

IECON 2006 - 32nd Annual Conference on IEEE Industrial Electronics

**Paris, France
7-10 November 2006**

Volume 1 of 11



**IEEE Catalog Number:
ISBN:**

**06CH37763
1-4244-0135-6**

**Copyright © 2006 by The Institute of Electrical and Electronics Engineers, Inc.
All Rights Reserved**

Copyright and Reprint Permissions: Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republications permission, write to IEEE Copyrights Manager, IEEE Operations Center, 445 Hoes Lane, Piscataway, New Jersey USA 08854. All rights reserved.

IEEE Catalog Number: 06CH37763

ISBN: 1-4244-0135-6

ISSN: 1553-572X

Additional Copies of This Publication Are Available from:

IEEE Service Center
445 Hoes Lane
Piscataway, NJ 08854
IEEE Service Center
445 Hoes Lane
Piscataway, NJ 08854

Phone: (800) 678-IEEE
(732) 981-1393

Fax: (732) 981-9667

E-mail: customer-service@ieee.org

Table of Contents

Independent Control of Two Five-Phase Induction Machines Connected in Parallel to a Single Inverter Supply	1
<i>Martin Jones, Emil Levi, Slobodan N. Vukosavic</i>	
Low-loss Electronic Starter for Single-Phase Compressors	7
<i>Laurent Gonthier, Vincent Adnot</i>	
Colour Object recognition combining Motion Descriptors, Zernike Moments and Support Vector Machine	12
<i>Fethi Smach, Cédric Lemaitre, Johel Miteran, Jean Paul Gauthier, Mohamed Abid</i>	
Static Modelling by Neural Networks of a PEM Fuel Cell	17
<i>M.Hatti, M.Tioursi, W.Nouibat</i>	
Integrated Smart Car Navigation and Voice Control System Design	23
<i>Po-Kuang Chang, Jium Ming Lin, Yuan Lo</i>	
A PWM Scheme for a Five-Phase VSI Supplying a Five-Phase Two-Motor Drive	29
<i>Atif Iqbal, Emil Levi, Martin Jones, Slobodan N. Vukosavic</i>	
New Structure for Three Phase Four Wires Hybrid Active Filters	35
<i>M.Lamich, J. Balcells, J.Garcia, D. González , J. Gago</i>	
Multiple turn on of IGBTs in Large Inverters	41
<i>Mark M. Bakran, Martin Helsper, Hans-Günter Eckel</i>	
Analysis of a Reduced Parts Converter for Bipolar Excitation of an 8/6 Switched Reluctance Drive	47
<i>Chris S. Edrington, Alton Tounsand, Justin Powell, Billy Yancey</i>	
Zero-Ripple-Resonant Converters – A New Class in Resonant Power Conversion	53
<i>Dodi Garinto</i>	
Adaptive Controller Design for a sensorless IPMSM Position Control System	59
<i>Ji-Liang Shi, Tian-Hua Liu, Yung-Chi Chang</i>	
An Approach Based on Particle Swarm Optimization for Optimal Operation of Distribution Network Considering Distributed Generators	65
<i>Taher Niknam</i>	
A Novel Four-leg Matrix Converter	70
<i>Fan Yue, Patrick W. Wheeler, Jon C. Clare</i>	
Design of Pulsewidth-Modulation Based Sliding Mode Controllers for Power Converters in Discontinuous Conduction Mode	76
<i>Siew-Chong Tan, Y. M. Lai, Chi K. Tse, Luis Martinez-Salamero, Angel Cid-Pastor</i>	
A Novel Four-leg Matrix Converter	82
<i>Fan Yue, Patrick W. Wheeler, Jon C. Clare</i>	
Industrial Communication Systems in Technology Control for Public Transport Vehicles	88
<i>Miguel A. Domínguez, Perfecto Mariño, Francisco Poza, Santiago Otero</i>	
Stability Analysis of Fractional Adaptive High-Gain Controllers for a Class of Linear Systems Generalcase	94
<i>Samir Ladaci, Jean Jacques Loiseau, Abdelfatah Charef</i>	
Control for Maximal Wind Energy Tracing in Matrix Converter AC Excited Brushless Doubly-Fed Wind Power Generation System	99
<i>Qi Wang, Xiaohu Chen, Yanchao Ji</i>	
Adaptive Backstepping Control for Linear Induction Motor Drive Using FPGA	105
<i>Faa-Jeng Lin, Li-Tao Teng, Chih-Kai Chang</i>	
Multilayer Perceptron Adaptive Dynamic Control for Trajectory Tracking of Mobile Robots	111
<i>Marvin K. Bugeja, Simon G. Fabri</i>	

Table of Contents

Compact Modeling of MOSFET with VHDL-AMS language	117
<i>Lyse-Aline Coyitangiyé, Richard Grisel</i>	
An Inertially Stabilised Vehicle Camera System - Hardware, Algorithms, Test Drives	123
<i>Wolfgang G.unthner, Philipp Wagner, Heinz Ulbric</i>	
Architecture of a Real-Time Wavelet Transform Calculation SoPC Core for Industrial Applications	129
<i>Jagoba Arias, Jesus Lazaro, Armando Astarloa, Jaime Jimenez, Unai Bidarte</i>	
Fault-Tolerant Ethernet-Based Vehicle On-Board Networks	135
<i>Ramez M. Daoud, Hassanein H. Amer, Hany M. Elsayed, Yves Saliez</i>	
Modern high-voltage IGBTs and their turn-off performance	139
<i>Hans-Guenter Eckel, Mark M. Bakran</i>	
Analytical formulation of the no-load magnetic field in IPM tubular machineswith translator eccentricity	145
<i>Fabrizio Marignetti, Piergiacomo Cancelliere, Maurizio Scarano</i>	
Novel Power Control Scheme for Stand-Alone Photovoltaic Generation System.....	152
<i>Rong-Jong Wai, Chung-You Lin, Wen-Hung Wang</i>	
Grid-Connected Photovoltaic Generation System with Adaptive Step-Perturbation Method and Active Sun Tracking Scheme.....	158
<i>Rong-Jong Wai, Wen-Hung Wang, Jun-You Lin</i>	
Merging Information Technologies with Mechatronics The Autonomous Intelligence Challenge	163
<i>Michel Cotsaftis</i>	
Trajectory-Based Design of Robust Non-Fragile Controllers for Uncertain Linear System.....	171
<i>Hidetoshi OYAy, Kojiro HAGINOz</i>	
Study on the Rotor Levitation of one High Speed Switched Reluctance Motor.....	178
<i>Lizhi Sun, Gang Yang, Qi Feng</i>	
Robust control of a Shunt Active Power Filter for the medium voltage range based on a three-level Neutral Point Clamped converter	182
<i>Alejandro Munduate, Gabriel Garcerá, Emilio Figueres</i>	
Real Time Linear Control implementation Based on Experimentally Validated Small Signal Model of a Three-Phase Three-Level Boost-Type Vienna Rectifier.....	188
<i>Nesrine Bel Haj Youssef, Kamal Al-Haddad, Hadi Youssef Kanaan</i>	
Analysis of Multi-Resonant Current Control Structures and Tuning Methods	194
<i>A. López de Heredia, H. Gaztañaga, I. Etxeberria-Otadui, S. Bacha, X. Guillaud</i>	
DSP Based Experimental Validation Technique Applied to the Development of a NewVienna Rectifier Small Signal Model.....	200
<i>Nesrine Bel Haj Youssef, Kamal Al-Haddad, Hadi Youssef Kanaan</i>	
Field Weakening with Nonlinear Controller Design for an InteriorPermanent Magnet Synchronous Motor	206
<i>Ji-Liang Shi, Tian-Hua Liu, Shih-Hsien Yang</i>	
Combined Analytical-Numerical Approach for the Modeling and Analysis of ThreephaseTransformers.....	212
<i>Basile Kawkabani, Gilles Rosselet, Jean-Jacques Simond</i>	
Study on Fuzzy Controller with a Self-adjustable Factor of Active Power Filter.....	218
<i>Xu Dianguo , He Na, Wang Wei</i>	
Magnetic Part Design of Pipe-Surface Inspection Robot	224
<i>Toshihiro Yukawa, Masayuki Suzuki, Yuichi Satoh, Hideharu Okano</i>	
Influence of Skin Effect on MOSFET Losses	230
<i>Alan Elbanhawy, William Newberry</i>	
Optimal Robot Path Planning Based on Fuzzy Model of Obstacles.....	235
<i>Iman Saboori, M.B. Menhaj, Bahram Karimi</i>	

Table of Contents

Small-Signal Models for Constant-Current Regulated Converters	240
<i>Mikko Hankaniemi, Teuvo Suntio</i>	
VHDL-AMS modeling for virtual prototyping of Very Large Scale Integration architecture for Direct Torque Control of an AC machine.....	246
<i>Philippe POURE, Serge WEBER</i>	
Source-Reflected Load Interactions in a Regulated Converter	252
<i>Mikko Hankaniemi, Matti Karppanen, Teuvo Suntio, Ali Altowati, Kai Zenger</i>	
Fuzzy EKF Control for Wheeled Nonholonomic Vehicles.....	258
<i>Francesco M. Raimondi, Maurizio Melluso</i>	
Control of the line current provided by Dual-Bridge Matrix Converters using a discrete-time sliding mode control approach.....	264
<i>Mahmoud Hamouda, Farhat Fnaiech, Kamal AL-Haddad</i>	
Robust Adaptive Control of Nonaffine Nonlinear Systems Using Radial Basis Function Neural Networks.....	270
<i>B. Karimi, M.B. Menhaj, I. Saboori</i>	
A Fixed-Frequency Direct Instantaneous Torque Control Method of Switched Reluctance Motor Contributing to Low Vibration and Acoustic Noise	276
<i>Qionghua Zhan, Jianbo Sun, Shuanghong Wang, Kai Xin</i>	
A Space Vector Classification Technique for MEMS Electrostatic Six-Phase Induction Micro-motors.....	282
<i>D. Yazdani, A. Bakhshai, G. Joos</i>	
Experimental Verification and Comparison of MAFC Method and D-Q Method for Selective Harmonic Detection.....	286
<i>Lewei Qian, David Cartes, Hui Li</i>	
Losses Minimization of Two Asymmetrical Windings Induction Motor Based on Swarm Intelligence.....	292
<i>A. M. A. Amin, M. I. Korfally, A. A. Sayed, O.T. M.Hegazy</i>	
A new modular multilevel conversion structure with passive filter minimization.....	298
<i>Matteo Carpaneto, Giuseppe Ferrando, Mario Marchesoni, Luis R. Vaccaro</i>	
Analysis of the Behaviour of Genetic Algorithm Applied in Optimization of Electrical System Design for Offshore Wind Farms.....	304
<i>Menghua Zhao, Zhe Chen, Jesper Hjerrild</i>	
Loss of Generation Ratio Analysis for Offshore Wind Farms.....	310
<i>Menghua Zhao, Zhe Chen, Frede Blaabjerg</i>	
QFT design for current-mode PWM buck converters operating in continuous and discontinuous conduction modes.....	316
<i>Carlos Olalla, Ramon Leyva, Abdelali El Aroudi</i>	
Dynamical synchronization for coupled oscillators: application to antenna arrays.....	322
<i>Florin Hutu, Sebastien Cauet, Patrick Coirault, Frederic Launay</i>	
Colour 3D system characterization	328
<i>Alexandra Lathuilière, Franck Marzani, Yvon Voisin</i>	
Optimal Locations and tuning of Robust Power System Stabilizers using Genetic Algorithms.....	334
<i>Karim Sebaa, Mohamed Boudour</i>	
Adaptive Nonlinear Control Applied To a Three Phase Shunt Active Power Filter	340
<i>A. Allag, M. Y. Hammoudi, M. Y. Ayad, M. Becherif, E. Miliani, M. Feliachi</i>	
Cooperative Multi-agent-based Control Systems with ITP Method	346
<i>Juichi Kosakaya, Tomoya Ito</i>	
Measuring the Load-Carrying Capability of IPMC Microgripper Fingers	352
<i>Ujwal Deole, Ron Lumia</i>	

Table of Contents

Rotor-position Sensing System based on one type of Variable-reluctance Resolver	358
<i>Lizhi Sun, Yongping Lu</i>	
Direction-Finding Experimentation through Acoustic Sensor Fabrication	362
<i>D'Mark Hunter, Dale Joachim</i>	
A Novel Sensorless Control Method for IPM Synchronous Machine Drives by Carrier Signal Injection based on Magnetic Saliency	368
<i>Guo Qiuqian, Zhao Li, Zhao Feng, Wen Xuhui</i>	
Application of an Adaptive Nonlinear Control Strategy to AC-DC-PWM Converter Feeding Induction Heating	374
<i>A. Hadri-Hamida, A. Allag, S. M. Mimoune, M. Y. Ayad, M. Becherif, E. Miliani, A. Miraoui, S. Khanniche</i>	
Modeling of Intelligent Electromagnetic Sensor for Buried Tags	379
<i>Adel Zitouni, Larbi Beheim, Fabien Belloir</i>	
Design of Piecewise Linear LQ Control by Multivariable Circle Criterion for Dynamic Positioning System	385
<i>Noriyuki Akasaka</i>	
Simulation Research of Self-adaptation Fuzzy-IMC Algorithm Based on Virtual-axis polishing Machine Tool*	391
<i>ShuangHan, JiZhao, Zhixin Liu</i>	
Robust Fuzzy-Neural-Network Levitation Control Design for LinearMaglev Rail System with Nonnegative Inputs	396
<i>Rong-Jong Wai, Jeng-Dao Lee</i>	
High Resolution DPWM Generator for DC-DC Converter using Pulse Composite Technique	402
<i>Eiji Takegami, Kohji Higuchi, Kazushi Nakano, Satoshi Tomioka,, Kazushi Watanabe</i>	
Improvements in Power Line Communication Reliability for Electric Drives by Random PWM Techniques	408
<i>Silverio Bolognani, L.Peretti, L.Sgarbossa, M.Zigliotto</i>	
Shaft Position Correction Scheme Comparison for Sensorless Control PMSM based on Space State-Estimation between a-B Variance Adjustment and d-q Angle PI Regulation	414
<i>Ming Chuan Huang, A. J. Moses, F. J. Anayi, Xiao Guang Yao</i>	
Comparison of Losses and Thermal Performance of a Three-Level Three-Phase Neutral-Point-Clamped dc-ac Converter under a Conventional NTV and the NTV2 Modulation Strategies	420
<i>Sergio Busquets-Monge, Josep Bordonau, José A. Beristáin</i>	
A Model Reference Adaptive Iterative Learning Control System	426
<i>Ali Madady</i>	
Hierarchical Timing Analysis Considering Global False Coupling Interaction	432
<i>Xiaoxiao Liu, Guangsheng Ma, Guanjun Wang, Gang Feng</i>	
Flyback Converter Protection Scheme with a Selective Shutdown Delay Time	436
<i>Hangseok Choi</i>	
Real-Time Induction Motor Speed Control with a Feedback Utilizing Power Line Communications and a Motor Feeder Cable in Data Transmission	441
<i>Antti Kosonen, Markku Jokinen, Jero Ahola, Markku Niemelä</i>	
Auxiliary Power Supply for the Control IC of a Boost Converter	447
<i>Ray-Lee Lin, Hung-Ming Chen</i>	
Design, Implementation and Characterisation of a Contactless Power Transfer System for Rotating Applications	453
<i>B. A. Potter, S. A. Shirsavar</i>	
A Formal Verification Analysis of a Bayesian Inference-Based Sensors and Actuators Control System	459
<i>Mark Moulin</i>	

Table of Contents

A Novel Method for Continuous Periodic Interference Suppression in On-Line PD Monitoring of Transformers.....	464
<i>Yongming Yang, Xinghuo Yu, Caixin Sun, Quandi Wang</i>	
A New Algorithm for the Detection of Faults in Permanent Magnet Machines	470
<i>P. S. Barendse, P. Pillay</i>	
Automated Inspection of Electric Transmission Lines: The power supply system.....	476
<i>Hector Beltran San Segundo, Vicente Fuster, Lourdes Perez, Pedro Mayorga</i>	
A New Algorithm for the Detection of Inter-Turn Stator Faults in Doubly-Fed Wind Generators.....	481
<i>P. S. Barendse, P. Pillay</i>	
SVC for Load Balancing and Maintaining of Power Quality in an Island Grid Feeding a Nickel Smelter	487
<i>Pierre Vigneau, Jean-Marie Destombes, Rolf Grünbaum, Tomas Gustafsson, Jean-Philippe, Hasler, Anders Persson</i>	
Modeling of PM-PM Dual Mechanical Ports Electric Machines.....	493
<i>Zhao Feng, Wen Xuhui, Chen Jingwei</i>	
Predictive Control Strategy for ZCS Single Stage Resonant Converter	499
<i>M. Catucci, J. Clare, P Wheeler</i>	
A 100kHz-2kW converter for switched reluctance motor used in high speed machining applications	505
<i>Frederic Saint-Eve, Christophe Sauvey, Gabriel Abba</i>	
PLL Structures for Utility Connected Systems under Distorted Utility Conditions.....	511
<i>Sérgio A. Oliveira da Silva, Edgar Tomizaki, Rhodolfo Novochadlo, Ernane Antônio Alves Coelho</i>	
An Empirical Study for Fitness Function Selection in Fuzzy Logic Controllers for Mobile Robot Navigation.....	517
<i>Lefteris Doitsidis, Nikos C. Tsourveloudis</i>	
Modeling of a parallel hybrid power audio amplifier.....	523
<i>Lorenzo Chiesi, Emilio Lorenzani, Giovanni Franceschini, Alberto Bellini</i>	
Field Oriented Current Vector Control of Double -Fed Induction Wind Generator	529
<i>István Schmidt, Károly Veszprémi</i>	
A Novel Time Independent Asynchronous Communication Protocol & Its Applications	535
<i>Pj Radcliffe, Xinghuo Yu</i>	
Intelligent Speed Control of Interior Permanent Magnet Motor Drives	541
<i>Casey Butt, M. A. Rahman</i>	
A Distributed approach to the Remote Control and Programming Improvement.....	547
<i>Francesco M. Raimondi, Ludovico S. Ciancimino</i>	
Comparison of Direct and Indirect Matrix Converters in Induction Motor Drive	553
<i>M. Jussila, H. Tuusa</i>	
High-Frequency Bi-Directional DC/DC Converter Using Two Inductor Rectifier	559
<i>L.A. Flores, O. García, J.A. Oliver, J.A. Cobos</i>	
Fast Algorithm for Adaptive Multivariable Generalized Predictive Control	565
<i>Qi-An Li</i>	
Development of an omni-directional mobile robot with two or more cameras and navigation based on cell map information	571
<i>Toshihiro Yukawa, Takashi Matsumoto, Hideharu Okano, Osamu Hosoya</i>	
A Control Strategy for Four-Wire Shunt Active Filters Using Instantaneous Active and Reactive Current Method.....	577
<i>Aniel Silva de Morais, Ivo Barbi</i>	

Table of Contents

Simulated Annealing Optimized and Neural Networks Self-Tuned PID Voltage Regulator for a Single-Machine Power System	583
<i>Ahmed Bensenouci, A.M. Abdel Ghany</i>	
Power Redistributor Applied to Distribution Transformers	589
<i>Aniel Silva de Morais, Ivo Barbi</i>	
A power sharing series power BJT array with isolated low voltage control for AC power control applications.....	594
<i>Nihal Kularatnaz, Paul Cho</i>	
Sliding Mode Control of Single-Phase UPS Inverters Using a Three-Level Hysteresis Switching Function.....	600
<i>Osman Kükrer, Hasan Kömürçügil, Alper Doganalp</i>	
High Dinamic Control of a PWM Rectifier using Harmonic Elimination.....	605
<i>César Silva, Jorge Oyarzún</i>	
Operation of Distributed Generation in Weak Grids with Local Critical Load	611
<i>Fainan Magueed, Jaap Daalder</i>	
On the Heating Characteristic and Magnetic Flux of a Double-Coil Drive Type Induction Heating Cooker.....	617
<i>Hironobu Yonemori, Miki Kobayashi</i>	
Position Measurement of Crane Hook by Vision and Laser	623
<i>Shunsuke Nara, Daisuke Miyamoto, Satoru Takahashi</i>	
Multi-Dimensional Approach to Multi-Phase Space Vector Pulse Width Modulation	629
<i>Mario J. Duran, Emil Levi</i>	
Control System Of The Two-Coordinate Multifunctional Servo Drive	635
<i>Vilius Antanas Geleževicius, Giedrius Blažiumas</i>	
Coupling control volume modeling in fluid and lumped thermal model – Application to an induction machine.....	640
<i>Jean-François Trigeol, Yves Bertin, Patrick Lagonotte</i>	
An Artificial Neural Network Based Rotor Position Estimation for Sensorless Permanent Magnet Brushless DC Motor Drive.....	646
<i>Rajesh Kumar, Santhosh Vijaya Padmanaban</i>	
Obstacle avoidance algorithm based on biological patterns for anthropomorphic robot manipulator	652
<i>Rafal Kapela, Andrzej Rybarczyk</i>	
Simulation of a Space Vector PWM Controller For a Three-Level Voltage-Fed Inverter Motor Drive	658
<i>Ayşe Kocalmis, Sedat Sünter</i>	
Gyroscope System Identification using an Impulse Response RLS Algorithm.....	664
<i>Eyad Turki, Tarek A. Tutunji, Mohammad Molhim</i>	
Output Voltage Distortion Compensation for Matrix Converter Fed Induction Motor Driven System	669
<i>Yang Mei, Lipei Huang</i>	
An Optimal Iterative Learning Control for Continuous -Time Systems	675
<i>Mohammad Reza Nasiri</i>	
Numerical Approach for Guaranteeing Stable Design of Practical Matrix Converter Drive Systems.....	681
<i>C.A.J. Ruse, J.C. Clare, C. Klumpner</i>	
A low memory disturbance elimination method for sensorless control of induction motor drive using test vector injection.....	687
<i>P. Makyi, G.M.Asher, M.Sumner, Q. Gao, J. Vittek</i>	
Color Stereoscopic Steps for Road Obstacle Detection	693
<i>Iyadh Cabani, Gwenaëlle Toulminet, Abdelaziz Bensrhair</i>	

Table of Contents

Sensorless Control of Induction Machines, including Zero Frequency using only Fundamental PWM Excitation.....	699
<i>Gao, Q, Asher, G.M., Sumner M., Makys, P.</i>	
Data Routing and Remote Protocol Analysis using the TETHRA System	705
<i>Mihai Fagadar-Cosma, Liviu D Faniciu, Mihai V Micea</i>	
Reduced models for temperature control of a power drive	
with variable cooling fluid flow	711
<i>Cédric Rouaud, Patrick Lagonotte, Alain Alexandre</i>	
Process Oriented Engineering Using Highly Integrated Adaptive Computer Descriptions	718
<i>Imre J. Rudas, László Horváth</i>	
Road Sign Tracking with a Predictive Filter Solution.....	724
<i>S. Lafuente-Arroyo, S. Maldonado-Bascon, P. Gil-Jimenez, H. Gomez-Moreno F. Lopez-Ferreras</i>	
Visual based Localization for mobile robots with Support Vector Machines	730
<i>Jiali Shen, Huosheng Hu</i>	
Visual Servoing of Par4 using Leg Observation.....	736
<i>Tej Dallej, Nicolas Andreff, Philippe Martinet</i>	
A Practical Example to Understand Pipeline A/D Converters Performance Using Software Tools	742
<i>Quintans C., Moure M.J, Mandado E., Castro M.A.</i>	
PWM-switch Model of Tapped Inductor Converters under Hysteretic Current-mode Control.....	747
<i>J. H. Park, B. H. Cho, T.H.Kim</i>	
Research on AC-DC-AC Converter for Wind Power Doubly-Fed Induction Generator.....	753
<i>Hongfei Ma, Yi Wang, Dianguo Xu, Yongqiang Lang</i>	
Towards the optimum cost of ownership of switched-mode power supplies: Early stage cost management with life-cycle costing.....	759
<i>Frank Bescherer, Mika Sippola</i>	
A Multi-Modular System Based On Parallel-Connected Multilevel Flying Capacitor Converters Controlled with Fundamental Frequency SPWM	764
<i>Chunmei Feng, Jun Liang, Vassilios G. Agelidis, Tim C. Green</i>	
A Non-Invasive Urination-Desire Sensing System based on Four-Electrodes Impedance Measurement Method	770
<i>Katsunori Shida, Shin Yagami</i>	
Wavelet Based Instantaneous Power Analysis for Induction Machine Fault Diagnosis	774
<i>Shahin Hedayati Kia, A. Mpanda Mabwe, Humberto Henao, Gérard-André Capolino</i>	
Analysis, design and practical evaluation of an input-output linearization controller for the CLL-T dc-dc resonant converter	780
<i>Jorge Sosa, Miguel Castilla, Nestor Berbel, J. M^a. Guerrero, L. García de Vicuña</i>	
Use of data standardization to improve inverter - induction machine fault detection	786
<i>O. Ondel, E. Boutleux, G. Clerc</i>	
Sensorless Vector Control of Spindle Induction Motors Using Rotor Flux Observer with a Variable Bandwidth	792
<i>Jae-Sung Yu, Byoung-Hoon Yoo, Byoung-Kuk Lee, Chung-Yuen Won</i>	
A Novel High-performance Single-phase PFC Approach Based on One-cycle Control.....	798
<i>Yubin Wang, Jiwen Li</i>	
A Single Phase Uninterruptible Power System with a Gradationally Controlled Voltage Inverter.....	804
<i>Osamu Mori, Masaki Yamada, Akihiko Iwata, Shinichiro Maruyama, Joji Okada, Yoshihiro Hatakeyama</i>	
Comparison of Integrator-based and Dead-Beat Controllers for Shunt Power Active Filters.....	810
<i>A. López de Heredia, I. Etxebarria-Otadui, M. Malinowski, S. Bacha, D. Roye</i>	

Table of Contents

Modelling of Nuclear Reactor and Power Control by Extended Frequency Method.....	816
<i>Yoon Joon. Lee, Man Gyun. Na</i>	
A simple circuit-oriented model for predicting six-phase induction machine performances.....	822
<i>G. Aroquiadassou, H. Henao, G.A. Capolino, A. Boglietti, A. Cavagnino</i>	
Depth Perception from three blurred images.....	828
<i>Thierry SIMON, Christophe SIMON</i>	
Design and performance of integrated antennas for wireless intra chip interconnections	833
<i>Philippe Benech, Fabien Ndagijimana, Anna Triantafyllou, Alexis Farcy</i>	
Side effects evaluation of switching frequency modulation in power converters.....	838
<i>Mon, J., Gonzalez, D., Gago, J., Balcells, J., Santolaria, A., Ferrer, Ll.</i>	
Modelling the Connection of Alternative Energy Sources to the Three-phase Utility Grid for Circuit Simulation.....	844
<i>Federico Scapino</i>	
Photonics integrated circuits on plasma-polymer-HMDSO: Single-mode TE₀₀-TM₀₀ straight waveguides, S-Bends, Y-Junctions and Mach-Zehnder Interferometers	850
<i>T. Begou, B. Bêche, A. Goulet, A. Granier, C. Cardinaud, E. Gaviot, V. Raballand, J.P. Landesman, J. Zyss</i>	
Tuning of PID Controllers for Networked Control Systems.....	855
<i>Mikael Pohjola, Lasse Eriksson, Heikki Koivo</i>	
A Self Oscillating Voltage Controller for Applications with High Bandwidth.....	861
<i>J.C. Olivier, J.C. Le Claire, L. Loron, N. Ginot</i>	
Partially-Rotating Piezoelectric Actuator to Assist Cell Penetration in Intra-Cytoplasmic Sperm Injection.....	867
<i>A.S. Putra, S. Huang, K.K. Tan, S.K. Panda, T.H. Lee</i>	
Determining Transmission Line Parameters from GPS Time-Stamped Data	873
<i>Martin Grobler, Raj Naidoo</i>	
Influence of Long High Voltage Cables on Total Harmonic Distortion of Currents in Wind Farms	878
<i>Juriy Plotkin, Detlef Schulz, Rolf Hanitsch</i>	
Multipulse Converter – Topology and Control for Utility Power Conversion.....	884
<i>Rajib Datta, Haiqing Weng, Kunlun Chen, Allen M. Ritter, Ravisekhar Raju</i>	
Time-Frequency Classification Applied to Induction Machine Faults Monitoring.....	890
<i>LEBAROUD Abdesselam, CLERC Guy</i>	
Experimental Identification of Natural Gas Cooling Process.....	896
<i>Toni Bjazic, Fetah Kolonic, Petar Crnosija</i>	
Fuzzy Cognitive Networks + Fuzzy Controller as a self adapting control system for Tracking Maximum Power Point of a PV-Array	902
<i>Yiannis S. Boutalis, Athanassios D. Karlis, Theodoros L. Kottas</i>	
Real-Time implementation of a SPLN for FACTS.	908
<i>Francisco D. Freijedo, Jesus Doval-Gandoy, Oscar Lopez, David Piñeiro, Carlos M. Peñalver, Andres A. Nogueiras</i>	
Vision Related Brain Activity for Biometric Authentication	914
<i>Ramaswamy Palaniappan</i>	
Solving The Problem Of Forbidden States By Feedback Control Logical Synthesis	919
<i>Abbas Dideban, Hassane Alla</i>	
A ned-type Neural-Fuzzy Gap Control of Electromagnetic Suspension Systems	925
<i>Shing-Jen Wu, Cheng-Tao Wu</i>	
Mutual Localization of Mobile Robotic Platforms Using Kalman Filtering	931
<i>Vincent Zalzal, Paul Cohen</i>	

Table of Contents

Design of Real Time Control Software Based On QNX	937
<i>Kong YaGuang, Wang WenHai</i>	
Slanted Oxide-Bypassed Superjunction Power MOSFETs	943
<i>Yu Chen, Yung C. Liang, Ganesh S. Samudra</i>	
Experimental designs for the tuning of a redundant position observer on a PMSM drive	948
<i>S. Caux, P. Maussion, C. Loubet, M. Fadel</i>	
Influence of Coil Arrangement and Current Polarity on the Output Torque of a Switched Reluctance Motor	954
<i>F J Pérez Cebolla, A Martínez, B Martín, E Laloya, T Pollán, J E Vicuña, J Lladó, B Sánchez</i>	
Auxiliary Power Supply for the Control IC of a Buck Converter	960
<i>Ray-Lee Lin, Hung-Ming Chen</i>	
SmartGec: A multisensor System for network monitoring in Civil Engineering	966
<i>Rémy Maurice, Eric Campo, Daniel Estève, Delphine Bouchet</i>	
Development of a Yarn Evenness Measurement and Hairiness Analysis System	971
<i>V. Carvalho, P. Cardoso, M. Belsley, R. M. Vasconcelos, F. O. Soares</i>	
Wavenet Based Modeling of Vehicle Suspension System	977
<i>Yul Y. Nazaruddin, Yuliati</i>	
Sliding-Mode Observer with Resistances or Speed Adaptation for Field-Oriented Induction Motor Drives	983
<i>Ciro Picardi, Francesco Scibilia</i>	
A High-Voltage Compatible BCD SoC-ASIC Performing Valley-Switching Control of AC-DC Power Converters Based on PFC and Flyback Cells	989
<i>W. Langeslag, R. Pagano, K. Schetters, A. Strijker, A. van Zoest</i>	
Adaptive Speed Sensorless Vector Control of Induction Motor using Singularly Perturbed Sliding Mode Observer	995
<i>A. Mezouar, M. K. Fellah, S. Hadjeri, Y. Sahali</i>	
Switched Feedback Tracking Control of a Nonholonomic Mobile Robot	1003
<i>Mahmut Reyhanoglu, Theo Geluk</i>	
Evaluation on basic resonant structures and voltage clamping techniques	1008
<i>Mizhi Zhang, T. A. Little</i>	
Sliding Mode Adaptive Controller for PZT Actuators	1014
<i>Sabanovic A., Khan S., Elitas M, Jezernik K.</i>	
Maximum-Power-Extraction Algorithm for Grid-Connected PMSG Wind Generation System	1020
<i>Rou-Yong Duan, Chung-You Lin, Rong-Jong Wai</i>	
Development of Real-time Control Test-bed for Unmanned Mobile Vehicles	1026
<i>Wenchuan Cai, L.G. Weng, R. Zhang, B. Li, F. Stewart, A. Dhaliwal, Y. D. Song</i>	
Extrema Detection of Optimal Smoothing Splines with Application to Edge Detection Problem	1032
<i>Hiroyuki Fujioka, Hiroyuki Kano</i>	
Backward Motion Control for Articulated Vehicles with Double Trailers Considering Driver's Input	1038
<i>Kouki Matsushita, Toshiyuki Murakami</i>	
Design of a Passive Filter to Reduce Common-Mode and Differential-Mode Voltage Generated by Voltage-Source PWM Inverter	1044
<i>Xu Dianguo, Gao Qiang, Wang Wei</i>	
Sags, swells and harmonic solid state compensator	1049
<i>Juan M. Ramirez, Jose M. Lozano, Julio Cesar Rosas</i>	
Extraction of equivalent electrical models for damascene MIM capacitors in a standard 120 nm CMOS technology for ultra wide band applications	1055
<i>P. Lemoigne, J.-D. Arnoult, P.-E. Bailly, N. Corrao, Ph. Benech, M. Thomas, A. Farcy, J. Torres</i>	

Table of Contents

Qualitative Modelling of Manufacturing Machinery	1059
<i>Georgia Garani, George K. Adam</i>	
Improved Canny Edge Detector in Ceramic Tiles Defect Detection	1065
<i>Zeljko Hocenski, Suzana Vasilic, Verica Hocenski</i>	
Investigation of Frequency/AC Voltage Control for Inverter Station of VSC-HVDC	1069
<i>Cuiqing Du, Evert Agneholm</i>	
Vision-based Computed Torque Control for Parallel Robots	1075
<i>Flavien Paccot, Nicolas Andreff, Philippe Martinet, Wisama Khalil</i>	
A Novel Control of VSC-HVDC for Improving Power Quality of an Industrial Plant.....	1081
<i>Cuiqing Du, Evert Agneholm</i>	
Tracking Control of an Underactuated Autonomous Surface Vessel Using Switched Feedback.....	1087
<i>Mahmut Reyhanoglu, Ard Bommer</i>	
Control method of a doubly-fed induction generator with automatic grid synchronization	1093
<i>Jungwoo park, Kiwook Lee, Dongwook Kim</i>	
A Novel Fault Detection Scheme for Voltage Fed PWM Inverter.....	1099
<i>Ok-Sun Yu, Nam-Ju Park, Dong-Seok Hyun</i>	
AC-DC Bidirectional Single-Phase Step-Down Converter with High Power Factor.....	1105
<i>Edward Fuentealba Vidal, Ivo Barbi</i>	
A Novel STATCOM Based on Cascaded Three-phases Voltage Source Inverter	1111
<i>Xiangyun FU, Jianze WANG, Yanchao JI</i>	
Practical Stability Analysis for Swarm Systems	1117
<i>Xue-Bo Chen, Fuchen Pan, Lin Li, Hong Fang</i>	
Physical Basis for the Variation of Lamination Core Loss Coefficients as a Function of Frequency and Flux Density	1123
<i>Tsakani Lotten Mthombeni, Pragasen Pillay</i>	
CLAIRVOYANCE: A Fast And Robust Precision Mosaicing System for Gigapixel Images.....	1130
<i>Frank Nielsen, Noriyuki Yamashita</i>	
Digital control strategies for switch-mode power supply	1136
<i>Xuefang Lin-Shi, Bruno Allard, Dominique Tournier, Jean-Marie Retif, Florent Morel</i>	
New State Observers and Sensorless Control of Wound Rotor Induction Generator (WRIG) at Power Grid with Experimental Characterization	1142
<i>Ioan Serban G.D. Andreescu, L. Tutelea, C. Lascu, I. Boldea, Frede Blaabjerg, Robert Bosch</i>	
Analysis And Design Of Four-Leg Fuel Cell Boost Converter	1148
<i>Li-Hsiu Chen, Jonq-Chin Hwang, Sheng-Nian Yeh, Ging-Chou Yu</i>	
A Design of Indirect Model Reference Adaptive Control for Discrete-Time Multivariable Plant.....	1154
<i>Wataru Kase, Fumihiko Hatamoto, Yasuhiko Mutoh</i>	
Identification of Synchronous Machine Parameters Using Hysteresis Based Current Controller	1160
<i>M-W. Naouar, E. Monmasson, I. Slama-Belkhdja</i>	
A Unified Approach to Back-EMF Detection for Brushless DC Motor Drives without Current and Hall Sensors	1166
<i>Yen-Shin Lai, Young-Kai Lin</i>	
Development of Dynamic Var Compensator Based on 12-pulse Thyristor Controlled Reactor	1172
<i>Long Yunbo, Yu Han, Cui Zhengpai, Zhang Jianhua</i>	
Straight and Circular Road Driving Control for Power Assisted Wheelchair Based on Fuzzy Algorithm.....	1177
<i>Hirokazu Seki, Susumu Tadakuma</i>	

Table of Contents

Novel Step Climbing Control for Power Assisted Wheelchair Based on Driving Mode Switching.....	1183
<i>Hirokazu Seki, Takashi Iijima, Hideaki Minakata, Susumu Tadakuma</i>	
A CAN Application Profile for Control Optimization in Networked Embedded Systems.....	1189
<i>Manel Velasco, Pau Marti, Rosa Castane, Josep Guardia, Josep M. Fuertes</i>	
Analog-to-digital converter architectures for digital controller of high-frequency power converters.....	1195
<i>Tao ZHOU, Jianping XU, Bruno FRANCOIS</i>	
Research on a Practical Approach of Integrated Compensation for Unbalanced Load	1201
<i>Cui Zhengpai, Yu Han, Li Sheng, Long Yunbo, Zhang Jianhua,.</i>	
On a Synthesis of Multivariable PID Controllers for a Class of Linear Systems.....	1206
<i>Nagato OHSE, Yoshitaka MATSUDA, Koki TANAKA</i>	
Approach on Detection of Reactive and Harmonic Currents in Single-phase Circuit	1212
<i>Yu Han, Cui Zhengpai, Li Sheng, Liu Qihui, Long Yunbo, Zhang Jianhua</i>	
Fault Tolerant Field Oriented Control of the Induction Motor for Loss of One Inverter Phase	1216
<i>Amr Saleh, Mario Pacas, Adel Shaltout</i>	
Measurement Error Analysis of Autonomous Decentralized Load Tracking System.....	1222
<i>Tetsuya Masuishi, Koichi Shibata, Yasuyuki Oki, Kinji Mori</i>	
A Sinusoidal VSI Wave-shaping Controller for Non-linear Loads	1228
<i>M. C. Trigg, H. Dehbonei, C. V. Nayar</i>	
Neural Control of a Fully Actuated Biped Robot	1234
<i>Nasser Sadati, Kaveh Akbari Hamed</i>	
Switched Coupled-Inductor Cell for DC-DC Converters with Very Large Conversion Ratio.....	1240
<i>Boris Axelrod, Yefim Berkovich, A. Ioinovici</i>	
Free Alternatives To Matlab For Undergraduate Electronics Engineering Curricula	1246
<i>Ahmad M. Ibrahim</i>	
Induction Machine Broken Bars Fault Detection Using Stray Flux after Supply Disconnection.....	1252
<i>Shahin Hedayati Kia, Humberto Henao, Gérard-André Capolino, C. Martis</i>	
Hybrid Fuzzy-PID-based Control of a Twin Rotor MIMO System	1258
<i>A.Rahideh, M.H.Shaheed</i>	
Product Definition in Mass Customization Adopting Neural Network	1264
<i>Chen Zhaoxun, Wang Liya</i>	
Study on the Permanent Magnet Demagnetization Fault in Permanent Magnet Synchronous Machines.....	1269
<i>J. A. Rosero, J. Cusido, A. Garcia, J.A. Ortega, L. Romeral</i>	
Broken Bearings and Eccentricity Fault Detection for a Permanent Magnet Synchronous Motor	1275
<i>J. A. Rosero, J. Cusido, A. Garcia, J.A. Ortega, L. Romeral</i>	
A Nonlinear Reduced Order Observer for Rotor Position Estimation of Sensorless Permanent Magnet Brushless DC Motor Drive.....	1281
<i>Rajesh Kumar, Narendra Singh, Jogendra Singh, Santhosh Vijaya Padmanaban</i>	
A Comparison between Polynomial and Locally Weighted Regression for Fault Detection and Diagnosis of HVAC Equipment	1287
<i>Regunathan Radhakrishnan, Daniel Nikovski, Kadir Peker, Ajay Divakaran</i>	
Simulator of Biomass Cogeneration System.....	1293
<i>Yunya SHIRAYAMA, Nobuo KURIHARA</i>	
Timed Petri Nets Modelling of High-Throughput Screening Process for Fault Study.....	1299
<i>Tao Hong, Mo-Yuen Chow</i>	

Table of Contents

Inverter Modeling and Current Control System Design for Improving Current Response of PM Synchronous Moter in Overmodulation range	1305
<i>Lerdudomsak Smith, Mitsuhiro Kadota, Shinji Doki, Shigeeru Okuma</i>	
The Rotor Conductor Design for Starting Stability of Line-Start Synchronous Reluctance Motor	1311
<i>Tae-Uk Jung, Cheol-Ho Yun, Hyun-Rok Cha, Hyung-Mo Kim, Hyuk Nam, Jung-Pyo Hong</i>	
Harmonic Suppression Orthogonal Reactor to Automatically Regulate Voltage in AC Power system.....	1317
<i>Xiaoxia Wei, Yanchao Ji, Jianze Wang, Yan Dong</i>	
A Bilateral Control Method for Master-Slave Grasping and Manipulation System	1322
<i>Koichi Nishimura, Kouhei Ohnishi</i>	
Carrier-Based Signal Injection Method for Harmonic Suppression in PWM Inverter Using Single DC-link Current Sensor.....	1328
<i>Hyung-Sun Ryu, Ho-Sun Yoo, Jung-Ik Ha</i>	
Autonomous Vehicle Obstacle Avoiding and Goal Position Reaching by Behavioral Cloning.....	1334
<i>Ranka Kulic, Zoran Vukic</i>	
A Model and Verification for Temperature Dependency of the Noise in Large Size CCD Image Sensor.....	1340
<i>Kazuhiro Hoshino, Toshihiro Nishimura</i>	
High Efficiency SVG System using Open-Winding Transformer and Two Space Vector Modulated Inverters	1344
<i>Hidekatsu Terakawa, Yousuke Fujii</i>	
Control of Switched Capacitor Step-Down Buck Converter	1349
<i>Mummadi Veerachary</i>	
Three-phase Four-Wire Shunt Active Filter to Reduce Voltage and Current Distortions in Distribution Systems	1353
<i>Robinson Figueiredo de Camargo, Humberto Pinheiro</i>	
Power Flow Diagrams Using a Bond Graph Library under Simulink	1359
<i>Gert-Helge Geitner</i>	
Real-Time Image Distortion Correction using FPGA-based System.....	1366
<i>Alvaro Hernandez, Alfredo Gardel, Laura Perez, Ignacio Bravo, Raul Mateos, Eduardo Sanchez</i>	
HVDC Transmission Line Models for Steady-State and Transients Analysis in SIMULINK Environment.....	1371
<i>Khatir. M, Zidi. S. A, Fellah. M. K, Hadjeri. S, Dahou. O</i>	
Monitoring of timed discrete events systems: Application to manufacturing systems	1377
<i>Adib Allahham, Hassane Alla</i>	
Backstepping Sliding Mode Control Applied to a Miniature Quadrotor Flying Robot	1383
<i>T. Madani, A. Benallegue</i>	
Low-order robust power system stabilizer for single-machine systems: an LMI approach	1389
<i>Seog-Joo Kim, Soonman Kwon, Young-Hyun Moon, Kook-Hun Kim</i>	
A Modulation Strategy To Reduce Common-Mode Voltage For Current-Controlled Matrix Converters.....	1395
<i>Lin Hua He Bi, Zhang Xiaofeng</i>	
Sliding-Mode Control for an Underactuated Overhead Crane System	1401
<i>Kuo-Kai Shyu, Cheng-Lung Jen, Li-Jen Shang</i>	
Direct Torque Control with Space Vector Modulation for Induction Motors Fed by Cascaded Multilevel Inverters	1407
<i>Yi Wang, Heming Li, Xinchun Shi</i>	
Electric drives estimation and denoising schemes based on wavelet transforms	1412
<i>Damian Giaouris, John W Finch</i>	
Singular Perturbation modelling and control of embarked electrical network	1418
<i>Iamya Abdeljalil, Mourad Ait-Ahmed, Mohamed Fouad Benkhoris</i>	

Table of Contents

A TINNI Development Environment for Eclipse	1424
<i>Dwight Deugo</i>	
Inverter Configurations Comparative for Residential PV-Grid Connected Systems	1430
<i>Carlos Meza, Juan José Negroni, Francesc Guinjoan, Domingo Biel</i>	
Urban Traffic Incident Detection Based On Fuzzy Logic	1436
<i>Kong Yaguang, Xue Anke</i>	
The Feasibility of Small-Scale Residential DC Distribution Systems	1440
<i>Kristof Engelen, Erik Leung Shun, Pieter Vermeyen, Ief Pardon, Reinhilde Dhulst, Johan Driesen, Ronnie Belmans</i>	
Monitoring Physical Device Positions using RFID in Electrical Distribution Switchboards	1446
<i>Fabrice Roudet, Smail Tedjini</i>	
A New Procedure of Time-Varying Switching Plane Design	1449
<i>Aleksandra Nowacka, Andrzej Bartoszewicz</i>	
Low speed operation improvement of MRAS sensorless vector control induction motor drive using neural network flux observers	1455
<i>Shady M Gadoue, Damian Giaouris, John W Finch</i>	
Moving Switching Plane Selection for the Third Order System Subject to Input and Acceleration Constraints	1461
<i>Aleksandra Nowacka, Andrzej Bartoszewicz</i>	
Robust control of DC motor velocity through DC-DC Buck Power Converter	1467
<i>H. El Fadil, F. Giri</i>	
Time Stepping Simulation of Synchronous Reluctance Motors Using Non Linear Reluctance Network Method	1473
<i>Tsarafidy Raminosoa, Ignace Rasoanarivo, Christian Belalahy, François-Michel Sargos</i>	
Discontinuous SVPWM Techniques for Double Star Induction Motor Drive Control	1479
<i>Khoudir Marouani, Lotfi Baghli , Djafar Hadiouche ,Abdelaziz Kheloui, Abderrezak Rezzoug</i>	
Fractal Rendering of 3D Shapes	1485
<i>Wieslaw Kotarski, Agnieszka Lisowska</i>	
High frequency inverter design for large-signal characterization of domestic induction heating load	1491
<i>D. Puyal, C. Bernal, J. M. Burdío, J. Acero, I. Millán</i>	
A Minimization of Speed Ripple of Sensorless DTC for controlled Induction Motors used in Electric Vehicles	1497
<i>F. Khoucha, K. Marouani, A. Kheloui, MEH. Benbouzid</i>	
UML-based Approach for the Re-Engineering of PLC Programs	1503
<i>Mohammed Bani Younis, Georg Frey</i>	
Vibration Influence of Tactile Walking Surface Indicators on the Running of Manual Wheelchairs and Walking Frames	1509
<i>Seiji Mitani, Shoichiro Fujisawa, Osamu Sueda, Tomomi Iwata</i>	
Measured Impedance by Distance Relay in Presence of SVC on Transmission Line	1515
<i>A. Kazemi, S. Jamali, H. Shateri</i>	
Adaptive Tracking for Nonlinear Plants Using Multiple Identification Models and State-Feedback	1520
<i>Ahmet Cezayirli, Kemal Ciliz</i>	
Modelling and Control of an Ultrasonic Motor: Application to a Mechanical Claw Drive	1526
<i>Frederic Giraud, Betty Semail, Alain Bouscayrol</i>	
A Biomechanical Model To Aid Robot-Assisted Therapy Of Upper Limb Impairment	1532
<i>Hussein A. Abdullah, Cole Tarry, Gauri S. Mittal, Mohamed Abderrahim</i>	

Table of Contents

Operation of the ATLAS Experiment: Organization of the Detector Controls and the Data Acquisition System.....	1538
<i>Alex Barriuso Poy, John Erik Sloper, Viatcheslav Khomutnikov, Giovanna Lehmann Miotto</i>	
Dynamic Modeling and Centralized Formation Control of Mobile Robots	1543
<i>Celso De La Cruz, Ricardo Carelli</i>	
Direct and indirect control of a Doubly Fed Induction Generator wind turbine including a storage unit.....	1549
<i>Armand Boyette, Shahrokh Saadate, Philippe Poure</i>	
Design and Fabrication Issues of a Silicon-Based Vibration Powered Electric Energy Generator Using Parallel Plate and In-Plane Mechanism.....	1555
<i>A. M. Paracha, P. Basset, C. L. P. Lim, F. Marty, P. Poulichet, G. Amendola, T. Bourouina</i>	
Data Hiding Scheme With Geometric Distortions Correction.....	1561
<i>Xiaoxia Jiang, Siwei Lu</i>	
A Hybrid Capacitor-Clamp Cascade Multilevel Converter	1567
<i>Anees Abu Sneineh, Ming-yan Wang, Kai Tian</i>	
Chopper stabilized CMOS integrated front-end for magnetic field measurement.....	1573
<i>Vincent Frick, Joris Pascal, Jean-Philippe Blondé, Luc Hébrard</i>	
On-Line Identification of Induction Motors using Discrete Models for Sinusoidal Signals.....	1578
<i>Alcindo do Prado Jr, Antonio Heronaldo de Sousa, Sandro Mauro Ferrari</i>	
A Novel Method to Estimate the Rotor Resistance of the Induction Motor Using Support Vector Machines.....	1584
<i>Sergio Villazana, Antonino Caralli, Cesar Seijas, Carlos Villanueva</i>	
A New Adaline Approach for Online Voltage Components Extraction from Unbalanced and Perturbed Power Systems.....	1590
<i>Djaffar Ould Abdeslam, Patrice Wira, Jean Mercklé, Damien Flieller</i>	
Particle Swarm Optimized Direct Torque Control of Induction Motors	1596
<i>O. S. El-Laban, H. A. Abdel Fattah, H. M. Emara, A. F. Sakr</i>	
Maintenance Analyses, Control and Supervision System Design of Light Rail – An Application in Estonia	1602
<i>Argo Rosin, Taavi Möller, Juhan Laugis</i>	
Polymer Thick Film Nip Width Sensor.....	1608
<i>Thomas V. Papakostas, Jason Flick, Mark Lowe</i>	
Development of Monitoring and Control Precise Riveting System using Wireless Internet.....	1613
<i>Hsiung Cheng Lin</i>	
Output feedback sliding-mode control for the boost inverter.....	1618
<i>Domingo Cortés, Jaime Alvarez, Nimrod Vázquez</i>	
Critical Control Design for Fatigue Avoidance in Two-Inertia Systems	1624
<i>Toshiyuki Satoh, Naoki Saito</i>	
Proposal and Evaluation of Outdoor Localisation based on IEEE 802.11	1630
<i>Salvatore Cavalieri</i>	
Predictive Direct Torque Control of the Doubly Fed Induction Machine with Reduced Torque and Flux Ripples at Low Constant Switching Frequency.....	1636
<i>Gonzalo Abad, Miguel Angel Rodriguez, Javier Poza</i>	
Application of Photonic Bandgap Fiber in Gas Concentration Measurement.....	1642
<i>Joanna Pawlata, Takahiro Matsuoa, Tadashi Sugiyamab, Toshitsugu Uedaa</i>	
Security Enhancement on VoIP using Chaotic Cryptography	1646
<i>Kwan-Pok Man, Kwok-Wo Wong, Kim-Fung Man</i>	
A Novel Polymeric Micropump based on a Multilayered Ionic Polymer-Metal Composite.....	1652
<i>Thanh Tung Nguyen, Vinh Khanh Nguyen, Youngtai Yoo, Nam Seo Goo</i>	

Table of Contents

Observer-Based Drive-Control For Self-Balanced Vehicles	1658
<i>Klaus Hofer</i>	
Single Switch LCD Backlight Inveerter with a Dimming Control	1664
<i>Gang- Youl Jeong</i>	
Dynamic Geometric Compensation for Gantry Stage using Iterative Learning Control.....	1670
<i>CS Teo, KK Tan, SY Lim</i>	
Inverse Filtering Approximation for Impacting Signals Estimation Using a Multilayer Neural Network	1676
<i>Erik Molino-Minero-Re, Mariano López-García, Antoni Mánuel-Lázaro, Joaquín del-Río-Fernández</i>	
Comparison of Reference Current Generation Techniques for Non-active Power Compensation Under Distorted and Unbalanced Conditions	1680
<i>Ordoñez Rafael, Karimi Charif, Oueidat Mohamad, Sadarnac Daniel</i>	
Setting the Preheating Process of Electronic Ballasts for Hot-Cathode Fluorescent Lamps, considering the Rh /Rc Ratio	1686
<i>Fabio T. Wakabayashi, Moacyr A. G. de Brito, Castellane S. Ferreira, Carlos A. Canesin</i>	
Image Thresholding Computation of Between-Class Variance in a Partial Parallel Structure parallel structure. [5], and surface inspection [2].	1692
<i>Ku Chin Lin, Yi-Hong Lin</i>	
Grasping Force Control in consideration of Translational and Rotational Slippage by a Flexible Sensor	1698
<i>Naoki Saito, Toshiyuki Satoh, Hideharu Okano</i>	
ANN Modelling of Nonlinear Subsystem of a PEMFC Stack for Dynamic and Steady State Operation	1704
<i>Xin KONG, Wenjie Yeau, Ashwin M. KHAMBADKONE</i>	
Predictive Direct Power Control - A New Control Strategy for DC/AC Converters.....	1710
<i>Sergio Aurtenechea, Miguel Angel Rodríguez, Estanis Oyarbide, José Ramón Torrealday</i>	
Decentralized H8 Control of Maglev Systems	1716
<i>Jong-Moon Kim, Sang-Hyuk Lee, Young-Kiu Choi</i>	
Fuzzy based Output Feedback H8 Control for Uncertain Nonlinear Systems An LMI Approach.....	1722
<i>A.H.Besheer, H.M.Emara, M.M.Abdel Aziz</i>	
An LMI Approach to Fuzzy Pole Cluster for Regulating Wind Energy Conversion System	1728
<i>A.H.Besheer, H.M.Emara, M.M.Abdel Aziz</i>	
Contribution of Non Integer Integro-Differential Operators (NIDO) to the geometrical understanding of Riemann's conjecture-(II).....	1734
<i>Alain Le Méhauté, Abdelaziz El Kaabouchi, Laurent Nivanen</i>	
Input Impedance Characteristics of an Electronic Choke- Influence by Inductor with Different Winding Structure -	1738
<i>Tadashi Matsumoto, Akihiko Katsuki</i>	
Pulsed Power Generation Techniques	1744
<i>D. J. Thrimawithana, U. K. Madawala, R. C. B. Woodhead</i>	
Run-Time Reconfigurable Hardware-Software Architecture for PID Motor Control IP Cores	1750
<i>Jesús Lázaro, Armando Astarloa, Unai Bidarte, Jaime Jimenez, Jagoba Arias</i>	
Passive Fuel Delivery in Direct Methanol Fuel Cell by Surface Tension Driving Effect.....	1756
<i>Yuming Yang, Yung C. Liang</i>	
Speed Sensorless Vector Controlled Induction Machine in Flux Weakening Region	1762
<i>Samir Moulahoum, Omar Touhami, Abderrezak Rezzoug, Lotfi Baghli</i>	
3D Object Matching Using Spherical Mapping	1768
<i>Blerim Mustafa, Danco Davcev, Vladimir Trajkovik, Slobodan Kalajdziski</i>	
DC Voltage Balancing for PWM Cascaded H-Bridge Converter Based STATCOM	1773
<i>Jon Andoni Barrena, Luis Marroyo, Miguel Ángel Rodríguez, Óscar Alonso, José Ramón Torrealday</i>	

Table of Contents

New Technique For Maximum Efficiency And Minimum Operating Cost Of Induction Motors Based On Particle Swarm Optimization (Pso).....	1779
<i>Radwan H. A. Hamid, Amr M. A. Amin, Refaat S. Ahmed, Adel A. A. El-Gammal</i>	
Control Strategy toward Mobile Robot Based on Driven Configuration Matrix	1785
<i>He Xu, B.S. Marie, Ran Wei</i>	
Large-Scale Tra.c Network Control Based on Mixed Integer Non-linear System Formulation	1791
<i>Tatsuya Kato, YoungWoo Kim, Shigeru Okuma, Tatsuo Narikiyo</i>	
Stability Analysis of a Brushless Doubly-Fed Machine under Closed Loop Scalar Current Control.....	1797
<i>Izaskun Sarasola, Javier Poza, Estanis Oyarbide, Miguel Ángel Rodríguez</i>	
Modeling and Control of a Cascaded Boost Converter with a Single Switch.....	1803
<i>Jorge Alberto Morales-Saldaña, Roberto Galarza-Quirino, Jesús Leyva-Ramos, Enrique Eduardo Carbajal-Gutierrez, Ma. Guadalupe Ortiz-Lopez</i>	
Optimized Pulse Patterns for the 5-Level ANPC Converter for High Speed High Power Applications	1809
<i>Jörg Meili, Srinivas Ponnaluri, Leonardo Serpa, Peter K. Steimer, Johann W. Kolar</i>	
Global Adaptive Learning Control of Robotic Manipulators by Output Error Feedback.....	1815
<i>Stefano Liuzzo, Patrizio Tomei</i>	
Constrained Finite Time Optimal Control of a Micro–Capacitor.....	1821
<i>Leonidas Dritsas, George Nikolakopoulos, Anthony Tzes</i>	
Fingerprint Matching Based on Inter-minutiae Constraint Network.....	1826
<i>Farid Benhammadi, Hamid Hentous</i>	
Industrial and lab-scale power module technologies : A review.....	1832
<i>L.Ménager, C.Martin, B.Allard, V.Bley</i>	
Rapid Control Prototyping of Mechatronic Systems.....	1838
<i>Alei Hace, Alei Polic, Karel Jezernik</i>	
A Modified Equivalent Circuit for Common-Mode Current of Single-Phase Full-Bridge Inverters	1844
<i>Kai Zhang, Yunbin Zhou, Yonggao Zhang, Yong Kang</i>	
Designing and Implementing Real-time and Dependable, Embedded Control Applications Using FlexCAN.....	1850
<i>Juan Pimentel</i>	
Application of 1-D Transmultiplexer to Images Transmission.....	1856
<i>Mariusz Ziólko, Przemyslaw Sypka, Bartosz Ziólko</i>	
E.cient Stepper Motor Torque Ripple Minimization Based on FPGA Hardware Implementation	1860
<i>Dejan Kos, Alja.z Kapun, Milan .Curkovi.c, Karel Jezernik</i>	
Three-Phase Operation Of Brushless Dc Motor Drive Controlled By A Predictive Algorithm	1866
<i>G. Gatto, I. Marongiu, A. Perfetto, A. Serpi</i>	
A new Real-Time Hardware Architecture for Road Line Tracking Using a Particle Filter	1871
<i>Jaime Alarcón, Rubén Salvador, Félix Moreno, Pedro Cobos, Ignacio López</i>	
Speed Sensorless Variable Structure Control of PMSM.....	1877
<i>Evgen Urlep, Karel Jezernik</i>	
Sliding Mode Observer for Rotor Faults Diagnosis.....	1883
<i>Lane Maria Rabelo Baccharini, Walmir Matos Caminhas, Benjamim Rodrigues de Menezes, Homero Nogueira Guimaraes, Leandro Henrique Batista</i>	
A New Model with Feedback Structure for Thermal Process and its Application to Decoupling Control	1889
<i>Ikuo Nanno, Nobutomo Matsunaga, Shigeyasu Kawaji</i>	
Control of Shunt Active Power Filter for Railway Sub-station	1895
<i>C. Batard, M. Machmoum, F. Alvarez, P. Ladoux</i>	

Table of Contents

Thorough Understanding and Experimental Validation of Current Sideband Components in Induction Machines Rotor Monitoring	1901
<i>A. Bellini C. Concari, G. Franceschini, E. Lorenzani, C. Tassoni, A. Toscani</i>	
Simulink/Modelsim Simulable VHDL PID Core for Industrial SoPC Multiaxis Controllers	1907
<i>Jesus Lazaro, Armando Astarloa, Jagoba Arias, Unai Bidarte, Aitzol Zuloaga</i>	
A Single-Stage High-Frequency Isolated Three-Phase AC/DC Converter	1912
<i>Diego Santos Greff, Ivo Barbi</i>	
Iron Losses Prediction with PWM Supply Using Low and High Frequency Measurements: Analysis and Results Comparison	1918
<i>Z. Gmyrek, A. Boglietti, A. Cavagnino</i>	
Intelligent System of Paraconsistent Logic to Control Autonomous Moving Robots	1924
<i>Cláudio Rodrigo Torres, Germano Lambert-Torres, Luiz Eduardo Borges da Silva, Jair Minoro Abe</i>	
Implementation of an Oriented Positioning on a Car-Like Mobile Robot by Fuzzy Control	1929
<i>Noureddine Ouadah, Lamine Ourak, Mustapha Hamerlain, Farès Boudjema</i>	
Control of a Seven-phase Axial Flux Machine Designed for Fault Operation	1935
<i>F. Locment, E. Semail, X. Kestelyn, A. Bouscayrol</i>	
Space Vector Modulation with Current Based Dead Time Compensation using Kalman-Filter	1941
<i>J. Zitzelsberger, W. Hofmann</i>	
Microcontroller power mode stabilized power factor correction stage for electronic ballast applied to metal halide lamps	1947
<i>Francisco J. Azcondo, F. Javier Díaz, Rosario Casanueva, Christian Brañas</i>	
The Wind Farm Aggregation Impact on Power Quality	1953
<i>Jan T. Bialasiewicz, Eduard Muljadi</i>	
Performance Analysis of Active Filters Used for Harmonic Compensation	1959
<i>S. D'Arco, D. Iannuzzi, E. Pagano, P. Tricoli</i>	
Hardware-in-the-loop simulation of different wind turbines using Energetic Macroscopic Representation	1965
<i>A. Bouscayrol, X. Guillaud, R. Teodorescu, P. Delarue, W. Lhomme</i>	
Compound Operations of Asynchronous Generator and PWM Inverters for Passive ac Network Supply	1971
<i>S. D'Arco, D. Iannuzzi, E. Pagano, P. Tricoli</i>	
Wood Defect Detection using Grayscale Images and an Optimized Feature Set	1978
<i>P. Cavalin, L. S. Oliveira, A. L. Koerich, A. S. Britto Jr</i>	
A simple and efficacious control system for stand alone generation plants equipped with induction machines	1983
<i>Andrea Del Pizzo, Diego Iannuzzi, Luigi Piegari, Stefano Baratto, Umberto Macri</i>	
Reusable VHDL Architectures for Induction Motor PWM Vector Control, targeting FPGAs	1989
<i>Abdulmagid Aounis, Silvia E. Cirstea, Marcian N. Cirstea</i>	
Nonlinear Trajectory Control of a High-Speed Linear Axis Driven by Pneumatic Muscle Actuators	1995
<i>Harald Aschemann, Eberhard P. Hofer</i>	
A Microcontroller Based Approach for Nonlinear Characterization of Magnetoencephalographic Data	2001
<i>A. Bonasera, M. Bucolo, R. Caponetto, L. Fortuna, F. Sapuppo, M.C. Virzi, M. G. Xibilia</i>	
Holistic Modelling of a Fuel Cell Power System and FPGA Controller using Handel-C	2006
<i>Kresimir Petrincec, Marcian Cirstea</i>	
Switching Frequency Behaviour for a Practical Matrix Converter	2012
<i>J. Andreu, I. Mtz. De Alegria, I. Kortabarria, S. Ceballos, I. Gabiola</i>	
Analysis and Stabilization of a Buck-Boost DC-DC Converter Feeding Constant Power Loads in Parallel with Conventional Loads in Vehicular Systems	2018
<i>Alireza Khaligh, Amir M. Rahimi, Arindam Chakraborty, Ali Emadi</i>	

Table of Contents

A New Approach for Inter-Turn Short-Circuit Detection in Six-Phase Induction Motor	2024
<i>C.R. da Silva, M.B.R. Correa, C.B. Jacobina, A.M.N. Lima, E.R.C.da Silva, R.N. Andriamalala, H. Razik</i>	
Design and Implementation of an Analog Constant Power Load for Studying Cascaded Converters	2030
<i>Amir M. Rahimi, Alireza Khaligh, Ali Emadi</i>	
Multisensor fibre optic for electrolyte density measurement in lead-acid batteries	2036
<i>Ana María Cao y Paz, Jorge Marcos Acevedo, Jesús Doval Gandoy, Alfredo del Río Vázquez</i>	
Single-Phase AC-AC Converter Operating as a Dynamic Voltage Restorer	2042
<i>Jorge Pérez, Víctor Cárdenas, Luis Morán, Ciro Núñez</i>	
Application of a LIPCA for the Structural Vibration Suppression of a Flexible Beam	2048
<i>Landong Martua, Seok Heo, Nam Seo Goo</i>	
Autotuning Of A Dc Servomechanism Using Closed Loop Identification	2054
<i>Rubén Garrido, Roger Miranda</i>	
A Novel Buck-Boost Control Technique for Push-Pull Parallel-Resonant Converters	2060
<i>D.J. Thrimawithana, U. K. Madawala, P. Lunenburg</i>	
A Teaching System Fostering Expertise for the Tuning of Printed Circuit Board Inspection Systems	2066
<i>Hirota Wada, Akira Nakajima, Tetsuo Sawaragi, Yukio Horiguchi</i>	
A Robustly Stable PI Controller For The Doubly-Fed Induction Machine	2072
<i>Carles Batlle, Arnau Doria-Cerezo, Romeo Ortega</i>	
A DSP-Based Implementation of a Nonlinear Optimal Predictive Control for Induction Machine	2078
<i>M. A. Fnaiech, F. Betin, F. Fnaiech, B. Nahid, G. A. Capolino</i>	
Variable Projection Method and Levenberg-Marquardt Algorithm for Neural Network Training	2084
<i>Cheol-Taek Kim, Ju-Jang Lee, Hyejin Kim</i>	
A Preview Controller with Time Based Spline Approximation for Multi-axis Manipulator	2090
<i>Toshihiko Inoue, Masayuki Morimoto, Kouhei Ohnishi</i>	
Switching Line Design for VSC of the Second Order Systems with Conventional and Elastic Constraints	2095
<i>Andrzej Vartoszewicz, Justyna Zuk</i>	
Investigation of Static Eccentricity Fault Frequencies using Multiple Sensors in Induction Motors and Effects of Loading	2101
<i>Randy Supangat, Jason Grieger, Nesimi Ertugrul, Wen L. Soong, Douglas A. Gray, Colin Hansen</i>	
A Single-Phase DG Generation Unit with Shunt Active Power Filter Capability by Adaptive Neural Filtering	2107
<i>Maurizio Cirrincione, Marcello Pucci, Gianpaolo Vitale</i>	
Synchronization Analysis on Converters with Distributed Control	2115
<i>Mingyao Ma, Lei Hu, Jiande Wu, Xiangning He, Hao Ma</i>	
Dynamic analysis and control design of the asymmetrical clamped-mode dc-dc series resonant converter	2121
<i>Jorge Sosa, Miguel Castilla, L. García de Vicuña, José Matas, Jaume Miret</i>	
Discrete Event System Modeling and Dynamic Service Allocation for RFID Networks	2127
<i>O.P. GAN, J. B. Zhang, T. J. Ng, M. M. Wong</i>	
Zoom Microscope Based Micropositioning for MEMS Sensor Packaging System	2133
<i>Chen Liguo, Ma Lingyu, Sun Lining, Rong Weibin</i>	
The RF power amplifier using current source circuit	2138
<i>Ju Won Baek, Jong hyun Kim, Myung hyo Ryu, Byung duk Min, Jong soo Kim</i>	
Toward Generic Fully Integrated Gate Driver Power Supplies	2143
<i>Nicolas Rouger, Jean-Christophe Crébier, Laurent Aubard, Christian Schaeffer</i>	
Multichannel DC-DC Converter's Efficiency Optimisation by variable Number of active Channels	2149
<i>L. Fleischli, S. Lemofouet, A. Rufer</i>	

Table of Contents

Power Factor Adjustment and Energy Management in Large Grid-Connected Wind Parks.....	2155
<i>Detlef Schulz, Rolf Hanitsch</i>	
Simulation of a dual hybrid generator for heavy vehicle application	2161
<i>Khadija El Kadri, Alain Berthon</i>	
Stability of Teleoperation Systems by Delay-dependent Neutral LMI Techniques	2167
<i>Antonio Barreiro, Emma Delgado</i>	
Electromagnetic Modeling of Switched Reluctance Motor Using Finite Element Method	2173
<i>J. Faiz, B. Ganji, R. W. De Doncker, J. O. Fiedler</i>	
An Identification for Continuous Time Models of the Multi-Mass System Using the LWTLS Method and the CDM based Order Determination	2179
<i>Yasutoshi Yoshioka, Tsuyoshi Hanamoto</i>	
The DSP Implementation of Moving Object Detecting and Tracking Based on MPEG-4.....	2185
<i>Pengju Shi, Guangmin Sun, Yan Li</i>	
A Simplified Control Algorithm for Shunt Active Power Filter Without Load and Filter Current Measurement.....	2190
<i>Engin Ozdemir, Mehmet Ucar, Metin Kesler, Murat Kale</i>	
Collision Avoidance Method of Humanoid RobotBased on Controlling Extended Orbital Energy	2196
<i>Naoki Motoi, Kouhei Ohnishi</i>	
FCANN: An Approach to Knowledge Representation From ANN Through Formal Concept Analysis – Application in the Cold Rolling Process	2202
<i>Luis E. Zárate, Sérgio M. Dias</i>	
Control of the Boost DC-AC Converter by Energy Shaping	2208
<i>Carolina Albea, Francisco Gordillo, Javier Aracil</i>	
Archive and Instruction of Hand Motion: Analysis and Evaluation of Hand Motion.....	2214
<i>Yu Kinoshita, Daisuke Takeda, Akinori Sasaki, Hiroshi Hashimoto, Chiharu Ishii</i>	
Performance Comparison of Voltage Mode Control and Current Mode Control of a Three-Phase PWM Rectifier based on a Dual SISO Model	2220
<i>B. Yin, R. Oruganti, S. K. Panda A. K. S. Bhat</i>	
Research of Multi-module PWM Rectifier for Feeding System of High-speed Maglev Vehicles	2227
<i>Shuwen Lu, Fei Lin, Xiaojie You, Trillion Q Zheng</i>	
A 6-DOF Parallel Robot for Optical Precise Operation.....	2232
<i>Weibin Rong, Li Ma, Lining Sun, Zheng Li</i>	
Control structure synthesis for electromechanical systems based on the concept of inverse model using Causal Ordering Graph	2237
<i>Richard Béarée, Pierre-Jean Barre, Jean-Paul Hautier</i>	
SENTIO: A Hardware Platform for Rapid Prototyping of Wireless Sensor Networks	2243
<i>Fredrik Linnarsson, Peng Cheng, Bengt Oelmann</i>	
Transient Stability Analysis of Grid-Connected Induction Generators Using Normal Form Method	2248
<i>H. Li, Z. Chen</i>	
An Approach to fusion control of stabilization control and human input in Electric Bicycle	2254
<i>Ko Iuchi, Toshiyuki Murakami</i>	
A Realization of Haptic Skill Database by Bilateral Motion Control	2260
<i>Tomoyuki Shimono, Seiichiro Katsura, Kouhei Ohnishi</i>	
A Unified SVM Algorithm for Multilevel Converter and Analysis of Zero Sequence Voltage Components	2266
<i>Wang Chenchen, Li Yongdong, Xiao Xi</i>	
STATCOM-controlled HVDC Power Transmission for Large Offshore Wind Farms: Engineering Issues	2271
<i>S. Bozhko, R. Li, R. Blasco-Gimenez, G. M. Asher, J. C. Clare, L. Yao, C. Sasse</i>	

Table of Contents

A Local Control Strategy for the Control of Discrete-Time Piecewise A.ne Systems on Full-Dimensional Polytopes.....	2277
<i>Thomas Erhard Hodrus, Florian Wol., Michael Buchholz, Volker Krebs</i>	
Super-Junction MOSFET and SiC Diode Application for the Efficiency Improvement in a Boost PFC Converter control the EMI problem	2283
<i>F. Chimento, S. Musumeci, A. Raciti, M. Melito, G. Sorrentino</i>	
Electromagnetic and Thermal Aspects of Special Permanent Magnet Generators for Short Term, Controlled Damping of Mechanical Oscillations	2289
<i>Antonino Di Gerlando, Gianmaria Foglia, Roberto Perini</i>	
Hybrid Particle Swarm-Based-Simulated Annealing Optimization Techniques	2295
<i>Nasser Sadati, Majid Zamani, Hamid Reza Feyz Mahdavian</i>	
A 6MHz QCM Sensor with a Miller XCO and its application in liquid media.....	2300
<i>Loreto Rodriguez-Pardo, Jose Fariña C. Gabrielli, H. Perrot, R. Brendel</i>	
Artificial Neural Network Based Implementation of Space Vector Modulation for Voltage Fed Inverter Induction Motor Drive	2304
<i>Nasser Sadati, Farhad Barati</i>	
A DSP structure authorizing reduced-bandwidth DC/DC Converters for Dynamic Supply of RF Power Amplifiers in Wideband Applications.....	2309
<i>Albert Cesari, Angel Cid-Pastor, Corinne Alonso, Jean-Marie Dilhac</i>	
Architecture Of Data Fusion For The Dynamic Follow-Up Of Vehicles : Saacam Project	2315
<i>Sonia Izri, Arnaud Clérentin Eric Brassart, Laurent Delahoche, Cyril Drocourt</i>	
T-S Fuzzy Path Controller Design for the Omnidirectional Mobile Robot.....	2321
<i>Chong-Cheng Shing, Pau-Lo Hsu, Syh-Shiuh Yeh</i>	
Minimization of DC Reactor and Operation Characteristics of Direct-Power-Controlled Current-Source PWM Rectifier	2327
<i>Toshihiko Noguchi, Akira Sato, Daisuke Takeuchi</i>	
Practical power control design of a NPC multilevel inverter for grid connection of arenewable energy plant based on a FESS and a Wind generator :	2333
<i>Omar Bouhali, Bruno François, Christophe Saudemont, El Madjid Berkouk</i>	
A Practical Method for Assessment of Harmonic Emission of Electrified Railway	2339
<i>Shaofeng Xie, Qunzhan Li</i>	
Importance of Data Quality in Virtual Metrology.....	2344
<i>Yi-Ting Huang, Fan-Tien Cheng, Yeh-Tung Chen</i>	
Optimisation of Output Filters for Inverter Fed Drives.....	2350
<i>S. Pöhler, A. Mertens, R. Sommer</i>	
Describing Function Analysis and Experimental Investigation of a High Power Utility Friendly AC-DC Converter System.....	2357
<i>Ranjan K. Behera, T. V. Dixit, Shyama P. Das</i>	
Study on Methods to Reducing Rail Potential of High-Speed Railway.....	2363
<i>Shaofeng Xie</i>	
Wireless Vehicle Communication for Traffic Control in Urban Areas	2368
<i>Ramez M. Daoud, Mohamed A. El-Dakroury, Hany M. Elsayed, Hassanein H. Amer, Magdi El-Soudani, Yves Sallez</i>	
Improving the RTR Growing Functional Module.....	2374
<i>Jérôme Leboeuf Pasquier</i>	
Impact of Rotor Design on Sensorless Position Estimation.....	2380
<i>A. S. Budden, R. Wrobel, D. Holliday, P. H. Mellor, A. Dinu, P. Sangha, M. Holme</i>	

Table of Contents

Current-Controlled Shape Memory Alloy Actuators for Automotive Tumble Flap	2386
<i>M. Colli, A. Bellini C. Concari, A. Toscani, G. Franceschini</i>	
The Improvement on Reinforcement Learning for SCM by the Agent Policy Mapping	2390
<i>Ruoying Sun, Gang Zhao, Chen Li, Shoji Tatsumi</i>	
Identification of diffusive interfaces using a simplified fractional integrator. Part II : non linear case.....	2396
<i>Francois Benoit-Marand, Laurent Signac, Amel Benchellal, Thierry Poinot, Jean-Claude Trigeassou</i>	
A New Investigation on Space Vector Modulation Technique for Voltage Source Inverter in AC Drive	2402
<i>Andrew Trentin, Pericle Zanchetta, Patrick Wheeler</i>	
Nonlinear Adaptive Output Feedback Control of Synchronous Motors with Damping Windings.....	2408
<i>Riccardo Marino, Patrizio Tomei, Cristiano Maria Verrelli</i>	
Design of an actuating system using Inverse bond graph methodology: Application of FEM to a tow-links flexible manipulator.....	2414
<i>Abdechafik Derkaoui, Éric Bideaux, Michel Vergé, Serge Scavarda</i>	
Vibrations, currents and stray flux signals to asses induction motors rotor conditions.....	2420
<i>A. Bellini, C. Concari, G. Franceschini, C. Tassoni, A. Toscani</i>	
Hardware-in-the-Loop Approach for Redundant Brushless Motor Control System.....	2426
<i>Alessandro Bertacchini, Paolo Pavan, Luca Tamagnini, Matteo Mistrorigo, Marco Morandi</i>	
Simulation of Superconductive Fault Current Limiter (SFCL) Using Modular Neural Networks.....	2432
<i>Behrooz Makki, Nasser Sadati, Mohammad Sohani</i>	
Comparison of Different ACS Methods and Analysis about Efficiency of Novel ACS Approaches	2437
<i>Chen Li ,Shoji Tatsumi, Ruoying Sun, Gang Zhao</i>	
Funnel-Control for Nonlinear Multi-Mass Flexible Systems.....	2443
<i>C.M. Hackl, D. Schröder</i>	
Mechatronic Contouring System for Unconventional Sheet Metal Forming Processes	2449
<i>Radu-Eugen Breaz, Valentin Oleksik, Octavian Bologna</i>	
Analysis Of A Moving Magnet Miniature Transducer Array Loudspeaker System.....	2453
<i>Razib Rashedin, Dr. Turgut Meydan</i>	
Analysis of Traction System Time-Varying Signals using ESPRIT Subspace Spectrum Estimation Method.....	2459
<i>Zbigniew Leonowicz, Tadeusz Lobos</i>	
Drive Train Control for Wind Energy Converters Based on Stochastic Dynamic Optimisation	2463
<i>Constantinos Sourkounis, Bingchang Ni</i>	
A Solution for Three-Phase System Unbalance Based on PWM AC Choppers.....	2469
<i>Bernardo Cougo, Thierry Meynard</i>	
Current Sensor Fault Detection by Bilinear Observer for a Doubly Fed Induction Generator	2475
<i>Kai Rothenhagen, Friedrich W. Fuchs</i>	
Novel Sensing Method for High Voltage Transmission Network Charging Currents.....	2481
<i>Osama E. Elmatboly, Marsha L. Walters, Abdullah Homaifar</i>	
A High Precision Multiple Loop Control Strategy for Three Phase PWM Inverters	2487
<i>Liang Zhou, Xiong Jian, Kai Zhang, Pengfei Shi</i>	
Discrete-Time Observer Design for a Class of Nonlinear Systems Including Newtonian Mechanical models: Application to an Autonomous Four Rotors Helicopter	2493
<i>M'hammed Guisser, Hicham Medromi, Hassan Ifassiouen, Janah Saadi, Nour-eddine radhy</i>	
Development of a FPGA-based SoC Instrument for the characterization of High Sensitivity QCM Oscillator Sensors	2499
<i>María José Moure, María Dolores Valdés, Pablo Rodiz, Loreto Rodríguez-Pardo, José Fariña</i>	

Table of Contents

A Coupled Nonlinear Discrete-Time Controller and Observer Designs for Underactuated Autonomous vehicles with Application to a Quadrotor Aerial Robot	2504
<i>M'hammed Guisser, Hicham Medromi, Hassan Ifassiouen, Janah Saadi, Nour-eddine radhy</i>	
A New Simulation Tool for the Design of TSM Acoustic Wave Sensors	2510
<i>Loreto Rodriguez-Pardo, Jose Fariña, C. Gabrielli, H. Perrot, R. Brendel</i>	
An Integrated System for Logic Controller Implementation Using FPGAs	2514
<i>Celso F. Silva, Camilo Quintáns, Jose M. Lago, Enrique Mandado</i>	
Power Transfer Analysis in a Utility- Interconnected Fuel Cell Distributed Generator	2520
<i>Mamadou L. Doumbia, Kodjo Agbossou, Michel Dostie</i>	
Dynamic Analysis of DC-DC Boost Converter Based on Its Nonlinear Characteristics	2526
<i>Qiang Zhou, Yong Huang, Fan Zeng, Quan-Shi Chen</i>	
Development of a Fuzzy Logic Control System in Matlab for an Air Impingement Oven	2532
<i>W. Davis Harbour, Terry W. Martin</i>	
Adaptive nonlinear backstepping control of SEDCM under velocity constraint	2538
<i>Sun Im, Byeong-Seok Lee</i>	
A Method to Reduce Power Consumption of Active-Clamped Flyback Converter at No-Load Condition	2544
<i>Jong Hyun Kim, Myung Hyo Ryu, Byung Duk Min, Eui Ho Song</i>	
An Active Snubber-Energy-Recovery Unit at PWM Converters to Achieve High Efficiency	2548
<i>Makoto Yatsu, Naoya Eguchi</i>	
Embedded System Study for Real Time Boosting Based Face Detection	2554
<i>K.Khattab, J.Miteran, J.Dubois, J.Matas</i>	
Identification of human skill and its application to an automatic driving system -an approach from hybrid dynamical system	2559
<i>Shangchang Ma, Tadanao Zanma, Muneaki Ishida</i>	
Basic Study on Magnetic Suspension by Using the Control of Mutual Inductance	2565
<i>Takeshi MIZUNO, Yusuke ITANI, Yuji ISHINO, Masaya TAKASAKI</i>	
Three-Phase Rectifier Applying Active Current Injection	2570
<i>Nimrod Vázquez, Heriberto Rodríguez, Claudia Hernández</i>	
Detection of Sags, Swells, and Interruptions Using the Digital RMS Method and Kalman Filter with Fast Response	2575
<i>Mario González, Víctor Cárdenas, Ricardo Álvarez</i>	
Distributed Hardware-in-the-Loop Simulation for Space Robot on CAN Bus	2581
<i>R.Wei , M.H.Jin , J.J.Xia , Z.W.Xie, H.Liu</i>	
Acquisition of Slip Phenomenon between Developed Distributed-Type Force Sensor and the Contacted Object	2587
<i>Akuhito Ito, Nobutaka Tsujiuchi, Takayuki Koizumi, Hiroko Oshima, Yoshiro Nojiri, Yotaro Tsuchiya, Naomichi Hirama, Shiro Kurogi</i>	
Remarks on 3D Human Body Posture Estimation System Using Single Multi-Camera System	2593
<i>Kazuhiko Takahashi, Yusuke Nagasawa, Masafumi Hashimoto</i>	
Bilateral Control to Achieve Transparent Teleoperation with Perturbation of Static Time Delay	2599
<i>Alireza Alfi, Mohammad Farrokhi</i>	
ON HMM SPEECH RECOGNITION BASED ON COMPLEX SPEECH ANALYSIS	2605
<i>Tatsuhiko KINJO, Keiichi FUNAKI</i>	
Current or Time Sharing Switches for High Efficiency Photovoltaic Power Systems	2609
<i>H. Dehbonei, S.H. Ko, S.R. Lee, L. Borle, C. V. Nayar</i>	

Table of Contents

Performance Analysis and Improvement of Output Current Controller for Three-Phase Shunt Active Power Filter	2615
<i>XueLiang Wei, Ke Dai, Xin Fang, Pan Geng, Yong Kang</i>	
On-line estimation of permanent magnet flux linkage ripple for PMSM based on a Kalman filter	2621
<i>Xiao Xi, Zhang Meng, Li Yongdong, Li Min</i>	
A Variable Frequency PWM Rectifier for Wind Driven Induction Generators	2626
<i>Kristian E. Medri, Bin Wu</i>	
Design and Control of a Four Steered Wheeled Mobile Robot	2632
<i>Michel Lauria, Isabelle Nadeau, Pierre Lepage, Yan Morin, Patrick Giguère, Frédéric Gagnon, Dominic L'Étourneau, François Michaud</i>	
A Family of Auxiliary Switch ZVS-PWM DC-DC Converters with Coupled Inductor	2638
<i>N.Lakshminarasamma, V.Ramanarayanan</i>	
An Analytical Framework for Comparative Analysis of Various Watermarking and Steganographic Techniques	2644
<i>Ahmad Khalil Khan, Habibullah Jamal</i>	
A UHF (950 MHz) Band RFID Reader Compliant with Japanese Radio Law	2648
<i>Masao Otani, Hiroshi Harada, Ryuhei Funada</i>	
New Scheme to Connect DFIG to Power Grid	2654
<i>Nitin N. Joshi, N. Mohan</i>	
Enhanced Voltage-Boost Inverter and Rectifier	2660
<i>P. C. Loh, F. Blaabjerg, J. X. Yao, T. F. Xu</i>	
Development of a low pressure driven pneumatic actuator and its application to a robot hand	2666
<i>Nobutaka Tsujiuchi, Takayuki Koizumi, Shigeki Shirai, Tatsuwo Kudawara, Yasunori Ichikawa</i>	
A Novel Control Strategy for Three-Phase Rectifier with High Power Factor	2672
<i>Hong-Hee Lee, Brovanov Sergey, Van-Tung Phan, Tae-Won Chun</i>	
A Metric for Comparing the EMI Spectra of Power Converters	2679
<i>Krishna Mainali, R. Oruganti, K. Viswanathan, Swee Peng Ng</i>	
Support Apparatuses Based on Technology for Active Life of Elderly	2686
<i>Hiroshi Hashimoto, Yasuhiro Ohyama, Jin-Hue She, Toshinori Tsuboi, Toshio Matsunaga, Naoki Amano, Hiroyuki Kobayashi</i>	
Algorithms for Minimizing the Effect of Network Delay of Sensor Data in Network-Based AC Motor Drive	2692
<i>Tae-Won Chun, Dong-Sik Kim, Jung-Ryol Ahn, Hong-Hee Lee</i>	
Yarn Segmentation Based on Filament Direction in 3-D CT Images for Structure Analysis of Textile Fabric	2697
<i>Toshihiro Shinohara, Jun-ya Takayama, Shinji Ohyama, Akira Kobayashi</i>	
Performance of the Inverter with the Super Capacitor for Vector Controlled Induction Motor Drives	2703
<i>Koichi Yamashita, Takeo Tomida, Kouki Matsuse</i>	
Automatic Recognition of Defect Signatures and Notification of Tool Malfunctions - IECON'06	2709
<i>Tetsuro Toyoshima, Eiji Yamada, Toshio Yamamoto, Katsuki Imai</i>	
Design and Implementation of Fully Digital Controller for Non-Isolated-Point-of-Load Converter with High Current Slew Rate	2714
<i>Ke-Yen Lee, Chia-An Yeh, Yen-Shin Lai</i>	
Model Reference Adaptive Control Design for a Shunt Active Power Filter System	2720
<i>Kuo-Kai Shyu, Ming-Ji Yang, Yen-Mo Chen, Yi-Fei Lin</i>	
Investigation of IPMSM's Position Estimation Method in Very Low Speed Region with DC Link Current Detection	2726
<i>Takayuki Kobayashi, Hisao Kubota, Satoshi Nakagawa</i>	

Table of Contents

Performance for Position Control of Two Permanent Magnet Synchronous Motors with the Five-Leg Inverter Features	2732
<i>Yusuke Nozawa, Kazuo Oka, Ryuji Omata, Kouki Matsuse</i>	
Implementation and Control of Dual Grid Connected Inverter for Wind Energy Conversion System	2738
<i>Ning Zhu, Hui Liang</i>	
Networked estimation using a send-on-delta method	2744
<i>Young Soo Suh, Vinh Hao Nguyen, Young Shick Ro</i>	
Asymmetric PID controller	2749
<i>Algirdas Baskys, Valerijus Zlosnikas</i>	
Robust Estimation Design of MEMS-Based Integration Inertial Navigation Systems.....	2754
<i>Yung-Yue Chen, Shyang-Jye Chang, Ren-Yuan Yu, Chiung-Yau Huang</i>	
Investigation of a Low-Cost Grid-Connected Inverter for Small-Scale Wind Turbines Based on a Constant-Current Source PM Generator	2760
<i>David M. Whaley, Gurhan Ertasgin, Wen L. Soong, Nesimi Ertugrul, James Darbyshire, Hooman Dehbonei, Chem V. Nayar</i>	
A GPS/INS Integration System with New Orientation Measurement Scheme for Land Vehicle Application.....	2766
<i>Nguyen Ho Quoc Phuong, Hee-Jun Kang, Young-Soo Suh, Young-Shick Ro, Kyu-Chan Lee</i>	
Mixed H2/H 8 Estimation Design of MEMS-Based Micro Inertial Navigation Systems.....	2772
<i>Shyang-Jye Chang, Yung-Yue Chen, Shih-Hao Wang, Chiung-Yau Huang</i>	
A Zero-current Switching PWM Flyback Converter with Low Current Stress	2778
<i>Y.P. Benny Yeung, Herbert H.C. Iu, K.W. Eric Cheng, Bruno Robert</i>	
Realtime Speaker Tracking for Robotic Auditory System.....	2783
<i>Hideyuki Sawada, Atsushi Todo, Toshiya Takechi</i>	
Hydropower Portfolios Management via Markov Decision Process.....	2789
<i>Chengjun Zhu, Jianzhong Zhou, Wei Wu, Li Mo</i>	
A Pseudo-Output Error Algorithm To Improve Global Convergence	2795
<i>Elie Tohme, Régis Ouvrard, Jean-Claude Trigeassou, Antoine Abche</i>	
Topological and Modulation Design of a Buck-Boost Three-Level Dual Inverter.....	2801
<i>F. Gao, P. C. Loh, D. M. Vilathgamuwa, F. Blaabjerg, C. K. Goh, J. Q. Zhang</i>	
Development of an effective training machine using muscle activity information.....	2807
<i>Shunji Moromugi, Seok-Hwan Kim, Sung J. Yoon, Nobuo Matsuzaka, Takakazu Ishimatsu, Murray J.</i>	
Real-Time Analysis of the Control Structure and Management Functions of a Hybrid Microgrid System	2813
<i>H. Gaztañaga, I. Etxeberria-Otadui, S. Bacha, D. Roye</i>	
A 24-pulse voltage sourced converter with passive and active harmonic voltage injection	2819
<i>F. Javier Chivite-Zabalza, Andrew J. Forsyth</i>	
1-D Gabor Directional Filtering for Low-Quality Fingerprint Image Enhancement	2825
<i>Ching-Han Chen, Kuo-En Chiu</i>	
Separation of a polynomial phase signals mixture using sparsity	2830
<i>Olivier Fourt, Messaoud Benidir</i>	
3D-Visual Detection of Multiple Objects and Structural Features in Complex and Dynamic Indoor Environments	2836
<i>Marta Marrón, Miguel Ángel Sotelo, Juan Carlos García, David Fernández, Ignacio Parra</i>	
Bilateral Control for Fine Processing Using Virtual Grasping/Manipulating Robots	2842
<i>Ryogo Kubo, Kouhei Ohnishi</i>	
Solution of Linear Time Invariant Differential Equations with 'Proper' Primitives.....	2848
<i>Peter W. Krempf</i>	

Table of Contents

Pyroelectric Characteristics of 0-3 PbTiO₃/P(VDF/TrFE) Nanocomposites Thin Films for Infrared Sensing	2854
<i>Sung - Yeol Kwon</i>	
An AC-DC Converter with Power Compensator Functions for Single-Phase Three-Wire Distribution System	2857
<i>Takayuki Fujita, Shoji Iida</i>	
Characterizing Impedance Interactions in Switched-Mode Converters Based on Linear Fractional Transformations (LFTs)	2863
<i>Ali Altowati, Teuvo Suntio, Kai Zenger</i>	
Sizing Factor Considerations for Grid-Connected PV Systems Based on a Central Inverter Configuration	2870
<i>Guillermo Velasco, Francesc Guinjoan, Robert Piqué, Juan José Negroni</i>	
Comparative study of three modelling methods of synchronous generator.	2875
<i>Emile MOUNI, Slim TNANI, Gérard CHAMPENOIS</i>	
A tool for the collaborative sizing of electrical device : CoSTo	2881
<i>Imen Ammar, Laurent Gerbaud, Frédéric Wurtz</i>	
Simulation of particle size measurement with LIBS	2887
<i>Muneaki Wakamatsu, Toshitsugu Ueda, Alexander Andreev</i>	
Virtual Friction Display of Hybrid Force Feedback Interface with Actuators Comprising DC Motor and Magnetorheological Brake	2893
<i>Jinung An, Dong-Soo Kwon</i>	
PWM Inverters and Double Star Asynchronous Machine drive - Sliding mode solution.	2899
<i>Nadia Mokhtari-Madani, Christophe Millet, M.F Benkhoris, René Le Doeuff</i>	
DC Bus Compensation for a Sinusoidal Voltage Source Inverter with Wave-Shaping Control	2905
<i>M. C. Trigg, H. Dehbonei, C. V. Nayar</i>	
Masked Symmetric Chaos Shift Keying : Modulation and demodulation of Chua's circuits using PI control estimated from LMI criterion	2911
<i>F.Launay, R.Burghilea, P.Combeau, P.Coirault</i>	
Cycle-Accurate Performance Evaluation of Parallel Jpeg2000 on a Multiprocessor System-on-Chip Platform	2917
<i>Simone Smorfa, Mauro Olivieri</i>	
A study on the Specification Decision Method of AF-SMES System considering Internal Fault Condition	2923
<i>Arong Kim, Jae-Ho Kim, Hae-Jong Kim, Seok-Ho Kim, Ki-Chul Seong, Minwon Park, In-Keun Yu</i>	
Modeling and control of the vehicle transmission chain using electric actuators	2929
<i>C. LAROUCI, G.FELD, JP.DIDIER</i>	
Modelling and Analysis of Faults in Wind Power	2935
<i>Chan-Ki Kim, Young-Do Choy, Jin-Boo Choo, Seong-Joo Lim</i>	
Algebraic Design of Multi-rate Control Systems for Environments with Limited Random Delays	2941
<i>Ángel Cuenca, Julián Salt, Pedro Albertos, Vicente Casanova</i>	
An Adaptive Optimal Linear Quadratic Regulator Applied to Three Phases PWM AC - DC Converter	2947
<i>S. Zerouali, A. Allag, S. M Mimoune, M. Y. Ayad, M. Becherif, A. Miraoui, S. Khanniche</i>	
Correction of Omnidirectional Camera Images using Reconfigurable Hardware	2953
<i>A. Gardel, A. Hernández, R. Miota, I. Bravo, R. Mateos</i>	
Background estimation for dynamic video scenes	2958
<i>Sebastien Harasse, Laurent Bonnaud, Michel Desvignes</i>	
Modified Passivity-Based Control of Switched-Reluctance Motor with Speed and Load Torque Observers	2964
<i>Milad Falahi, Farzad R. Salmasi, Caro Lucas</i>	

Table of Contents

Autonomous Power Generating System with Multi-Level Converters	2969
<i>Lech M. Grzesiak, Jacek G. Tomasik</i>	
Harmonic Analysis of Parallel Frequency Converters Coupled via a Multi-Primary Three-Phase Transformer	2975
<i>Anssi Lipsanen, Juha Pyrhönen, Pertti Silventoinen</i>	
FPGA-based Implementation of an Ultrasonic Beacon for a Local Positioning System	2981
<i>A. Jiménez, A. Hernández, J. Ureña, M. Alonso, C. De Marziani, M.C. Pérez, M. Mazo, J. M. Villadangos, J.J. García, F. Álvarez</i>	
Efficient Modulation Technique for a Four-Leg Fault-Tolerant Neutral-Point-Clamped Inverter	2987
<i>Salvador Ceballos, Josep Pou, Jordi Zaragoza, Jose Luis Martín, Eider Robles, Igor Gabiola</i>	
Torque Ripple Reduction in Sensorless PMSM Drives	2993
<i>Antti Piippo, Jorma Luomi</i>	
A New Fast Multi-Layer Line Detection For Embedded Robotic Application	2999
<i>Thomas Costis, Vincent Hugel, Patrick Bonnin</i>	
Back-EMF Detection Technique of Brushless DC Motor Drives for Wide Range Control	3005
<i>Yen-Shin Lai, Yong-Kai Lin</i>	
A Micro Linear Motor with Integrated Passive Magnetic Guidance	3011
<i>R. Gehrking, S. Demmig, B. Ponick M. Feldmann, S. Büttgenbach</i>	
Experimental Verification for Stability Improvement of Sensor-less Vector Control System of Induction Motor Using Observer Gain Tuning	3017
<i>Kazuhiro Ohyama, Greg Asher, Mark Sumner</i>	
Real Time Driving-Aid System for Different Lighting Conditions, on Board a Road Vehicle	3023
<i>Miguel Angel Garcia-Garrido, Miguel Angel Sotelo, Ernesto Martin-Gorostiza, Ignacio Parra</i>	
Delay-Independent Stability Of Reset Control Systems	3029
<i>Alfonso Banos, Antonio Barreiro</i>	
Sensorless Vector Control of PMSM Drives Equipped With Inverter Output Filter	3035
<i>Janne Salomaki, Antti Piippo, Marko Hinkkanen, Jorma Luomi</i>	
High Speed Movement Control making use of Zero Dynamics on Inverted Pendulums	3041
<i>Akira Shimada, Naoya Hatakeyama</i>	
Capacitive pressure microsensor fabricated by bulk micromachining and sacrificial layer etching	3047
<i>A. Luque, R. G. Bolea, M. Fernandez-Bolanos, A. Ionescu, J. M. Quero</i>	
Mitigation of Voltage Dips and Voltage Harmonics within a Micro-grid, using a Single Shunt Active Filter with Energy Storage	3053
<i>Fabio Carastro, Mark Sumner, Pericle Zanchetta</i>	
A fault diagnosis approach for hybrid systems	3059
<i>A. MOKHTARI, M.V. LE LANN, G.HETREUX, J.M LE LANN</i>	
Design and Implementation of a Microcontroller-Based High Power Factor Electronic Ballast to Supply Metal Halide Lamps	3065
<i>Marco A Dalla Costa, Daniel Alonso Álvarez, J. Marcos Alonso, Jorge García, Jesus Cardesin</i>	
A High Performance Harmonic Current Control for Shunt Active Filters Based on Resonant Compensators	3071
<i>Wanchak Lenwari, Mark Sumner, Pericle Zanchetta, Mihai Culea</i>	
Ubiquitous Function Services Based Control for Robots with Ambient Intelligence	3077
<i>Bong Keun Kim, Nobuyasu Tomokuni, Kenichi Ohara, Kohtaro Ohba, Tamio Tanikawa, Shigeoki Hirai</i>	
Effectiveness of Induction Motor Model Order for Machine Parameters Estimation in Sensorless Control Drive	3083
<i>S.B. Bodkhe, Dr. M.V. Aware</i>	

Table of Contents

A Control of the MMF Space Harmonic Parasitic Torques in the concentrated winding AC Machine Using Skew angle Optimization	3089
<i>Hyun Rok Cha, Cheol Ho Yun, Tae Uk Jung, Hyung Mo Kim, Jeong Cheol Kim, Seung Hun Baek, Kwang Heon Kim</i>	
Sensorless Position Estimation in a Fault Tolerant Surface-Mounted Permanent Magnet AC Motor Drive with Redundancy	3094
<i>Jae Sam An Nesimi Ertugrul, Wen Liang Soong</i>	
Applications of the Acousto-Optic Effect on Glass Integrated Optic Devices	3100
<i>Luiz Poffoa, Pierre Lemaitre-Augerb, Philippe Benecha, Khelifa Djerrouda, Romain Siragusa</i>	
Multi-Objective Optimization in Self-Optimizing Systems	3106
<i>Alessandro Dell'Aere</i>	
Human Dexterity analysis of machine Operation-Development of An Experimental System	3112
<i>Toshiya Tajiri, Masami Iwase, Shoshire hatakeyama, Hougyi Li</i>	
Teleoperated Visual Inspection System for Hull Spot-Blasting	3117
<i>Pedro Navarro, Juan Suardiaz, Pedro Alcover, Raúl Borraz, Antonio Mateo, Andrés Iborra</i>	
Current Based Mechanical Fault Detection in Induction Motors through Maximum Likelihood Estimation	3123
<i>Martin Blödt, Marie Chabert, Jérémie Regnier, Jean Faucher</i>	
Predictive control of a doubly-fed induction generator connected to an isolated grid	3129
<i>Nicolas Patin, Wissem Naouar, Eric Monmasson, Jean-Paul Louis</i>	
Graphical representation of electrical generators using dynamical equivalent circuits	3135
<i>Nicolas Patin, Eric Monmasson, Jean-Paul Louis</i>	
A Stable Grasping and Manipulating Control Method Based on Grasp Plane	3141
<i>Shoyo Hyodo, Ryogo Kubo, Kouhei Ohnishi</i>	
Identification of Human Operation under Closed-loop System	3147
<i>Y.I.wai, M.Iwase, R.Ohno, S. Hatakeyama</i>	
Speed and rotor flux estimation of induction motors via on-line adjusted Extended Kalman Filter	3152
<i>Francesco Alonge, Tommaso Cangemi, Filippo D'Ippolito, Giuseppe Giardina</i>	
Feedback Linearization Control of Inverter Fed Induction Motor - with Sliding Mode Speed and Flux Observers	3158
<i>Dariusz Sobczuk, Mariusz Malinowski</i>	
Identification of di.usive interfaces using a simplified fractional integrator. Part 1 : linear case	3164
<i>A. Benchellal, F. Benoît-Marand, L. Signac, T. Poinot, J.-C. Trigeassou</i>	
Design of V4DB - Experimental Real-Time Database System	3170
<i>Václav Król, Jan Pokorný</i>	
Analysis and Control of the Output Instantaneous Power for Three Phase PWM Boost Rectifier Under Unbalanced Supply Voltage Conditions	3176
<i>Xinhui Wu, Sanjib K. Panda</i>	
Modelling and Detection of Inter-Turn Short Circuits in Stator Windings of Induction Motor	3182
<i>M. Sahraoui, A. Ghoggal, S. E. Zouzou, A. Aboubou., H. Razik</i>	
Indirect Power Factor Correction Method and Corresponding Sensorless Switch-Mode Resonant AC/DC Converter	3188
<i>Jevgeni Shklovski, Kuno Janson</i>	
Virtual Laboratory for Modeling Systems: A Sustainable Approach	3194
<i>Antoni Grau, Yolanda Bolea</i>	
The effect of rotor eccentricity on the radial and tangential electromagnetic stresses in synchronous machines	3200
<i>Lucia Frosini, Paolo Pennacchi</i>	

Table of Contents

Comparison of Voltage harmonic identification Algorithms for Three-Phase Systems	3206
<i>R. Alcaraz, E. J. Bueno, S. Cobreces, F. J. Rodriguez, F. Huerta, M. Liserre</i>	
Improvements in Direct Torque Control of Induction Motor Supplied by CSI	3212
<i>Aleksandar B. Nikolic, Borislav I. Jeftenic</i>	
A Comparison of Iterative Learning Control Algorithms with Application to a Linear Motor System	3218
<i>Mark Butcher, Alireza Karimi, Roland Longchamp</i>	
Large Force Generation Method Exploiting Oscillatory Motion of Manipulator Driven by Van Der Pol Oscillator	3224
<i>Jun Kobayashi, Fujio Ohkawa</i>	
Taking into Account of Non-Linearities in the CRONE approach: Application to Vibration Isolation	3230
<i>Pascal Serrier, Xavier Moreau, Jocelyn Sabatier, Alain Oustaloup</i>	
A Study on the Electric and Magnetic Circuit of Single Phase Line Start Permanent Magnet Motor	3236
<i>Eiko Nakayama, Koichiro Sawa</i>	
UWB-IR transceiver for millimeter wave WLAN	3242
<i>Nicolas Deparis, Alexandre Boe, Christophe Loyez, Nathalie Rolland, Paul-Alain Rolland</i>	
A New Approach to the Sewer Pipe Inspection: Fully Autonomous Mobile Robot "KANTARO"	3247
<i>Amir A. F. Nassiraei, Yoshinori Kawamura, Alireza Ahrary, Yoshikazu Mikuriya, Kazuo Ishii</i>	
Fuzzy logic based supervisor of a wind farm including storage system and able to work in islanding mode	3253
<i>Arnaud Davigny, Benoit Robyns</i>	
Trajectory Planning of Biped Robot Using Linear Pendulum Mode for Double Support Phase	3259
<i>Maki Shibuya, Tomoyuki Suzuki, Kouhei Ohnishi</i>	
Tracking system for solar power plants	3265
<i>C. Aracil, J. M. Quero, L. Castaner, R. Osuna, L. G. Franquelo</i>	
A No DC-Gain Error Small-Signal Model for the Zero-Voltage-Switching Phase-Shift- Modulated Full-Bridge DC-DC Converter	3271
<i>Cleber Zanatta, José Renes Pinheiro</i>	
Aspects Concerning the Performances of a New Insulation System for Low Voltage Asynchronous Motors	3277
<i>Sonia Degeratu, Bogdan O. Degeratu, Mihaela Popescu</i>	
ZVS Considerations for a Phase-Lock Control DC/DC Converter with Piezoelectric Transformer	3281
<i>Shih-Yu Chen, Chern-Lin Chen</i>	
Tuning of Fractional PID Controllers by Using QFT	3286
<i>Joaquín Cervera, Alfonso Baños, Concha A. Monje, Blas M. Vinagre</i>	
Accurate Calibration of a Robotic Positioning System Using the Evolutionary Search	3292
<i>Yau-Zen Chang, Jung-Fu Hou, Shih-Tseng Lee</i>	
An Efficient Skin Illumination Compensation Model for Efficient Face Detection	3298
<i>C. N. Ravi Kumar, Bindu . A</i>	
Equivalent Circuit of a Linear Induction Motor with Variable Parameters	3304
<i>Ana Julia Escalada, Javier Poza, Sergio Luri, Antonio Gonzalez</i>	
Probability Field Localization Algorithm for Wireless Sensor Network	3310
<i>Hao Guo, Kay Soon Low, Meng Joo Er</i>	
Robust Tracking Control of Optical Disk Recording System based on Sudden Disturbance Observer	3316
<i>Toshimasa Miyazaki, Kiyoshi Ohishi, Daiichi Koide, Isao Shibusaki, Haruki Tokumaru</i>	
Independent PQ Control for Distributed Power Generation Systems under Grid Faults	3322
<i>P. Rodríguez, A.V. Timbus, R. Teodorescu, M. Liserreand, F. Blaabjerg</i>	

Table of Contents

Stabilization of Rotary Inverted Pendulum by Gain-scheduling of Weight and H8 Loop Shaping Controller	3328
<i>Kazuhiro Yubai, Kazunori Okuhara, Junji Hirai</i>	
Multilevel transformerless topologies for single-phase grid-connected converters	3334
<i>Oscar Lopez, Remus Teodorescu, Jesus Doval-Gandoy</i>	
Development of a Person Following Mobile Robot in Complicated Background by Using Distance and Color Information.....	3340
<i>Keita Itoh, Takashi Kikuchi, Hiroshi Takemura, Hiroshi Mizoguchi</i>	
Resonant Plasma Display Panel Driver with Efficient Energy Recovery Function	3346
<i>Sangshin Kwak, Dong-Myung Lee, Jin-Woo Jung</i>	
Parameters and States Estimation with Linear Quadratic Regulator Applied to Uninterruptible Power Supplies (UPS).....	3352
<i>Rabhi Boualaga, Benaissa Amar, Moussi Ammar, Luc Loron</i>	
Modeling of Power Electronic Systems Using Signal Flow Graphs	3358
<i>Mummadi Veerachary</i>	
New Approach to Rotor Position Detection and Precision Speed Control of the BLDC Motor	3364
<i>Yong-Ho Yoon, Tae-Won Lee, Sang-Hun Park, Byoung-Kuk Lee, Chung-Yuen Won</i>	
A New Control Approach for Active Power Quality Conditioner in Synchronous Rotating Frame	3370
<i>Enxing Yang, Guozhu Chen</i>	
PV inverter simulation using MATLAB/Simulink graphical environment and PLECS blockset.....	3375
<i>M. Ciobotaru, T. Kerekes, R. Teodorescu, A. Bouscayrol</i>	
Decoupling Control of Electric Power Steering System with Variable Gear Transmission System	3381
<i>Yoshifumi Morita, Kentaro Torii, Norio Tsuchida, Hiroyuki Ukai, Makoto Iwasaki, Nobuyuki Matsui, Jiro Hayashi, Noriyuki Ido, Hiroshi Ishikawa</i>	
Smart generator for ultrasonic applications	3387
<i>Coutard Frédéric, Schweitzer Patrick, Tisserand Etienne</i>	
Comparison of Voltage Harmonic Identification Methods for Single-Phase Systems.....	3391
<i>R. Alcaraz, E. J. Bueno, S. Cobrecas, F. J. Rodriguez, C. Giron, M. Listerre</i>	
Improving the Performances of Power Converters working in no-continuous duty	3397
<i>C. Attaianese, V. Nardi, G. Tomasso</i>	
Convex Hull in Medical Simulations: A New Hybrid Approach.....	3403
<i>Fadi Yaacoub, Yskandar Hamam, Antoine Abche, Charbel Fares</i>	
Multilevel Phase-Shifting Carrier PWM Technique in case of Non-Equal dc-Link Voltages	3409
<i>M. Liserre, V. G. Monopoli, A. Dell'Aquila, A. Pigazo, V. Moreno</i>	
Matrix Converter Protection for More Electric Aircraft Applications	3413
<i>Lee Empringham, Liliana de Lillo, Patrick W Wheeler, Jon C Clare</i>	
Wavelet Based Control Strategy for UPQC Control System Used for Mitigating Voltage Sag	3418
<i>M. Forghani, S. Afsharnia</i>	
Sensorless Control of Induction Motors based on High-Gain Speed Estimation and On-Line Stator Resistance Adaptation	3424
<i>Marcello Montanari, Andrea Tilli</i>	
Electronic Load Controller for Stand-Alone Generating Units with Renewable Energy Sources	3430
<i>I. Serban, C. Ion, C. Marinescu, M. N. Cirstea</i>	
Cascaded Predictive Control CGPC of an Induction Motor Drive under Constrained Efficiency Optimisation.....	3434
<i>Kamel Barra, Khier Benmahammed</i>	

Table of Contents

Voltage-Mode control of Hybrid Switched Capacitor Converters	3440
<i>Mummadi Veerachary, Narasa Reddy. T</i>	
Irregular Actuation and Sampling in a Networked Control System over Profibus-DP	3444
<i>Vicente Casanova, Julián Salt, Ángel Cuenca</i>	
Dual Response Surface Approach for the Analysis of a Fuel Cell Durability Test	3450
<i>Bouchra Wahdame, Denis Candusso, Xavier François, Fabien Harel, Marie-Cécile Péra, Daniel Hissel, Jean-Marie Kauffmann</i>	
Fault-tolerant Actuator System for Electrical Steering of Vehicles	3456
<i>Jesper S. Thomsen, Mogens Blanke</i>	
Impact of Periodic Switching Frequency Modulation control to reduce conducted EMI in Power Factor Converters	3462
<i>Jean-Charles Le Bunetel, David González, Josep Balcells</i>	
Investigation on the application of a time-triggered protocol aboard trains	3467
<i>Manuele Bertoluzzo, Giuseppe Buja</i>	
Optimization of an electrical system using Pareto borders of each component. Application to an automotive drive chain.	3473
<i>Hieu Nguyen Huu, Nicolas Retiere, Frédéric Wurtz</i>	
High-Precision Positioning Control of Magnetic Levitation System	3479
<i>Jeong-Woo Jeon, Mitica Caraiani, Don-Ha Hwang, Joo-Hoon Lee, Dong-Sik Kang, Yong-Joo Kim, Sung-Shin Kim</i>	
Loss Minimized Pulse Width Modulation of IGBT Current Source Converters	3485
<i>Michael H Bierhoff, Friedrich W Fuchs</i>	
Sensorless position-control method based on magnetic saliencies for a Long-Stator Linear Synchronous-Motor	3491
<i>Roberto Leidhold, Peter Mutschler</i>	
Simulink-DSP Co-Design of a Fuzzy Logic Controller	3497
<i>Abderrachid Bakhti, Lahcene Benbaouche</i>	
Mobile Robot Localization and Mapping by Scan Matching using Laser Reflection Intensity of the SOKUIKI Sensor	3503
<i>HARA Yoshitaka, KAWATA Hirohiko, OHYA Akihisa, YUTA Shin'ichi</i>	
SYNTHESIS OF A THIRD GENERATION CRONE CONTROLLER USING μ-ANALYSIS TOOLS	3509
<i>Mathieu Moze, Jocelyn Sabatier, Alain Oustaloup</i>	
Inter-Symbol Interference Reduction on Macro-Sequences Generated from Complementary Set of Sequences	3515
<i>C. De Marziani, J. Ureña, A. Hernández, M. Mazo, J.J. García, A. Jimenez, J.M. Villadangos, M.C. Perez, Alberto Ochoa, F. Álvarez</i>	
Grape Detection By Image Processing	3521
<i>R. Chamelat, E. Rosso, A. Choksuriwong, C. Rosenberger, H. Laurent, P. Bro</i>	
Energy Management for an Onboard Storage System Based on Multi-Objective Optimization	3527
<i>Tobias Knoke, Christoph Romaus, Joachim Böcker, Alessandro Dell'Aere, Katrin Witting</i>	
Hausdorff Distance Map Classification Using SVM	3533
<i>Djedjiga AIT AOUIT, Abdeldjalil OUAHABI</i>	
Fractional Robust Control of a Ball-Beam System	3538
<i>Imre J. Rudas., Jozsef K. Tar, Kazuhiro Kosuge</i>	
O.-line segmentation of GPS signal tracking using a Bayesian approach	3544
<i>S. Boutoille, S. Reboul, M. Benjelloun</i>	
MPEG-4 SP/ASP decoder for a DSP-based Multi-Format IP Set-Top Box	3550
<i>F. Pescador, M. J. Garrido, C. Sanz, E. Juárez, D. Samper, R. Antoniello</i>	

Table of Contents

Study of the Influence of parameter settings for local invariant object recognition.....	3556
<i>A. Choksuriwong, C. Rosenberger, B. Emile</i>	
Methodology for Capability Profiling of Manufacturing Equipment.....	3560
<i>Kenji Suzuki, Satoshi Iwatsu, Shinichiro Chino, Tetsuo Ideguchi</i>	
A Color Tracker Employing a Two-dimensional Color Histogram Under Changeable Illumination	3566
<i>Hirofumi Uemura, Joo Kooi Tan, Seiji Ishikawa</i>	
Nonlinear modelling and control approach for a turbocharged SI engine.....	3572
<i>D. Khiar, J. Lauber, T.M. Guerra T. Floquet Y. Chamailard, G. Colin</i>	
A Space Vector Modulation Strategy for Matrix Converters Minimizing the RMS Value of the Load Current Ripple.....	3578
<i>D. Casadei, G. Serra, A. Tani, L. Zarri</i>	
Parameterization of Outputs Tracking to Reference Asymptotically and Achievable by Bounded Inputs	3584
<i>Hiroshi Okajima, Toru Asai</i>	
Environmental Impedance Estimation and Imitation in Haptics by Sliding Mode Neural Networks	3590
<i>Baris Yalcin, kouhei Ohnishi</i>	
On-Line Detection of State-of-Charge in Lead Acid Battery Using Both Neural Network and On-Line Identification.....	3596
<i>Yoshifumi Morita, Sou Yamamoto, Sun Hee Lee, Naoki Mizuno</i>	
Steady-State Analysis of the Inductively Coupled Power Transfer System	3602
<i>Wenqi Zhou, Hao Ma</i>	
Experimental fuzzy control improvement with surface response methodology for power electronics	3608
<i>Jérôme Faucher, Pascal Maussion</i>	
Improvement of Voltage Stability in Wind Farm Connection to distribution Network Using FACTS Devices	3614
<i>V. Salehi, S. Afsharnia, S. Kahrobae</i>	
Differential Amplifier Using Polysilicon TFTs Processed at Low Temperature to be Integrated with TFT Hall Sensor.	3620
<i>Emmanuel Jacques, France Le Bihan, Samuel Crand, Tayeb Mohammed Brahim</i>	
Stability and Performance Analysis of Regulated Converter Systems	3626
<i>Kai Zenger, Ali Altowati, Teuvo Suntio</i>	
Clinical Evaluation of a Colonoscopy Simulator with Improved Haptics	3632
<i>Sun Young Yi, Hyun Soo Woo, Woojin Ahn, Jae Kyoung Joo, Doo Yong Lee</i>	
Automatic Identification of a PMSM Drive Equipped with an Output LC-Filter.....	3637
<i>Piotr Szczupak, Mario Pacas</i>	
A “Two –Ahead” Predictive Controller For Active Shunt Power Filters.....	3643
<i>Milijana Odavic, Pericle Zanchetta, Mark Sumner, Claudia Ladisa, Zeljko Jakopovic</i>	
A Linear-Quadratic Regulator with Integral Action Applied to PWM DC-DC Converters	3649
<i>Carles Jaen, Josep Pou, Rafael Pindado, Vicenç Sala, Jordi Zaragoza</i>	
Hardware-Software Co-design of a Fingerprint Image Enhancement Algorithm.....	3655
<i>Mariano López, Enrique Cantó, Mariano Fons</i>	
Transformer Diagnosis Approach using Frequency Response Analysis Method	3661
<i>Carlos González, Jorge Pleite, Rosa Ana Salas, Juan Vázquez</i>	
Windows Processing for Deblocking Filter in H.264/AVC	3667
<i>Chung-Ming Chen, Chung-Ho Chen, Jian-Ping Zeng, Wan-Chug Hsu, Chao-Tang Yu</i>	
Reconfigurable OPB Coprocessors for a Microblaze Self-Reconfigurable SOC Mapped on Spartan-3 FPGAs.....	3673
<i>Enrique Cantó, Francesc Fons, Mariano López</i>	

Table of Contents

Analytical modelling of electromagnetic origin vibrations in an induction machine supplied by high power PWM inverter	3678
<i>Emmanuel Leleu, Abdellatif Miraoui</i>	
Behavioural Affective Modulation of Service Robotic Agents.....	3686
<i>Carlos Domínguez, Houcine Hassan, Alfons Crespo</i>	
Consequences of Discontinuous Current Consumption on Battery Powered Wireless Terminals	3692
<i>José Ignacio Garate, Ph.D. José Miguel de Diego, Maite Sierra</i>	
Anti-slip Readhesion Control of Electric Commuter Train Based on Disturbance Observer Considering Bogie Dynamics.....	3698
<i>Kiyoshi Ohishi, Satoshi Kadowaki, Yosuke Smizu, Takashi Sano**, Shinobu Yasukawa, Takafumi Koseki</i>	
A Stirling Micro Cogenerator Emulator	3704
<i>I. Garcia Burrel, L. Prévond, S. Le Ballois, E. Monmasson</i>	
Analysis and Design of a Contactless Energy Transmission System with Flexible Inductor Positioning for Automated Guided Vehicles	3710
<i>A. Ecklebe, A. Lindemann</i>	
Analysis and design of Power Rectifiers for Voltage Regulation.....	3716
<i>A. Cid-Pastor, L. Martinez-Salamero, C. Alonso, B. Estibals, L. Seguíer, G. Schweitz</i>	
Bi-directional Gap Closing MEMS Actuator Using Timing Control and Control Techniques	3722
<i>John E. Rogers, Phillip M. Ozmun, John Y. Hung, Robert N. Dean</i>	
Remote Actuation of Independent Electrostatic Distributed Micromechanical Systems (DMMS) for a Wireless Microrobot.....	3728
<i>P. Basset, L. Buchaillot, D. Collard, A. Kaiser</i>	
Improvements of Object Grabbing Method by Using Color Images and Neural Networks Classification.....	3734
<i>Mohamed Trabelsi, Naima Aitoufroukh, Sylvie Lelandais</i>	
MOS Controlled AC Switches implemented with Full driver power supplies and dead time management circuits.....	3740
<i>Binh NGUYEN-Dac, Jean-Christophe CREBIER</i>	
Design and Optimization by using Complex Function of Magnet Electric Poles in order to obtain Magnetic Levitation.....	3746
<i>Clément Lorin, Ignace Rasoanarivo, Adrian Colteu, Alain Mailfert</i>	
Four-Wire Unidirectional Three-Phase/Level/Switch (VIENNA) Rectifier	3753
<i>Jarno Alahuhtala, Heikki Tuusa</i>	
Bounding Box Accuracy in Pedestrian Detection for Intelligent Transportation Systems	3759
<i>David Fernandez, Ignacio Parra, Miguel Angel Sotelo, Pedro A. Revenga</i>	
Dynamic Model of a Polymer Electrolyte Fuel Cell Power Device.....	3765
<i>Elie Laffly, Marie-Cécile Péra, Daniel Hissel</i>	
Pre-Design and Optimization of three phase homopolar SRM With double statoric winding and double massive rotor	3771
<i>Christian Belalahy, Ignace Rasoanarivo, Tsarafidy Raminosa, François-Michel Sargos</i>	
High Precision Force Control by Multi-Sensor based Disturbance Observer	3777
<i>Seiichiro Katsura, Kouhei Irie, Kiyoshi Ohishi</i>	
Step by step design procedure of an Independent-Wheeled Small EV applying EVLS	3784
<i>Francisco J. Pérez-Pinal, Ciro Núñez, Ricardo Álvarez, Marco Gallegos</i>	
Self calibration of a road stereo color vision system using a similarity criterion.....	3790
<i>Sebastien Kramm, Abdelaziz Bensrhair, Pierre Miché</i>	
Artificial Neural Networks as Harmonic Detectors.....	3796
<i>Abdelaziz Zouidi, Farhat Fnaiech, Kamal AL-Haddad, Salem Rahmani</i>	

Table of Contents

Optimization of Position Control of Induction Motors using Compact Genetic Algorithms.....	3800
<i>Francesco Cupertino, Ernesto Mininno, Erika Lino, David Naso</i>	
Estimation of High Heat Flux in Supersonic Plasma Flows.....	3806
<i>Stefan Lohle, Jean-Luc Battaglia, Jean-Christophe Batsale, Frederic Bourserau, Dominique Conte, Pierre Jullien, Bruno van Ootegem, Jacques Couzi, Jean-Pierre Lasserre</i>	
Multifunctional Six-Phase Motor Drives with Algorithms of Synchronized PWM.....	3814
<i>Valentin Oleschuk, Radu Bojoi, Francesco Profumo, Alberto Tenconi, Alexandar M. Stankovic</i>	
Adaptive Multiple Sampling Rate Scheduling of Real-time Networked Supervisory Control System – Part I.....	3822
<i>Zheng Li, Mo-Yuen Chow</i>	
Real-Time Stereo Vision Processing System in a FPGA	3828
<i>Carlos Cuadrado, Aitzol Zuloaga, Jose L. Martin, Jesus Lazaro, Jaime Jimenez</i>	
Cooperative environment for training on SCM	3834
<i>Mauro F.Koyama, Francisco E.D.Pereira, Olga Nabuco, Takao Suguuy, Marcius F.H. Carvalho, Carlos Machado</i>	
A Grid-Connected Photovoltaic System with Direct Coupled Power Quality Control	3840
<i>Sung-Hun Ko, Seong-Ryong Lee, Hooman Dehbonei, C.V. Nayar</i>	
Image segmentation using quantum genetic algorithms	3846
<i>Karima Benatchba, Mouloud Koudil, Yacine Boukir, Nadjib Benkhelat</i>	
Industrial Processes Supervision Using Service Oriented Architecture	3854
<i>Francisco Sales de L. Filho, Adauto L. T. B. da Fonseca, Alessandro J. de Souza, Felipe Alves Couto Rodrigo P. R. dos Santos, Luiz Affonso Guedes</i>	
Using co-design techniques to increase the reliability of the Electronic control system for a Multilevel Power Converter	3859
<i>Javier C., Brook H., Fco. J., Rodriguez S., Pedro Martin S., Emilio J. Bueno</i>	
Direct Power Control Based Matrix Converter and Its Operation Characteristics	3865
<i>Toshihiko Noguchi, Somei Nakatomi, Daisuke Takeuchi</i>	
Ac Indirect Line Conditioner Digital Control Using PLL Based on the Three-Phase Instantaneous Power Theory.....	3871
<i>Carlos Eduardo, Marcussi Gomes, Clóvis Antônio Petry, Samir Ahmad Mussa, Hari Bruno Mohr</i>	
Nonlinear Target Impedance Design and Its Use in Robot Compliant Motion Control with Time Delay Estimation.....	3877
<i>Pyung Hun Chang, Maolin Jin</i>	
Compaarison of measurement methods for the induction machine frequential modeling	3883
<i>mehdi Belhaj, patrick Guerin, EL Hadi Zaim</i>	
Evaluation of Reconfigurable Manufacturing Systems configurations using tolerance criteria	3888
<i>Florent Frizon de Lamotte, Pascal Berruet, Jean-Luc Philippe</i>	
A Three-Phase Power Flow Modelization: A Tool for Optimal Location and Control of FACTS Devices in Unbalanced Power Systems	3894
<i>Belkacem Mahdad, Tarek Bouktir, Kamel Srairi</i>	
Visual Information Assist System Using 3D SOKUIKI Sensor for Blind People - System Concept and Object Detecting Experiments -.....	3900
<i>Tatsuro UEDA, Hirohiko KAWATA, Tetsuo TOMIZAWA, Akihisa OHYA, Shin'ich YUTA</i>	
Service Oriented Architecture for Context Perception Based on Heterogeneous Sensors Network.....	3906
<i>Vincent Ricquebourg, David Menga, Bruno Marhic, Laurent Delahoche, David Durand, Christophe Logé</i>	
A Design Method of Communication Disturbance Observer for Time Delay Compensation	3912
<i>Kenji Natori, Kouhei Ohnishi</i>	

Table of Contents

The 4th Official IGS Global Data Center and Evaluation for the Vast Storage On KASI GDC System	3918
<i>Daekyu Lee, Sungki Cho, Jonguk Park, Taekyung Sung</i>	
Islanding for Distributed Generation.....	3922
<i>Erik S. Hoff, Lars E. Norum</i>	
Novel Zero-Voltage Switching Control Methods for a Multiple-Input Converter Interfacing a Fuel Cell and Supercapacitor.....	3928
<i>Haimin Tao, Jorge. L. Duarte, Marcel. A. M. Hendrix</i>	
A fast on-line algebraic estimation of a single-link flexible arm applied to GPI control.....	3934
<i>J. Becedas, J.R. Trapero, G. Mamani, H. Sira-Ramirez, V. Feliu-Battle</i>	
Compensation Current of Active Power Filter Generated by Artificial Neural Network Approach.....	3940
<i>Claudionor F. Nascimento, Azauri A. Oliveira Jr., Alessandro Goedtel, Ivan N. Silva</i>	
The Motion Message Estimator in Real-Time Network Control Systems	3946
<i>Chen-Chou Hsieh, Pau-Lo Hsu, Bor-Chyun Wang</i>	
Single-Stage Power Factor Correction Switched Power Supply	3952
<i>Cícero S. Postiglione, Arnaldo J. Perin, Claudinor B. Nascimento</i>	
Stereo Vision Calibration Procedure for 3D Surface measurements.....	3958
<i>João L. Vilaça, Jaime Fonseca, A. C. Pinho</i>	
BAW resonators reliability in the GHz range.....	3964
<i>B. Ivira, R.Y. Fillit, Ph. Benech, F. Ndagijimana, G. Parat, P. Ancey</i>	
A Proposal to the Supervision of Processes in an Industrial Environment with Heterogeneous Systems	3970
<i>Rodrigo B Souza, Adelarado A D Medeiros, João M A Nascimento, Heitor P Gomes, André L Maitelli</i>	
eDSPlab: A remote-accessed instrumentation laboratory for digital signal processors training based on the Internet.....	3975
<i>Sergio Gallardo, Federico Barrero, Sergio L. Toral, Mario J. Durán</i>	
Inversion-based control of electromechanical systems using causal graphical descriptions.....	3981
<i>P. J. Barre, A. Bouscayrol, P. Delarue, E. Dumetz, F. Giraud, J. P. Hautier, X. Kestelyn, B. Lemaire-Semail, E. Semail</i>	
Robust Field Weakening Algorithm for Vector-Controlled Induction Machine Traction Drives	3987
<i>Zdenek Peroutka, Karel Zeman</i>	
Low-Cost Sensorless Induction Motor Speed Control	3993
<i>Helder Tavares Camara, Rafael Cardoso, Rodrigo Z. Azzolin, Humberto Pinheiro, Hilton Abilio Grundling</i>	
Optimized Direct Power Control Strategy using Output Regulation Subspaces and Pulse Width Modulation	3999
<i>Sergio Vazquez, Jose I. Leon, Juan A. Sanchez, Eduardo Galvan, Juan M. Carrasco, Leopoldo G. Franquelo, Eugenio Dominguez, Gerardo Escobar</i>	
Characterization of Waterproofness in Ready-to-Wear Professional Garments.....	4005
<i>Jorge Yanez, Jose Farina, jaun J. Rodriguez-Andina, X. Ramon Novoa, Alejandro Marques de magallanes</i>	
Analysis of the contact-less power supply for a moving load.....	4011
<i>C. Fernández, P. Zumel, A. Lázaro, A. Barrado</i>	
E-Spart Analyzer Based On A Stationary-Fringe Ldv.....	4017
<i>J. Zhang, P. K. Srirama, N. Wu, M. K. Mazumder</i>	
A Control Analysis and Implementation of High Voltage, High Frequency Direct Power Converter	4021
<i>H.Q.S Dang, P. Wheeler, J. Clare</i>	
A Short-Stroke Permanent Magnet Aerospace Actuator with High Force-to-Mass Ratio	4028
<i>F. L. Langley, P. H. Mellor</i>	
Hardware-Software Co-Design in Practice: A Case Study in Image Processing	4034
<i>Ralf Joost, Ralf Salomon</i>	

Table of Contents

Monitoring of Static and Dynamic Air Gap Eccentricity of Inverter Fed Induction Machine Drives	4040
<i>Thomas M. Wolbank, Peter E. Macheiner</i>	
PEM Fuel Cells Control by means of the Perturb and Observe Technique	4046
<i>A.Giustiniani, G.Petrone, C.Pianese, M.Sorrentino, G.Spagnuolo, M.Vitelli</i>	
Position and speed estimations of a switched reluctance machine using current harmonic	4052
<i>M. Hilairat, H. Hannoun, J. Mazouari, C. Marchand</i>	
Design of an Optimal Stationary Frame Controller for Grid Connected AC-DC Converters	4058
<i>Jae-Won George Hwang, Manfred Winkelkemper, Peter W. Lehn</i>	
Dynamic Model of One-Cycle control for converters operating in CCM and DCM	4064
<i>L.Egiziano, N.Femia, M.Fortunato, G.Petrone, G.Spagnuolo, M.Vitelli</i>	
Passivity-Based Control for a Single-Phase, Full Bridge, Active Rectifier.	4070
<i>Manuel Flota, Jesus Lira, Ciro Nunez, Ricardo Alvarez, Felipe Pazos</i>	
Combination of Buck and Boost Modes to Minimize Transients in the Output of a Positive Buck-Boost Converter	4075
<i>Arindam Chakraborty, Alireza Khaligh, Ali Emadi</i>	
Discrete trajectory formation in comparison with the analytical method for smooth movements	4081
<i>Ki Tak Ahn, Jung San Cho, Wan Kyun Chungy</i>	
Stacked Multicell Converter: Digital Sliding Mode Observation of Flying Capacitor Voltages	4087
<i>A.-M. Lienhardt, G. Gateau, T.A. Meynard</i>	
Timing and Carrier Acquisition in Upstream CATV Channels	4093
<i>Eric R. Pelet, J. Eric Salt, Douglas Fast</i>	
Codesign of CAN Networked Control Systems with Remote Controllers using Jitter Margin	4099
<i>Daniel A. Perez, Ubirajara F. Moreno, Carlos B. Montez</i>	
A Speed-Sensorless Direct Torque Control Scheme For Matrix Converter Driven Induction Motor	4105
<i>K.K. Mohapatra, T. Satish, Ned Mohan</i>	
Modelling and Control of a Multi-Mass Ultrasonic Motor for Airborne Applications	4111
<i>H. Wetzel, N. Fröhleke, J. Böcker, S. Ouchouche, D. Bezanere, F. Cugnon</i>	
Flatness-Based Control of an Induction Machine Fed via Voltage Source Inverter - Concept, Control Design and Performance Analysis	4117
<i>Joerg Dannehl, Friedrich W. Fuchs</i>	
Comparison of two nonlinear speed observers for induction motors	4123
<i>M. A. Gallegos, R. Alvarez, C. A. Nunez, F. Perez-Pinal</i>	
CIRCON: An Alternative 3D Shape Representation for Surface Matching	4129
<i>Carlos Torre-Ferrero, Sandra Robla, Esther G. Sarabia, José Ramón Llata</i>	
A Resonant Gate Drive Circuit with Reduced MOSFET Switching and Gate Losses	4133
<i>Wilson Eberle, Yan-Fei Liu, P.C. Sen</i>	
Current-Fed Full Bridge Converters for Fuel Cell Systems Connected to the Three Phase Grid	4139
<i>Malte Mohr, Friedrich-W. Fuchs</i>	
Realization of Negative Inductance using Direct Reactance Synthesis (DRS) Technique	4145
<i>Leonardo de Araújo Silva, André Augusto Ferreira, José Antenor Pomilio</i>	
Damping Control in Magnetic Levitation of Micro Objects	4151
<i>Cağlar Elbuken, Mir Behrad Khamesee, Mustafa Yavuz</i>	
Design and Control of an Outdoor Autonomous Quadrotor powered by a four strokes RC engine	4157
<i>Bruno Bluteau, Renaud Briand, Olivier Patrouix</i>	

Table of Contents

Auto-adjustable method for Gaussian width optimization on RBF neural network. Application to face authentication on a mono-chip system.	4163
<i>Lionel Pierrefeu, Jacques Jay, Cecile Barat</i>	
Dynamic UPS Drive Model for Low-Power Applications	4168
<i>T. Loix, E. Haesen, K. De Brabandere, J. Driesen, R. Belmans</i>	
A New Hybrid Cycloconverter with Smooth Output Voltage Generation Capability and Accurate Control of the Circulating Current	4174
<i>Christian Klumpner, Tianning Xu, Jon Clare</i>	
Flatness Based Control of a Hybrid System Using a Supercapacitor as an Energy- Storage Device and a Fuel Cell as the Main Power Source	4180
<i>A. Payman, S. Pierfederici, D. Arab-Khaburi, F. Meilbody-Tabar</i>	
Extended Kalman Filter Based Speed Sensorless PMSM Control with Load Reconstruction	4186
<i>Dariusz Janiszewski</i>	
A New Control Structure for Hybrid Power Filter to Reduce the Inverter Power Rating	4190
<i>Lucian Asiminoaei, Wojciech Wiechowski, Frede Blaabjerg, Tomasz Krzeszowiak, Bartosz Kedra</i>	
Computation of SAR Distributions in a Head Due to a Radiating Dipole Antenna Representing A Hand-Held Mobile Phone	4196
<i>Mohammed Bouhorma, Fatiha Elouaai, Ahmed Mamouni</i>	
A Novel Digital Control Technique for Brushless DC Motor Drives: Steady State and Dynamics	4203
<i>Fernando Rodriguez, Ali Emadi</i>	
A New Smart Flash Memory Based On the Human Brain Structure by Using Trainable Transistor	4209
<i>Dariusz Shahgoshtasbi</i>	
Positioning In Underground Mines	4214
<i>Warren Hawkins, Brian L.F. Daku, Arnfinn F. Prugger</i>	
Interactive Bank of Unscented Kalman Filters for Fault Detection and Isolation in Reaction Wheel Actuators of Satellite Attitude Control System	4219
<i>N. TUDOROIU, E. SOBHANI-TEHRANI, K. KHORASANI</i>	
An emulator to develop the Wire Train Bus protocol stack	4225
<i>Hibai Unzueta, Jaime Jimenez, Jose L. Martin, Jon Andreu, Carlos Cuadrado</i>	
Real-Time Simulation of PWM Power Converters in a Doubly-Fed Induction Generator Using Switching-Function-Based Models	4231
<i>Hoang Le-Huy, Gilbert Sybille, Richard Gagnon, Van Que Do</i>	
Stability Improvement with A Multi-Functional Power Electronic Converter in Distributed Power Systems	4237
<i>Z. Chen, Y Hu, Frede Blaabjerg, John K. Pedersen</i>	
Distributed Bayesian Decision-Making for Urban Traffic Control	4243
<i>Vaclav Smidl, Jan Prikryl</i>	
Model Based Stator Fault Detection in Induction Motors	4249
<i>Cristian De Angelo, Guillermo Bossio, Santiago Giaccone, Guillermo O. Garcia, Jorge Solsona, Maria I. Valla</i>	
Maximum control structure of a five-drive paper system using Energetic Macroscopic Representation	4255
<i>Y. Djani Wankam, P. Sicard, A. Bouscayrol</i>	
Humanoid Walking Robot Control with Natural ZMP References	4261
<i>Kemalettin Erbatur, Okan Kurt</i>	
Controllability and output tracking for an ellipsoidal submarine driven by Kirchho's laws	4268
<i>Thomas Chambrion, Mario Sigalotti</i>	
Visualization and Analysis of "Pseudo-Contact Point" Loci for Determination of a Sensing Parameter	4274
<i>Hiromu Onda, Woo-Keun Yoon, Kousei Kitagaki, Takashi Suehiro</i>	

Table of Contents

A Current Flow Model for m-Level Diode-Clamped Multilevel Converters	4280
<i>S.A. Khajehoddin, A. Bakhshai, P.K. Jain</i>	
Modified Sector Scheme to Overcome Flux Drooping of Direct Torque Controlled IPMSM.....	4286
<i>Priya Verma, B.G. Fernandes</i>	
Stability Improvement of Wind Turbine Systems by STATCOM.....	4291
<i>Z. Chen, Frede Blaabjerg, Y Hu</i>	
A Generalized High Voltage Gain Boost Converter Based on Three-State Switching Cell.....	4297
<i>Grover V. Torrico-Bascopé, René P. Torrico-Bascopé, Demercil S. Oliveira Jr., Carlos G. C.Branco</i>	
A New Two-Stage Voltage Source Inverter with Modulated DC-link Voltage and Reduced Switching Losses	4303
<i>Christian Klumpner</i>	
Sliding Mode Control Using an Integrator Controller and Implementation For a Three-Tank System.....	4309
<i>S. Mahieddine-Mahmoud, L. Chrifi-Alaoui, V. Van Assche, J-M. Castelain</i>	
High performance torque and flux control for multilevel inverter fed induction motors.....	4315
<i>Samir Kouro, Rafael Bernal, Cesar Silva, Jose Rodriguez, Jorge Pontt</i>	
Realization of High Efficiency AC link Converter System based on AC/AC Direct Conversion Techniques with RB-IGBT	4321
<i>Jun-ichi Itoh, Takashi Iida, Akihiro Odaka</i>	
A New Control Scheme for an Hybrid Two-stage Matrix Converter with Improved Efficiency	4327
<i>S. Mariethoz</i>	
Experience of Design and Prototyping of a Multi-Biometric Early Warning Physical Access Control Security System (PASS) and a Training System (T-PASS).....	4334
<i>S. N. Yanushkevich, A. Stoica, V. P. Shmerko</i>	
3D Image Analysis for Evaluating Internal Deformation / Fractur Fracture Characteristics of Materials.....	4340
<i>Mitsuru Nakazawa, Yoshimitsu Aoki, Yuji Kawai, Masakazu Kobayashi, Hiroyuki Toda</i>	
Novel non linear PD controller for the positioning system of a 2D Automated Visual Inspection Machine for Quality Control of SMD1.....	4346
<i>Noé Pérez-Arreortúa, Francisco J. Ruiz-Sánchez, Nicolás A. Plata-Ramírez</i>	
Implementing Intelligent Functionality into Embedded System	4352
<i>Isabele Morais Costa, Eloi Cagni Junior, Felipe Cesar Couto, Leonardo Savio Guanabara, Diego Domingos, Jose Alberto Nicolau de Oliveira, Jorge Dantas de Melo, Adriaio Duarte Doria Neto, Luiz Affonso Guedes</i>	
Stacking approaches for the design of a soft sensor for a Sulfur Recovery Unit	4358
<i>L. Fortuna, S. Graziani, G. Napoli, M.G. Xibilia</i>	
A Fault Tolerant Operating System in a Doubly Fed Induction Machine Under Inverter Short-circuit Faults.....	4364
<i>Sejir Khojet El Khil, Ilhem Slama-Belkhdja, Maria Pietrzak-David, Bernard de Fornel</i>	
Modeling of Sensitivity of fabricated Capacitive Pressure Sensor	4370
<i>Sherif Saleh, Amal Zaki, Hamed Elsemary, S. Ahmad</i>	
Motion Detection with Networked Cellular Vision System for Surveillance.....	4374
<i>Hiroyuki Kawai, Hisato Kobayashi</i>	
Iterative Learning and Self-Optimization Techniques for the Innovative Railcab-System1	4380
<i>Ansgar Trächtler, Eckehard Münch, Henner Vöcking</i>	
A New Three-Level Sparse Indirect Matrix Converter.....	4386
<i>Christian Klumpner, Meng Lee, Patrick Wheeler</i>	
A study on the pulse generator for CNT Lamp driving	4392
<i>Myunghyo Ryu, Juwon Baek, Jonghyun Kim, Dongwook Yoo</i>	

Table of Contents

Design and Fabrication of a High Temperature (250 °C Baseplate), High Power Density Silicon Carbide (SiC) Multichip Power Module (MCPM) Inverter	4397
<i>Edgar Cilio, Jared Hornberger, Brice McPherson, Roberto Schupbach, Alexander Lostetter</i>	
Observation of Gradients, by Means of Algorithmic Differentiation.....	4403
<i>Eckehard Munch, Ansgar Trachtler</i>	
Stand-alone Photovoltaic System using an UPS Inverter and a Microcontrolled Battery Charger based on a Boost Converter with a 3 State-Commutation Cell.	4409
<i>Samuel V. Araújo, René P. Torrico-Bascopé, Fernando L. M. Antunes, Edilson Mineiro Sá</i>	
Pulse Density Modulation Pattern Optimization using Genetic Algorithms	4415
<i>Demian Pimentel, Ahmed Chériti, Mohamed Ben Slima, Pierre Sicard</i>	
Cancellation Predictive Control for Three-Phase PWM Rectifiers under Harmonic and Unbalanced Input Conditions.....	4421
<i>Peng Xiao, Keith A. Corzine, Ganesh K. Venayamoorthy</i>	
A Novel Seven-Level Shunt Active Filter for High-Power Drive Systems	4427
<i>Peng Xiao, Keith A. Corzine, Ganesh K. Venayamoorthy</i>	
Cost Function-Based Predictive Control for Power Converters.....	4433
<i>Patricio Cortes, Jos Rodriguez, Rene Vargas, Ulrich Ammann</i>	
Adaptive Fuzzy Integral-Backstepping Controller for Linear Induction Motor Position Control	4439
<i>A. Hazzab, I. K. Bousserhane, P. Sicard, M. Rahli, M. Kamli, B. Mazari</i>	
A PDMS Mold with Embedded Sensory Array for Micromolding Processes	4445
<i>R. C. Luo, C. F. Lin, C. W. Liu</i>	
Fault Detection on Multicell Converter Based on Output Voltage Frequency Analysis.	4450
<i>P. Lezana, J. Rodríguez, R. Aguilera, C. Silva</i>	
Experimental Characterization and Evaluation of an Scaled-Down TCSC Prototype under Steady State Conditions.....	4456
<i>Moreno-Goytia E. L., Acha E.</i>	
Attaining Operational Survivability in an Autonomous Unmanned Ground Surveillance Vehicle.....	4462
<i>Boon-Kiat Quek, Javier Ibanez-Guzman, Khiang-Wee Lim</i>	
Torque Regulation by Means of Stator Flux Control for Induction Machines	4468
<i>Hernan Miranda, Cesar Silva, Jose Rodriguez</i>	
Analysis of intermittent control systems by human operations	4473
<i>masami Iwase, Shoshiro hatakeyama, Katsuhisa Furuta</i>	
Fuzzy Sliding Mode Based on Indirect Field Orientation for Induction Motor Drive	4479
<i>I. K. Bousserhane, A. Hazzab, P. Sicard, M. Rahli, B. Mazari, M. Kamli</i>	
A New Gradient-Based Mode Selection of Intra Prediction for 4x4 block in H.264/AVC	4485
<i>Kyeong-Yuk Min, Jong-Wha Chong</i>	
Torque Ripples Suppression for Six-Phase Induction Motors Under Open Phase Faults	4489
<i>R. Kianinezhad, B. Nahid-Mobarakeh, L. Baghli, F. Betin, G.A. Capolino</i>	
Decoupling Modeling and Control of Six-Phase Induction Machines Under Open Phase Fault Conditions	4495
<i>R. Alcharea, B. Nahidmobarakeh, L. Baghli, F. Betin, G.A. Capolino</i>	
Design Issues in Implementing MPPT for Improved Tracking and Dynamic Performance	4501
<i>Ashish Pandey, Nivedita Dasgupta, Ashok K. Mukerjee</i>	
Power Drive Investigation by Spectral Analysis of the Electromagnetic Field Emitted by the DC Bus	4506
<i>Cyrille Gillot, Hamed Yahoui, Gerard Rojat</i>	
Design of Class DE Inverter with Band-pass Filter	4510
<i>Motoki Katayama, Hiroyuki Hase, Hiroo Sekiya, Janming Lu, Takashi Yahagi</i>	

Table of Contents

An Equivalent Circuit of a Novel Ultrasonic Motor	4516
<i>Guo-Shing Huang, Puu-An Juang, Da-Wei Gu</i>	
Real-Time Line-of-Sight Rate Estimator for Surface-to-Air Missiles with a RF Seeker	4522
<i>Won-Sang Ra, Ick-Ho Whang, Jin-Bae Park</i>	
Design and Development of New Controller Suitable to Neighbourhood Electric Vehicle Propulsion Control.....	4528
<i>José Ricardo Soares, Nuno Miguel Cerqueira, Ricardo Pinto de Castro, Hugo Santos Oliveira, Rui Esteves Araújo</i>	
A new resonant gate drive circuit utilizing leakage inductance of transformer.....	4534
<i>Kai Xu, Yan-Fei Liu, P.C. Sen</i>	
Hybrid Neural Fuzzy Sliding Mode Control of Flexible-Joint Manipulators with Unknown Dynamics.....	4539
<i>Hicham Chaoui, Wail Gueaieb, Mustapha C.E. Yagoub, Pierre Sicard</i>	
Multi-Agent Scheduling Transient Inter-Production States for Many Cyclic Productions.....	4545
<i>Olfa Belkahla Driss, Ouajdi Korbaa, Khaled Ghedira, Pascal Yim</i>	
Comparison of Two Switched Reluctance Motors with No Flux-Reversal in the Stator.....	4551
<i>N. S. Lobo, Seok-Gyu Oh, R. Krishnan</i>	
Force Control Test Bench for Underwater Vehicle- Manipulator System Applications.....	4557
<i>Sylvain Lemieux, Julien Beaudry, Michel Blain</i>	
A New Cycle by Cycle Controller for a Three Level Resonant Single Stage Power Factor Correction Converter.....	4564
<i>Mohammed S. Agamy, Praveen K. Jain</i>	
Implementation of a SOPC Based Switched Reluctance Drive	4570
<i>Ming-Tsan Lin</i>	
A Fast Stereo Matching Algorithm using Interpolation for Sewer Inspection Robots.....	4575
<i>Alireza Ahrary, Masumi Ishikawa</i>	
Virtual Electronics Laboratory: A new tool to improve Industrial Electronics Learning.....	4581
<i>Luis M. Menéndez, Angel Salaverría, Enrique Mandado, Jacinto G. Dacosta</i>	
Integrated Ultra-Wideband Transmitter and Receiver for Sensor, Positioning and Identification Network.....	4585
<i>Stanislas Voinot, Emil Novakov, Jean-Michel Fournier, Bruno Challiol</i>	
A New High Frequency Modeling Technique of Travelling Waves in Long Cable PWM Drives	4589
<i>Saïd Amarir, Kamal AL-Haddad</i>	
Measuring Performance Electric Power Generations Using Artificial Neural Networks and Fuzzy Clustering	4595
<i>M. A. Azadeh, S. F. Ghaderi, M. Anvari, M. Saberi</i>	
IP Controlled Three-Phase Shunt Active Power Filter for Power Improvement Quality.....	4601
<i>Abdelmadjid Chaoui, Jean-Paul Gaubert, Fateh Krim, Laurent Rambault</i>	
Statistical Power Estimation for IP-Based Design	4607
<i>Yaseer A. Durrani, Teresa Riesgo</i>	
Description of complex strain-optical coefficient by the Fractional Standard Solid Model.....	4612
<i>Nicole Heymans</i>	
DC-DC Converters with a Novel Hysteretic PWM Controller	4618
<i>Terukazu Sato, Takashi Nabeshima, Kimihiro Nishijima, Tadao Nakano</i>	
Calibration of a Panoramic Stereovision Sensor : Analytical vs Interpolation-Based Methods.....	4623
<i>N. Ragot, J-Y. Ertaud, X. Savatier, B. Mazari</i>	
Documents Image Compression with IDP and Adaptive RLE	4629
<i>Roumen Kountchev, Vladimir Todorov, Mariofanna Milanova, Roumiana Kountcheva</i>	

Table of Contents

Improvement of Indirect Rotor Flux Orientation Control of Induction Motors with Skewed Rotor Bars.....	4635
<i>Nadia Salvatore, Giuseppe L. Cascella, Davide Cascella, Silvio Stasi</i>	
Human Adaptive Assist Planning for Teleoperation	4641
<i>Hiroshi Igarashi, Akira Takeya, Fumio Harashima, Masayoshi Kakikura</i>	
Skill Analysis in Human Tele-operation Using Dynamic Image.....	4647
<i>Kazumasa Saida, Satoshi Suzuki, Yorito Maeda, Kouiti Hidaka</i>	
Development of a new connection scheme for variable-speed wind turbines using squirrel-cage generators.....	4653
<i>José Fco. Sanz, Jesús Sallán</i>	
A Robust PLL Algorithm to Synchronize Static Power Converters with Polluted AC Systems	4658
<i>Marcelo A. Pérez, José R. Espinoza, Miguel A. Torres, Ernesto A. Araya</i>	
X-Ray Computed Tomography for Metals Using Fourier Reconstruction	4664
<i>Chawanakorn Mantala, Nipon Theera-Umpon</i>	
Automated Crack Detection for Concrete Surface Image Using Percolation Model and Edge Information.....	4669
<i>Tomoyuki Yamaguchi, Shuji Hashimoto</i>	
2DOF Control-Based Fast and Precise Positioning Using Disturbance Observer	4675
<i>Makoto Iwasaki, Motohiro Kawafuku, Hiromu Hirai</i>	
Remote Target Monitoring in Embedded Systems Lab Courses using a Sensor Network	4681
<i>Christian Trodhandl, Markus Proske, Wilfried Elmenreich</i>	
A new Approach for Electrical Machine Winding Insulation Monitoring by Means of High Frequency Parametric modelling	4687
<i>W. Liu, E. Schaeffer, D. Averty, L. Loron</i>	
Dynamically Reconfigurable Hardware for autonomous mini-Robots	4692
<i>Carlos paiz, Teerapat Chinapirom, Ulf Witkowski, Mario Porrman</i>	
Control Parameter Optimization in the Hardware-in-the-loop System using Novel Search Algorithm	4698
<i>Schoon Oh, Yoichi Hori</i>	
Time-varying interference spectral analysis for Cognitive UWB networks	4704
<i>Massimo Francone, Daniele Domenicali, Maria-Gabriella Di Benedetto</i>	
Electromagnetic Considerations in the Design of Doubly-Fed Reluctance Generators for use in Wind Turbines.....	4710
<i>David G Dorrell, Ilario Scian, Erich M Schulz, Robert B Betz, Milutin Jovanovic</i>	
Design and development of a Cartesian plotter as a way to teach Mechatronics to Mechanical Engineering students	4716
<i>M. Camposaragna, S. Chatterton, P. Righettini, R. Riva, R. Strada, B. Zappa</i>	
Design and Operation of a Phase-Locked Loop with Kalman Estimator-Based Filter for Single-Phase Applications.....	4722
<i>K. De Brabandere, T. Loix, K. Engelen, B. Bolsens, J. Van den Keybus, J. Driesen, R. Belmans</i>	
Realization of Virtual Slave Model of a Forceps Robot Using Bilateral Control.....	4728
<i>A.M. Harsha, S. Abeykoon, Kouhei Ohnishi</i>	
Timing Analysis of Automatically Generated Code by MATLAB/Simulink	4734
<i>Romulo Silva de Oliveira, Marcos Vinicius Linhares, Ricardo Bacha Borges</i>	
Enforcing Dependability and Timeliness in Controller Area Networks	4740
<i>Jose Rufino, Carlos Almeida, Paulo Verissimo, Guilherme Arroz</i>	
Synthesis of Motor Motion Curves for Intermittent Indexing Tables with Minimized Positioning Time.....	4746
<i>Der-Min Tsay, Wei-Chih Shih</i>	
Impact of the Hybrid Multilevel Modulation Strategy on the Semiconductors Power Losses	4752
<i>Diorge Alex Bão Zambra, Cassiano Rech, José Renes Pinheiro</i>	

Table of Contents

Design of Brushless Permanent Magnet Motors - A Combined Electromagnetic and Thermal Approach to High Performance Specification	4758
<i>David G Dorrell, David A Staton, Malcolm I McGilp</i>	
A Mixed LQRI / PI based Control for Three-Phase UPQCs	4764
<i>Leonardo M. Landaeta, Cristian A. Sepúlveda, José R. Espinoza, Carlos R. Baier</i>	
Temperatures evaluation in an integrated motor drive for traction applications	4770
<i>Alberto Tenconi, Francesco Profumo, Dario Gallo, Martin D. Hennen, Stefan E. Bauer</i>	
Easy and Efficient Tuning of PI Controllers for Electrical Drives	4776
<i>Tiémélé ANE, Luc LORON</i>	
Thermal Design of an Integrated Motor Drive	4782
<i>Stephen Pickering, Frederic Thovex, Patrick Wheeler, Keith Bradley</i>	
Dealing with Ill Conditioning in Recursive Parameter Estimation for a Synchronous Generator	4788
<i>Carlos E Niño, Miguel Velez-Reyes</i>	
Gray-Box Modeling of Electric Drives using Recursive Identification and Radial Basis Functions	4794
<i>Angel Aquino-Lugo, Miguel Vélez-Reyes</i>	
Adaptive Multiple Sampling Rate Scheduling of Real-time Networked Supervisory Control System - PartII	4800
<i>Zheng Li, Mo-Yuen Chow</i>	
A novel MRI-SPECT registration scheme using eight similarity measures	4806
<i>Chung-Hsien Huang, Jiann-Der Lee, Yi-Hsin Weng</i>	
Synchronous Reference Frame Based Active Filter Current Reference Generation Using Neural Networks	4810
<i>Joy Mazumdar, Ronald G Harley, Ganesh K. Venayagamoorthy</i>	
Self-Optimization as a Framework for Advanced Control Systems	4816
<i>Joachim Böcker, Bernd Schulz, Tobias Knoke, Norbert Fröhleke</i>	
Modulations for Three-Phase AC-DC Voltage Source Rectification and DC-Three- Phase AC Voltage Source Inversion Using General Direct Space Vector Approach	4821
<i>Keping You, M. F. Rahman</i>	
Low-Ripple Low-Transition Time, Current Driver For Large Inductive Loads	4827
<i>Antonio Caiafa, Juan A. Sabate, Eladio Delgado</i>	
Integration of Artificial Neural Networks and Genetic Algorithm to Predict Electrical Energy consumption	4834
<i>A. Azadeh, S. F. Ghaderi, S.Tarverdian, M. Saberi</i>	
ARM - Adaptive Risk Management Platform for Emergency Response Operations	4840
<i>Mihaela Ulieru, Paul Relf, Merv Matson</i>	
Fast prototyping of control circuits for Power Electronics, based on FPGA	4846
<i>C. Fernández, P. Zumel, M. Sanz, A. Lázaro, C. López, A. Barrado</i>	
Simulation of message Data in a Testbench for the Multifunction Vehicle Bus	4852
<i>jaime Jimenez, Iker Hoyos, Carlos Cuadrado, Jon Andreu, Aitzol Zuloaga</i>	
Object oriented modeling of a squirrel cage induction motor	4858
<i>S. Bazine, K. Jelassi, G. Champenois, S. Tnani</i>	
Operating Regions Comparison of VSC-based Custom Power Devices	4864
<i>Cristian A. Sepulveda, Jos R. Espinoza, Leonardo M. Landaeta, Carlos R. Baier</i>	
Considerations about the modeling and simulation of air-gap eccentricity in induction motors	4870
<i>A. Ghogal, A. Aboubou, S. E. Zouzou, M. Sahraoui, H. Razik</i>	
Indirect Field Oriented Control of an Integrated Starter Generator	4876
<i>Dorin D. Lucache, Vasile Horga, Mihai Albu, Marcel Ratoi</i>	

Table of Contents

Schematic Architecture: Reference Architecture / Frameworks / Particular Models for the Shop Floor Environment.....	4882
<i>J. E. Acosta C., F. Sastrón B.</i>	
Simulink Model for Double Buffering	4888
<i>R.B.Sheeparamatti, B.G.Sheeparamatti, Manjula Bharamagoudar, Nayan Ambali</i>	
Convection Heat Transfer and Flow Calculations Suitable for Analytical Modelling of Electric Machines.....	4893
<i>D.A. Staton, A. Cavagnino</i>	
FEM and Lumped Circuit Thermal Analysis of External Rotor Motor.....	4899
<i>Alessandro Tassi, Giuseppe Zanocchi, Dave Staton</i>	
Modeling of Automotive Control Systems Using Power Oriented Graphs.....	4903
<i>Riccardo Morselli, Roberto Zanasi</i>	
The Examples of Implementation of two Specialized Case Tools as Extensions of a General Framework.....	4909
<i>Jindrich Cernohorsky, Jiri Koziorek, Gustav Hrudka</i>	
Ant Colony Based Algorithm to Identify Alarm Patterns For Predicting Equipment Failures	4915
<i>M. Luo, K.C. Ng, D.H. Zhang, J.B. Zhang</i>	
CANopen Network for μcontroller-based Real Time Distributed Control Systems.....	4921
<i>Javier Portillo, Elisabet Estevez, Itziar Cabanes, Marga Marcos</i>	
Heat Transfer and Thermal Design of Finned Frames for TEFC Variable Speed Motors.....	4927
<i>M. Anibal Valenzuela, Juan A. Tapia</i>	
A Method to Decrease Input Current Harmonics of Three-Phase Diode Rectifier by Pulse-Doubler Scheme	4933
<i>Yasuyuki Nishida, Kazuaki Mino</i>	
Identification of fractional order models for electrical networks.....	4939
<i>Octavian Enacheanu, Delphine Riu, Nicolas Retière, Petre Enciu</i>	
Performance Evaluation of Nonparametric, Parametric, and the MUSIC Methods to Detection of Rotor Cage Faults of Induction Motors.....	4944
<i>Luis A. Pereira, Dênis Fernandes, Daniel S. Gazzana, Fausto B. Libano, Sérgio Haffner</i>	
SE_BNF : An Aide-Diagnosis Expert System of an Iron Core Coil	4950
<i>Houda Ben Attia Sethom, Amel Grissa Touzi, Laurent SIGNAC, Gérard Champenois</i>	
Thermal and fluid dynamical aspects in the design of an Axial Flux Permanent Magnet Synchronous Machine with Soft Magnetic Compound Stator.....	4957
<i>Fabrizio Marignetti</i>	
Harmonic and Interharmonic Identification Based on Improved Prony's Method	4963
<i>F. F. Costa, A. J. M. Cardoso</i>	
Model-Based Fault Detection Using Adaptive Observer.....	4969
<i>F.Nejjari</i>	
InfiniBand-Based Real-Time Simulation of HVDC, STATCOM, and SVC Devices with Commercial-Off-The-Shelf PCs and FPGAs	4975
<i>Christian Dufour, Simon Abourida, Jean Bélanger, Vincent Lapointe</i>	
Real-Time Simulation of Permanent Magnet Motor Drive on FPGA Chip or High-Bandwidth Controller Tests and Validation	4982
<i>Christian Dufour, Simon Abourida, Jean Bélanger, Vincent Lapointe</i>	
Segmentation of color image by β criterion and fuzzy theory	4988
<i>Abdelaziz El Matouat, Hassania Hamzaoui, Patrick Martin</i>	
Diagnosability Analysis Using Quasi-Static Models	4993
<i>F. Nejjari , R. Perez , T. Escobet</i>	

Table of Contents

Hardware-in-the-loop simulation of electric vehicle traction systems using Energetic Macroscopic Representation	4999
<i>A. Bouscayrol, W. Lhomme, P. Delarue, B. Lemaire-Semail, S. Aksas</i>	
Simulation of the Three Phase Induction Machine Including the Effects of Saturation	5005
<i>Eduardo V N Souza, Sreeramulu R Naidu</i>	
Design and Analysis of an Interior Permanent Magnet (IPM) Machine with Very Wide Constant Power Operation Range.....	5011
<i>Rukmi Dutta, M. F. Rahman</i>	
Secure Biometric Recognition method in Home Network.....	5017
<i>Yun-kyung, Lee Hong-il, Ju Hyung-kyu, Lee</i>	
N-step predictive algorithm based on fractional multimodel for rat muscle.....	5022
<i>Laurent Sommacal, Arnaud Dossat, Pierre Melchior, Julien Petit, Jean-Marie Cabelguen, Alain Oustaloup</i>	
Gate driving of high power IGBT through a Double Galvanic Insulation Transformer	5028
<i>Stéphane Brehaut, François Costa</i>	
Observer design for state and parameter estimation in induction motors with simulation and experimental validation	5034
<i>Alexandru Ticlea, Gildas Besancon</i>	
Spread spectrum strategies study for induction motor vibratory and acaustic behavior	5040
<i>Vincent LANFRANCHI, Guy Friedrich, Jean LE Besnerais, Michel Hecquet</i>	
Electrical signals analysis of an asynchronous motor for bearing fault detection	5046
<i>Ali Ibrahim, Mohamed El Badaoui, François Guillet, Widian Youssef</i>	
Maneuvering Strategies for Four-Wheel Drive, Four-Wheel Steer Mobile Robots Using Curvatures Based on Weingarten-Maps	5052
<i>M. Kursat Yalcin, S. Murat Yesiloglu, Mustafa Dal, Hakan Temeltas</i>	
Advanced Grid Synchronization System for Power Converters under Unbalanced and Distorted Operating Conditions	5057
<i>P. Rodríguez, A. Luna, M. Ciobotaru, R. Teodorescu, F. Blaabjerg</i>	
Dynamic Performance of a Permanent Magnet Brushless DC Motor for UAV Electric Propulsion System - Part I.....	5063
<i>Olusegun Solomon, Parviz Famouri</i>	
Qualitative Investigation of Force Density Components in Electromechanical Energy Conversion Process.....	5069
<i>W. Jiang, M. Moallem, B. Fahimi, S. Pekarek</i>	
Speed and Position Estimation for PM Synchronous Motor using self-compensated Back-EMF Observers	5075
<i>Marco Tursini, Roberto Petrella, Alessia Scafati</i>	
A Maximum Power Point Tracking Control Method Suitable for Multi-Parallel-Connected Compact Wind Power Generators with Self-Pitch Controlled Blades	5081
<i>Nobutoshi Mutoh, Atsushi Nagasawa</i>	
Origin-Destination (O-D) Trip Table Estimation using Traffic Movement Counts from Vehicle Tracking System at Intersection	5088
<i>Sang-Mook Lee, Hojong Baik</i>	
Optimal Control for Simultaneous Localisation and Mapping Problems in Indoor Environments with Stereo Vision	5094
<i>Satoshi Takezawa, Tsuguo Ishimoto, Gamini Dissanayake</i>	
Dynamic Analysis of Synchronous Reluctance Motor Drives Based on Simulink® and Finite Element Model	5100
<i>Francesco Parasiliti, Marco Villani, Alessandro Tassi</i>	
Control Problems Related To Tumor Angiogenesis	5105
<i>Andrzej Swierniak, Alberto d'Onofrio</i>	

Table of Contents

A Mechatronic Platform, The Aldebaran Robotics Humanoid Robot.....	5110
<i>David Gouaillier, Pierre Blazevic</i>	
Limited-Pool Random Carrier-Frequency PWM for Digitally Controlled dc-dc Converters	5115
<i>D. Trevisan P. Mattavelli, M. Zigliotto, S. Saggini</i>	
Conducting and semiconducting end-capped oligothiophenes for thin films devices in organic electronics.....	5121
<i>Christine Videlot-Ackermann, Jörg Ackermann, Hugues Brisset, Pascal Raynal, Fabrice Moggia, Frédéric Fages, Koji Kawamura, Noriyuki Yoshimoto</i>	
Accessing WebLabs from cellular phones	5127
<i>Javier Garcia-Zubia, Diego López de Ipiña, Pablo Orduña</i>	
New Optoelectronic Sensor Array for Artificial Visual Cortex.....	5130
<i>Yu-ichi Matsui</i>	
Automated Online Design of Robust Position and Speed Digital Controllers For Variable Speed Drives.....	5136
<i>Nnamdi Okaeme, Pericle Zanchetta, Mark Sumner</i>	
A Three-Port Three-Phase DC-DC Converter for Hybrid Low Voltage Fuel Cell and Ultracapacitor	5142
<i>Danwei Liu, Hui Li</i>	
Capacitive protection system for robot dedicated to the safety of humans.	5148
<i>Bernard Pottier, Lanto Rasolofondraibe, Danielle Nuzillard</i>	
Digital compensator design for DC-DC converters based on FPGA: an educational approach	5154
<i>P. Zumel, C. Fernandez, A. Lazaro, A. Barrado</i>	
Digital Implementation of a DC Bus Voltage Controller for Four-Wire Active Filters	5160
<i>V. Soares, P. Verdelho</i>	
Communication on Power Lines Using Frequency and Duty-Cycle Modulation in digitally Controlled dc-dc Converters	5166
<i>W. Stefanutti, P. Mattavelli, S. Saggini, L. Panseri</i>	
Decentralized Control for Parallel Operation of Distributed Generation Inverters in Microgrids Using Resistive Output Impedance	5172
<i>Josep M. Guerrero, Néstor Berbel, José Matas, Luis García de Vicuña, Jaume Miret</i>	
Comparative Investigation of Diagnosis Media of Stator Voltage Asymmetry and Rotor Broken Bars in Induction Machines	5178
<i>Khmais Bacha, Moncef Gossa, Humberto Henao, Gérard-André Capolino</i>	
Reliability improvement of obstacle detection in an IR barrier	5184
<i>Juan Jesús García, Jesús Ureña, Manuel Mazo, Cristina Losada, Alvaro Hernández, J. Antonio, Jiménez, Ana Jiménez, Carlos De Marziani, Alberto Ochoa, Fernando Álvarez</i>	
Repetitive Ripple Estimation in Multi-sampling Digitally Controlled dc-dc Converters.....	5190
<i>E. Tedeschi, P. Mattavelli D. Trevisan L. Corradini</i>	
Design and Evaluation of a PLL-Based Position Controller for Sensorless Vector Control of Permanent-Magnet Synchronous Machines.....	5196
<i>Rolando P. Burgos, Parag Kshirsagar, Alessandro Lidozzi, Jihoon Jang, Fred Wang, Dushan Boroyevich, Pedro Rodriguez, Seung-Ki Sul</i>	
An Analytical Method to Generate Walking Pattern of Humanoid Robot	5202
<i>Yonghwan Oh, Kyung-ho Ahn, Doik Kim, ChangHwan Kim</i>	
Autonomous Load Shedding in a Nanogrid using DC Bus Signalling	5208
<i>John Schonberger, Simon Round, Richard Duke</i>	
Recursive Synthesis of Robust Supervisory Controllers for Vector Discrete Event Systems	5214
<i>Christoforos E. Economakos, Fotis N. Koumboulis, Maria P. Tzamtzi</i>	
Robust PID Controller Design with Application to a Flight Actuator.....	5220
<i>Fotis N. Koumboulis, Michael G. Skarpetis, Maria P. Tzamtzi</i>	

Table of Contents

Robust Tracking for Time-Varying Uncertain Systems with Application to 4WS Vehicles.....	5226
<i>Michael G. Skarpetis, Fotis N. Koumboulis, Achilleas S. Ntellis</i>	
On the Use of Precalculated Switching Strategy to Reduce Harmonic Distortion, a Single-Phase Inverter Performance Comparative Study.....	5232
<i>Kamal Meghriche, Omar Mansouri, Abderrezzak Cherifi</i>	
Facial Media for Non-verbal Communication in Production Processes.....	5237
<i>Takuma Funahashi, Takayuki Fujiwara, Hiroyasu Koshimizu</i>	
The study of double-star synchronous machine in normal mode and the control strategy in degraded mode.....	5242
<i>M.A. Shamsi-Nejad, S. Pierfederici, F. Meibody-Tabar</i>	
A Two-phase Induction Motor Back-to-back Drive	5248
<i>C. Cecati, A. Dell'Aquila, A. Lecci, M. Liserre</i>	
Thermal Modelling of TEFC Alternators.....	5254
<i>Carlos Mejuto, Markus Mueller, Dave Staton, Salem Mebarki, Nazar Al-Khayat</i>	
Analysis Of The Sound Field Emitted By A Doubly Salient Switched Reluctance Motor Using Acoustic Intensity Measurement.....	5260
<i>F. Keddar, A. Kaddour, A. Maache</i>	
Sensorless Control of a PMSM Synchronous Motor at Low Speed	5266
<i>R. S. Miranda, E. M. Fernandes, C. B. Jacobina, A. M. N. Lima, A. C. Oliveira, M. B. R. Correa</i>	
Optimal Discrete-Time Complete Order State Observer Applied to Asynchronous Machine Drive Systems.....	5272
<i>Fabiano Salvadori, Mauricio de Campos, Cassiano Rech, Gideon Villar Leandro, Rodrigo Padilha Vieira, Alexandre Cunha Oliveira</i>	
Fractional robust control of lightly damped systems.....	5278
<i>Valérie Pommier-Budinger, Patrick Lanusse, Yaman Janat, Alain Oustaloup</i>	
Analysis of Side-approach Transfer Motion for Patients with Spinal Cord Injuries	5284
<i>Yoshio Tanimoto, Kuniharu Namba, Akihiro Tokuhiko, Hiroyuki Ukida, Hideki Yamamoto</i>	
Sound and video processing in wireless sensor networks.....	5290
<i>Andrea Kulakov, Georgi Stojanov, Danco Davcev</i>	
Data-logging and Monitoring of Production Auto-lines Based on Visual-tracking Tech.....	5296
<i>Zhenbang Gong, Wei Ding, Hairong Zou</i>	
Human Factors of Visual Inspection Systems in Production.....	5302
<i>Seiji Hata</i>	
Description, analysis and test of an autonomous computer aided learning module for digital control	5306
<i>Pascal Maussion, André Tricot</i>	
Electroactive materials : from piezomotors to electroactive morphing	5312
<i>Bertrand Nogarede, Carole Henaux, Jean-François Rouchon, Eric Duhayon</i>	
Integration of Microprocessors and FPGAs for the Education in Digital Systems Design	5317
<i>Juan J. Rodríguez-Andina, José Fariña</i>	
Discrete-time modelling of induction motors with consideration of magnetic saturation.....	5322
<i>A. Elfadili, F. Giri, H. Ouadi, L. Dugard</i>	
RFID for MRO Work In Progress Tracking.....	5328
<i>Tsong Jye Ng, Ming Mao Wong, Jing Bing Zhang, Oon Peen Gan</i>	
Power Electronic Systems for the Grid Integration of Wind Turbines	5334
<i>J. M. Carrasco, E. Galván, R. Portillo, L.G. Franquelo, J.T.Bialasiewicz</i>	
Analytical Modelling of High Speed Electrical machines in view of their Optimal Design.....	5341
<i>Mathieu Couderc, Carole Henaux, Bertrand Nogarede</i>	

Table of Contents

MATLAB Web Server and Web-based Control Design Learning	5347
<i>Suzana Uran, Darko Hercog, Karel Jezernik</i>	
Mechatronics Engineering The Evolution, the Needs and the Challenges	5353
<i>Maki K. Habib</i>	
A Wide Bandwidth Resonant-based Digitally Controlled 48V Voltage Regulator Module	5359
<i>Mohamed Z. Youssef, Praveen K. Jain</i>	
Interconnected observers for sensorless induction motor in dq frame: Experimental tests	5365
<i>D. Traore, J. De Leon, A. Glumineau, L. Loron</i>	
Automatic Land-mine Detection System using Adaptive Sensing with Vector GPR	5373
<i>Toshio Fukuda, Yasuhisa Hasegawa, Yasuhiro Kawai, Shinsuke Sato, Zyada Zakariya . , Takayuki Matsuno</i>	
Hardware-in-the-loop simulation of PUMA 560 via internet	5379
<i>Trivikram Singaraju, Ali Turan, Metin Gokasan, Seta Bogosyan</i>	
DSPIFPGA Control for Variable,Speed Wind Turbines	5386
<i>Mariusz Malinowski, Wojciech Kolomyjski, Marian P. Kazmierkowski, Sebastian Stynski</i>	
Transparent all organic TFT fabrication by low cost process without clean room	5392
<i>T. Trigaud, I. El Jazairi, S.Y. Kwon, V. Bernical, J.P. Moliton</i>	
Modelling of Organic Device Cathode Obtained by Ion Beam Assisted Deposition	5398
<i>Mahmoud Chakaroun, Bernard Ratier, André Moliton</i>	
Influence of thickness and position of an ultrathin yellow layer on color tuning (including white) of Organic Light Emitting Diodes	5403
<i>H. Choukri, A. Fischer, S. Forget, S. Chénais, T. Billeton, M-C. Castex, D. Adès, A. Siove, N. Lemaitre, C. Denis, P. Maise, B. Geffroy</i>	
Solid-state dye-sensitized mesoporous TiO₂ and doped carbazole derivative molecular glasses solar cell	5408
<i>Reda Aich, F. Goubard, F. Tran-Van, C. Chevrot, A.. Michaleviciute, J. Grazulevicius, B. Ratier</i>	
Adaptive Fuzzy Sliding Mode Control of a Drive System with Flexible Joint	5414
<i>Teresa Orłowska-Kowalska, Krzysztof Szabat</i>	
Adaptive Control of Two-Mass System using Nonlinear Extended Kalman Filter	5420
<i>Krzysztof Szabat, Teresa Orłowska-Kowalska</i>	
Polythiophene Derivatives -Based Materials for Organic Field Effect Transistors and Photovoltaic Cells	5426
<i>Jean-Marie Verilhac, Muriel Firon, Gilles LeBlevenec, Renaud Demadrille, Jean-Pierre Travers, Adam Pron</i>	
Structuration Of Semiconducting Polymer Thin Films By Nanorubbing.	5431
<i>Gwennaëlle Derue, Sylvain Gabriele, Fabien Monteverde, Séverine Coppée, Pascal Damman, Mathieu Surin, Victor Geskin, Philippe Leclère, Roberto Lazzaroni</i>	
Design of Coupled Van del Pol Oscillators for Multi-link Robots	5437
<i>Kiyotaka Izumi, Akihito Tajima, Guang Lei Liu, Keigo Watanabe</i>	
Approximate Decision Making by Natural Language Commands for Robots	5443
<i>Keigo Watanabe, Chandimal Jayawardena, Kiyotaka Izumi</i>	