The Sixth International Conference on Power Electronics and Drive Systems
28 Nov - 1 Dec, 2005

Renaissance Hotel, Kuala Lumpur, MALAYSIA

Advance Technical Program
(As of Oct 12, 2005)
Monday Nov 28

2.00pm - 5.40pm

REGISTRATION

TUTORIAL 1 Prof. Boon-Teck Ooi - Flexible AC Transmission System (FACTS)

TUTORIAL 2 Assoc. Prof. Muhammed Faz Rahman - Design and Control of IPM Motors

TUTORIAL 3 Prof. Dr. Leo Lorenz - New Power Semiconductor Devices for high switching Frequencies In future power converters

TUTORIAL 4 Prof. Vassiliios Ageidis - State-of-the-Art Power Electronics Technologies for the De-regulated Power Systems

6.30pm

WELCOMING RECEPTION

Tuesday Nov 29

8.40am - 12.40pm

OPENING CEREMONY

KEYNOTE 1 by Prof. Dean J. Patterson - University of Nebraska Lincoln (Conference Chairman)

KEYNOTE 2 by Prof. Dr.-Ing. Joachim Holtz - University of Wuppertal, Germany

KEYNOTE 3 by Prof. Boon-Teck Ooi - McGill University, Canada

PLENARY LECTURE 1

PLENARY LECTURE 2

Notes: Only affiliation of the first authors are shown.

Session 1A Induction Motor Drives Tuesday, Nov 29 (2.00pm - 5.40pm)

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<td>Jiri Klima</td>
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<td>1D.9 P0322 A New Commutation Method for a Full-Bridge Current-Source Inverter Yu-Kang Lo, Jian-Ming Wang, Sung-Tung Wu National Taiwan University of Science and Technology, TAIWAN</td>
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Session 1E  Distributed Generation 1  Tuesday, Nov 29 (2.00pm - 5.40pm)

1E.1  P0220  A Central Method of Prolonging the Service Life of Battery in Stand-alone Renewable Energy System using Electric Double Layer Capacitor (EDLC)
Yan Jia, Ryosuke Shibata, Naoki Yamamura, Muneaki Ishida
Mie University, JAPAN

1E.2  P0338  Voltage Compensation in Weak Grids using Distributed Generation with Voltage Source Converter as a Front End
Faijan Magued, Hilm Awad
Chalmers University of Technology, Sweden

1E.3  P0593  An Electronic Voltage and Frequency Controller for Single-Phase Self-Excited Induction Generators for Pico Hydro Applications
Bhim Singh, Mr. Murthy, Sushma Gupta
Indian Institute of Technology, Delhi, India

1E.4  P0615  High-efficient Soft-Switching Converter for Three-Phase Grid Connections of Renewable Energy Systems
Klaus Rügens, Peter Lukenens, Matthias Wendt, Stefan Schroeder, Ulrich Bocke, Rik W. De Doncker
RWTH Aachen University, Germany

1E.5  P0333  Development of an Analog Maximum Power Point Tracker for a Photovoltaic Panel
Abu Tariq, Md Syed Jamil Ashgar
Aligarh Muslim University, India

1E.6  P0341  A Consise Two-phase Flow Model for Direct Methanol Fuel Cell Performance Modelling
Yuming Yang, Yung C. Liang
National University of Singapore, Singapore

1E.7  P0246  Smart and Accurate State-of-Charge Indication in Portable Applications
Valer Pop, Henk Jan Bergveld, Notton Peter, Regtien Paul
University of Twente, Netherlands, The Netherlands

1E.8  P0651  Decoupling Load and Power System Dynamics to Improve System Stability
Xiaoyu Wang, Don Mahinda Vilathgamuwa, San Shin Choi
Nanyang Technological University, Singapore

1E.9  P0535  Power Quality Enhancement with DSTATCOM for Small Isolated Alternator Feeding Distribution System
Bhim Singh, Akila Adya, AP Mittal, JRP Gupta
Indian Institute of Technology, Delhi, India

Session 1F  Power Quality 1  Tuesday, Nov 29 (2.00pm - 5.40pm)

1F.1  P0392  A Novel Method of Suppressing the Inrush Current of Transformers using a Series-Connected Voltage-Source PWM Converter
Hiroaki Yamada, Eiji Hiraki, Toshikho Tanaka
Shimane University, Japan

1F.2  P0626  Simultaneous Operation of a PSS and a Series Power Electronics-Based Controller with Minimum Interaction
Jafar Ghaisari, Aminreza Bakhtiar, Praveen K. Jain
Isfahan University of Technology, Iran

1F.3  P0418  Optimization of Hybrid Filters for Distributed Harmonic and Reactive Compensation
Paolo Tenii, Elisabetta Tedeschi, Paolo Mattavelli
University of Padova, Italy

1F.4  P0616  Improved Broadband Harmonic Filter Design for Adjustable Speed Drives
Ahmet Hava, Hazem Zubi
Middle East Technical University, Turkey

1F.5  P0199  Development of a DSP-Based Power Quality Monitoring Instrument for Real-Time Detection of Power Disturbances
Mohammed Salim, Azah Mohamed, Salina Abd Samad, Ramiz Mohamed
Universiti Kebangsaan Malaysia, Malaysia

1F.6  P0153  Study of Dynamic Voltage Restorer under the Abnormal Voltage Conditions
Huaim-Keng Chiang, Bor-Ren Lin, Kuan-Wei Wu
National Yunlin University of Science and Technology, Taiwan

1F.7  P0400  Robust Signal Processing System for Identification of Harmonics in an Active Power Filter Application
Thip Mamek, Chathuru P. Mudannayake, Colin Grantham
The University of New South Wales, Australia

1F.8  P0151  A multi-function single-phase voltage source inverter with current harmonic elimination and voltage regulation features
Bor-Ren LIN, Huaim-Keng CHIANG, Cheng-Chang YANG, Kuan-Wei WU
National Yunlin University of Science and Technology, Taiwan

Session 2A  Control of Motor Drives 1  Wednesday, Nov 30 (8.40am - 12.40pm)

2A.1  P0497  Phase-Shift-Based Synchronous Modulation of Dual Inverters for an Open-End Winding Motor Drive with Elimination of Zero Sequence Currents
Valentin Oleschuk, Alexandar Sizov, Bimal K Bose, Alexandar Stankovic
Academy of Sciences of Moldova, Moldova

2A.2  P0669  Evaluation of Secondary Slot Effects on Performance of High-Speed Linear Induction Motors Using a Quasi Three-Dimensional Space Harmonic Method
Mehran Mirzayee, Mahmood Joorabian
Amirkabir University of Technology, Iran

2A.3  P0617  Studies of Inverter Ratings of BDFM Adjustable Speed Drive or Generator Systems
Xiaoyan Wang, Paul Roberts, Richard Monahan
University of Cambridge, United Kingdom

2A.4  P0463  Closed-Loop Control and Performance of an Inverterless Interior PM Automotive Alternator
Chong-Zhi Liaw, Wen L. Soong, Nesimi Erugru
The University of Adelaide, Australia

2A.5  P0331  Investigation of Velocity Ripple Suppression for the Discontinuous Permanent Magnet Linear Synchronous Motor by Open Loop
Yongae Kim, Hideo Dohmeki, Daiki Eishara
Musashi Institute of Technology, Japan

2A.6  P0548  Sensorless Rotor Position Detection using Differential High Frequency Phase Current method
Ram Chandru, Jianguo Zhu
University of Technology Sydney, Australia

2A.7  P0224  A Novel Implementation Method of a Programmable Cascaded Low Pass Filters for a Low Speed Sensorless Control of Synchronous Relucance Motors
Ahmad Ghaderi, Tsyoshi Hanamoto, Teruaki Tsuji, Mohammad Ebrahimi
Kyushu Institute of Technology, Japan
2A.8 P0389 Nonlinear Feedback Control of a Bearingless Brushless DC Motor
Herbert Gräbner, Wolfgang Amrhein, Siegfried Silber, Klaus Nenninger
Linz Center of Competence in Mechatronics, AUSTRIA

2A.9 P0351 Sensorless Control of Permanent Magnet Machine Drives for Aerospace Applications
Alan Budden, R. Wrobel, Derrick Holland, Phil Melkor, Parminder Sangha
University of Bristol, UNITED KINGDOM

Session 2B  DC-DC Converters 2  Wednesday, Nov 30 (8.40am - 12.40pm)

2B.1 P0665 Simulation and Experimental Results of the Bi-Directional DC-DC Converter Operating as an Active Damping Device in a Simple System
Awang Jusoh, Zainal Saidin, Shahrin Md Ayob, M.R. Sahid
Universiti Teknologi Malaysia, MALAYSIA

2B.2 P0423 Integrated Magnetic Component based Analysis for Interleaved DC-DC Buck Converter
Nagaraja H N, Anmi Patra, Kasha Debaprasad
Indian Institute of Technology, Kharagpur, INDIA

2B.3 P0551 A New Hybrid Current Source Rectifier with Common Mode Voltage Elimination
Mohd Junaidi Abdul Aziz, Christian Klumppner, Jonathan Charles Clare
University of Nottingham, UNITED KINGDOM

2B.4 P0187 AC/DC Flyback Converter With A Single Switch Controlled DC Motor Drives
Ewey El Kholy
Menoufia University, EGYPT

2B.5 P0458 Improved Asymmetrical Half-Bridge Converters
Valery Meleshin, Denis Orchinnikov
Svyaz Engineering, RUSSIA

2B.6 P0443 Analysis and Implementation of an Asymmetrical Half-Bridge Converter
Ber-Ren Lin, Huanh-Keng Chiang, Chao-Hisien Tseng, Kao-Cheng Chen
National Yunlin University of Science and Technology, TAIWAN

2B.7 P0536 A New Control Circuit Extends the Effective Duty Cycle Range of Flyback Converters
Tapas Halder, Sujit Kumar Biswas, Shib Sankar Saha, Biswajit Majumdar
 Jadavpur University, INDIA

2B.8 P0310 An Improved Control Scheme for Multiphase Buck Converter Circuits used in Voltage Regulator Modules
Jitendra Agrawal, Kasha Debaprasad, Anmi Patra, Barry Culpepper
Indian Institute of Technology, Kharagpur, INDIA

2B.9 P0211 Analysis, Design and Implementation of an Active Clamp Flyback Converter
Ber-Ren Lin, Huanh-Keng Chiang, Kao-Cheng Chen, David Wang
National Yunlin University of Science and Technology, TAIWAN

2B.10 P0396 Increasing Efficiency of an DSP-controlled Converter by On-the-fly Changing of the Gate Drive Method
Frank Berling, Stefan Soter
University of Dortmund, GERMANY

Session 2C  Converters Control 1  Wednesday, Nov 30 (8.40am - 12.40pm)

2C.1 P0417 Modelling, Analysis and Design of Cascaded Forward and Interleaved Converter for Powering Future Microprocessors
Ravinder Pal Singh, Ashwin M Khambarikone, Saneesh Samudra, Yung C Liang
National University of Singapore, SINGAPORE

2C.2 P0624 Modulation and Control Schemes for A New Power Converter Based on Z-source and Matrix Converters for ISA 42 V PowerNet System
Keping You, Muhammed Faz Rahman
The University of New South Wales, AUSTRALIA

2C.3 P0564 Control of High Performance DC-AC Inverters using Frequency Domain Based Repetitive Control
Wei Wang, Sanjib Kumar Panda, Jian-Xin Xu
National University of Singapore, SINGAPORE

2C.4 P0671 Predictive Digital Control For Voltage Regulation Module Applications
Erik Delia Monica, W. Stefanutt, Paolo Mattavelli, Elisabetta Tedeschi, Paolo Tenti, S. Saggin
University of Udine, ITALY

2C.5 P0179 New Current Sensing Circuit for Hysteresis-Current-Controlled Buck Converters
Jinn-Jong Chen, Yuh-Shyan Huang, Juang-Huei Su, Wei-Chung Shih
National Taiwan University of Science and Technology, TAIWAN

2C.6 P0537 Control of a Three-Phase P1V/MI Rectifier Based on a Dual Single-Input Output Linear Model
Bo Yin, Ramesh Oruganti, Sanjib Kumar Panda, Ashoka K S Bhat
National University of Singapore, SINGAPORE

2C.7 P0309 Small-Signal Model of a High-Power-Factor, Three-Phase AC-DC Converter with High-Frequency Resonant Current Injection
Mohammad Nawawi Seraji, Andrew Forsyth
The University of Birmingham, UNITED KINGDOM

2C.8 P0382 Modeling and Simulation of DC-DC Power Converters in CCM and DCM using the Switching Functions Approach: Application to the Buck and Cuk Converters
Hadi Kanaan, Kamal Al-Haddad
Saint Joseph University, LEBANON

2C.9 P0420 Analysis and Implementation of a High Efficiency, Interleaved Current-fed Full Bridge Converter for Fuel Cell System
Xin Kong, Ashwin M Khambarikone
National University of Singapore, SINGAPORE

Session 2D  Distributed Generation 2  Wednesday, Nov 30 (8.40am - 12.40pm)

2D.1 P0386 Deadbeat Current Control for AC and DC Power Applications of a Stand-Alone Induction Generator System
Katsum Nishida, Tarek Ahmed, Mitsuo Nakao
Ube National College of Technology, JAPAN

2D.2 P0577 Optimum Input Volt-Ampere Control of Three-Phase Induction Motors Connected to Distributed Generating Systems
Haron Ashfaq, M Syed Jamil Ashgar
Aligarh Muslim University, INDIA

2D.3 P0542 An Improved Maximum Power Point Tracking Algorithm with Current-Mode Control for Photovoltaic Applications
Chee Wei Tan, Tim C Green, Carlos A Hernandez Aramburo
Imperial College London, UNITED KINGDOM
2D.4 P0513 Smoothing Control of Wind Farm Output Fluctuation with Doubly-fed Asynchronous Machine
Li Wu, Z.X. Wang, *Junji Tamura
Shanghai Jiaotong University, CHINA

2D.5 P0075 Battery Energy Storage System for Power Conditioning of Renewable Energy Sources
Ravinder Singh Bhatia, SP Jain, *Dinesh Kumar Jain, **Bhim Singh
NIT Kurukshetra, INDIA

2D.6 P0602 A Solar-powered Battery Charger with Neural Network Maximum Power Point Tracking Implemented on a Low-Cost PIC-microcontroller
Mahanakorn University of Technology, THAILAND

2D.7 P0451 Transient Stability Analysis of Wind Generator System with the Consideration of Multi-Mass Shaft Model
Kumamoto Institute of Technology, JAPAN

2D.8 P0694 Grid-connected Photovoltaic System with Maximum Power Point Tracking using Self-Organizing Fuzzy Logic Controller
Noppadol Khaehintung, Chatboon Kangsajjan, Phapphak Sirisuk, *Anatawat Kunakorn
Mahanakorn University of Technology, THAILAND

2D.9 P0614 Grid-Connection Technique for a Photovoltaic System with Power Factor Correction
Yu-Kang Lo, Jin-Yuan Lin, Tin-Yuan Wu
National Taiwan University of Science and Technology, TAIWAN

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**Session 2E Power Quality 2 Wednesday, Nov 30 (8.40am - 12.40pm)**

2E.1 P0301 Simulation and Experimental Investigation of an Optimum UPQC with Minimum VA Loading
Yashomani Y Kohkarhat, Shyama P Das
Indian Institute of Technology, Kharagpur, INDIA

2E.2 P0130 Locating Voltage Sag Source at the Point of Common Coupling in Industrial Distribution Systems
Noraliza Hanzah, *Azah Mohamed, Aini Hussain
Universiti Kebangsaan Malaysia, MALAYSIA

2E.3 P0134 The Novel Detection Approach of Shunt Active Filter Based on Adaptive Inverse Control
Yanfeng Wu, Zhengguo Wu
Naval University of Engineering, CHINA

2E.4 P0238 Analysis of Instantaneous Representative Active Power Equality based Control Method for Three-Phase Shunt Active Power Filter
Slamat Riyadi, Yanuar syah Hancen
LPKKE-ITB, INDONESIA

2E.5 P0539 Fundamental Frequency Model of a Dynamic Voltage Restorer
Rengan Krishnan Iyer, Agleswar K Ramasamy, Vigna Kumar Ramachandranmurthy, Ravindra Nath Mukerjee
Universiti Tenaga Nasional, MALAYSIA

2E.6 P0613 Design, Simulation and Analog Circuit Implementation of a Three-phase Shunt Active Filter using the Icos(pH) Algorithm
Manjula G Nair, G Bhuvaneswaran
Indian Institute of Technology, Delhi, INDIA

2E.7 P0393 Real Time Tracking of RMS Quantities in Three-Phase Systems under Nonsinusoidal Conditions
Thip Manmek, Colin Grantham, Toan Phung
The University of New South Wales, AUSTRALIA

2E.8 P0566 A Soft-Switching Utility-Interfaced Power Conditioner with High-Frequency
Sawouth Chandhaket, *Mutsuo Nakasaka
Walailak University, THAILAND

2E.9 P0676 Design of a Prototype D-Statcom using DSP Controller for Voltage Sag Mitigation
Universiti Putra Malaysia, MALAYSIA

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**Session 3A Motor Design 1 Wednesday, Nov 30 (2.00pm - 3.40pm)**

3A.1 P0639 Study of A PMSM Model Incorporating Structural and Saturation Saliences
Ying Yan, Jianguo Zhu, Haiwei Lu, Youguang Guo, *Shuhong Wang
University of Technology Sydney, AUSTRALIA

3A.2 P0314 A New Motor Design for Hermetic DC Compressor
Chih-Chung Lo, Chun-Chung Yang, Hung-Chi Chen
Industrial Technology Research Institute, TAIWAN

3A.3 P0399 Stability Limits of Saturated Interior Permanent Magnet Motors
Eesam Eddin Rashad
Buraydah College of Technology, SAUDI ARABIA

3A.4 P0466 A Permanent Magnet Linear Motor for Micro Robots
Haiwei Lu, Jianguo Zhu, Youguang Guo
University of Technology Sydney, AUSTRALIA

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**Session 3B Permanent Magnet Motor Drives Wednesday, Nov 30 (2.00pm - 3.40pm)**

3B.1 P0149 Adaptive Backstepping based Controller Design for Interior type PMSM using Maximum Torque Per Ampere Strategy
Jafar Soltani, Majid Patihavannichazad
Isfahan University of Technology, IRAN

3B.2 P0298 Intelligent Speed Control of Permanent Magnet Synchronous Motor Drive Based-on Neuro-Fuzzy Approach
Tawfiq Radwan, *Mohamed Gouda
Riyadh College of Technology, SAUDI ARABIA

3B.3 P0474 A Novel Direct Load Angle Control for Interior Permanent Magnet Synchronous Machine Drives with Space Vector Modulation
Jun Zhang, *Zhuang Xu, Linlin Tang, Muhammed Faz Rahman
The University of New South Wales, AUSTRALIA

3B.4 P0434 A Novel and Simple Initial Rotor Position Detecting Method for PMSMs
Jun'ichi Sugawara, Tomoki Kamotani, Shoji Nishikata
Tokyo Denki University, JAPAN

3B.5 P0074 Hybrid Model Reference Adaptive Speed Control for Vector Controlled Permanent Magnet Synchronous Motor Drive
Muatasir Nour, Ishak Ams, *Norman Marliun, S. Mahmoud
Universiti Putra Malaysia, MALAYSIA
Session 3C  Inverters 2  Wednesday, Nov 30 (2.00pm - 3.40pm)

3C.1 P0506  200kW/400kHz High Frequency Inverter for Induction Heating Application  Xiaoruong Zhu, Yonglong Peng, Xinchun Shi, Heming Li  North China Electric Power University, CHINA

3C.2 P0421  Analysis and Research of a Multiple-loop Control Strategy for Single-Phase UPS Inverters  Wei Yao, Chongfeng Zheng, Min Chen, Zhaoming Qian  Zhejiang University, CHINA

3C.3 P0156  Modeling and Simulation of Three-Phase OHSSW Multilevel Voltage-Source Inverter by Means of Switching Functions  Mir Ghasem Hosseini Aghdam, Seyed Hamid Fathi, *Azadeh Ghasemi  Amirkabir University of Technology, IRAN

3C.4 P0122  High-Frequency Transformer-Link Inverter with Regenerative Snubber  Leong Soon Toh, Zainal Salam, Zukifli Ramli  Universiti Teknologi Malaysia, MALAYSIA

3C.5 P0178  Proposed Nine Switches Five Level Inverter With Low Switching Frequencies for Linear Generator Applications  Mahrous Ahmed, Nasrudin Abd Rahim, Hew Ping, Khalid Mohamed Nor  University of Malaya, MALAYSIA

Session 3D  Lighting and display  Wednesday, Nov 30 (2.00pm - 3.40pm)

3D.1 P0578  Igniter for HID Lamp Based on Discontinuous Working Mode of Piezoelectric Transformers  Marli Cuong Do, *Thomas Hansch, *Henry Gaulthier  Dresden University of Technology, GERMANY

3D.2 P0263  Study on Improvement of Buck-boost Inverter Suitable for Compact Self-ballast Fluorescent Lamp  Nobuo Takahashi, *Yoshito Kato, **Mitsuho Nakaoa  Mutsue National College of Technology, JAPAN

3D.3 P0670  A High-Voltage Input Backlight Module Driver for Multi-Lamp LCD Panels  Yu-Kang Lo, Kai-Jun Pai, Shang-Chin Yen  National Taiwan University of Science and Technology, TAIWAN

3D.4 P0291  High-Frequency Operating Characteristics of Metal Halide Lamps  Sheng-Yi Tang, Chin-Sien Moo, *Ching-Ran Lee  National Sun Yat-Sen University, TAIWAN

Session 3E  Power Electronics Components  Wednesday, Nov 30 (2.00pm - 3.40pm)

3E.1 P0328  Design of Superjunction Power MOSFET Devices using the Gradient Oxide-Bypassed Structure  Yu Chen, Yong C Liang, Ganesh Samudra  National University of Singapore, SINGAPORE

3E.2 P0367  Static Model Verification of IRF Power MOSFETs using Fluke Temperature Probe (80T-150U) and Performance Comparison of TEPWM Methods  S Jeewanantham, P Dananjayan  Pondicherry Engineering College, INDIA

3E.3 P0498  The Gate Drive Requirements for New Generation of High Current Low Voltage IGBTs Employed in Motor Converters  Peter Gerbovic  Schneider Toshiba Inverter Europe, FRANCE


3E.5 P0303  Device Temperature and Stress Distributions in Power Diode ‘C A Finite Element Method  Guangyu Huang, Cher Ming Tan  Nanyang Technological University, SINGAPORE

Session 4A  Control of Motor Drives 2  Thursday, Dec 1 (8.40am - 12.40pm)

4A.1 P0286  Recent Hot Strip Mill in China  Horomi Hosoda, Satoshi Wada, Sumiyasu Kodama, *Junfeng Li  Toshiba Mitsubishi-Electric Industrial Systems Corporation, JAPAN

4A.2 P0250  A New Sensorless Control Scheme for Brushless DC Motors without Phase Shift Circuit  Cheng-Hu Chen, Ming-Yang Cheng  National Cheng-Kung University, TAIWAN

4A.3 P0284  Generalized Predictive Controller For A Boost AC To DC Converter Fed DC Motor  Eley El-Kholy  Menoufia University, EGYPT

4A.4 P0233  Modeling of a Converter-Connected Six-Phase Permanent Magnet Synchronous Generator  Kai Zhang, *Hossein M Kojabadi, **Peter Z Wang, **Luchen Chang  Huazhong University of Science and Technology, CHINA

4A.5 P0184  Chattering Free Neuro-Sliding Mode Control of DC Drives  Mohammed Gomaa Sarwar, Md Abdul Raffiq, Manoj Datta, Bashu Dev Chandha Ghosh, *Satoshi Komada  Khulna University of Engineering and Technology, BANGLADESH


4A.7 P0457  Development of Closed Loop Control Schemes for Constant Speed operation of a Thyristorized Comvertorless Series Motor Drive  Kaushik Mukherjee, *Sabyasachi Sengupta, *Tapas Kumar Bhattacharya, **Ajit Kumar Chattopadhyay  Jadavpur University, INDIA

4A.8 P0452  RTLinux Based Online Real Time Simulator of SPMSM using the Block Pulse Approximation  Tsuyoshi Hanamoto, Ahmad Ghaderi, Teru Suzui  Kyushu Institute of Technology, JAPAN
### Session 4B  Analysis and Design of Motor Systems  Thursday, Dec 1 (8.40am - 12.40pm)

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<td>A Torque Estimation Method for a Switched Reluctance Machine</td>
<td>Sittichai Kaewthai, Supat Kittiratsatcha</td>
<td>King Mongkut's Institute of Technology Ladkrabang, THAILAND</td>
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<td>4B.3</td>
<td>P0229</td>
<td>Practical Implementation of the Bridge Configured Winding for Self-Bearing Machines</td>
<td>W K S Khoo, S D Ganve</td>
<td>The University of Nottingham, UNITED KINGDOM</td>
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<td>Sei Char, Mohamed Nazim Hamid</td>
<td>University Technology Mara, MALAYSIA</td>
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<td>4B.6</td>
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<td>Armando Morales-Castorena, Wen L Soong, Nesrim Eratgul</td>
<td>The University of Adelaide, AUSTRALIA</td>
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<td>Jong-Han Lee, Eun-Woong Lee, Jun-Ho Kim</td>
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<td>Juraj Makarovic, Elena Lomonova, *Johan Compter</td>
<td>Technical University of Eindhoven, NETHERLANDS, THE \</td>
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<td>Murat Balci, Hakan Hacoaglu</td>
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### Session 4D  Converters Control 2  Thursday, Dec 1 (8.40am - 12.40pm)

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<td>Annamalai University, INDIA</td>
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<td>Mohammad Tavakoli Bina, Mahmood Samimi</td>
<td>University of K. N. Toosi, IRAN</td>
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4D.8 P0296 Improvement of the Transient Performance of a Voltage-Type PWM Rectifier with Active Filtering Function Tatsuya Kitamura, Teruo Kataoka Tokyo Denki University, JAPAN

4D.9 P0172 Secondary Side Post Regulation Application in Multiple Outputs Flyback Converter Huihui Chen, Wenhu diagram late on, Yingyan He, Zhaoqing Qian Zhejiang University, CHINA

Session 4E Power Quality 2 Thursday, Dec 1 (8.40am - 12.40pm)

4E.1 P0510 Intelligence-Driven Power Quality Monitoring Hazlinda Hakimie, Vigna Kumaran Ramachandaramurthy, Ravindra Nath Mukerjee Universiti Tenaga Nasional, MALAYSIA

4E.2 P0182 A Novel Control Strategy to Reduce Transformer Inrush Currents by Series Compensator Juei-Lung Shyu Kao Yuan Institute of Technology, TAIWAN

4E.3 P0427 Dynamic Voltage Restorer for Voltage Sag Compensation Agleswar K Ramasamy, Rengan Krishnan Iyer, Vigna Kumaran Ramachandaramurthy, Ravindra Nath Mukerjee Universiti Tenaga Nasional, MALAYSIA

4E.4 P0619 Performance Comparison of Various Passive Harmonic Filters for Adjustable Speed Drives Ahmet Hava, Hazem Zubli Middle East Technical University, TURKEY

4E.5 P0659 A 3-Phase 4-Wire Voltage Sag Compensator Based on Three Dimensions Space Vector Kosol Oranpich, **Sutthisri Premudsopphotech, Yutana Kumsaw, **T. Boonsai, ***Chem Nayar Rajamangala University of Technology Lanna, THAILAND

4E.6 P0175 Passive Hybrid Filter for Varying Rectifier Loads Bhim Singh, *Vishal Verma, **Vipin Garg Indian Institute of Technology, Delhi, INDIA

4E.7 P0469 Modular Structured Multilevel Inverter with Unified Constant-Frequency Integration Control for Active Power Filters Nazha Aziz, *Pei Yi Lim Universiti Teknologi Malaysia, MALAYSIA

4E.8 P0472 Voltage Sag Mitigation using NAS Battery-based Standby Power Supply Zahrol Fazli Hussain, Amir Basha Ismail, Lee Wei Chung, *A.M. Busrah, **Mohd Fadil Mohd Siam Universiti Tenaga Nasional, MALAYSIA

4E.9 P0561 Design and Implementation of a Hybrid Series Active Power Filter Chih-Chiang Hua, Chih-Wei Chuang National Yunlin University of Science and Technology, TAIWAN

Session 4F Applications in Power Systems Thursday, Dec 1 (8.40am - 12.40pm)

4F.1 P0496 Determination of Total Transfer Capability Incorporating FACTS Devices in Power Markets Gengyin Li, Ming Zhou, Yaping Gao North China Electric Power University, CHINA

4F.2 P0445 Inductively Loaded Current Controlled Solid-State Lead-Lag Var Compensator: Special Feature and Performance Portosh Shadhu Khan, *Jayanta Chatterjee, Gobbi Ramasamy Multimedia University, MALAYSIA

4F.3 P0546 Switching DC Excitation System on Harmonic-Current Amplification of Self-Excited Wind Induction Generators (WIG) Wang Li, Shiang-Shong Chen National Cheng-Kung University, TAIWAN


4F.5 P0236 Thyristor based Sequential Switching of Transmission line Improves Power System Stability Basu K.P, Naeem M H Multimedia University, MALAYSIA

4F.6 P0369 Assessment Study of Shunt FACTS Devices for Improving Dynamic Behavior of Induction Motors Mahdi Hedayati, *Hashem Oraee Islamic Azad University, IRAN

4F.7 P0509 Design and Operation of SVC for Voltage Support at Mussafah Substation in Abu Dhabi Junichi Arai, Takeru Murao, Takafumi Kanbe, Kikuo Takagi, **Mohammad Ibrahim, *Abed Alah, **Yasutomo Morura Toshiba Corporation, JAPAN

4F.8 P0116 Two Control Schemes to Control Flow of Current Using Series Connected PWM-Voltage-Sourced Converter Fawzi Al Jouder University of Bahrain, BAHRAIN

4F.9 P0416 Research on Super Capacitor Energy Storage System for Power network Jiancheng Zhang North China Electric Power University, CHINA

Session 5A Motor Design 2 Thursday, Dec 1 (2.00pm - 5.40pm)

5A.1 P0339 Double Side Interior Permanent Magnet of Linear Synchronous Motor Northas Matt, Kim Chai Wong, *Wakawaka Hirotsuki, Norman Manun Universiti Putra Malaysia, MALAYSIA

5A.2 P0444 Design and Experiments of Two Glued Axially-Laminated Synchronous Reluctance Permanent Magnetic Motors Wei Guo, Zhengming Zhao Tsinghua University, CHINA

5A.3 P0227 180,000-r/min, 2.7-kW Electric Drive of Supercharger for Automobiles Toshifumi Neguchi, Yoosuke Takata, *Yuuki Yamashita, *Seiichi Ibaraki Nagasaki University of Technology, JAPAN

5A.4 P0640 Design of a Linear Permanent Magnet Synchronous Motor with Extra Low Force Pulsations Arash Hassaneen, Isfahani, Sadegh Vaez-Zadieh University of Tehran, IRAN
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### Session 5D Converters Control 3 Thursday, Dec 1 (2.00pm - 5.40pm)

| 5D.1 | P0396 Development of Neuro Controller for Negative Output Re-lift Luo Converter | Ramanujam Kayalvizhi, Srinivasan Panduranga Natarajan, Palanisamy Padmanabhan, R Vijayaragavan | Annamalai University, INDIA |
| 5D.2 | P0206 Energy Based Switching Control Scheme for DC-DC Buck-Boost Converter Circuits | Pawan Gupta, Amit Patra | Indian Institute of Technology Kanpur, INDIA |
| 5D.3 | P0207 Modeling, Analysis, Simulation and Design Optimization (Genetic Algorithm) of DC-DC Converter for Uninterruptible Power Supply Applications | Choon Keat Chew, Siva Rama Rao Kondapalli | Universiti Sains Malaysia, MALAYSIA |
| 5D.4 | P0142 Implementation of Single-Phase Matrix Converter as a Direct AC-AC Converter Synthesized using Sinusoidal Pulse Width Modulation with Passive Loaded Condition | Zahiruddin Idris, Mustafar Kamal Hamzah, Ahmad Maliki Omar | Universiti Teknologi Mara, MALAYSIA |
| 5D.5 | P0253 Variable On-time Control of the Critical Conduction Mode Boost Power Factor Correction Converter to Improve Zero-crossing Distortion | Jung Won Kim, Soek Mun Choi, Xi Tao Kim | Fairchild Semiconductor, KOREA |
| 5D.6 | P0433 Deadbeat Current Controller of Front-end Converter with State-Observer based Predictor | Hong Viet Lui, Peter Bjorjner, Volkmar Miiller, Phung Ngoc Lan | Dresden University of Technology, GERMANY |
| 5D.7 | P0598 Design of Double Closed Loop in Boost Aerospace DC-DC Power Supply | Xiang Liu, Xijun Yang, Janguo Jiang, Xu Cai | Shanghai Jiaotong University, CHINA |
| 5D.8 | P0139 Modeling & Simulation of a new Single-phase to Single-phase Cycloconverter based on Single-phase Controlled Rectifier | Zahiruddin Idris, Mustafar Kamal Hamzah, Ngah Ramzi Hamzah | Universiti Teknologi Mara, MALAYSIA |
| 5D.9 | P0583 Voltage Regulator Modules with Double-Loop Relay Feedback Control | Shiang-Huea Yu, Chia-Len Huang | National Sun Yat-Sen University, TAIWAN |

### Session 5E Distributed Generation 3 Thursday, Dec 1 (2.00pm - 5.40pm)

| 5E.2 | P0482 Wind Farm Stabilization by Doubly-Fed Synchronous Wind Generator | Rion Takahashi, Junji Tamura, Moto-o Futami, Mamoru Kimura, Ide Kazumasa | Kitami Institute of Technology, JAPAN |
| 5E.3 | P0225 A Bi-directional Charge Equalization Circuit for Series-connected Batteries | Yao-Ching Hsieh, Chien-San Mao, Wen-Yi Ou-Yang | Kao Yuan University, TAIWAN |
| 5E.5 | P0525 Control of Induction Generator in a Wells Turbine Based Wave Energy System | Sandeepa Srinivasa Rao, Bhagwan K Murthy | National Institute of Technology, Warangal, INDIA |
| 5E.6 | P0475 A Calculation Method of the Total Efficiency of Wind Generator | Akira Inoue, Mohd. Hasan Ali, Rion Takahashi, Toshikazu Murata, Junji Tamura, Moto-o Futami | Kitami Institute of Technology, JAPAN |
| 5E.7 | P0440 Implementation of a Stand-Alone Photovoltaic Lighting System with MPPT, Battery Charger and High Brightness LEDs | Chih-Chang Hsu, Pi-Kuang Ku | National Yunlin University of Science and Technology, TAIWAN |
| 5E.8 | P0109 An Embedded Microchip System Design for Programmable Solar Panel Simulator | Yew Thean Chan, Junbo Ja, Eric Wing Kong Au | Temasek Polytechnic, SINGAPORE |
| 5E.10 | P0373 Power Optimization in a Grid-Connected Wind Energy Conversion System | Anandavel Palanisamy, Rajambal Kalyana Sundaram, Chelaimuthu Chinna Gounder | Pondicherry Engineering College, INDIA |

### Session 5F Test and Measurement Thursday, Dec 1 (2.00pm - 5.40pm)

| 5F.1 | P0197 Measurement and Mitigation of Conducted Emission for Voltage Phase Controlled Capacitor-Run Single Phase Induction Motor | Yuan-Shung Lee, Te-Tsung Yang, Ming-Wang Cheng | Fu-Jen Catholic University, TAIWAN |
| 5F.2 | P0534 An ESR Meter for High Frequencies | Acacio Amaral, Antonio Cardoso | Polytechnic of Coimbra, PORTUGAL |
| 5F.3 | P0257 Trouble Call Based Outage Determination In Power Distribution Networks Using ANFIS | Babak Amir, Seyyed Hosein Khatounabadi, Azadeh Zamanifar | Niro Research Institute, IRAN |
| 5F.4 | P0191 Time Domain Measurement System for Conducted EMI and CM/DM Noise Signal Separation | Yuan-Shung Lee, Yu-Ling Liang, Ming-Wang Cheng | Fu-Jen Catholic University, TAIWAN |
| 5F.5 | P0280 Hardware-in-the-Loop Simulation of Power Drives with RT-LAB | Christian Dufour, Simon Abourida, Jean Belanger | Opal-RT Technologies, CANADA |
| 5F.6 | P0239 Very Fast Measurement of Speed by Rotating Magnetic Field | M Syed Jami Asghar, Abu Tarig, Syed Javed Anil | Aligarh Muslim University, INDIA |
SF.7  P0219  Analysis of the Thermal Expansion Effect on Measurement Precision of Rogowski Coils  
Haiming Wang, Feng Lu, Hongling Zhang, Shengxuan Zheng  
Yanshan University, CHINA

SF.8  P0240  BMF Fuzzy Neural Network with Genetic Algorithm for Forecasting Electric Load  
Yuang-Shung Lee, Chia-Hui Kao, Wei-Yen Wang  
Fu-Jen Catholic University, TAIWAN

SF.9  P0375  Real-Time Power Quality Monitoring System Based on TMS320C5410 DSP Processor  
Abdul Rahim Abdullah, *Ahmad Zuri Shalamer  
KUTKM, MALAYSIA

POSTERS  Wednesday, Nov 30 (4.00pm - 6.00pm)

P.1  P0603  A New Scheme for Field-Orientation Control of Induction Motor Drive with Adaptive Neural Flux Estimator  
Md Abdur Rafiq, Maroq Datta, Mohammed Golam Sarwar, Bashu Dev Chandra Ghosh  
Khulna University of Engineering and Technology, BANGLADESH

P.2  P0352  Variable Structure Speed Regulation of Induction Motor in Steel Manufacture  
Rui Lin Pei, Ying Fang  
Baoshan Iron & Steel Co Ltd, CHINA

P.3  P0442  A Simplified Analytical Averaged Model of a Thyristorized Commutatorless Series Motor  
Kausik Mukherjee, *Sabyasachi Sengupta, *Tapas Kumar Bhattacharya, **Ajit Kumar Chattopadhyay, ***Sailendra Nath Bhadra  
Jadavpur University, INDIA

P.4  P0575  Evaluation of Sparse PWM Converter for Switched Reluctance Generator  
Nand Kishor Singh, *John Edward Fletcher, **Steve J. Finney, ***Douglas M. Grant, **Barry Williams  
University of Strathclyde, UNITED KINGDOM

P.5  P0165  Frequency Spectrum of the Generated Voltage of Claw Pole Automotive Alternators on No Load  
K P P Pillai, Mini K Idiculla, *Achuthsankar S Nair  
College of Engineering Triandrum, INDIA

P.6  P0495  The Force Requisite for the Starting Device in the Single-Phase SRM  
Jun-Ho Kim, Eun-Woong Lee, Jong-Han Lee  
Chungnam National University, KOREA

P.7  P0486  A Sensorless Control based on MRAS Method in Interior Permanent-Magnet Machine Drive  
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