733</b>
<i>Ehsan Sobhani Tehrani, Robert E. Kearney</i>	

## PART 2

<b>UNDERSTANDING CLOSED-LOOP IDENTIFICATION WITH ITCLI.....</b>	<b>739</b>
<i>D. E. Rivera, J. L. Guzmán, M. Berenguel, S. Dormido</i>	
<b>REGULARIZATION FEATURES IN THE SYSTEM IDENTIFICATION TOOLBOX .....</b>	<b>745</b>
<i>Lennart Ljung, Rajiv Singh, Tianshi Chen</i>	
<b>INTERACTIVE EDUCATION FOR TIME-DOMAIN TIME SERIES ANALYSIS USING ITTSAE .....</b>	<b>751</b>
<i>J. M. Díaz, S. Dormido, D. E. Rivera</i>	
<b>VERSION 7.0 OF THE CONTSID TOOLBOX .....</b>	<b>757</b>
<i>Padilla A., Garnier H., Gilson M.</i>	
<b>COBRA - SOFTWARE FOR A COVARIANCE BASED REALIZATION ALGORITHM WITH CONVEX CONSTRAINTS ON POLE LOCATIONS.....</b>	<b>763</b>
<i>Raymond A. De Callafon, Daniel N. Miller</i>	
<b>CRONE TOOLBOX FOR SYSTEM IDENTIFICATION USING FRACTIONAL DIFFERENTIATION MODELS .....</b>	<b>769</b>
<i>Rachid Malti, Stéphane Victor</i>	
<b>SEQUENTIAL MONTE CARLO METHODS FOR SYSTEM IDENTIFICATION .....</b>	<b>775</b>
<i>Thomas B. Schön, Fredrik Lindsten, Johan Dahlin, Johan Wågberg, Christian A. Naeseth, Andreas Svensson, Liang Dai</i>	
<b>A PRACTICAL INTRODUCTION TO BUTTERFLY AND ADAPTIVE RESAMPLING IN SEQUENTIAL MONTE CARLO .....</b>	<b>787</b>
<i>Hakan Guldás, A. Taylan Cemgil, Nick Whiteley, Kari Heine</i>	



<b>ON THE (NON-)CONVERGENCE OF PARTICLE FILTERS WITH GAUSSIAN IMPORTANCE DISTRIBUTIONS .....</b>	<b>793</b>
<i>Juho Kokkala, Simo Särkkä</i>	
<b>PARAMETER ESTIMATION FOR BATCH PROCESSES WITH MEASUREMENTS OF LARGE SAMPLING INTERVALS.....</b>	<b>799</b>
<i>Zhonggai Zhao, Biao Huang, Fei Liu</i>	
<b>ESTIMATING DYNAMICS IN PARTICLE TRACKING MICROSCOPY USING NONLINEAR SYSTEM IDENTIFICATION.....</b>	<b>805</b>
<i>Trevor T. Ashley, Sean B. Andersson</i>	
<b>MONTE CARLO METHODS FOR CONTROLLER APPROXIMATION AND STABILIZATION IN NONLINEAR STOCHASTIC OPTIMAL CONTROL.....</b>	<b>811</b>
<i>Francesco Bertoli, Adrian N. Bishop</i>	
<b>GREY-BOX NONLINEAR STATE-SPACE MODELLING FOR MECHANICAL VIBRATIONS IDENTIFICATION .....</b>	<b>817</b>
<i>J. P. Noël, J. Schoukens, G. Kerschen</i>	
<b>PHYSICAL PARAMETER IDENTIFICATION OF A ONE-DEGREE-OF-FREEDOM ELECTROMECHANICAL SYSTEM OPERATING IN CLOSED LOOP.....</b>	<b>823</b>
<i>M. Brunot, A. Janot, F. Carrillo, H. Garnier, P. O. Vandanjon, M. Gautier</i>	
<b>APPLICATION OF MODEL SELECTION METHODS FOR THE IDENTIFICATION OF A DYNAMIC BOOST PRESSURE MODEL .....</b>	<b>829</b>
<i>M. Kahl, A. Kroll, R. Kästner, M. Sofsky</i>	
<b>TARGET RECOGNITION IN THE TERMINAL GUIDANCE PROCESS: A NOVEL ALGORITHM FOR RESOURCE ALLOCATION .....</b>	<b>835</b>
<i>Silun Zhang, Fenghua He, Yu Yao</i>	
<b>THE CAM CONTOUR CONTROL IN GRINDING BASED ON REPETITIVE CONTROL AND ERROR COMPENSATION.....</b>	<b>841</b>
<i>J. Wang, Z. Sui, Z. B. Sun, W. C. Yu, W. Fan, H. Y. Li, Y. T. Tian</i>	
<b>ROTOR TEMPERATURE MODELING OF AN INDUCTION MOTOR USING SUBSPACE IDENTIFICATION .....</b>	<b>847</b>
<i>S. Zaiser, M. Buchholz, K. Dietmayer</i>	
<b>A NEW IDENTIFICATION METHOD FOR DUAL-RATE HAMMERSTEIN SYSTEMS .....</b>	<b>853</b>
<i>Jing Chen, Bin Jiang</i>	
<b>AN <math>H_{\infty}</math> DISTURBANCE ESTIMATION APPROACH TO FAULT DETECTION FOR LINEAR DISCRETE TIME-VARYING SYSTEMS.....</b>	<b>857</b>
<i>Bo Shen, Zidong Wang, Hongli Dong, Qi Li</i>	
<b>DISTRIBUTED SUBGRADIENT ALGORITHM FOR MULTI-AGENT OPTIMIZATION WITH DIRECTED COMMUNICATION TOPOLOGY.....</b>	<b>863</b>
<i>Yanhui Yin, Zhongxin Liu, Zengqiang Chen</i>	
<b>CLASSIFICATION OF HAND MANIPULATION USING BP NEURAL NETWORK AND SUPPORT VECTOR MACHINE BASED ON SURFACE ELECTROMYOGRAPHY SIGNAL .....</b>	<b>869</b>
<i>Yang Lu, Gang Lu, Xianye Bu, Yajing Yu, Xianye Bu</i>	
<b>FLATNESS-BASED TARGET TRACKING FOR A QUADROTOR UNMANNED AERIAL VEHICLE.....</b>	<b>874</b>
<i>Tianya Li, Yuanqing Xia, Daoliang Ma</i>	
<b>RECURSIVE CLOSED-LOOP PARSIM-E SUBSPACE IDENTIFICATION .....</b>	<b>880</b>
<i>Jie Hou, Fengwei Chen, Tao Liu</i>	
<b>EXPERIMENT DESIGN FOR IMPROVED FREQUENCY DOMAIN SUBSPACE SYSTEM IDENTIFICATION OF CONTINUOUS-TIME SYSTEMS.....</b>	<b>886</b>
<i>Majid Khorsand Vakilzadeh, Vahid Yaghoubi, Tomas McKelvey, Thomas Abrahamsson, Lennart Ljung</i>	
<b>SUBSPACE IDENTIFICATION OF LOCAL 1D HOMOGENEOUS SYSTEMS .....</b>	<b>892</b>
<i>Chengpu Yu, Michel Verhaegen, Anders Hansson</i>	
<b>EVALUATION OF SPECTRAL LEARNING FOR THE IDENTIFICATION OF HIDDEN MARKOV MODELS .....</b>	<b>897</b>
<i>Robert Mattila, Cristian R. Rojas, Bo Wahlberg</i>	
<b>TIME-DOMAIN SUBSPACE IDENTIFICATION ALGORITHMS USING NUCLEAR NORM MINIMISATION.....</b>	<b>903</b>
<i>Mogens Graf Plessen, Tony A. Wood, Roy S. Smith</i>	
<b>TENSOR REGRESSION FOR LTI SUBSPACE IDENTIFICATION: FREE PARAMETRIZATIONS.....</b>	<b>909</b>
<i>Bilal Gunes, Jan-Willem Van Wingerden, Michel Verhaegen</i>	

<b>DISTRIBUTED ADAPTIVE CONSENSUS OF NONLINEAR MULTI-AGENT SYSTEMS WITH UNKNOWN CONTROL COEFFICIENTS .....</b>	<b>915</b>
<i>Xinglong Niu, Yungang Liu, Yongchao Man</i>	
<b>FORMATION TRACKING BASED ON TARGET POINTS.....</b>	<b>921</b>
<i>Shaoshuai Mou, Fenghua He, Silun Zhang</i>	
<b>DISCRETE-TIME STOCHASTIC SOURCE SEEKING VIA TUNING OF FORWARD VELOCITY .....</b>	<b>927</b>
<i>Shu-Jun Liu, Pei-Pei Zhang</i>	
<b>REAL-TIME CORRECTION OF MOLECULAR WEIGHT DISTRIBUTION MODEL BASED ON THE FIELD-MEASURABLE MOMENTS .....</b>	<b>933</b>
<i>Mali Ding, Jing Wang, Haiyan Wu, Jinglin Zhou</i>	
<b>IDENTIFICATION OF BLOCK-ORIENTED SYSTEMS WITH RATE SATURATION NONLINEARITY .....</b>	<b>939</b>
<i>Alex Y. K. Yong, Ai Hui Tan, Chin Leei Cham</i>	
<b>FREQUENCY IDENTIFICATION OF A FEEDBACK HAMMERSTEIN SYSTEM.....</b>	<b>945</b>
<i>F. Giri, T. Ahmed-Ali, A. Brouri, F. Z. Chaoui, A. Radouane</i>	
<b>RECOVERING WIENER-HAMMERSTEIN NONLINEAR STATE-SPACE MODELS USING LINEAR ALGEBRA .....</b>	<b>951</b>
<i>Philippe Dreesen, Mariya Ishteva, Johan Schoukens</i>	
<b>ONE-SHOT SET-MEMBERSHIP IDENTIFICATION OF WIENER MODELS WITH POLYNOMIAL NONLINEARITIES.....</b>	<b>957</b>
<i>V. Cerone, V. Razza, D. Regruto</i>	
<b>AN EFFICIENT PARTICLE-BASED ONLINE EM ALGORITHM FOR GENERAL STATE-SPACE MODELS.....</b>	<b>963</b>
<i>Jimmy Olsson, Johan Westerborn</i>	
<b>ON BLOCKS, TEMPERING AND PARTICLE MCMC FOR SYSTEMS IDENTIFICATION.....</b>	<b>969</b>
<i>Adam M. Johansen</i>	
<b>NONLINEAR STATE SPACE SMOOTHING USING THE CONDITIONAL PARTICLE FILTER.....</b>	<b>975</b>
<i>Andreas Svensson, Thomas B. Schön, Manon Kok</i>	
<b>QUASI-NEWTON PARTICLE METROPOLIS-HASTINGS .....</b>	<b>981</b>
<i>Johan Dahlin, Fredrik Lindsten, Thomas B. Schön</i>	
<b>STRUCTURAL HEALTH MONITORING BY MEANS OF STRAIN FIELD PATTERN RECOGNITION ON THE BASIS OF PCA AND AUTOMATIC CLUSTERING TECHNIQUES BASED ON SOM.....</b>	<b>987</b>
<i>Julián Sierra-Pérez, Miguel A. Torres-Arredondo, Guénaél Cabanes, Alfredo Güeme, Luis E. Mujica</i>	
<b>MULTI-STAGE PROCESS ANALYSIS AND MODELLING BASED ONLINE MONITORING FOR CHIP PACKAGING PROCESS.....</b>	<b>993</b>
<i>Yan Qin, Chunhui Zhao, Furong Gao</i>	
<b>VIBRATION MONITORING BY EIGENSTRUCTURE CHANGE DETECTION BASED ON PERTURBATION ANALYSIS .....</b>	<b>999</b>
<i>Michael Döhler, Qinghua Zhang, Laurent Mevel</i>	
<b>UNIT-LEVEL MODELLING FOR KPI OF BATCH HOT STRIP MILL PROCESS USING DYNAMIC PARTIAL LEAST SQUARES.....</b>	<b>1005</b>
<i>Kai Zhang, Yuri A. W Shardt, Zhiwen Chen, Steven X Ding, Kaixiang Peng</i>	
<b>A KERNEL-BASED APPROACH TO HAMMERSTEIN SYSTEM IDENTIFICATION .....</b>	<b>1011</b>
<i>Riccardo S. Risuleo, Giulio Bottegal, Håkan Hjalmarsson</i>	
<b>RECURSIVE IDENTIFICATION OF HAMMERSTEIN WITH NOISY OBSERVATIONS.....</b>	<b>1017</b>
<i>Biqiang Mu, Chen Han-Fu, Le Yi Wang, George Yin</i>	
<b>METHODS FOR THE IDENTIFICATION OF TIME-VARYING HAMMERSTEIN SYSTEMS WITH APPLICATIONS TO THE STUDY OF DYNAMIC JOINT STIFFNESS .....</b>	<b>1023</b>
<i>Ehsan Sobhani Tehrani, Mahsa A. Golkar, Diego L. Guarin, Kian Jalaleddini, Robert E. Kearney</i>	
<b>NON-LINEAR CLOSED-LOOP IDENTIFICATION OF CSTR IN THE PRESENCE OF A NON-STATIONARY DISTURBANCES.....</b>	<b>1029</b>
<i>Ibrahim Aljamaan, David Westwick, Michael Foley</i>	
<b>ON KERNEL STRUCTURES FOR REGULARIZED SYSTEM IDENTIFICATION (I): A MACHINE LEARNING PERSPECTIVE .....</b>	<b>1035</b>
<i>Tianshi Chen, Lennart Ljung</i>	
<b>ON KERNEL STRUCTURES FOR REGULARIZED SYSTEM IDENTIFICATION (II): A SYSTEM THEORY PERSPECTIVE.....</b>	<b>1041</b>
<i>Tianshi Chen, Lennart Ljung</i>	
<b>COLLISION HANDLING IN 3D ARTICULATORY ANIMATION FOR CHINESE SPEECH ARTICULATION.....</b>	<b>1047</b>
<i>Rui Li, Jun Yu, Zengfu Wang</i>	

<b>UNCERTAINTY IN SYSTEM IDENTIFICATION: LEARNING FROM THE THEORY OF RISK</b> .....	1053
<i>Patricio E Valenzuela, Cristian R Rojas, Håkan Hjalmarsson</i>	
<b>LEARNING DEEP DYNAMICAL MODELS FROM IMAGE PIXELS</b> .....	1059
<i>Niklas Wahlström, Thomas B Schön, Marc Peter Deisenroth</i>	
<b>A REFINED ROBUST STABILITY CRITERION FOR UNCERTAIN NEUTRAL SYSTEMS WITH MIXED DELAYS</b> .....	1065
<i>Yuanyuan Han, Xian Zhang, Yantao Wang</i>	
<b>A NEW PRACTICALLY ORIENTED GENERATION OF NONLINEAR FILTERING TOOLBOX</b> .....	1070
<i>Jindrich Havlík, Miroslav Šimandl, Ondrej Straka</i>	
<b>WEIGHTED STOCHASTIC GRADIENT IDENTIFICATION ALGORITHMS FOR ARX MODELS</b> .....	1076
<i>Ai-Guo Wu, Rui-Qi Dong, Fang-Zhou Fu</i>	
<b>REAL-TIME IDENTIFICATION OF PROPELLER-ENGINE PARAMETERS FOR FIXED WING UAVS</b> .....	1082
<i>Umair Ahsun, Tabish Badar, Shiraz Tahir, Saeed Aldosari</i>	
<b>DECENTRALIZED NAVIGATIONAL STATE ESTIMATION FOR NETWORKED MULTIPLE VEHICLES SUBJECT TO LIMITED DATA RATE</b> .....	1088
<i>Chao Gao, Guorong Zhao, Shuai Liu, Jianhua Lu</i>	
<b>DECENTRALIZED STATE ESTIMATION FOR NETWORKED NAVIGATION SYSTEMS WITH COMMUNICATION DELAY AND PACKET LOSS: THE RECEDING HORIZON CASE</b> .....	1094
<i>Jianhua Lu, Chao Gao, Guorong Zhao, Shuai Liu</i>	
<b>ARMAX TIME DELAY SYSTEMS IDENTIFICATION BASED ON LEAST SQUARE APPROACH</b> .....	1100
<i>Saïda Bedoui, Kamel Abderrahim</i>	
<b>STABILITY OF THE KALMAN FILTER FOR OUTPUT ERROR SYSTEMS</b> .....	1106
<i>Boyi Ni, Qinghua Zhang</i>	
<b>LINEAR FILTER FOR UNCERTAIN SYSTEM WITH TRANSMISSION DELAYS AND LOSSES</b> .....	1112
<i>J. Ma, S. L. Sun</i>	
<b>A NOVEL ADAPTIVE KALMAN FILTER BASED NLOS ERROR MITIGATION ALGORITHM</b> .....	1118
<i>Li. Qiyue, Wu Zhong, Li Jie, Sun Wei, Wang Jianping</i>	
<b>NONLINEAR PARAMETERS ESTIMATION VIA ZAKAI FILTERING IN DEPOSITION PROCESS CONTROL</b> .....	1124
<i>R. Tenno</i>	
<b>ESTIMATION OF NOISE COVARIANCE MATRICES FOR LINEAR SYSTEMS WITH NONLINEAR MEASUREMENTS</b> .....	1130
<i>Jindrich Duntík, Ondrej Straka, Miroslav Šimandl</i>	
<b>NONLINEAR DRIFTING PARAMETERS TRACKING BY MEANS OF FACTORIZED ZAKAI FILTER IN BOUNDARY-CONTROLLED ELECTRODEPOSITION PROCESS</b> .....	1136
<i>R. Tenno</i>	
<b>REDUCING IDENTIFICATION ERROR USING OVER-SAMPLING TECHNIQUE</b> .....	1142
<i>Mengyuan Fang, Yucai Zhu</i>	
<b>A GAIT OPTIMIZATION SMOOTHING PENALTY FUNCTION METHOD FOR BIPEDAL ROBOT VIA DMOC</b> .....	1148
<i>Zhongbo Sun, Hongyang Li, Jing Wang, Yantao Tian</i>	
<b>IMPROVING THE PM10 ESTIMATES OF THE AIR QUALITY MODEL AURORA BY USING OPTIMAL INTERPOLATION</b> .....	1154
<i>Oscar Mauricio Agudelo, Peter Viaene, Bart De Moor</i>	
<b>IDENTIFICATION OF AXIAL COMPRESSOR DYNAMICS USING TABU SEARCH OPTIMIZATION</b> .....	1160
<i>Marco P. Schoen, Ji-Chao Lee, Feng Lin</i>	
<b>EN-PH: A REGULARIZATION-BASED MODEL PREDICTIVE CONTROL RELEVANT IDENTIFICATION METHOD</b> .....	1166
<i>Raphael M. S. M. Baltar, Rafael B. C. Lima, Péricles R. Barros</i>	
<b>REWEIGHTED NUCLEAR NORM REGULARIZATION: A SPARSEVA APPROACH</b> .....	1172
<i>Huong Ha, James S. Welsh, Niclas Blomberg, Cristian R. Rojas, Bo Wahlberg</i>	
<b>METAMODEL ASSISTED ROBUST OPTIMIZATION UNDER INTERVAL UNCERTAINTY BASED ON REVERSE MODEL</b> .....	1178
<i>Longchao Cao, Ping Jiang, Zhimin Chen, Qi Zhou, Hui Zhou</i>	
<b>ON IDENTIFICATION OF NETWORKED SYSTEMS WITH TIME-INVARIANT TOPOLOGY</b> .....	1184
<i>Mohsen Zamani, Brett Ninness, Juan C. Agüero</i>	
<b>CONTRACTION BASED IDENTIFICATION FOR NONLINEAR SYSTEMS</b> .....	1190
<i>A. Flores Pérez, Yu Tang, Ileana Grave</i>	

<b>A NOVEL APPROACH TO T-S FUZZY MODELING OF NONLINEAR DYNAMIC SYSTEMS WITH UNCERTAINTIES USING SYMBOLIC INTERVAL-VALUED OUTPUTS .....</b>	<b>1196</b>
<i>Salman Zaidi, Andreas Kroll</i>	
<b>SILICON SINGLE CRYSTAL DISLOCATION DYNAMICAL FEATURES EXTRACTION.....</b>	<b>1202</b>
<i>A. Liang Yan-Ming, B. Liu Ding, C. Wang Bo-Wei</i>	
<b>SPARSE VECTOR AUTOREGRESSIVE MODELING OF AUDIO SIGNALS AND ITS APPLICATION TO THE ELIMINATION OF IMPULSIVE DISTURBANCES.....</b>	<b>1208</b>
<i>Niedzwiecki Maciej, Ciolek Marcin</i>	
<b>GLOBAL OUTPUT-FEEDBACK STABILIZATION FOR HIGH-ORDER NONLINEAR SYSTEMS WITH UNKNOWN CONTROL COEFFICIENTS.....</b>	<b>1214</b>
<i>Yongchao Man, Yungang Liu</i>	
<b>MULTIPLE MODEL LPV APPROACH TO IDENTIFICATION OF NONLINEAR DUAL-RATE SYSTEM WITH RANDOM TIME DELAY .....</b>	<b>1220</b>
<i>Lei Chen, Biao Huang, Yongsheng Ding</i>	
<b>ON ESTIMATION OF APPROXIMATE INVERSE MODELS OF BLOCK-ORIENTED SYSTEMS.....</b>	<b>1226</b>
<i>Ylva Jung, Martin Enqvist</i>	
<b>A TIME-DOMAIN FRACTIONAL APPROACH FOR WIENER-HAMMERSTEIN SYSTEMS IDENTIFICATION .....</b>	<b>1232</b>
<i>G. Giordano, J. Sjöberg</i>	
<b>NEW RESULT ON GLOBAL OUTPUT-FEEDBACK TRACKING FOR UNCERTAIN NONLINEAR SYSTEMS .....</b>	<b>1238</b>
<i>Shaoli Jin, Yungang Liu, Fengzhong Li</i>	
<b>MODELING AND IDENTIFICATION FOR PNEUMATIC CONTROL VALVES WITH STICTION .....</b>	<b>1244</b>
<i>Li Tang, Lei Fang, Jiandong Wang, Qunli Shang</i>	
<b>IDENTIFICATION OF HIGH-TECH MOTION SYSTEMS: AN ACTIVE VIBRATION ISOLATION BENCHMARK.....</b>	<b>1250</b>
<i>Robbert Voorhoeve, Annemiek Van Rietschoten, Egon Geerardyn, Tom Oomen</i>	
<b>A BENCHMARK FOR DATA-BASED OFFICE MODELING: CHALLENGES RELATED TO CO2 DYNAMICS .....</b>	<b>1256</b>
<i>Riccardo S. Risuleo, Marco Molinari, Giulio Bottegal, Håkan Hjalmarsson, Karl H. Johansson</i>	
<b>HYDROGEOLOGICAL EXPERIMENTAL SITE OF POITIERS (FRANCE).....</b>	<b>1262</b>
<i>Afzal Chamroo, Régis Ouwrad, Thierry Poinot, Jacques Bodin, Benoit Nauleau, Gilles Porel</i>	
<b>A CRUDE UNIT DATASET FOR INDUSTRIAL MPC IDENTIFICATION.....</b>	<b>1268</b>
<i>Yucui Zhu</i>	
<b>HANDLING BIG DATA IN SET-MEMBERSHIP IDENTIFICATION THROUGH A SPARSE OPTIMIZATION APPROACH.....</b>	<b>1272</b>
<i>V. Cerone, D. Regruto</i>	
<b>THE CURSE OF DIMENSIONALITY AND VARIABLE SELECTION IN NONLINEAR NON-PARAMETRIC SYSTEM IDENTIFICATION.....</b>	<b>1279</b>
<i>Er-Wei Bai, Wenxiao Zhao, Wei Xing Zheng</i>	
<b>THE INTERPLAY BETWEEN BIG DATA AND SPARSITY IN SYSTEMS IDENTIFICATION: SOME LESSONS FROM MACHINE LEARNING.....</b>	<b>1285</b>
<i>Y. Cheng, Y. Wang, O. Camps, M. Sznaiier</i>	
<b>THE ROLE OF RANK PENALTIES IN LINEAR SYSTEM IDENTIFICATION .....</b>	<b>1293</b>
<i>G. Prando, G. Pillonetto, A. Chiuso</i>	
<b>PSEUDO-RANDOM SEQUENCES IN DQ-DOMAIN ANALYSIS OF FEEDFORWARD CONTROL IN GRID-CONNECTED INVERTERS.....</b>	<b>1301</b>
<i>Tommi Roinila, Tuomas Messo, Teuvo Suntio, Matti Vilkkö</i>	
<b>OPTIMAL INPUT DESIGN FOR CONTINUOUS-TIME SYSTEM IDENTIFICATION: APPLICATION TO FRACTIONAL SYSTEMS.....</b>	<b>1307</b>
<i>Sergey Abrashov, Rachid Malti, Mathieu Moze, Xavier Moreau, Franck Guillemand</i>	
<b>ECONOMICAL INPUT DESIGN FOR IDENTIFICATION OF MULTIVARIATE SYSTEMS.....</b>	<b>1313</b>
<i>Abhishankar Kumar, M. Nabil, Sridharakumar Narasimhan</i>	
<b>OPTIMAL INPUT DESIGN FOR PARAMETER ESTIMATION IN NONLINEAR STATE-SPACE MODELS USING PONTRYAGIN'S MINIMUM PRINCIPLE .....</b>	<b>1319</b>
<i>Karel J. Keesman</i>	
<b>DESIGN OF INFORMATIVE IDENTIFICATION EXPERIMENTS FOR BEHAVIORAL INTERVENTIONS.....</b>	<b>1325</b>
<i>César A. Martín, Daniel E. Rivera, Eric B. Hekler</i>	
<b>NO-FRAGILE <math>H_{\infty}</math> GUARANTEED COST CONTROL DESIGN FOR SPACECRAFT RENDEZVOUS .....</b>	<b>1331</b>
<i>Gao Xiangyu, Zhang Xian, Tan Julong, Li Jiaojiao</i>	

<b>ROBUST SUPERSTABILIZING CONTROLLER DESIGN FROM OPEN-LOOP EXPERIMENTAL INPUT/OUTPUT DATA</b> .....	1337
<i>Y. Cheng, M. Sznaier, C. Lagoa</i>	
<b>DATA-DRIVEN INVERSION-BASED CONTROL OF NONLINEAR SYSTEMS</b> .....	1343
<i>Simone Formentin, Carlo Novara, Sergio M. Savaresi, Mario Milanese</i>	
<b>ASYMPTOTICALLY EXACT DIRECT DATA-DRIVEN MULTIVARIABLE CONTROLLER TUNING</b> .....	1349
<i>Simone Formentin, Andrea Bisoffi, Tom Oomen</i>	
<b>TIME-SPACE CHARACTERISTIC OF INTERRUPTIBLE LOAD ON DISPATCH SOLUTION</b> .....	1355
<i>Shuangchen Yao, Haoming Liu, Dan Lu, Xiaoling Yuan</i>	
<b>ACTIVE QUASI-LPV MODELING AND IDENTIFICATION FOR A WATER-JET PROPULSION USV: AN EXPERIMENTAL STUDY</b> .....	1359
<i>Junfeng Xiong, Decai Li, Yuqing He, Feng Gu, Jianda Han</i>	
<b>TRACKING THE EVOLVING SPATIAL-TEMPORAL GENE NETWORKS</b> .....	1365
<i>Weikang Gong, Lin Wan</i>	
<b>SYSTEM IDENTIFICATION OF MULTIDIMENSIONAL SHOULDER IMPEDANCE DURING VOLITIONAL CONTRACTIONS</b> .....	1369
<i>David B. Lipps, Emma M. Baillargeon, Daniel Ludvig, Eric J. Perreault</i>	
<b>PARAMETRIC METHODS FOR IDENTIFICATION OF TIME-INVARIANT AND TIME-VARYING JOINT STIFFNESS MODELS</b> .....	1375
<i>Kian Jaleleddini, Mahsa A. Golkar, Diego L. Guarin, Ehsan Sobhani Tehrani, Robert E. Kearney</i>	
<b>ASSESSING STANDING BALANCE USING MIMO CLOSED LOOP SYSTEM IDENTIFICATION TECHNIQUES</b> .....	1381
<i>Jantsje H. Pasma, Denise Engelhart, Andrea B. Maier, Carel G. M. Meskers, Ronald G. K. M. Aarts, Alfred C. Schouten, Herman Van Der Kooij</i>	
<b>PROBING THE NONLINEARITY IN NEURAL SYSTEMS USING CROSS-FREQUENCY COHERENCE FRAMEWORK</b> .....	1386
<i>Yuan Yang, Alfred C. Schouten, Teodoro Solis-Escalante, Frans C. T. Van Der Helm</i>	
<b>FREQUENCY DOMAIN CHARACTERIZATION OF THE SOMATOSENSORY STEADY STATE RESPONSE IN ELECTROENCEPHALOGRAPHY</b> .....	1391
<i>Martijn P. Vlaar, Frans C. T. Van Der Helm, Alfred C. Schouten</i>	
<b>IDENTIFICATION OF STRETCH REFLEX DYNAMICS FROM CLOSED-LOOP DATA</b> .....	1397
<i>Kiana Karami, David T. Westwick</i>	
<b>LOCAL STRUCTURAL IDENTIFIABILITY FOR A CLASS OF PARAMETER-DEPENDENT MECHANICAL SYSTEMS</b> .....	1403
<i>Hideyuki Tanaka, Yoshito Ohta</i>	
<b>IDENTIFIABILITY IN DYNAMIC NETWORK IDENTIFICATION</b> .....	1409
<i>Harm H. M. Weerts, Arne G. Dankers, Paul M. J. Van Den Hof</i>	
<b>STRUCTURAL IDENTIFIABILITY AND IDENTIFICATION OF SYSTEMS UNDER OUTPUT COUPLINGS</b> .....	1415
<i>Safa Jedidi, Romain Bourdais, Jean Buisson, Marie-Anne Lefebvre</i>	
<b>ON ARBITRARY FRACTIONAL SYSTEM IDENTIFICATION IN FREQUENCY DOMAIN</b> .....	1421
<i>Dazi Li, Lang Liu, Tianheng Song, Dong Shen</i>	
<b>ON JOINT OPTIMAL EXPERIMENT DESIGN FOR IDENTIFYING PARTITION AND LOCAL MODEL PARAMETERS OF TAKAGI-SUGENO MODELS</b> .....	1427
<i>A. Kroll, A. Dürrbaum</i>	
<b>IDENTIFICATION OF A HVDC CABLE MODEL WITH COUPLING BETWEEN CORE AND SCREEN</b> .....	1433
<i>Manhal Abouzlam, Régis Ouvrard, Thierry Poinot, Abdelkrim Benchaib</i>	
<b>A DYNAMIC CO-EVOLUTION COMPACT GENETIC ALGORITHM FOR E/T PROBLEM</b> .....	1439
<i>Zhonghua Han, Yihang Zhu, Shuo Lin</i>	
<b>DESIGN OF A NOVEL FORCE FEEDBACK MASTER MANIPULATOR</b> .....	1444
<i>Hong Jia, Yunxiang Jiang, Peng Sun, Yiwen Zhao</i>	
<b>TWO MODIFIED UNSCENTED KALMAN FILTER AND ACCELERATION INFORMATION IN UNMANNED SURFACE VEHICLE ESTIMATION</b> .....	1450
<i>Yulong Ma</i>	
<b>AN EXPRESSIVE EYE MODEL: USING EYE MOVEMENT TO SHOW OCULAR EMOTIONAL EXPRESSION</b> .....	1456
<i>Chen Jiang, Zengfu Wang, Jun Yu</i>	
<b>ACHIEVING ACCURATE AND FAST BASE-CALLING BY A BLOCK MODEL OF THE ILLUMINA SEQUENCING DATA</b> .....	1462
<i>Bo Wang, Lin Wan, Lei M. Li</i>	

<b>MIMO LOWLY DAMPED SYSTEM: FREE-FREE VIBRATIONS OF AN ALUMINIUM TOOLING PLATE</b> .....	1466
<i>R. Pintelon, Y. Rolain</i>	
<b>A CRITICAL VIEW ON BENCHMARKS BASED ON RANDOMLY GENERATED SYSTEMS</b> .....	1471
<i>Cristian R. Rojas, Patricio E. Valenzuela, Ricardo A. Rojas</i>	
<b>BENCHMARK DATA ON A LINEAR TIME- AND PARAMETER-VARYING SYSTEM</b> .....	1477
<i>J. Lataire, E. Louarroudi, R. Pintelon, Y. Rolain</i>	
<b>A BENCHMARK FOR IDENTIFICATION OF A FLEXIBLE SERIAL MANIPULATOR USING A CAMERA</b> .....	1483
<i>E. Laroche, L. Cuvillon, D. Vizer, G. Mercère</i>	
<b>Author Index</b>	