

2006 5th International Power Electronics and Motion Control Conference

**Shanghai, China
13-16 August 2006**

Volume 1 of 4



IEEE Catalog Number:
ISBN:

06EX1405
1-4244-0448-7

**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: 06EX1405
ISBN: 1-4244-0448-7
Library of Congress: 2006925601

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

Design Challenges For Distributed Power Systems	1
<i>Fred C. Lee, Ming Xu, Shuo Wang, Bing Lu</i>	
A Smarter Grid for Improving System Reliability and Asset Utilization	16
<i>D. Divan, H. Johal</i>	
Medium-Voltage Power Conversion Systems in the Next Generation	23
<i>Hirofumi Akagi, Shigenori Inoue</i>	
Modern Electrical Drives: Design and Future Trends	31
<i>R. W. De Doncker</i>	
Power Semiconductors development trends	39
<i>L. Lorenz</i>	
Power Electronics in Wind Turbine Systems	46
<i>F. Blaabjerg, Z. Chen, R. Teodorescu, F. Iov</i>	
Sustainable Energy and Mobility, and Challenges to Power Electronics	57
<i>C.C.Chan</i>	
Wind farms with increased transient stability margin provided by a STATCOM	63
<i>Marta Molinas, Jon Are Suul, Tore Undeland</i>	
A New Super Junction LDMOS with N+-Floating Layer	70
<i>Baoxing Duan, Bo Zhang, Zhaoji Li</i>	
Unified Power Flow Controller: Comparison of Two Advanced Control Schemes and Performance Analysis for Power Flow Control	74
<i>Liu Liming, Zhu Pengcheng, Kang Yong, Chen Jian</i>	
A New Analytical Model for the Surface Electrical Field Distribution of Double RESURF LDMOS	79
<i>Qi Li, Zhaoji Li</i>	
A Novel Centralized HID Ballast System with Power-Bus	83
<i>Xiaodong Lu, Bo Yang, Jiande Wu, Xiangning He</i>	
Research on a Novel Structure of SiGeC/Si Heterojunction Power Diodes	88
<i>Liu Jing, Gao Yong, Ma Li</i>	
Gate driving of high power IGBT by wireless transmission	92
<i>Stéphane Bréhaut, François Costa</i>	
The Characteristics of Thyristor Controlled Reactance Series Compensation by Adjustable Coupling	97
<i>Guo-rong Zhu, Min-zu Li, Yong Kang</i>	
Dual-Side Cooled Novel IPM and Improved Capability of Inverter for Elevated-Temperature Operations	102
<i>Jie (Jay) Chang, Changming Liao</i>	
An Improved Current-Doubler with Coupled Inductors	108
<i>T.-F. Wu, C.-T. Tsai, W.-C. Lin, Y.-M. Chen</i>	
Monolithic Integration of Trench Power JFET with Schottky Diode	113
<i>Yang Gao, Jie Chen, Alex. Q. Huang</i>	
Sequential Color LED Back-Light Driving System for LCD Panels	117
<i>C.-C. Chen, C.-Y. Wu, P.-C. Lu, Y.-M. Chen, T.-F. Wu</i>	
Development of Large Capacity Programmable Harmonic Current Generator Based on Three-phase-four-wire Configuration	122
<i>LIU Tao, ZHUO Fang, CHEN Bo, ZHAI Xi, WANG Zhao-an</i>	
A Universal Digital Platform and Software Library for Power Electronic Systems Integration	127
<i>Haibing HU, Tianjun Jin, Wenxi YAO, Zhengyu LU, Zhaoming Qian</i>	

Table of Contents

Unipolar SiC Devices - Latest Achievements on the Way to a New Generation of High Voltage Power Semiconductors	132
<i>Peter Friedrichs</i>	
Implementation of GA-trained GRNN for Intelligent Fast Charger for Ni-Cd Batteries	137
<i>Panom Petchjaturorn, Noppadol Khaehintung, Khamron Sunat, Phaophak Sirisuk, Wiwat Kiranon</i>	
Modelling and Analysis of a Novel Transformer with Ability to Suppress Conducted interference	142
<i>Zongxiang Chen, Pengsheng Ye, Junmin Pan</i>	
An Observer-Based Three-Phase Current Reconstruction using DC Link Measurement in PMAC Motors	147
<i>Li Ying, Nesimi Ertugrul</i>	
Experiment Research of Chaotic PWM Suppressing EMI in Converter	152
<i>R. Yang, B. Zhang , F.Li, J.J. Jiang</i>	
Emitter Size Effect in 4H-SiC BJT	157
<i>Yan Gao, Alex Q. Huang, Sumi Krishnaswami, Anant K. Agarwal, Charles Scozzie</i>	
PSIM and SIMULINK Co-simulation for Threelvel Adjustable Speed Drive Systems	161
<i>Zhang Yongchang, Zhao Zhengming, Baihua, Yuan Liqiang, Zhang Haitao</i>	
Three-Phase Z-Source AC-AC Converter for Motor Drives	166
<i>Xu-Peng Fang</i>	
Construction and Application of Macro Model for ZVS Resonant Mode Controller MC34067	171
<i>Wei Chen, Yilei Gu, Zhengyu Lu, Zhaoming Qian</i>	
Optimum Design of Hollow Conductor in Stator Winding for Large Evaporative Hydro-generator	175
<i>Z. Wen , L. Ruan, G. Gu</i>	
Rotor Suspension Principle and Decoupling Control for Self-bearing Induction Motors	179
<i>Tengchao Zhang, Huangqiu Zhu, Yuxin Sun</i>	
Field Oriented Control of Linear Induction Motor Considering Attraction Force & End-Effects	184
<i>Jianqiang Liu, Fei Lin, Zhongping Yang, Trillion Q. Zheng</i>	
Series Resonant High Frequency Link Sine-wave Inverter System Modeling using Sampled Data	189
<i>Jin Xiaoyi, Dong Wei, Sun Xiaofeng, Wu Weiyang</i>	
Maximal Power Point Tracking under Speed-Mode Control for Wind Energy Generation System with Doubly Fed Introduction Generator	194
<i>Y. Zhao, X. D. Zou, Y. N. Xu, Y. Kang, J. Chen</i>	
Effective Mobility in Nano-Scaled n-MOSFETs	199
<i>Yue-Hua Dai, Jun-Ning Chen, Dao-Ming Ke, Jia-E Sun</i>	
Investigation on the Factors Affecting Inrush Current of Transformers Based on Finite Element Modeling	204
<i>M. Reza Feyzi, M. B. B. Sharifian</i>	
An Improved Support Vector Machine Method for Harmonic and Inter-harmonic Detecting	209
<i>Ma Li, Liu Kaipei, Lei Xiao</i>	
A Common Mode and Differential Mode Integrated EMI Filter	214
<i>Liu Nan, Yang Yugang</i>	
Electromagnetism Model and Characteristic Simulation of Novel Claw Pole Generator with Permanent Magnet Outer Rotor	219
<i>Fengge Zhang, Haijun Bai, Shifu Zhang, Hans Pert Gruenberger, Eugen Nolle</i>	
An Improved Adaptive Filter for Voltage and Current Reference Extraction	224
<i>A. Abedini, A. Nasiri</i>	
Simulation Analysis on Current SVM Algorithm of Matrix Rectifier	229
<i>Xi-jun Yang, Peng-sheng Ye, Xiang Liu, Xing-hua Yang, Jian-quan Wang, Luan-guo Zhang</i>	

Table of Contents

Study of Measurement Approach of Loop Gain of Converter	236
<i>Weiping Zhang, Yungpeng Chen, Yuanchao Liu, Dongyan Zhang, Zheng Meng</i>	
A Stand-Alone Hybrid Generation System Combining Solar Photovoltaic and Wind Turbine with Simple Maximum Power Point Tracking Control.....	242
<i>Nabil A. Ahmed, Masafumi Miyatake</i>	
Design Optimization of Industrial Motor Drive Power Stage Using Genetic Algorithms.....	249
<i>F. Wang, W. Shen, D. Boroyevich, S. Ragon, V. Stefanovic, M. Arpilliere</i>	
FEM Based Simulation of a Permanent Magnet Synchronous Motor Performance Characteristics	254
<i>L. Petkovska, G. Cvetkovski</i>	
Analytical Modeling of Semiconductor Losses in Matrix Converters.....	259
<i>Bingsen Wang, Giri Venkataramanan</i>	
Nonlinear Robust Sliding Mode Control for PM Linear Synchronous Motors	267
<i>Xi Zhang, Junmin Pan</i>	
Dynamic Analysis of PWM Switching DC-DC Converters.....	272
<i>Liu Jian, Wang Yuanbin</i>	
A Novel LLC Resonant Converter Topology: Voltage Stresses of All Components in Secondary Side Being Half of Output Voltage.....	276
<i>Yilei Gu, Zhengyu Lu, Zhaoming Qian</i>	
On the hybrid automaton models and control synthesis of a single inductor, double output boost converter.....	281
<i>Sreekumar C, Vivek Agarwal</i>	
Complex Intermittency in Voltage-Mode Controlled Buck Converter.....	286
<i>Zheng-Ping Li, Yu-Fei Zhou, Jun-Ning Chen</i>	
Dual Mode Control Multiphase DC/DC Converter for CPU Power.....	291
<i>Li-Wei Lin, Chung-Hsing Chang, Huang-Jen Chiu, Shann-Chyi Mou</i>	
An Analog Implementation of Pulse-Width-Modulation Based Sliding Mode Controller for DC-DC Boost Converters	296
<i>Siew-Chong Tan, Y. M. Lai, Chi K. Tse</i>	
Low Cost Electronic Ballast with Buck Converter as PFC Stage.....	301
<i>Li Xiangrong, Xu Dianguo, Zhang Xiangjun</i>	
A New Converter Architecture for Future Generations of Microprocessors.....	306
<i>Dodi Garinto</i>	
A Combined ZVS Converter with Naturally Sharing Input-Current and High Voltage Gain	311
<i>Linbing Wang, Bo Yang</i>	
Matrix Coefficient Polynomial Description Model of DC-DC Converters Based on Switched Linear Systems	316
<i>Yongping Zhang, Bo Zhang, Zongbo Hu, Dongyuan Qiu, Guiping Du</i>	
Development of DC-DC Multiple Converter based on Push-pull Forward Topology accomplished.....	321
<i>Weihao Hu, Yunqing Pei, Zhaoan Wang</i>	
Voltage Fed and Current Fed Full Bridge Converter for the Use in Three Phase Grid Connected Fuel Cell Systems	325
<i>M. Mohr, F.-W. Fuchs</i>	
Small-Signal Modeling of Asymmetrical Half Bridge Flyback Converter	332
<i>Tso-Min Chen, Chern-Lin Chen</i>	
A DSP Based Controller for High Power Dual-Phase DC-DC Converters	337
<i>Xin Guo, Xuhui Wen, Ermin Qiao</i>	

Table of Contents

Effective Load Resistance; A New Method to Evaluate DC/DC converters Efficiency	342
<i>Alan Elbanhawvy</i>	
Calculation of Power Loss in Output Diode of a Flyback Switching DC-DC Converter	346
<i>Jiaxin Chen, Jianguo Zhu, Youguang Guo</i>	
A Multiple Output Forward Converter Adopting Weighted Time-Sharing Control and Switch-Linear Hybrid Scheme.....	351
<i>Xiaodong Liu, Songqin Hu, Sizhou Sun</i>	
A Novel Soft-Switching PWM Full-Bridge DC/DC Converter with DC Busline Series Switch-Parallel Capacitor Edge Resonant Snubber Assisted by High-Frequency Transformer Leakage Inductor	356
<i>Khairy Fathy, Toshimitsu Doi, Keiki Morimoto, Hyun Woo Lee, Mutsuo Nakaoka</i>	
High-Efficiency Cascade Forward Converter of Low Power PEMFC System	361
<i>Jiann-Fuh Chen, Wei-Shih Liu, Ray-Lee Lin, Tsorng-Juu Liang, Ching-Hsiung Liu</i>	
Control of Bifurcation by Fuzzy Logic Controller for Current-mode Boost Converters.....	368
<i>Noppadol Khaehintung, Phaophak Sirisuk, Anantawat Kunakorn</i>	
An Improved Three-Level Soft-Switching DC/DC Converter.....	373
<i>Z. L. Lou, Z. S. Wang</i>	
A Novel Soft Switching Bidirectional DC/DC Converter and Design Consideration	378
<i>Ma Gang, Qu Wenlong, Liu Yuanyuan</i>	
State-Variable Description and Analysis of a DC-Rail ZVT Inverter Feeding a Permanent Magnet Synchronous Motor	382
<i>Ming Zhengfeng, Zhong Yanru</i>	
Analysis, Simulations and Experiments Of A Novel ZVS -ZCS Inverter With Pulse Current Feedback Transformer Auxiliary Commutation	386
<i>Yaogang, Mahammad Mansoor Khan, Chenchen</i>	
A Novel Eddy-Current Based Far-Infrared Rays Radiant Planner Heater using High-Frequency ZVT-PWM Inverter	392
<i>Hisayuki Sugimura, Bishwajit Saha, Hideki Omori, Hyun Woo Lee, Mutsuo Nakaoka</i>	
3 Phases-3 Devices AC Voltage Regulator With Quasi-Zero Switching	397
<i>Qianzhi Zhou, Wenhua Hu, Bin Wu</i>	
Study on Power Decoupling Control of Three Phase Voltage Source PWM Rectifiers	401
<i>Wang Jiuhe, Yin Hongren, Zhang Jinlong, Li Huade</i>	
A Fully Digital Controlled 3KW, Single-Stage Power Factor Correction Converter Based on Full-Bridge Topology	406
<i>HANG Li-jun, YANG Yue-feng, SU Bin, LU Zheng-yu, QIAN Zhao-ming</i>	
A New ZVT Power Factor Corrected Three-Phase AC-AC Converter with Single-Phase HF Link.....	411
<i>T. H. Abdelhamid, A. Sabzali</i>	
Simple Bridge-Type AC/DC Converters with Natural Input-Current-Shaper.....	417
<i>Hsing-Fu Liu, Chih-Yu Wu, Chin Sun, Lon-Kou Chang</i>	
Rough Controlling TSC for Reactive Current Compensation in Traction Substations.....	423
<i>Hongsheng Su, Qunzhan Li</i>	
A Digitally Controlled 4-kW Single-Phase Bridgeless PFC Circuit for Air Conditioner Motor Drive Applications.....	428
<i>Yong Li, Toshio Takahashi</i>	
Optimized Electrical Design for Single Phase PFC Active IPFM	433
<i>Qiaoliang Chen, Xu Yang, Zhao-an Wang</i>	

Table of Contents

A Novel Topology of APFC with On-Line Half-Bridge UPS Controlled by DSP	438
<i>Xuejun Ma, Xuezhi Hu, Hongxia Wu, XuWu Chen</i>	
Nonlinear Current Control of Single-Phase PFC Suitable for Mixed-Signal IC Implementation	442
<i>Min Chen, Anu Mathew, Jian Sun</i>	
A Novel Detection Method for Three-Phase Reactive Current	449
<i>Zong Ming, Wang Fengxiang, Hua Funian, Sun Yidan</i>	
Selective Harmonic Controlling for Three-Level High Power Active Front End Converter with Low Switching Frequency	453
<i>Hui Zhang, Kaipei Liu,</i>	
A Unity Power Factor Three-Phase Buck Type SVPWM Rectifier Based on Direct Phase Control Scheme	458
<i>LI Yabin, Li Heming, Peng Yonglong</i>	
3-Phase Current-Source SMES-UPS Based on TFSC and its Control Strategies Control Strategies.....	463
<i>WANG Fu-sheng, LI Hong-mei</i>	
A novel control scheme of 230kA DC power source using thyristor, Phase-shifting rectifier transformer and On-load tap changer.....	468
<i>Qiao Shutong, Jiang Jianguo, Zuo Dongsheng, Wu Xiaojie</i>	
Research on Control Method of Double-Mode Inverter with Grid-Connection and Stand-Alone	473
<i>Herong Gu, Zilong Yang, Deyu Wang, Weiyang Wu</i>	
Power and Energy Management of a Dual- Energy Source Electric Vehicle - Policy Implementation Issues.....	478
<i>P.C.K. Luk, L.C. Rosario</i>	
Study on Non Contact Automatic on-Load Voltage Regulating Distributing Transformer Based on Solid State Relay.....	484
<i>Zhao-Yulin, Dong-Shoutian, Li-Jiahui, Yao-Xin, Zheng-Na, Liu-Xueli</i>	
The Principle of a Novel Arc-suppression Coil and its Implementation.....	489
<i>Cheng Lu, Chen Qiaofu, Zhang Yu, Zhang Changzheng</i>	
Grid Connection to Stand Alone Transitions of Slip Ring Induction Generator During Grid Faults.....	494
<i>G. Iwanski, W. Koczara</i>	
System Control of Power Electronics Interfaced Distribution Generation Units	499
<i>D. Feng, Z. Chen</i>	
Test Loadability of Power Systems using A Networked Power Electronic Devices Control and Measurement System.....	505
<i>Sheng Yang, Venkataramana Ajjarapu, Bo Zhang</i>	
Test-Bed of Doubly Fed Induction Generator for Variable-Speed Constant-Frequency Wind Power Generation.....	510
<i>S. Y. Yang, X. Zhang, C. W. Zhang, R. X. Cao</i>	
Control strategy of Hybrid sources for Transport applications using supercapacitors and batteries	515
<i>M.B. Camara, H. Gualous, F. Gustin, A. Berthon</i>	
Wind Generator Stabilization With Doubly-Fed Asynchronous Machine.....	520
<i>Li Wu, Zhixin Wang</i>	
Design Consideration of a Novel Digital Bidirectional Constant Current Source Used in Hybrid Electric Vehicle.....	526
<i>Qingbo Hu, Zhengyu Lü</i>	
A Single-Phase Grid-Connected Inverter System With Zero Steady-State Error	532
<i>Guo Xiaoqiang, Zhao Qinglin, Wu Weiyang</i>	
DC Transformer with Line Frequency Ripple Cancellation	537
<i>Sen Dou, Wilson Wu, Annabelle Pratt, Pavan Kumar</i>	

Table of Contents

A Novel PWM Method for Stacked Flying Capacitor Inverter	542
<i>Gangui Yan, Gang Mu, Yafeng Huang, Wenhua Liu</i>	
Study on a New Method of Voltage-Source Induction Heating Load-Matched	549
<i>Li Jin-gang, Zhong Yan-ru, Zhao Miao</i>	
An Alternating-master-slave Parallel Control Research for Single Phase Paralleled Inverters Based on CAN Bus	554
<i>Zhang Chunjiang, Chen Guitao, Guo Zhongnan, Wu Weiyang</i>	
Analysis and Design of a Novel Dual Secondary Winding and Dual Power Bridge High Frequency Link Inverter	559
<i>Zhang Zhe, Zhang Chunjiang, Wu Weiyang, Gu Herong, Shen Hong</i>	
Reduction of Common Mode EMI in a Full-Bridge Converter through Automatic Tuning of Gating Signals	564
<i>Kai Zhang, Yubin Zhou, Yonggao Zhang, Yong Kang</i>	
Phase Multilevel Inverter Fault Diagnosis and Tolerant Control Technique	569
<i>Wang Baocheng, Wang Jie, Sun Xiaofeng, Wu Junjuan, Wu Weiyang</i>	
Microcontroller-Based Single Phase Inverter Using a New Switching Strategy	574
<i>K. Meghriche, O. Mansouri, A. Cherifi</i>	
Study of Stability Regions in Parallel Connected Boost Converters	580
<i>Yuehui Huang, Chi. K. Tse</i>	
A Novel Analysis and Design Method for Integrated Magnetics	585
<i>Zheng Feng, Weihao Hu, Pei Yun-qing</i>	
Investigation on the Space Vector PWM for Large Power Three-Level DC-Link Voltage Source Inverter Equipped with IGBTs	589
<i>Wang Chengsheng, Li Chongjian, Li Yaohua, Zhao Xiaotan</i>	
Status and Opportunities of Photovoltaic Inverters in Grid-Tied and Micro-Grid Systems	593
<i>Xiaoming Yuan, Yingqi Zhang</i>	
Adaptive Neuro-Fuzzy Control with Fuzzy Supervisory Learning Algorithm for Speed Regulation of 4-Switch Inverter Brushless DC Machines	597
<i>A. Halvaei Niasar, H. Moghbelli, A. Vahedi</i>	
Combined Modulation and Harmonic Suppression	602
<i>Cheng Weibin, Zhong Yanru, Jin Shun</i>	
Application Research of Maximum Wind-energy Tracing Controller Based Adaptive Control Strategy in WECS	607
<i>Changhong Shao, Xiangjun Chen, Zhonghua Liang</i>	
Research on Synchrodrive Control Technology for Wind Turbine Adjustable-Pitch System Based on Adaptive decoupling Control	612
<i>Hongche Guo, Qingding Guo</i>	
Limit-Trajectory Single- and Two-Mode Overmodulation Technology	617
<i>Shun Jin, Yan-ru Zhong</i>	
Multiphase Permanent Magnet Motor Drive System Based on A Novel Multiphase SVPWM	622
<i>Shan Xue, Xuhui Wen, Zhao Feng</i>	
Novel Random-Harmonic Elimination PWM Technique for Single-Switch Three-Phase AC-DC Buck Converter	627
<i>Guang-Hui Tan, Wenchuan Ma, Yanchao Ji, Hongxiang Yu, Wancai Xu</i>	

Table of Contents

FPGA Based Multichannel PWM Pulse Generator for Multi-modular Converters or Multilevel Converters	632
<i>Liqiao Wang, Weiyang Wu</i>	
Cascaded Multilevel Converters with Non-Integer or Dynamically Changing DC Voltage Ratios	637
<i>Shuai Lu, Keith A. Corzine</i>	
Practical Thermal Design Considerations for IPEM-based Converter	642
<i>Qiaoliang Chen, Xu Yang, Zhao-an Wang</i>	
Realization of an FPGA-Based Space-Vector PWM Controller.....	647
<i>Zhou Yuan, Xu Fei-peng, Zhou Zhao-yong</i>	
Chaotifying Control of Permanent Magnet Synchronous Motor	652
<i>Hai Peng Ren, Chong Zhao Han</i>	
Analysis of PMLSM Direct Thrust Control System Based on Sliding Mode Variable Structure	657
<i>Junyou Yang, Guofeng He, Jiefan Cui</i>	
Carrier-based Pulse Width Modulation for Three-Level Inverters: Neutral Point Potential and Output Voltage Distortion	662
<i>Jang-Hwan Kim, Seung-Ki Sul</i>	
AC Current Sensorless Control of Three-Phase Three-Wire PWM rectifiers under the Unbalanced Source Voltage	669
<i>Jia-peng Xu, Yu-peng Tang</i>	
Waveform Library Control of Converter.....	674
<i>Xiaofeng Sun, Bin Wang, Meng Lingjie, Weiyang Wu</i>	
d-model Adaptive Algorithm Based on Plant-Parameterization	679
<i>Zhao Feng, Liu Weiguo</i>	
Dynamics and Control of Electronic Cascaded Systems	684
<i>Wen Wei, Xu Haiping, Wen Xuhui, Shi Wenqing</i>	
The Controlling Strategy for Electronic Ballast of HID Lamps	688
<i>Weiping Zhang, Xiaohan Guan, Xusen Zhao, Hongtao Li, Zhengang Liu</i>	
Voltage Spectra of Three-Level Inverters with Three-Phase Modulation.....	693
<i>S. Halász, I. Varjasi</i>	
Design of Motion Control System Used for Filter Rod Production Machine.....	699
<i>Yang Qingyu, Ge Sibao, Ye Kesong, Shi Ren</i>	
Magnetic Pole Identification for PMSM at Zero Speed Based on Space Vector PWM	703
<i>Jiangang Hu, Longya Xu, Jingbo Liu</i>	
Study on Stagewise Control of Connecting DFIG to the Grid.....	708
<i>Xueguang Zhang, Dianguo Xu, Yongqiang Lang, Hongfei Ma</i>	
Generalized Control Approach for Active Power Filters.....	713
<i>Xiaoyu Wang, Jinjun Liu, Chang Yuan, Zhaoan Wang</i>	
Novel Circuit Configuration for Hybrid Reactive Power Compensator.....	718
<i>H.L Jou, J.C Wu, J.J. Yang, W.P. Hsu</i>	
Shunt Active Power Filter with Sample Time Staggered Space Vector Modulation Based Cascade Multilevel Converters	724
<i>Liqiao Wang, Weiyang Wu</i>	
Shunt Active Power Filter Synthesizing Resistive Loads by Means of Adaptive Inverse Control	729
<i>Wu Yanfeng, Wu Zhengguo, Li Hua, Li Hui</i>	

Table of Contents

Single Neutral Element Self-Adaptive PID Controller Used In SVC	734
<i>Zeng Guang, Ke Min-qian, Su Yan-min, Fu Qi-gang</i>	
A Novel Shunt Single-Phase Active Power Filter for High Voltage Application	739
<i>Zhang Changzheng, Chen Qiaofu, Zhao Youbin, Chen Yuda, Cheng Lu</i>	
Three-phase Active Power Filter Based on Space Vector and One-cycle Control	744
<i>Wang Yong, Shen Songhua, Guan Miao</i>	
Implementation of a Shunt-Series Compensator for Nonlinear and Voltage Sensitive Load	748
<i>Bor-Ren Lin, Chien-Lan Huang</i>	
Three-Phase Active Filter using a Single-Phase STATCOM Structure with Asymmetrical Dead-band Control	753
<i>Seyyed Hossein Hosseini, Mehran Sabahi</i>	
Mitigation of Voltage Sag Using Adaptive Neural Network with Dynamic Voltage Restorer	759
<i>M. R. Banaei, S. H. Hosseini, M. Darkalee Khajee</i>	
Mitigation of Current Harmonic Using Adaptive Neural Network with Active Power Line Conditioner	764
<i>M. R. Banaei, S. H. Hosseini</i>	
A direct control strategy for UPQC in three-phase four-wire system	769
<i>Tan Zhili, Li Xun, Chen Jian, Kang Yong, Duan Shanxu</i>	
Three-Phase Harmonic Selective Active Filter Using Multiple Adaptive Feed Forward Cancellation Method	774
<i>Lewei Qian, David Cartes, Qiang Zhang</i>	
Reactive Power Compensation in Distribution Networks with STATCOM by Fuzzy Logic Theory Application	779
<i>Seyyed Hossein Hosseini, Reza Rahnavard, Yousef Ebrahimi</i>	
A Distributed Fuel Cell Based Generation and Compensation System to Improve Power Quality	784
<i>Haimin Tao, Jorge L. Duarte, Marcel A. M. Hendrix</i>	
Parallel Control of Three-Phase Three-Wire Shunt Active Power Filters	789
<i>Xueliang Wei, Ke Dai, Xin Fang, Pan Geng, Fang Luo, Yong Kang</i>	
Study and Design of Noninductive Bus bar for high power switching converter	794
<i>Zhiling Qiu, Hongyan Zhang, Guozhu Chen</i>	
A New Minimum Torque-ripple and Sensorless Control Scheme of BLDC Motors Based on RBF Networks	798
<i>Juan Wang, Hongwei Liu, Yuran Zhu, Bo Cui, Huijuan Duan</i>	
Improved Modelling and Calculation on Electromagnetic Transient of Power Transformer	802
<i>Chen Zhe, Wen Yuanfang, Lu Guojun</i>	
The Simulation and the Experimental Research of the Stator Bars' Evaporative Cooling System in the Three Gorges' Hydrogenerator	808
<i>Ruan Lin, Gu Guobiao, Tian Xindong, Yuan JiaYi</i>	
An Investigation of Multi-phase Transverse Flux Permanent Magnet Machine	813
<i>G.Q. Bao, J.K.Wang, D.Zhang, J.Z. Jiang</i>	
Suspension Principle and Digital Control for Bearingless Permanent Magnet Slice Motors	817
<i>Huangqiu Zhu, Liang Fang</i>	
The effect of parameter variations on the performance of indirect vector controlled induction motor drive	821
<i>A. Shiri, A. Vahedi, A. Shoulaie</i>	
Magnetic Field Analysis and Performance Calculation for New Type of Claw Pole Motor with Permanent Magnet Outer Rotor	826
<i>Fengge Zhang, Shifu Zhang, Haijun Bai, Eugen Nolle, Hans Pert Gruenberger</i>	

Table of Contents

Performance Analysis of a PM Claw Pole SMC Motor with Brushless DC Control Scheme	831
<i>Youguang Guo, Jianguo Zhu, Jiaxin Chen, Jianxun Jin</i>	
Solving Induction Motor Equivalent Circuit using Numerical Methods for an In-Service and Nonintrusive Motor Efficiency Estimation Method	836
<i>Bin Lu, Wei Qiao, Thomas G. Habetler, Ronald G. Harley</i>	
Fault Investigation of X-by-wire Permanent Magnet Synchronous Machine	842
<i>L. Feng, A. Binder, A. Rentschler, A. Paweletz, D. Guenther</i>	
PLC-Based Speed Control of DC Motor	847
<i>Ashraf Salah El Din Zein El Din</i>	
H8 Control of Adjustable-Pitch Wind Turbine Adjustable-Pitch System	853
<i>Hongche Guo, Qingding Guo</i>	
The Motion Control Algorithm based on Quaternion Rotation for a Permanent Magnet Spherical Stepper Motor	857
<i>Qun-jing Wang, Kun Xia</i>	
Research on Restraining Thrust Force Ripple for Permanent Magnet Linear Synchronous Motor	862
<i>Cui Jiefan, Wu Hui, Sun Qing, Zhang Yi, Zhao Lijun</i>	
Using Recurrent Fuzzy Wavelet Neural Network to Control AC Servo System	866
<i>Yan Tang, Wei Sun, Yaonan Wang, Xiaohua Zhai</i>	
new topology of multi - level - converter for harmonic reduction	870
<i>Frank Grundmann, Jian Xie</i>	
PWM Based Sensing and Control of Magnetic Bearings	875
<i>Zhuliang Yeic, Flalph Vansenc</i>	
Position Sensorless Direct Torque Control of Synchronous Reluctance with Permanent Magnet Motor	880
<i>Jiang Dong, Zhao Zhengming, Duan Yao, Guo Wei</i>	
Counter-Rotating Permanent Magnet Brushless DC Motor for Underwater Propulsion	885
<i>Jianqi Qiu, Cenwei Shi, Mengjia Jin, Ruiguang Lin</i>	
A Special Flux-weakening Control Scheme of PMSM - Incorporating and Adaptive to Wide-Range Speed Regulation	890
<i>Song Chi, Longya Xu</i>	
Model-based Disturbance Attenuation for Linear Motor Servo System	896
<i>Guiqiu Liu, Qingding Guo</i>	
A Fuzzy-Wavelet-Network-Based Position Control for PMSM	899
<i>Wang Jun, Peng Hong, Xia Ling</i>	
Stability Analysis of Magnetic Bearing with Resonance Circuit	903
<i>Zong Ming, Wang Fengxiang, Sun Yidan, Wang Jiqiang</i>	
Flux-Weakening Characteristics of Trapezoidal Back-EMF Machines in Brushless DC and AC Modes	908
<i>Z.Q. Zhu, J.X. Shen, D. Howe</i>	
A Cost Effective Sensorless Control Method for Permanent Magnet Synchronous Motors Based on Average Terminal Voltage	913
<i>Cheng-Hu Chen, Wei-Chih Tai, Ming-Yang Cheng</i>	
DSP-based Discrete-Time Reaching Law Control of Switched Reluctance Motor	918
<i>Ge Baoming, Zhao Nan</i>	
Digital Control System on Bearingless Permanent Magnet-type Synchronous Motors	923
<i>Jianming Deng, Huangqiu Zhu, Yang Zhou</i>	

Table of Contents

Practical Issues in Sensorless Control of PM Brushless Machines Using Third-Harmonic Back-EMF	928
<i>J.X. Shen, Z.Q. Zhu, D. Howe</i>	
Switched Reluctance Motors Drive for the Electrical Traction in Shearer	933
<i>H. Chen</i>	
Research on Three-level Inverter of Six-phase Synchronous Motor.....	937
<i>Yao Wenxi, Hu Haibing, Lu Zhengyu, Xu Haijie</i>	
Doubly-Salient Permanent-Magnet Machine with Skewed Rotor and Six-State Commutating Mode.....	942
<i>Yongbin Li, Chris Mi</i>	
Sensorless Control and PMSM Drive System for Compressor Applications	947
<i>Dongsheng Li, Takahiro Suzuki, Kiyoshi Sakamoto, Yasuo Notohara, Tsunehiro Endo, Chikara Tanaka, Tatsuo Ando</i>	
Analysis and Experimental Study of Slot Effect in Synchronous Reluctance Permanent Magnet Motors	952
<i>Wei Guo, Zhengming Zhao, Yingchao Zhang</i>	
A New BLDC Motor Drives Method Based on BUCK Converter for Torque Ripple Reduction	958
<i>Zhang Xiaofeng, Lu Zhengyu</i>	
Performance Investigation of a Fault-Tolerant Brushless Permanent Magnet AC Motor Drive.....	962
<i>Jingwei Zhu, Nesimi Ertugrul, Wen Liang Soong</i>	
Current sensorless integral variable structure controller of synchronous reluctance motor	967
<i>Huann-Keng Chiang, Chien-An Chen, Bor-Ren Lin, Kai-Sheng Hsu</i>	
An Improved Sliding Mode Observer for Speed Sensorless Vector Control Drive of PMSM.....	972
<i>K. Paponpen, M. Konghirun</i>	
Analysis of an AC fed direct converter for a switched reluctance machine in aerospace applications.....	977
<i>S. J. Forrest, J. Wang, G. W. Jewell, C. M. Johnson, S.D. Calverley</i>	
Direct Torque Control of an Interior Permanent Magnet Synchronous Machine fed by a Direct AC-AC Converter.....	983
<i>D. Xiao, M. F. Rahman</i>	
A Novel Modular Permanent Magnet Drive System Design.....	989
<i>Wen Ouyang, Nicholas Lemberg, Ruoping Yao, T.A.Lipo</i>	
Research on Digital Control Systems for Large Power AC-DC-AC Converters with Synchronous Motor Load	995
<i>Xiaotan Zhao, Chongjian Li, Weihui Sheng, Yaohua Li</i>	
About the Prediction of Undesired Higher Current and Torque Harmonics of Inverter Driven Motors with Numerical Methods.....	999
<i>C. Grabner</i>	
A Method of Stator Voltage Error Compensation in MRAS Sensorless Vector Control of Induction Motor	1006
<i>Wen Xuhui, Chen Guilan, Han Li</i>	
Systematic Design of Fuzzy Logic Based Hybrid On-Line Minimum Input Power Search Control Strategy for Efficiency Optimization of IM.....	1012
<i>Zhang Liwei, Liu Jun, Wen Xuhui, Trillion Q. Zheng</i>	
Research on an AC Variable-frequency Power Dynamometer Based on PWM Rectifier and Fuzzy Direct Torque Control	1017
<i>Jia-qiang Yang, Jin Huang</i>	
Characteristic Research of Bearing Currents in Inverter-Motor Drive Systems	1023
<i>Xing Shancheng, Wu Zhengguo</i>	
Research on a New Motor Drive Control System for Electric Transit Bus	1027
<i>SHAO Gui-xin, ZHANG Cheng-ning</i>	

Table of Contents

New Micro-Drive Series For Induction Motors & Survey of Market Trends	1032
<i>Henrik Rosendal Andersen, Ruimin Tan, Zhang Hui</i>	
Robust Backstepping Control of Induction Motor Drives Using Artificial Neural Networks	1038
<i>J. Soltani, R. Yazdanpanah</i>	
Robust Nonlinear Control of Linear Induction Motor taking into account the Primary End Effects	1043
<i>J. Soltani, M.A. Abbasian</i>	
A Novel Adaptive Scheme for Stator Resistance Estimation in Sensorless Induction Motor Drives	1049
<i>Han Li, Wen Xuhui, Chen Guilan</i>	
Ripple-Free Sampling of Current Signals in Drives with Carrier-based PWM Patterns	1054
<i>Haihui Lu, Qiang Yin, Russel J. Kerkman, Thomas A. Nondahl</i>	
Study of Speed Sensorless Control Methodology for Single Inverter Parallel Connected Dual Induction Motors Based on the Dynamic Model	1061
<i>Shi Wei, Wang Ruxi, Wang Yue, He Yanhui, Wang Zhaoan, Liu Jinjun</i>	
ADC architecture with direct binary output for digital controllers of high-frequency SMPS	1066
<i>Tao Zhou, Jianping Xu</i>	
Analysis and Evaluation of a High-Voltage AC Amplifier for Electrostatic Suspension	1071
<i>F. T. Han, Q. P. Wu, K. Liu, Z. Y. Gao</i>	
Design and Development of a 50kW Z-Source Inverter for Fuel Cell Vehicles	1076
<i>Miaosen Shen, Alan Joseph, Yi Huang, Fang Z. Peng, Zhaoming Qian</i>	
Identification and improvement of stray coupling effect in an L-C-L common mode EMI filter	1081
<i>Junping He, Wei Chen, Jianguo Jiang</i>	
High Step-up Converter Associated with Soft-Switching Circuit with Partial Energy Processing for Livestock Stunning Applications	1086
<i>S. -Y. Tseng, S.-H. Tseng, J. -Z. Shiang</i>	
A Computationally Intelligent Methodologies and Sliding Mode Control Based Traction control System for in-wheel driven EV	1091
<i>Ming Zhengfeng, NI Guangzheng</i>	
A Low-Cost Gate Driver Design Using Bootstrap Capacitors for Multilevel MOSFET Inverters	1096
<i>J. J. Graczykowski, K. L. Neff, X. Kou</i>	
An Effective Method to Suppress Resonance in Input LC Filter of a PWM Current-Source Rectifier	1101
<i>Y.W. Li, B. Wu, N. Zargari, J. Wiseman, D. Xu</i>	
Topological and Modulation Design of Three-Level Z-Source Inverters	1107
<i>P. C. Loh, F. Gao F. Blaabjerg</i>	
Investigation of Power Supplies for a Piezoelectric Brake Actuator in Aircrafts	1112
<i>Rongyuan Li, Norbert Fröhleke, Hermann Wetzel, Joachim Böcker</i>	
A Line Power-Supply for LED Lighting using Piezoelectric Transformers in Class-E Topology	1117
<i>F.E. Bisogno, S. Nittayarumphong, M. Radecker, A. V. Carazo, R. N. do Prado</i>	
Integrating Large Wind Farms into Weak Power Grids with Long Transmission Lines	1122
<i>Richard Pivko, Nicholas Miller, Juan Sanchez-Gasca, Xiaoming Yuan, Renchang Dai, James Lyons</i>	
Turn-on Condition and Characteristics of Highpower Semiconductor Switch RSD	1129
<i>Y. M. Zhou, Y. H. Yu, H. G. Chen, L. Liang</i>	
The analysis and simulation of power circuits for high voltage converter	1133
<i>S. I. Volskiy, Y. Y. Skorokhod, V. V. Shergin</i>	
A novel IGCT-based Half-controlled Bridge Type Fault Current Limiter	1138
<i>Wanmin Fei, Yanli Zhang</i>	

Table of Contents

Influence of Proton Irradiation dose on the Performance of Local Lifetime Controlled Power Diode with Proximity Gettering of Platinum	1143
<i>B.D. Han, D.Q. Hu, S.S. Xie, Y.P. Jia, B.W. Kang</i>	
IMPLEMENTATION OF A HIGHER QUALITY DC POWER CONVERTER	1148
<i>Barsoum, N.N., Yil, M.L.</i>	
Design of a Digital Programmable Control IC for Single-Phase Controlled Rectifiers	1154
<i>Ming-Fa Tsai, Fu-Jing Ke, Ying-De Lin, Jui-Kum Wang</i>	
Feasibility Study of AlGaIn/GaN HEMT for Multimegahertz DC/DC Converter Applications	1159
<i>Yang Gao, Alex Q. Huang</i>	
The Mechanism Analysis of IGBT Module Invalidation	1162
<i>Xu Aide, Fan Yin Hai, Wang Xinxin, Liu Yuanyuan</i>	
A New Injection Efficiency Controlled GTO	1167
<i>Wang Cailin, Gao Yong, Zhang Ruliang</i>	
Implementation and Analysis of 3-phase Voltage Sourced Regenerative Rectifier	1171
<i>Rui Chen, Qiong Xuan Ge, Shijie Li</i>	
Design and Implementation of Electronic Ballast for Fluorescent Lamps with Low Lighting Flicker	1178
<i>Yang-Sheng Lin, Chun-An Cheng, Jiann-Fuh Chen, Tsorng-Juu Liang, Wei-Shih Liu</i>	
A Floating-point Coprocessor Configured by a FPGA in a Digital Platform Based on Fixed-point DSP for Power Electronics	1183
<i>Haibing HU, Tianjun Jin, Xianmiao Zhang, Zhengyu LU, Zhaoming Qian</i>	
An Analytical Model for 4H-SiC Super-Junction Devices	1188
<i>L.C. Yu, K. Sheng</i>	
Architecture Implementation of Class-D Amplifiers Using Digital-Controlled Multiphase-Interleaved PWM Technique	1192
<i>Yu-Tzung Lin, Chi-Yang Lee, Ying-Yu Tzou,</i>	
Integrated IC-like Thyristor-based Switching Structure for Pulse Current Generation to Electronic Ignition	1198
<i>C. L. Zhang, K. S. Jeon, C. H. Ahn, J. D. Park, E. D. Kim, Na Zhi, Yong Gao</i>	
A Wide Bandwidth Current Probe Based on Rogowski Coil and Hall Sensor	1202
<i>Dong Li, Guiyou Chen</i>	
Voltage Dip Detection Based on an Efficient Least Squares Algorithm for D-STATCOM Application	1207
<i>Thip Manmek, Chathura P. Mudannayake, Colin Grantham</i>	
Optimal Design and Analysis on Bearingless Permanent Magnet-type Synchronous Motors Using Finite Element Method	1213
<i>Chang Jiang , Huangqiu Zhu, Zhenyue Huang</i>	
The Restrain of Harmonic Circulating Currents between Parallel Inverters	1218
<i>Yu Zhang, Shanxu Duan, Yong Kang, Jian Chen</i>	
Simulation of Permanent Magnet Synchronous Motor with Dual Closed Loop by Time-Stepping Finite Element Model	1223
<i>Xinhua Liu, Jianzhong Jiang, Yu Gong, Ye Ding</i>	
Online Dynamic Parameter Estimation of Transformer Equivalent Circuit	1228
<i>M. Reza Feyzi, Mehran Sabahi</i>	
Worst-Case Tolerance Analysis for a Power Electronic System by Modified Genetic Algorithms	1233
<i>Toshiji Kato, Kaoru Inoue, Kazuya Nishimae</i>	
The Reduction of Force Ripples of PMLSM Using Field Oriented Control Method	1238
<i>Yu-wu Zhu, Kun-seok Jung, Yun-hyun Cho</i>	

Table of Contents

Analysis and Design of Signal Stage AC/DC Converter with Resonant Model PFC	1243
<i>Weiping Zhang, Liangrui Lin, Dongyan Zhang, Xusen Zhao</i>	
Low Frequency Model for the Metal Halide Lamp	1248
<i>Weiping Zhang, Yuanchao Liu, Xiaoqiang Zhang, Hongtao Li, Wenji Liu</i>	
H8 Robust Controller Based on Local Feedback Recurrent Neural Network for Permanent Magnet Linear Synchronous Motor	1253
<i>Junyou Yang, Naiguang Fa, Ruijuan Chen</i>	
Parameter Estimate Modeling of Electronic Transformer	1258
<i>Jiaju Wu, Hidehiko Sugimoto, Changkun Wang</i>	
Analysis and Design of Boost DC-DC Converters for Intrinsic Safety	1267
<i>Shu-Lin Liu, Jian Liu, Hong Mao</i>	
Modeling and Fuzzy Logic with Integrator Control for the ZVZCS PWM DC/DC Converter	1273
<i>Shen Hong, Wan Jianru, Yang Xiaobo, Wu Weiyang, Wang Xiaohuan</i>	
ZVS DC-DC Converter with Parallel-Connected Current Doubler Rectifier	1278
<i>Bor-Ren Lin, Shuh-Chuan Tsay, Chun-Sheng Yang, Chien-Lan Huang</i>	
Study on the Dynamical Model and Analytical Method for DC-DC Switching Converter	1283
<i>Li-Li Wang, Yu-Fei Zhou, Jun-Ning Chen</i>	
A Novel Topology Family of Single-stage Parallel Mode Uninterruptible AC/DC Converter with PFC	1288
<i>Xuejun Ma, Hongxia Wu, Congsheng Huang, Xuwen Huang</i>	
Analysis and Design of an Automatic-Current-Sharing Control Based on Average-Current Mode for Parallel Boost Converters	1293
<i>Wenxun Xiao, Bo Zhang, Dongyuan Qiu</i>	
A Novel Digital Charge Control for DC-DC Converters	1298
<i>Shi Wenqing, Xu Haiping, Wen Xuhui, Wen Wei</i>	
An Asymmetrical Switched Capacitor and Lossless Inductor Quasi-Resonant Snubber-Assisted ZCS-PWM DC-DC Converter with High frequency Link	1302
<i>Khairy Fathy, Keiki Morimoto, Toshimitsu Doi, Hyun Woo Lee, Mutsuo Nakaoka</i>	
A Divided Voltage Half-Bridge High Frequency Soft-Switching PWM DC-DC Converter with High and Low Side DC Rail Active Edge Resonant Snubbers	1307
<i>Khairy Fathy, Keiki Morimoto, Toshimitsu Doi, Hiroyuki Ogiwara, Hyun Woo Lee, Mutsuo Nakaoka</i>	
Dynamic Analysis of a Current Source Inductively Coupled Power Transfer System	1312
<i>Wenqi Zhou, Hao Ma</i>	
A New Topology of Capacitor-Clamp Cascade Multilevel Converters	1318
<i>Anees Abu Sneineh, Ming-Yan Wang, Kai Tian</i>	
Evaluation of Semiconductor Losses in Cryogenic DC-DC Converters	1323
<i>C. Jia, A. J. Forsyth</i>	
Design and Performance Evaluation of a 10-kW Interleaved Boost Converter for a Fuel Cell Electric Vehicle	1328
<i>G. Calderon-Lopez, A. J. Forsyth, D. R. Nuttall</i>	
Analysis of Abnormal Phenomenon in Common-Source-type Forward Converter with Self-driven Synchronous Rectifier	1333
<i>Kentaro Fukushima, Takayoshi Hashimoto, Tamotsu Ninomiya, Takeshi Segawa</i>	
Power Quality Conditioning in Distributed Generation Systems	1338
<i>R.K. Járdán, I. Nagy</i>	

Table of Contents

Active Clamp Forward Converter Combined with Dither Voltage Generator for Poultry Stunning Applications.....	1343
<i>S. -Y. Tseng, H.-T. Wen, H.-H. Chang, J. -S. Kuo</i>	
A Novel Zero-Voltage Switching Resonant Pole Inverter	1348
<i>Sanbo Pan, Junmin Pan</i>	
Analysis of Three-Level ZVS PWM Inverter for Induction Heating Applications	1353
<i>A. Jangwanitlert, J. Songboonkaew, W. Thammasiriroj, J.C. Balda</i>	
Dual Duty Cycle Controlled Voltage Source Soft-Switching High Frequency Inverter with AC Load Side Reverse Blocking Switched Resonant Capacitor	1358
<i>Khairy Fathy, Ju-Sung Kang, Hiroyuki Ogiwara, Bin Eiuo, Hideki Omori, Hyun Woo Lee, Mutsuo Nakaoka</i>	
A Switched-Capacitor Lossless Inductor ZCS Snubber-Assisted Series Load Resonant High Frequency Inverter with Dual Mode Pulse Modulation Scheme.....	1363
<i>Khairy Fathy, Takaaki Okude, Hideki Omori, Hyun Woo Lee, Mutsuo Nakaoka</i>	
Topologies of Switch-Linear Hybrid Power Conversion & Special Operation States.....	1368
<i>Lu-sheng Ge, Qian-zhi Zhou, Wu bin</i>	
Single Reverse Blocking Switch Type Pulse Density Modulation Controlled ZVS Inverter with Boost Transformer for Dielectric Barrier Discharge Lamp Dimmer.....	1372
<i>Hisayuki Sugimura, Bishwajit Saha, Hideki Omori, Hyun-Woo Lee, Mutsuo Nakaoka</i>	
PDM Controlled Series Load Resonant Soft Switching High Frequency Inverter for Induction Heated Toner Fixing Outer Roller with Inner Cylindrical Working Coil Stator	1377
<i>Hisayuki Sugimura, Hideki Omori, Hyun Woo Lee, Mutsuo Nakaoka</i>	
Zero-Voltage and Zero-Current Switching Two-Transformer Full-Bridge Converter Using the Output-Voltage-Doubler	1382
<i>H.K. Yoon, E.S. Choi, S.K. Han, G.W. Moon, M.J. Youn</i>	
A Single-stage Boost-Flyback PFC Converter	1387
<i>Zhao Qinglin, Wen Yi, Wu Weiyang, Chen Zhe</i>	
Control Bifurcation in PFC Boost Converter under Peak Current-Mode Control.....	1392
<i>Yi-Jing Ke, Yu-Fei Zhou, Jun-Ning Chen</i>	
Analysis and Design of One-Cycle-Controlled Dual-Boost Power Factor Corrector	1397
<i>Yue-feng Yao, Yuan-rui Chen</i>	
A Novel Single-phase Buck PFC Converter Based on One-cycle Control.....	1401
<i>Chen Bing, Xie Yun-Xiang, Huang Feng, Chen Jiang-Hui</i>	
Modeling and Simulation of Three Phase High Power Factor PWM Rectifier factor correction.....	1406
<i>Yu Fang, Yong Xie, Yan Xing</i>	
Effect of the Ripple Current on Power Factor of CRM Boost APFC	1412
<i>A. Abramovitz</i>	
Simulated Study of Three-Phase Single-Switch PFC Converter with Harmonic Injected PWM by MATLAB.....	1416
<i>Zhanlong Li, Yupeng Tang</i>	
A Simple Digital Controller for Constant Instantaneous Input Power type Three-Phase Boost Rectifier under Unbalanced System.....	1421
<i>Jin Ai-Juan, Li Hang-Tian, Li Shao-Long</i>	
An Improved and Digital Current Control Strategy for One Cycle Control Based Three-Phase Boost Rectifier under Unbalanced System.....	1426
<i>Li Shao-Long, Jin Ai-Juan, Li Hang-Tian</i>	

Table of Contents

Control Method for Power Quality Compensation Based on Levenberg-Marquardt Optimized BP Neural Networks.....	1431
<i>Zhou Ming, Wan Jian-Ru, Wei Zhi-Qiang, Cui Jian</i>	
A Nonlinear Method for Hybrid Electromagnetic Suspension.....	1436
<i>Junwei Cui, Jianhui Wang</i>	
New topology of multi - level - converter for harmonic reduction	1442
<i>Frank Grundmann, Jian Xie</i>	
Model Reference Adaptive Control based on Neural Network for Electrode System in Electric Arc Furnace.....	1447
<i>Zhang Shi-feng, Zhang Shao-De, Li Kun, Zheng Xiao</i>	
STATCOM ETO Failure Analysis.....	1450
<i>Zhong Du, Bin Chen, Chong Han, Zhaoning Yang, Wenchao Song, Subhashish Bhattacharya, Alex Q. Huang</i>	
Modeling and Control of Three-phase Voltage Source PWM Rectifier	1454
<i>Yao Chen, Xin Min Jin</i>	
Mitigation of Electric Arc Furnace Voltage Flicker Using Static Synchronous Compensator.....	1458
<i>Y.F. Wang, J.G. Jiang, L.S. Ge, X.J. Yang</i>	
Design of Distributed FACTS Controller and Considerations for Transient Characteristics.....	1463
<i>Gaidi Ning, Shijie He, Yue Wang, Lei Yao, Zhaoan Wang</i>	
A Wind-Power Generation System Having a Function of Suppressing Line Voltage Deviation.....	1468
<i>Y. Nakayama, S. Fukuda, M. Futami, M. Ichinose, S. Ohara, H. Kita</i>	
A Novel Active Islanding Detection Method of Grid-connected Photovoltaic Inverters Based on Current-Disturbing.....	1473
<i>Zhang Chunjiang, Liu Wei, San Guocheng, Wu Weiyang</i>	
Grid Connection of Doubly-Fed Induction Generators in Wind Energy Conversion System.....	1477
<i>Ahmed G. Abo-Khalil, Dong-Choon Lee, Se-Hyun Lee</i>	
Active and Reactive Power Control of DFIG for Wind Energy Conversion under Unbalanced Grid Voltage.....	1482
<i>Jeong-Ik Jang, Young-Sin Kim, Dong-Choon Lee</i>	
A BASIC STUDY OF FUZZY-LOGIC-BASED POWER SYSTEM STABILIZATION WITH DOUBLY-FED ASYNCHRONOUS MACHINE.....	1487
<i>Li Wu, Zhixin Wang</i>	
Quantitative Analysis on Different Modes of Energy Optimal Control for Series Power Quality Controllers.....	1492
<i>Huang Xinming, Liu Jinjun, Zhang Hui</i>	
Resonance inverter power system for improving plasma sterilization effect	1497
<i>Y.M Kim, J.Y Kim, M. C Jo, S.H Lee, S.P Mun, H.W Lee, S.K Kwon, K.Y Suh</i>	
Generic optimization for SMPS design with Smart Scan and Genetic Algorithm.....	1502
<i>Heidi H.T. Yeung, N. K. Poon, Stephen L. Lai</i>	
Novel Single-Stage Isolated Buck-Boost Inverter Based on Improved SPWM Control Method	1507
<i>Guang-Hui Tan, Fanpeng Zeng, Yanchao Ji, Xi Chen, Hua Wang</i>	
On the Effects of Voltage Loop in Paralleled Converters Under Master-Slave Current Sharing.....	1512
<i>Yuehui Huang, Chi K. Tse</i>	
Improved Control for Parallel Inverter with Current-Sharing Control Scheme	1517
<i>Zhao Qinglin, Chen Zhongying, Wu Weiyang</i>	
A Novel Digital Controlled battery charger for High power UPS application.....	1522
<i>Fang Luo, Yong Kang, Shan Xu Duan, Xueliang Wei</i>	

Table of Contents

A Novel High Input Power Factor Single-Stage Single-Phase AC/AC Converter	1527
<i>Chien-Ming Wang, Chien-Yeh Ho, Maoh-Chin Jiag</i>	
Research on the Power Sharing of the Parallel Inverters without Control Interconnection Basing on Droop Characteristic	1532
<i>Kan Jiarong, Xie Shaojun</i>	
Analysis and Design of Repetitive controlled Inverter System with High Dynamic Performance	1537
<i>Mingzhu Li, Zhongyi He, Yan Xing</i>	
Study on a large-volume high-performance programmable voltage disturbance source.....	1542
<i>Zhan Qizhi, Zhuo Fang, Dong Wenjuan, Wang Zhao'an</i>	
1 KW Dual Interleaved Boost Converter for Low Voltage Applications.....	1546
<i>Heinz van der Broeck, Ibrahim Tezcan</i>	
Control of Multilevel Flying Capacitor Inverters for High Performance.....	1551
<i>L. Zhang, S. J. Watkins, Duan Qi Chang</i>	
Analysis of Harmonics in Input Line Current for Matrix Converter based on Double Input Line-toline Voltages.....	1557
<i>Guo Yougui, Deng Wenlang, Zhu Jianlin</i>	
Research on Neutral-point Balancing Control for Three-level NPC Inverter Based on Correlation between Carrier-based PWM and SVPWM	1560
<i>Wenxiang Song, Guocheng Chen, Xiaoyu Ding, Mantang Shu</i>	
Instantaneous Voltage Regulated Seamless Transfer Control Strategy for Utility-interconnected Fuel cell Inverters with an LCL-filter	1566
<i>Guoqiao Shen, Dehong Xu, Xiaoming Yuan</i>	
An Anti-windup Design Method for Internal Model Control Based on H8 Optimization	1571
<i>Hou Yansong, Li Hua</i>	
Study on Pwm Control Strategy of Photovoltaic Grid-connected Generation System.....	1576
<i>Shi-cheng Zheng, Pei-zhen Wang, Lu-sheng Ge</i>	
Robust Sliding Model Control for Regenerative Braking of Electric Vehicle.....	1581
<i>Min Ye, Zhifeng Bai, Binggang. Cao</i>	
A Self-adaptive Fuzzy Control Scheme of High Frequency Link SPWM Inverters.....	1585
<i>Herong Gu, Deyu Wan, Weiyang Wu</i>	
Using Automatic Frequency Shifting Techniques for LLC-SRC Output Voltage Regulation	1590
<i>Kuo-Kai Shyu, Ching-Ming Lai, Ko-Wen Jwo, Ming-Ho Pan, Chung-Ping Ku</i>	
Design and Test of Novel Programmable Digital Three Phases SPWM Chip.....	1595
<i>Yang Yuan, Gao Yong, Chen Lijie</i>	
An Improved Performance of Five-Leg Inverter in Two Induction Motor Drives.....	1598
<i>Ryuji Omata, Kazuo Oka, Atsushi Furuya, Shuji Matsumoto, Yusuke Nozawa, Kouki Matsuse</i>	
Adaptive Three Dimensional Space Vector Modulation in abc Coordinates for Three Phase Four Wire Split Capacitor Converter.....	1603
<i>Xiao-bo Yang, Wei-yang Wu, Hong Shen</i>	
Inverters Parallel Operation Based on CAN.....	1608
<i>Yong Wu, Xianglong Jiang, Jinbang Xu, Qingyi Wang, Shuyun Wan</i>	
EMI Reduction Method for a Single-Phase PWM Inverter by Suppressing Common-Mode Currents with Complementary Switching.....	1613
<i>Toshiji Kato, Kaoru Inoue, Koji Akimasa</i>	

Table of Contents

Analysis and Design of a Novel Dual Secondary Winding and Dual Power Bridge High Frequency Link Inverter	1618
<i>Zhang Zhe, Zhang Chunjiang, Wu Weiyang, Gu Herong, Shen Hong</i>	
Research of Complex Fuzzy Control on-off Magnetism Team Motor Speed-Adjusting System.....	1623
<i>Zhao Ming-fu, Chen Yan, Zhang Zhi-yuan, Dong Chun, Dong Yu</i>	
A New BLDC Motor Drives Method Based on BUCK Converter for Torque Ripple Reduction	1626
<i>Zhang Xiaofeng, Lu Zhengyu</i>	
Design of Wind Turbine Generator Control System	1630
<i>Chen Guiyou, Zhou Li, Sun Tongjing, Wang Zhongmin</i>	
Non-touching Intelligent Control System of Water Intenerating Equipment Based on Sodian Exchange	1634
<i>Chen Guiyou, Zhang Qingfan, Zhou Li, Luo Donghua</i>	
Investigation of Hybrid Modeling and Control for DC-DC Converters	1637
<i>Hao Ma, Feng Qi, Wenqi Zhou</i>	
Effect of Peak Current Mode Control on Transient Response for VRM Application.....	1641
<i>Seiya Abe, Tamotsu Ninomiya</i>	
Modulations for Voltage Source Rectification and Voltage Source Inversion Using Direct Space Vector Approach	1646
<i>Keping You, M. F. Rahman</i>	
Synchronization of Voltage Waveforms in Basic Topologies of Dual Inverter-Fed Motor Drives.....	1651
<i>V. Oleschuk, F. Profumo, A. Tenconi, R. Bojoi, A.M. Stankovic</i>	
Research on Fast Magnetic Valve Controllable Reactor	1657
<i>Zhang Jian-wen, Cai Xu</i>	
Study and comparison of fault tolerant shunt three-phase active filter topologies	1663
<i>H. El Brouji, P. Poure, S. Saadate</i>	
Application of GA-BP in Fault Diagnosis of Power Circuit of SVC.....	1669
<i>Zeng Guang, Xi Yu-fan, Su Yan-min, Zhang Jing-Gang</i>	
The Optimization-Sliding Mode Control For Three-Phase Three-Wire DSP-based Active Power Filter	1674
<i>Zhou Wei-ping, Liu Da-ming, Wu Zheng-guo, Xia Li, and Yang Xuan-fang</i>	
Three-Phase DVR using a Single-Phase Structure with Combined Hysteresis/ Dead-band Control.....	1679
<i>Seyyed Hossein Hosseini, Mehran Sabahi</i>	
Harmonic Detection Based on the TLS Estimation Algorithm.....	1684
<i>Liu Kaipei, Zhang Junmin</i>	
Control Strategy Study of Hybrid Active Power Filter	1689
<i>Jia Zhang, Guohong Zeng</i>	
Novel Harmonic Free Single Phase Variable Inductor Based on Active Power Filter Strategy	1693
<i>Mu Xianmin, Wang Jianze, Ji Yanchao, Wei Xiaoxia, Fu Xiangyun</i>	
A Multi-Output Series Resonant Inverter with Asymmetrical Voltage-Cancellation Control for Induction-Heating Cooking Appliances.....	1697
<i>S.H. Hosseini, A. Yazdanpanah Goharrizi, E. Karimi</i>	
Capacitor Voltage Control in a Cascaded Multilevel Inverter as a Static Var Generator.....	1703
<i>M. Li, J. N. Chiasson, L. M. Tolbert</i>	
DC-link Pumping-up Voltage Suppression of a Series Active Voltage Regulator With Phase Shift Control.....	1708
<i>G. C. Xiao, Z. L. Hu, C. H. Nan, Z. A. Wang</i>	
The Fuzzy Soft-startup Controller of Active Power Filter.....	1713
<i>He Na, Wu Jian, Xu Dianguo</i>	

Table of Contents

A Novel Control Method for DSTATCOM Using Artificial Neural Network.....	1718
<i>Yang Xiao-ping, Zhong Yan-ru, Wang Yan</i>	
A Detailed Analysis of Unexpected DC-side Voltage Boost in Series Power Quality Controllers	1722
<i>Yuan Chang, Liu Jinjun, Wang Xiaoyu, Wang Zhaoan</i>	
Comparative Analysis of Popular Control Schemes for Parallel Active Power Filter and Experimental Verification.....	1726
<i>Xiaoyu Wang, Jinjun Liu, Chang Yuan, Zhaoan Wang</i>	
Accurate Modeling of the Three Phase Induction Motor Including Saturation Effects.....	1731
<i>E. V. N. Souza, S. R. Naidu</i>	
A study on the reliability evaluation of driving parts for note handling units	1736
<i>Joo Han Kim, Jung Kee Chung, Ha Kyeong Sung, Se Hyun Rhyu</i>	
Analysis on Toothless Permanent Magnet Machine with Halbach Array.....	1741
<i>Xu Yanliang, Feng Kaijie</i>	
Improvement in Reliability of Doubly Salient Permanent Magnet Motor Drive.....	1746
<i>Wenxiang Zhao, Ming Cheng, Xiaoyong Zhu, Wei Hua, Jianzhong Zhang</i>	
A New Approach of Modeling the Saturated Induction and Synchronous Salient Pole Machines	1751
<i>A. Câmpeanu, M. Badica</i>	
Inductance characteristics of 3-phase fluxswitching permanent magnet machine with doubly-salient structure	1758
<i>Wei Hua, Cheng Ming</i>	
Performance Index Evaluations of a Micro Axialflux Switched-reluctance Motor.....	1763
<i>Cheng-Tsung Liu, Yen-Ming Chen, Da-Chen Pang</i>	
Study of Variable Frequency Operation of Induction Generator for Wind Power.....	1768
<i>Noriyuki Kimura, Mitsuhiro Hirao, Toshimitsu Morizane, Katsunori Taniguchi</i>	
Optimal Power Control Strategy of Maximizing Wind Energy Tracking and Conversion for VSCF Doubly Fed Induction Generator System.....	1773
<i>H. Li, Z. Chen, John K. Pedersen</i>	
Design and Evaluation of a Dual Mechanical Port Machine and System.....	1779
<i>Longya Xu, Yuan Zhang</i>	
Characteristic Analysis on Overhang Effect in Axial Flux PM Synchronous Motors with Slotted Winding	1784
<i>WonYoung Jo, YunHyun Cho, YonDo Chun, DaeHyun Koo</i>	
Design and Analysis of a Double-Stator Cup-Rotor Directly Driven Permanent Magnet Wind Power Generator	1788
<i>Dong Zhang, Shuangxia Niu, K. T. Chau, J. Z. Jiang, Yu Gong</i>	
Feasibility Analysis of Accelerometer Configuration of Non-gyro Micro Inertial Measurement Unit.....	1793
<i>Ding Mingli, Zhou Qingdong, Wang Qi, Wang Changhong</i>	
Design of Fractional-Order a PI Controller with two modes.....	1797
<i>Wen Li, Yoichi Hori</i>	
Sliding Mode Robust Tracking Control Based on Learning Feedforward Compensation for High Precision Linear Servo System	1802
<i>Zhu Guoxin, Guo Qingding, Zhao Ximei</i>	
Application of Fuzzy Self-learning Sliding Mode Variable Structure Control in Linear AC Servo System.....	1806
<i>Qing Hu, Shuo Jie, Dongmei Yu</i>	
Dynamics Research of Robot Manipulator	1811
<i>Zhibing Shu, Caizhong Yan, Hairong Zhang</i>	

Table of Contents

Advanced Angle Control Schemes for Stator Hybrid Excited Doubly Salient Motor Drive	1815
<i>Xiaoyong Zhu, Ming Cheng, Wenxiang Zhao, Wenguang Li</i>	
A Design Method of Reconfigurable Controller for AC Position Servo Systems.....	1820
<i>Wu Qinmu, Qin Yi, Li Yesong</i>	
Position Sensorless Control of PMSM Based on a Novel Sliding Mode Observer over Wide Speed Range	1825
<i>Song Chi, Student Member, Longya Xu,</i>	
Design of Motion Control System Used for Filter Rod Production Machine	1832
<i>Yang Qingyu, Ge Sibao, Ye Kesong, Shi Ren</i>	
Analysis and Implementation of Sensorless Position Detection in a Permanent Magnet Generator	1836
<i>Sebastian Rosado, Xiangfei Ma, Fred Wang, Jerry Francis, Dushan Boroyevich</i>	
Torque-Speed Characteristics of Interior-Magnet Machines in Brushless AC and DC Modes, with Particular Reference to Their Flux-Weakening Performance.....	1841
<i>Y. F. Shi, Z. Q. Zhu, D. Howe</i>	
H8 Robust Control for Dual Linear Motors Servo System	1846
<i>Zhao Ximei, Guo Qingding</i>	
Research on Linear Motor Driving System Based on Wavelet Transform	1849
<i>Cui Jiefan, Zhao Lijun, Wang Hemin, Wan Junzhu, Jiang Lili</i>	
Study on Rotor Position Detection Error in Sensorless BLDC Motor Drives.....	1853
<i>Li Qiang, Wang Ruixia</i>	
A New Scheme to Direct Torque Control of Interior Permanent Magnet Synchronous Machine Drives for Constant Inverter Switching Frequency and Low Torque Ripple	1858
<i>Jun Zhang, M. Faz Rahman, Colin Grantham</i>	
A Modified Direct Torque Control for Interior Permanent Magnet Synchronous Motor Drive Without a Speed Sensor	1863
<i>Yanping Xu, Yanru Zhong, Hui Yang</i>	
Direct Torque Control for Interior Permanent Magnet Synchronous Motors Using Matrix Converters.....	1867
<i>D. Xiao, M. F. Rahman</i>	
A Neural Network Based Initial Position Detection Method To Permanent Magnet Synchronous Machines.....	1872
<i>Mengjia Jin, P.C.K Luk, Jianqi Qiu, Cenwei Shi, Ruiguang Lin</i>	
A New Recurrent Fuzzy Neural Network Sliding Mode Position Controller Based on Vector Control of PMLSM Using SVM.....	1877
<i>Junyou Yang, Ruijuan Chen, Naiguang Fa</i>	
DSP Implementation of Rotor Position Detection Method for Hybrid Stepper Motors	1882
<i>M. Bendjedia, Y. Ait-Amirat, B. Walther, A. Berthon</i>	
An In-Wheel Switched Reluctance Motor for Electric Vehicles	1887
<i>P.C.K. Luk, P. Jinupun</i>	
Speed Sensorless Vector Control of Induction Motor Based on Full-Order Flux Observer	1892
<i>Shanshan Wu, Yongdong Li, Zedong Zheng</i>	
A Parameter Identification Method for General Inverter-fed Induction Motor Drive.....	1896
<i>Xiaochun Jiang, Geng Yang, Yunfei Wang</i>	
Indirect Rotor Field Orientation Vector Control for Induction Motor Drives in the Absence of Current Sensors	1901
<i>Z. S. WANG, S. L. HO</i>	
A Robust Adaptive Sliding-Mode Controller for Slip Power Recovery Induction Machine Drives	1906
<i>J.Soltani, A. Farrokh Payam</i>	

Table of Contents

Identification of the Rotor Time Constant in Induction Machines without Speed Sensor.....	1912
<i>M. Li, J.N. Chiasson, M. Bodson, L.M. Tolbert</i>	
Adaptive Control of Doubly Fed Field-Oriented Induction Machine Based On Recursive Least Squares Method Taking the Iron Loss Into account.....	1917
<i>N. R. Abjadi, J. Askari, J. Soltani</i>	
Analysis and Design of PDM Converter with High Frequency Link for HEV Drive System.....	1922
<i>Ma Xianmin</i>	
A Multi-Directional Power Converter for a Hybrid Renewable Energy Distributed Generation System with Battery Storage.....	1926
<i>Mei Qiang, Wu Wei-Yang, Xu Zhen-lin</i>	
Four-bridge Multilevel Converters Based on Hybrid-clamped Techniques.....	1931
<i>Xiaofeng Wang, Yan Deng, Xiangning He</i>	
Standardization of Input/Output Impedance Specifications of Buck Converters Based on the System Integration Concept.....	1936
<i>Tao Wu, Xinbo Ruan</i>	
Research on The Magnetic Integration in Three-Level ZCS Quasi-Resonant Buck Converter.....	1942
<i>Jiang Ying, Xiang Hui-jie, Yang Yu-gang, Liu Nan</i>	
Decoupling Control of Magnetically Levitated Induction Motor with Inverse System Theory	1947
<i>Yang Zhou, Huangqiu Zhu, Tianbo Li</i>	
Fault Detection and Accommodation for Nonlinear Systems Using Fuzzy Neural Networks	1952
<i>H. Xue, J.G. Jiang</i>	
A Novel Constant Power Control of High Frequency Electronic Ballast Applying the PLL Technique for a Metal Halide Lamp.....	1957
<i>Chang-Hua Lin, Chung-Lun Ou, Tien-Shuo Liu, Ken-Chuan Hsu</i>	
The Voltage Stability Research of Ship Electric Power System	1962
<i>Fanyinhai Zhaomin</i>	
Parasitic Gate Resistance and Switching Performance.....	1967
<i>Alan Elbanhawy</i>	
PWM Rectifier with DC Reverse-Blocking Diode for High-Reliability Generating Apparatus and Its Application to Gas Heat Pump System.....	1971
<i>Akio Toba, Toshihiro Maeda, Kouetsu Fujita, Tomohiko Kato</i>	
A Novel Stator Section Crossing Method of Long Stator Linear Synchronous Motor for Maglev Vehicles.....	1976
<i>Qian Zhang, Fei Lin, Xiaojie You, Trillion Q. Zheng</i>	
Common Mode Current Suppression in Full-Bridge Converter Based on Simulated Annealing Algorithm	1981
<i>Yonggao Zhang, Kai Zhang, Yunbin Zhou, Yong Kang</i>	
Summary of Distance Measurement Based on Vision in Localization Technology	1986
<i>Handong Zhang, Gang Wang, Yuwan Cen</i>	
The studies of Single-phase Inverter Fault Diagnosis Based on D-S Evidential Theory and Fuzzy Logical Theory.....	1991
<i>Wang Baocheng, Li Danhe, Sun Xiaofeng, Wu Weiyang</i>	
A Novel Single-Stage High-Power-Factor Electronic Ballast with Symmetrical Half-Bridge Topology	1995
<i>Chien-Ming Wang, Chien-Yeh Ho</i>	
Smoothed-Power Output Supply System for Battery of Stand-alone Renewable Power System Using EDLC	2000
<i>Y. Jia, R. Shibata, N. Yamamura, M. Ashida</i>	

Table of Contents

Supercapacitors characterization for hybrid vehicle applications	2005
<i>F. Rafik, H. Gualous, R. Gallay, A. Crausaz, A. Berthon</i>	
Power Transfer Maximization and Di/Dt Based Extremum Tracking for a Swing Engine Based Portable Power System	2010
<i>Satish Rajagopalan, Deepak M. Divan, Ronald G. Harley, J. Rhett Mayor</i>	
3D FEA of the Stator of the Linear Magnetic Flux Compression Generator.....	2015
<i>Yanjie Cao, Chengxue Wang</i>	
The Effect of Current Control Strategies on Power Consumption of a Magnetically Levitated Turbomolecular Pump	2018
<i>A.E. Hartavi, R.N. Tuncay, M.N. Sahinkaya</i>	
Direct Torque Control of an Interior Permanent Magnet Synchronous Machine fed by a Direct AC-AC Converter.....	2023
<i>D. Xiao, M. F. Rahman</i>	
Control of Distributed Power Systems.....	2029
<i>Z. Chen, Y. Hu, F. Blaaberg</i>	