TECHNICAL PROGRAM

IEEE International Conference on Power and Energy (PECon)

The Zon Regency Hotel, Johor Bahru,
MALAYSIA

30 Nov - 3 Dec, 2008

Tutorials

Date : 30 November 2008, Sunday

Time : 1400-1700

Tutorial 1 **Modelling and Control of Three-Phase PWM Converter**

Prof. Dushan Boroyevich, American Electric Power Professor at Virginia Tech And The Co-Director of Center for Power Electronics System (CPES)

Venue : Hibiscus Seminar Room

Tutorial 2 **Power System Principle Applied in Protection Practice**

Prof. Akhtar Kalam, Electrical Engineering Professor at Victoria University, Australia

Venue: Auditorium

Tutorial 3 **Design of Practical Buck Regulator**

Assoc. Prof. Taufik

Venue: Acadia Seminar Room

Venue: Ballroom 1 & 2

0900-0920	Welcoming Speech
0920-1000	Keynote Address 1
	Future Electronics Power Distribution System Prof. Dushan Boroyevich, American Electric Power Professor at Virgina Tech And The Co-Director of Center for Power Electronics System (CPES)
1000-1040	Keynote Address 2 **Electricity Distribution in The De – Regulated Australian Power Industry** Prof. Akhtar Kalam, Electrical Engineering Professor at Victoria University, Australia
1040-1100	Coffee Break
1100-1140	Plenary Lecture 1
	The Role Power Electronics in Future Energy System and Green Industrialization M. Elbuluk: University of Akron, Akron, Ohio N.R.N. Idris: Universiti Teknologi Malaysia, Malaysia
1140-1220	Plenary Lecture 2
	Effectiveness of Zonal Congestion Management in the European Electricity Market J. W. Bialek, M. Imran: University of Edinburgh, UK

Session 1A
Session Title : High Voltage Apparatus and Testing
Session Chair : M.A. Salam
Co-Chair : Zulkurnain Abdul Malek
Date : 1 December 2008, Monday
Time : 1400-1705
Venue : Angsana Seminar Room

1400-1415 **1A.1**
Artificial Neural Network for Insulator Leakage Currents Prediction from Environmental Data
A. Kazemi, M.T.Hassanzadeh, A.Gholami
Iran University of Science and Technology, IRAN

1415-1430 **1A.2**
Performance Study of Line Post Insulator under Different Pollution Conditions
M. A. Salam, Hj Morsidi bin Hj Kassim
Institute of Technology Brunei, BRUNEI DARUSSALAM

1430-1445 **1A.3**
Application of Artificial Neural Network in Cable Life Time Estimation and its Failure rate per 100 km
**A. H. Ranjbar, **R. Adnani, H. Omranpour*
*Amirkabir University of Technology (AUT), IRAN
**Mazandaran University of Science and Technology (MUST), IRAN

1445-1500 **1A.4**
Evaluation and Assessment of Transformer Failure on 132kv Substation
**M. H. Mohammed Ariff, *M. Z. A. Abd Kadir, *J. Jasni, **R. Mesron, **M. T. Salahuddin, **J. Lamsi*
*Universiti Putra Malaysia, MALAYSIA
**Tenaga Nasional Berhad, MALAYSIA

1500-1515 **1A.5**
Ageing of Transmission Line Insulators: The Past, Present and Future
N. Bashir, H. Ahmad
Universiti Teknologi Malaysia, MALAYSIA

1515-1530 **1A.6**
Reduction of Magnetizing Inrush Current in a Delta Connected Transformer
K. P. Basu, Ali Asghar
Multimedia University, MALAYSIA

1530-1550 Coffee break

1550-1605 **1A.7**
Study on the Performance of Underground XLPE Cables in Service Based on Tan Delta and Capacitance Measurements
A. Ponnira, M. S. Kamarudin
Universiti Tun Hussein Onn Malaysia, MALAYSIA

1605-1620 **1A.8**
Effect of Antenna position on On-Line monitoring of transformer winding axial displacement using electromagnetic waves
M.A. Hejazi, M. Choopani, M. Dabir, G.B. Gharehpetian
Amirkabir University of Technology, IRAN

1620-1635 **1A.9**

Experience in HVDC Testing of Vulcanized Rubber in UTeM's High Voltage Laboratory
Alias K., Che Ab A. M. F., Mat L. J., Zainuddin H., Hairi M. H.
Univesiti Teknikal Malaysia Melaka, MALAYSIA

1635-1650 **1A.10**

Application of Frequency Domain Spectroscopy (FDS) in Assessing Dryness and Ageing State of Transformer Insulation Systems
**Gobi K. Supramaniam, *Zahrul Faizi Hussien, **Mohd. Aizam T*
*Universiti Tenaga Nasional (UNITEN), MALAYSIA
**Tenaga Nasional Berhad Research Center, MALAYSIA

1650-1705 **1A.11**

Microcontroller Modulation for VLF High Voltage Generator rate 3 kV peak Using DSPIC-30F2010
S.Seesanga, W.Kongnun, S. Chotigo
King Mongkut's University of Technology Thonburi, THAILAND

Session 1B
Session Title : Power System Dynamics 1
Session Chair : Janusz Bialek
Co-Chair : Mohd Wazir Mustafa
Date : 1 December 2008, Monday
Time : 1400-1705
Venue : Hibiscus Seminar Room

1400-1415 **1B.1**
Damping of Inter Area Oscillations Using Interline Power Flow Controller Based Damping Controllers
Alivelu M. Parimi, Irraivan Elamvazuthi, Nordin Saad
Universiti Teknologi PETRONAS, MALAYSIA

1415-1430 **1B.2**
Multi-Agent-Based Particle Swarm Optimization Approach for PSS Designing In Multi-Machine Power Systems
**H. Kazemi Kargar, **R. Aghmasheh, **A. Safari, **G. R. Zareie Govar*
*Shahid Beheshti University, IRAN
**Zanjan University, IRAN

1430-1445 **1B.3**
A Frequency Control Approach by Decentralized Generators and Loads in Power Systems
**Tomonobu Senjyu, *Motoki Tokudome, *Atsushi Yona, *Hideomi Sekine, **Toshihisa Funabashi, ***Chul-Hwan Kim*
*University of the Ryukyus, JAPAN
**Meidensha Corporation, JAPAN
***Sungkyunkwan University, KOREA

1445-1500 **1B.4**
Fuzzy Logic Based UPFC Controller for Damping Low Frequency Oscillations of Power Systems
A. Majid Dejamkhooy, M. Banejad, Nasser Talebi
Shahrood University of Technology, IRAN

1500-1515 **1B.5**
Fast Estimation of Transient Stability Constrained ATC by Relevance Vector Machine
Akihiro Wada, Teruhisa Kumano
Meiji University, JAPAN

1515-1530 **1B.6**
Power System Stability Assessment Based on Synchronized Phasor Measurements
B. B. Monchusi, Y. Mitani, L. Changsong, S. Dechanupaprittha
Kyushu Institute of Technology, JAPAN

1530-1550 Coffee break

1550-1605 **1B.7**
Optimal Tuning Of Temporary Droop Structure Governor in the Hydro Power Plant
**M.Abdolmaleki, *A.M.Ranjbar, *Ansarimehr, **S. Borjian Boroujeni*
Sharif University of Technology, IRAN
Azad University of Qazvin, IRAN

1605-1620 **1B.8**
Analysis of the Small Signal Stability for the International Space Station/JEM Electric Power Systems

**Masaaki Komatsu, **Satoru Yanabu*
*Japan Aerospace Exploration Agency (JAXA), JAPAN
**Tokyo Denki University, JAPAN

1620-1635 **1B.9**
A Strategy for Frequency Stability of Islanded Power Systems
S. Najafi, M.Abedi, S. H. Hosseinian
Amirkabir University of Technology (AUT), IRAN

1635-1650 **1B.10**
An Effective Controller to Damp the Deviations in a Two-Area HVAC/HVDC Power System
M. Kheirmand, M. R. Yousef, M. Bayati Poudeh, S. Eshtehardiha
Islamic Azad University, IRAN

1650-1705 **1B.11**
Enhancement of Power System Stability Using Fuzzy Logic Based Supervisory Power System Stabilizer
Hussain M. Behbehani, Janusz Bialek, Zbigniew Lubosny
University of Edinburgh, SCOTLAND

Session 1C
Session Title : Power System Planning 1
Session Chair : Michael Joseph
Co-Chair : Mohammad Yusri Hassan
Date : 1 December 2008, Monday
Time : 1400-1705
Venue : Acadia Seminar Room

1400-1415 **1C.1**
Analysis of bipolar-6-phase-transmission system with option of 4-phase-operation for large scale wind farms
R. van de Sandt, H. Brakelmann, I. Erlich
Universität Duisburg-Essen, GERMANY

1415-1430 **1C.2**
Analysis and Design of Power System Restoration in the Context of Generating Plant Islanding
**Jayesh J. Joglekar, **Yogesh P. Nerkar, ***Mohan T. Bapat*
*Maharashtra Institute of Technology, INDIA
**PVG's College of Engineering and Technology, INDIA
***Maharashtra Electricity Transmission Company, INDIA

1430-1445 **1C.3**
Short Term Load Forecasting Using Data Mining Technique
**Intan Azmira binti Wan Abdul Razak, **Md. Shah bin Majid, **Hasimah Abd. Rahman, **Mohammad Yusri Hassan*
*Universiti Teknikal Malaysia Melaka, MALAYSIA
**Universiti Teknologi Malaysia, MALAYSIA

1445-1500 **1C.4**
Optimal Generation Expansion Planning in IPP Presence with HCGA
**Arash Shabani, *Hadi Hosseini, **Hossein Kazemi Karegar, *Saeed Jalilzadeh*
*Zanjan university, IRAN
**Shahid Beheshti university, IRAN

1500-1515 **1C.5**
Reliability and Availability Study on Substation Automation System based on IEC 61850
**B. Yunus, **A. Musa, *H.S. Ong, *A.R. Khalid, *H. Hashim*
*Universiti Tenaga Nasional (UNITEN), MALAYSIA
**Tenaga Nasional Berhad (TNB), MALAYSIA

1515-1530 **1C.6**
An Approach for Improving Spinning Reserve Capacity by Means of Optimal Utilization of DR Program
*E. Shayesteh, *A. Yousefi, **F. Daneshvar, *M. Parsa Moghaddam
*Tarbiat Modares University, IRAN
**Hormozgan Electrical Distribution Company (HEDC), IRAN

1530-1550 Coffee break

1550-1605 **1C.7**
A Novel Approach for Modeling Wind Turbine Generators for Reliability Analysis
**Eman Beshr, *Yasser Galal, **Yasser Hegazy, **Mohmaed.Abdelatif Badr*
*Arab Academy for Science & Technology, EGYPT

**Ain shams University, EGYPT

1605-1620 **1C.8**
Economic Analysis of Iran-Turkey Power Network Interconnection: HVDC vs. HVAC
**Mehrdad Eghlimi, **Hamed Shakouri G.*
*Islamic Azad University, IRAN
**University of Tehran, IRAN

1620-1635 **1C.9**
Multi-objective Power System Planning by Artificial Life Simulation
Hiroaki Yamashita, Teruhisa Kumano
Meiji University, JAPAN

1635-1650 **1C.10**
Improved Regional Coordination of Generation Voltage Control
Mohamed Shaaban
Suez Canal University, EGYPT

1650-1705 **1C.11**
Newton-Raphson Power Flow Solution Employing Systematically Constructed Jacobian Matrix
Ramiah Jegatheesan, Nursyarizal Mohd Nor, Mohd Fakhizan Romlie
University Technology PETRONAS, MALAYSIA

Session 1D
Session Title : DC-DC converters
Session Chair : Dushan Boroyevich
Co-Chair : Gobbi Ramasamy
Date : 1 December 2008, Monday
Time : 1400-1650
Venue : Daffodil Seminar Room

1400-1415 **1D.1**
Voltage Injection Switching Inductor (VISI) Method for Fast Transient Response in Switch Mode Power Supplies
Jegandren.J, Gobbi.R, Hussain S. Athab
Multimedia University, MALAYSIA

1415-1430 **1D.2**
Natural Commutation Method for a Low Voltage High-Current Input DC-DC Converter
**Nobuhiro Kurio, *Kiyoshi Ogata, **Tokuo Ohnishi*
*Nissin Electric Co. Ltd., JAPAN
**The University of Tokushima, JAPAN

1430-1445 **1D.3**
Dynamic Analysis of Three phase Z-source Boost-Buck Rectifier
**Kancheti Karunakar, **D.M.Vilathgamuwa*
*Ecospec Global Technology, SINGAPORE
**Nanyang Technological University, SINGAPORE

1445-1500 **1D.4**
A Soft Switching Flyback Current-fed Push Pull Dc-Dc Converter with Active Clamp Circuit
M. Delshad, H. Farzanehfard
Isfahan University of Technology, IRAN

1500-1515 **1D.5**
State Feedback Control of Boost Converter Using S1-$\Sigma\Delta$ PWM Method
**M. Davari, **B. Abdi, **H. Nafisi, **G. B. Gharehpetian, *H.R. Karshenas*
*Isfahan University of Technology, IRAN
**Amirkabir University of Technology, IRAN

1515-1530 **1D.6**
Implementation of New Control Method based on Dynamic Evolution Control with Linear Evolution Path for Boost DC-DC Converter
A. S. Samosir, A. H. M. Yatim
Universiti Teknologi Malaysia, MALAYSIA

1530-1550 Coffee break

1550-1605 **1D.7**
Study and Control of Sheppard-Taylor DC-DC Converter
**M.Rezanejad, *M.Dargahi, *S.Lesan, *A.Ranjbar Noee, *M.Karami, **M.Joshani*
*Noshirvani Technical University of Babol, IRAN
**Universiti Teknologi Malaysia, MALAYSIA

1605-1620 **1D.8**
Design of a MIMO Controller for a Multimodul Dc-Dc Converter Based on Particle Swarm Optimized Neural Network

Ashkan M.Z.Jasour, Mostafa Khazraei, Abdolreza Rahmati
Iran University of Science and Technology, IRAN

1620-1635 **1D.9**
Simulation of Power Electronic Converters with Sliding Mode Control Using PSpice
Nik Din Muhamad, Junaidi Abdul Aziz
Universiti Teknologi Malaysia, MALAYSIA

1635-1650 **1D.10**
Analysis of Perturb and Observe Maximum Power Point Tracking Algorithm for Photovoltaic Applications
**Chee Wei Tan, **Tim C. Green. **Carlos A. Hernandez-Aramburo*
*Universiti Teknologi Malaysia, MALAYSIA
**Imperial College London, UNITED KINGDOM

Session 1E
Session Title : Permanent Magnet Motor Drives
Session Chair : Malik Elbuluk
Co-Chair : Mutasim Nour
Date : 1 December 2008, Monday
Time : 1400-1650
Venue : Jasmine Seminar Room

1400-1415 **1E.1**
Sensorless Control of a BLDC Motor with Back EMF Detection Method using DSPIC
**K. S. Rama Rao, **Nagadeven, ***Soib Taib*
*Universiti Teknologi PETRONAS, MALAYSIA
**Flextronics International, MALAYSIA
***Universiti Sains Malaysia, MALAYSIA

1415-1430 **1E.2**
Optimal Vector Control of Permanent Magnet Synchronous Motor
Roozbeh Molavi, Khoshnam Shojaee, Davood A. Khaburi
Iran University of Science and Technology (IUST), IRAN

1430-1445 **1E.3**
A High-Performance Vector-Controlled PMSM Drive with Maximum Torque per Ampere Operation
F. Tahami, H. Nademi, M. Rezaei
Sharif University of Technology, IRAN

1445-1500 **1E.4**
Performance Improvements of IPMSM Position Sensorless Control for Low-speed Operation Using ε_1-Modification Approach
Hiroki Yamauchi, Masaru Hasegawa, Keiju Matsui
Chubu University, JAPAN

1500-1515 **1E.5**
Synchronous Machine Drive Observability Analysis and Sensorless Control Design
Pavel Vaclavek, Petr Blaha
Brno University of Technology, CZECH REPUBLIC

1515-1530 **1E.6**
An Extended Kalman Filter for Sensorless Direct Torque Controlled IPM Synchronous Motor Drive
Gilbert Foo, Saad Sayeef, M. F. Rahman
The University of New South Wales, AUSTRALIA

1530-1550 Coffee break

1550-1605 **1E.7**
Sensorless Direct Torque and Flux Control of an IPM Synchronous Motor at Low Speed and Standstill
Gilbert Foo, Saad Sayeef, M. F. Rahman
The University of New South Wales, AUSTRALIA

1605-1620 **1E.8**
A Sensor Fault Tolerant Drive for Interior Permanent-Magnet Synchronous Motors
F. Tahami, H. Nademi, M. Rezaei
Sharif University of Technology, IRAN

1620-1635 **1E.9**

Reduction of Commutation Torque Ripple in a Brushless DC Motor Drive

S. S. Bharatkar, Raju Yanamshetti, D. Chatterjee, A. K. Ganguli
Jadavpur University, INDIA

1635-1650 **1E.10**

Improvements on the High Frequency Signal Injection Method for Permanent Magnet Synchronous Motors and its Application in the Hybrid Drive Position Control

**Mutasim Nour, *New Yen Ee, **Eyad Radwan*
*University of Nottingham Malaysia Campus, MALAYSIA
**University College Sedaya International, MALAYSIA

Session 1F
Session Title : Power Quality 1
Session Chair : Bhim Singh
Co-Chair : Ahmad Safawi Mokhtar
Date : 1 December 2008, Monday
Time : 1400-1650
Venue : Orchid Seminar Room

1400-1415 **1F.1**
Current Mode Control of Dynamic Voltage Restorer for Power Quality Improvement in Distribution System
**P. Jayaprakash, *Bhim Singh, **D. P. Kothari*
*Indian Institute of Technology, INDIA
**Vellore Institute of Technology, INDIA

1415-1430 **1F.2**
Minimization of Monitoring Locations for Detection of Flicker sources by the Direction of Propagation Method
N. Moaddabi, S. H. H. Sadeghi, H. Askarian Abyaneh
Amirkabir University of Technology, IRAN

1430-1445 **1F.3**
Power Quality Analysis Using Linear Time-Frequency Distribution
**Abdul Rahim Abdullah, **Ahmad Zuri Sha'ameri*
*Universiti Teknikal Malaysia Melaka, MALAYSIA
**Universiti Teknologi Malaysia, MALAYSIA

1445-1500 **1F.4**
Development of New Control Strategy for Voltage sag Mitigation
Ali O Al-Mathnani , M A Hannan, Majid Al-Dabbagh , Mohd Alauddin Mohd Ali, Azah Mohamed
Universiti Kebangsaan Malaysia, MALAYSIA

1500-1515 **1F.5**
Impact of Multiple Adjustable Speed Drive System to Power System Harmonics
**Taufik, **Erin Matsumoto, **Makbul Anwari*
* California Polytechnic State University, USA
**Chevron Energy Solutions, SAN FRANCISCO
***Universiti Teknologi Malaysia, MALAYSIA

1515-1530 **1F.6**
Comparison of Active Power Filters with Series-Connected Capacitor
Perttu Parkatti, Heikki Tuusa
Tampere University of Technology, FINLAND

1530-1550 Coffee break

1550-1605 **1F.7**
Simulation of the Impact of Harmonic on Distribution Transformer
D.M. Said, K.M. Nor
Universiti Teknologi Malaysia, MALAYSIA

1605-1620 **1F.8**
Brief study on the efficiency of several single-phase PFC topologies
Mohd Rodhi Sahid, Abdul Halim Mohd Yatim
Universiti Teknologi Malaysia, MALAYSIA

1620-1635 **1F.9**

An Improvement of Active Power Filter Control Methods in Non-Sinusoidal Condition

Norani Atan, Zahrul Faizi Hussien
University of Tenaga Nasional, MALAYSIA

1635-1650 **1F.10**

Development of Artificial-Intelligent Power Quality Diagnosis Equipment for Single-Phase Power System

**Sun-Geun Kwack, *Gyo-Bum Chung, **Jaeho Choi, *Ginkyu Choi*
*Hongik University, KOREA
**Chungbuk National University, KOREA

Session 2A
Session Title : Overvoltages and Transients
Session Chair : Zahrul Faizi Hussein
Co-Chair : Yanuar Z. Arief
Date : 2 December 2008, Tuesday
Time : 09:00 - 12:05
Venue : Angsana Seminar Room

0900-0915 **2A.1**
Modeling and Simulation of Overvoltage Surges in Low Voltage Systems
**H. Shareef , **S.N. Khalid , **M. W. Mustafa, *A. Mohamed*
*Universiti Kebangsaan Malaysia, MALAYSIA
**Universiti Teknologi Malaysia, MALAYSIA

0915-0930 **2A.2**
Study on Various Excitation Voltage Effects to the Transient Responses of a Single Long Horizontal Ground Conductor
**W. F. Wan Ahmad, **D. W. P. Thomas, **C. Christopoulos, *M. A., Drahman, *J., Jasni, *M. Z. A. Ab Kadir, *H. Hizam*
*Universiti Putra Malaysia, MALAYSIA
**The University of Nottingham, UNITED KINGDOM

0930-0945 **2A.3**
Effects of Homogenous Soil Characteristics to the Transient Responses of a Single Long Horizontal Ground Conductor Model
**W. F. Wan Ahmad, **D. W. P. Thomas, **C. Christopoulos, *M. S. Mohamad Hashim, *J., Jasni, *M. Z. A. Ab Kadir, *H. Hizam*
*Universiti Putra Malaysia, MALAYSIA
**The University of Nottingham, UNITED KINGDOM

0945-1000 **2A.4**
Transient Responses due to Various Burial Depths on a Single Long Horizontal Ground Conductor
**W. F. Wan Ahmad, **D. W. P. Thomas, **C. Christopoulos, *K. A. Mohd Sharim, *J., Jasni, *M. Z. A. Ab Kadir, *H., Hizam*
*Universiti Putra Malaysia, MALAYSIA
**The University of Nottingham, UNITED KINGDOM

1000-1015 **2A.5**
Electromagnetic Interference Analysis for GSM Tower under The Influence of Lightning Over voltage.
**Md. Osman Goni,* Mohammad Saiful Islam Hossaini, **Yasir Siraj, **Salman Khan, **Talha Faiz Ur Rahman*
*Khulna University of Engineering and Technology, BANGLADESH
**Islamic University of Technology (IUT), BANGLADESH

1015-1030 **2A.6**
Implementation and Use of Lightning Detection Network in Malaysia
**Noradlina Abdullah, *Mohd Pauzi Yahaya, **Dr. Nadiah Salwi Hudi*
*TNB Research Sdn Bhd, MALAYSIA
**TNB Transmission, MALAYSIA

1030-1050 Coffee break

1050-1105 **2A.7**
Impulse Voltage Distribution in Intershield Disk Winding VS Interleaved and Continuous Disk Winding in Power Transformer

**Mehdi Bagheri, **Arsalan Hekmati, *R.Heidarzadeh, ***M.Salay Naderi*
*Iran Transformer Research Institute, IRAN
**Sharif University of Technology, IRAN
***Imam Khomeini International University, IRAN

1105-1120 **2A.8**
Effect of Lightning Induced Voltages on Gas Pipelines using ATP-EMTP Program
D. Caulker, H. Ahmad, M. S Mohamed Ali
Universiti Teknologi Malaysia, MALAYSIA

1120-1135 **2A.9**
A New Method to Extract the Resistive Component of the Metal Oxide Surge Arrester Leakage Current
**Zulkurnain Abdul-Malek, *Novizon, **Aulia*
*Universiti Teknologi Malaysia, MALAYSIA
**University Andalas Padang, INDONESIA

1135-1150 **2A.10**
A New Localised Lightning Locating System Utilising Telecommunication Subscriber Lines
Aulia, Zulkurnain A. Malek, Zuraimy Adzis , Novizon
Universiti Teknologi Malaysia, MALAYSIA

1150-1205 **2A.11**
The Effect of Multiple Lightning Impulse on the Electrical Characteristics of Opto-Isolators
*M M Yaacob, **A Aman
*Universiti Teknologi Malaysia, MALAYSIA
**Universiti Teknikal Malaysia Melaka, MALAYSIA

Session 2B
Session Title : Renewable Energy System
Session Chair : Deniz Yildirim
Co-Chair : Abd Halim Mohd Yatim
Date : 2 December 2008, Tuesday
Time : 09:00 - 12:20
Venue : Hibiscus Seminar Room

0900-0915 **2B.1**
Functional Modeling for Intelligent Controller Design for MW-Class Variable Speed WECS with Independent Blade Pitch Regulation
**E. B. Muhando, *T. Senjyu, *E. Omine, **T. Funabashi, ***Chul-Hwan Kim*
*University of the Ryukyus, JAPAN
**Meidensha Corporation, JAPAN
***Sungkyunkwan University, S. KOREA

0915-0930 **2B.2**
A Minimal-order Observer based Coordinated Control Method for Isolated Power Utility Connected Multiple PV Systems to Reduce Frequency Deviations
**Manoj Datta, *Tomonobu Senjyu, *Atsushi Yona, **Toshihisa Funabashi, ***Chul-Hwan Kim*
*University of the Ryukyus, JAPAN
**Meidensha Corporation, JAPAN
***Sungkyunkwan University, KOREA

0930-0945 **2B.3**
A New Control Methodology of Wind Farm using Short-Term Ahead Wind Speed Prediction for Load Frequency Control of Power System
**Tomonobu Senjyu, *Motoki Tokudome, *Akie Uehara, *Toshiaki Kaneko, *Atsushi Yona, *Hideomi Sekine, **Chul-Hwan Kim*
*University of the Ryukyus, JAPAN
**Sungkyunkwan University, KOREA

0945-1000 **2B.4**
Zig-zag Transformer Based Electronic Load Controller for an Isolated Asynchronous Generator
Gaurav Kumar Kasal, Bhim Singh
Indian Institute of Technology, INDIA

1000-1015 **2B.5**
High Temperature Solid Oxide Fuel Cell Integrated with Autothermal Reformer
Anuchart Srisiriwat
Pathumwan Institute of Technology, THAILAND

1015-1030 **2B.6**
Economic and Environmental Analysis of Micro Hydropower System for Rural Power Supply
K. Kusakana, J.L. Munda, AA Jimoh
Tshwane University of Technology, SOUTH AFRICA

1030-1050 Coffee break

1050-1105 **2B.7**
An Algebraic Method for Maximum Power Point Tracking in Wind Turbines
Deniz Yildirim, Yusuf Gurkaynak
Istanbul Technical University, TURKEY

1105-1120 **2B.8**

Application of Genetic Algorithms in the Design of a Solar Array-exclusive Standalone Photovoltaic System

**Tan Zheng Hong, **Shen Weixiang*
*Monash University, MALAYSIA
**Nanyang Technological University, SINGAPORE

1120-1135 **2B.9**

MPPT Performance of a Grid-connected PV Inverter under Malaysian Conditions

N. A. Azli, Z. Salam, A. Jusoh, M. Facta, B. C. Lim, S. Hossain
Universiti Teknologi Malaysia, MALAYSIA

1135-1150 **2B.10**

Effect of Fill Factor on the MPPT Performance of a Grid-connected Inverter under Malaysian Conditions

N. A. Azli, Z. Salam, A. Jusoh, M. Facta, B. C. Lim, S. Hossain
Universiti Teknologi Malaysia, MALAYSIA

1150-1205 **2B.11**

Control of Hybrid Fuel Cell/Battery Distributed Power Generation System with Voltage Sag Ride-Through Capability

Amin Hajizadeh, Masoud Aliakbar Golkar
K.N.Toosi University of Technology, IRAN

1205-1220 **2B.12**

Cost comparison between Amorphous Silicon and Cadmium Telluride for Stand-Alone Photovoltaic System in Malaysia

**A. Vigneswaran, *Md Shah Majid, *Hasimah Abdul Rahman, *Mohammad Yusri Hassan, **M. K. Hamzah*
Universiti Teknologi Malaysia, MALAYSIA
Universiti Teknologi Mara, MALAYSIA

Session 2C
Session Title : Power System Dynamics 2
Session Chair : Akhtar Kalam
Co-Chair : Mohd Shah Majid
Date : 2 December 2008, Tuesday
Time : 09:00 - 11:50
Venue : Acadia Seminar Room

0900-0915 **2C.1**
UPFC Online PI Controller Design using Particle Swarm Optimization Algorithm and Artificial Neural Networks
**Mohammad Reza. Asadi, **Vahid Gohari Sadr*
*Amirkabir University of Technology, IRAN
**Transmission and Distribution Management Co. (TAVANIR), IRAN

0915-0930 **2C.2**
Sliding Mode Control Power System Stabilizer (PSS) For Single Machine Connected To Infinite Bus (SMIB)
**Safie S.I, **Md.Shah Majid, **Hasimah A.R , **A Wahab, **M. Yusri .H*
*Laksana Indah Sdn Bhd, MALAYSIA
**Universiti Teknologi Malaysia, MALAYSIA

0930-0945 **2C.3**
Comparing Least Squares Support Vector Machine and Probabilistic Neural Network in Transient Stability Assessment of a Large-Scale Power System
Noor Izzri Abdul Wahab, Azah Mohamed, Aini Hussain
Universiti Kebangsaan Malaysia, MALAYSIA

0945-1000 **2C.4**
Minimum Distance, a Quick and Simple Method of Determining the Static ATC
**Mostafa Eidiani, *S. M. Asadi, **S. A. Faroji, ***M. H. Velayati, ****D. Yazdanpanah*
*Bojnourd Campus of Islamic Azad University, IRAN
** Tabriz Sahand University, IRAN
*** Semnan University, IRAN
**** Khorasan Region Electric Co., IRAN

1000-1015 **2C.5**
Assessment of Voltage Stability with NEW NRS
Mostafa Eidiani
Bojnourd Campus of Islamic Azad University, IRAN

1015-1030 **2C.6**
Nonlinear Coordinated Control of Multiple HVDC Links
Robert Eriksson, Valerijs Knazkins
Royal Institute of Technology, SWEDEN

1030-1050 Coffee break

1050-1105 **2C.7**
Utilization of LFC Generators with Long Time Delay in Output Power Response
**Hiroaki Tanaka, *Hiroyuki Amano, *Toshio Inoue, **Kazunari Maki*
*Central Research Institute of Electric Power Ind., JAPAN
**Chugoku Electric Power Co. Inc., JAPAN

1105-1120 **2C.8**

Estimation of Electromechanical Modes of Power System Using ARMA Model Based on Cross Spectrum
H. Koseki, K. Yoshimura
Central Research Institute of Electric Power Industry, JAPAN

1120-1135 **2C.9**
Development of a Dynamical Model for Customer's Gas Turbine Generator in Industrial Power Systems
**Masayuki Watanabe, *Yuuya Ueno, *Yasunori Mitani, **Hiroyuki Iki, **Yoshihisa Uriu, ***Yasuhiro Urano*
*Kyushu Institute of Technology, JAPAN
**Seikei University, JAPAN
***Idemitsu Engineering Co. Ltd., JAPAN

1135-1150 **2C.10**
Determination of Proximity to Static Voltage Collapse Using CPF-GMRES Method
J.Jasni,H.Hizam,M.Z.A.Kadir,N.Mariun, S.B.M.Noor
Universiti Putra Malaysia, MALAYSIA

Session 2D
Session Title : Power System Protection
Session Chair : Kartik Basu
Co-Chair : Saiful Nizam Khalid
Date : 2 December 2008, Tuesday
Time : 09:00 - 12:05
Venue : Daffodil Seminar Room

0900-0915 **2D.1**
Transient Based Protection Using Current Transients
**Xia Mingchao, **Huang Yizhuang*
*Beijing Jiaotong University, CHINA
**Tsinghua University, CHINA

0915-0930 **2D.2**
A Study on Static Voltage Collapse Proximity Indicators
Renuga Verayiah, Izham Zainal Abidin
Universiti Tenaga Nasional, MALAYSIA

0930-0945 **2D.3**
Fault Current Limiting in Distribution Systems with Distributed Generation Units by a New Dual Functional Series Compensator
*H.R. Baghaee, **M. Mirsalim, *M. J. Sanjari, *G.B. Gharehpetian
*Amirkabir University of Technology, IRAN
**St. Mary's University, USA

0945-1000 **2D.4**
Analysis of Load Flow and Short Circuit Studies of an Offshore Platform Using ERACS Software
K.N. Hasan, K. S. R. Rao, Z. Mokhtar
Universiti Teknologi PETRONAS, MALAYSIA

1000-1015 **2D.5**
Performance of Restricted Earth Fault Protection Scheme in the Presence of Current Transformer Remanence
**Kamarul Jalal Abdul Jalil, *Dr. Ab Halim Abu Bakar, **Wan Norliza Wan Mahadi, ***Faridah Hani Mohamed Salleh*
*Tenaga Nasional Berhad, MALAYSIA
**Universiti Malaya, MALAYSIA
*** Universiti Tenaga Nasional, MALAYSIA

1015-1030 **2D.6**
Effects of Voltage Transformers Connection Point on Measured Impedance at Relaying Point for Inter Phase Faults in Presence of TCSC
S. Jamali, A. Kazemi, H. Shateri
Iran University of Science and Technology, IRAN

1030-1050 Coffee break

1050-1105 **2D.7**
Measured Impedance by Distance Relay in Presence of UPFC on Next Line
A. Kazemi, S. Jamali, H. Shateri
Iran University of Science and Technology, IRAN

1105-1120 **2D.8**

Performance of Multi-Column MOVs for C Class Protection of AC Power Circuits
**Muhammad Saufi Kamarudin, *Asmarashid Ponniran, **Zulkurnain Abdul Malek*
*Universiti Tun Hussein Onn Malaysia, MALAYSIA
**Universiti Teknologi Malaysia, MALAYSIA

1120-1135 **2D.9**
A New Genetic Algorithm Method for Optimal Coordination of Overcurrent and Distance Relays Considering Various Characteristics for Overcurrent Relays
**Reza. Mohammadi. Chabanloo, *Hossein. Askarian. Abyaneh, *Somayeh. Sadat. Hashemi. Kamangar, **Farzad. Razavi*
*Amirkabir University of Technology, IRAN
**Tafresh University, IRAN

1135-1150 **2D.10**
Power Socket Programmable Circuit Breaker System
H.G.Rodney Tan, A.C. Tan, Mimi Iriana, V.H. Mok
University College Sedaya International, MALAYSIA

1150-1205 **2D.11**
Measured Impedance by Distance Relay in Presence of Inductive Fault Current Limiter
H. Shateri, S. Jamali
Iran University of Science and Technology, IRAN

Session 2E
Session Title : Inverters
Session Chair : Ali I. Maswood
Co-Chair : Zainal Salam
Date : 2 December 2008, Tuesday
Time : 09:00 - 12:05
Venue : Jasmine Seminar Room

0900-0915 **2E.1**
Design of an FPGA-based Space Vector PWM Generator for Three-phase Voltage-Sourced Inverters
Woei-Luen Chen, Chun-Hao Pien, Yung-Ping Feng
Chang Gung University, TAIWAN

0915-0930 **2E.2**
A Review on Controllers for PWM Inverters
S. M. Ayob, N. A. Azli, Z. Salam
Universiti Teknologi Malaysia, MALAYSIA

0930-0945 **2E.3**
Variable High Frequency Voltage Source for an Ohmic Heating Process
A. Toudeshki, N. Mariun, H. Hizam, S. M. Bashi, H. Jamaludin
Universiti Putra Malaysia, MALAYSIA

0945-1000 **2E.4**
Sugeno-type Fuzzy Logic Controller (SFLC) for a Modular Structured Multilevel Inverter (MSMI)
S. N. F. Mohamed, N. A. Azli , Z.Salam, S.M.Ayob
Universiti Teknologi Malaysia, MALAYSIA

1000-1015 **2E.5**
A New Topology -Reversing Voltage (RV) - for Multi Level Inverters
E.Najafi, A. H. M. Yatim, A. S. Samosir
University Technology Malaysia, MALAYSIA

1015-1030 **2E.6**
A Switching Loss Study in SPWM IGBT Inverter
Ali I. Maswood
Nanyang Technological University, SINGAPORE

1030-1050 Coffee break

1050-1105 **2E.7**
Novel Quasi-Parallel Resonant DC-Link Inverter with One Auxiliary Switch
M. R. Amini, H. Farzanehfard
Isfahan University of Technology, IRAN

1105-1120 **2E.8**
Robust Controller Design for Parallel Multi-Inverter Systems Using μ-Synthesis
M.Jafari, Sh.Farhangi, F.R.Salmasi
University of Tehran, IRAN

1120-1135 **2E.9**
Analysis and Minimization of Input Current and Voltage Ripples of Five-Phase PWM Inverters
P. A. Dahono, Deni, A. Rizqiawan
Institute of Technology Bandung, INDONESIA

1135-1150 **2E.10**

Decoupling Voltage Controller Design with Time Response Specifications for Three-Phase DC/AC Inverter
Jinmok Lee, Jaeho Choi
Chungbuk National University, SOUTH KOREA

1150-1205 **2E.11**

PWM Inverter Regulation Using Single Input Fuzzy Logic Controller
S. M. Ayob, N. A. Azli, Z. Salam
Universiti Teknologi Malaysia, MALAYSIA

Session 2F
Session Title : Power Quality 2
Session Chair : Robert Kennedy
Co-Chair : Ahmad Safawi Mokhtar
Date : 2 December 2008, Tuesday
Time : 09:00 - 12:05
Venue : Orchid Seminar Room

0900-0915 **2F.1**
Electric Power System's Dynamic Voltage Stability Improvement through a Thyristor Controlled Series Compensation Strategy
**R. M. Monteiro Pereira, *Adelino J. C. Pereira, *C. Machado Ferreira, **F. P. Maciel Barbosa*
*College of Engineering of Coimbra, PORTUGAL
**University of Porto, PORTUGAL

0915-0930 **2F.2**
Harmonic Optimization in Multi-Level Inverters using Harmony Search Algorithm
**H.R. Baghaee, **M. Mirsalim, *M. J. Sanjari, *G.B. Gharehpetian*
*Amirkabir University of Technology, IRAN
**St. Mary's University, USA

0930-0945 **2F.3**
Improvements to Fault Location Analysis Based on Voltage Sag Data
**Takeo Shibata, *Toshikazu Fujita, *Kenji Yoshimura, **Hiroshi Nagashima*
*Central Research Institute of Electric Power Industry (CRIEPI), JAPAN
**Kyushu Electric Power Co., Inc, JAPAN

0945-1000 **2F.4**
Comparing the performance of various mother wavelet functions in detecting actual 3-phase voltage sags
M.F.Faisal, A.Mohamed
Universiti Kebangsaan Malaysia, MALAYSIA

1000-1015 **2F.5**
Analysis of PQ Waveform for Optimum Data Transmission over IEC 61850 Communication Standards
**Bahisham Yunus, **H. Li*
*Universiti Tenaga Nasional (UNITEN), MALAYSIA
**University of Manchester, UNITED KINGDOM

1015-1030 **2F.6**
Electromagnetic Interference Effect from Power Line Noise in Electrocardiograph Signal using Faraday Cage
Noor Amalina Zakaria, Rubita Sudirman, Mohd. Najeb Jamaluddin
Universiti Teknologi Malaysia, MALAYSIA

1030-1050 Coffee break

1050-1105 **2F.7**
Dynamic Voltage Restorer Lab Prototype
**Agileswari K. Ramasamy, *Vigna Ramachandaramurthy, **Rengan Krishna Iyer*
*University Tenaga Nasional, MALAYSIA
**Intel, MALAYSIA

1105-1120 **2F.8**
Power Quality Indexes for Continue and Discrete Disturbances in a Distribution Area

H. Siahkali
Islamic Azad University, IRAN

1120-1135 **2F.9**
Investigation on the Effect of Shunt Capacitor and Shunt Filter on Harmonic in Distribution System
I.Daut, R.Chan Bahaudin, C.M.Hadzer, S. Hardi, N Hashim, I.Nisja
University Malaysia Perlis, MALAYSIA

1135-1150 **2F.10**
Power Quality and Electromagnetic Compatibility -The 'Simple or Not So Simple' Ubiquitous Power Supply Input Stage
Robert T Kennedy, Ismail Daut
Universiti Malaysia Perlis, MALAYSIA

1150-1205 **2F.11**
Numerical Electromagnetic Analysis of GSM Tower under the Influence of Lightning Overvoltage using Method of Moments
Mohammad Saiful Islam Hossaini, Md. Osman Goni
Khulna University of Engineering & Technology, BANGLADESH

Session 3A
Session Title : Electrical Machines and Drives 1
Session Chair : Majid Poshtan
Co-Chair : Nik Rumzi Nik Idris
Date : 2 December 2008, Tuesday
Time : 1400-1705
Venue : Angsana Seminar Room

1400-1415 **3A.1**
A PLC-based Self-tuning PI-Fuzzy Controller for Linear and Non-linear Drives Control
Muhammad Arrofiq, Nordin Saad
Universiti Teknologi PETRONAS, MALAYSIA

1415-1430 **3A.2**
Sensorless Predictive Torque Control by means of Sliding Mode Observer
S. Alireza Davari, Davood Arab Khaburi
Iran University of Science and Technology, IRAN

1430-1445 **3A.3**
Adaptive Deadbeat Current Controllers for AC Induction Motor Control
Petr Blaha, Pavel Vaclavek
xBrno University of Technology, CZECH REPUBLIC

1445-1500 **3A.4**
PWM Technique to Control Speed of Induction Motor using Matlab/xPC Target Box
Mohd Fakhizan bin Romlie, Mohammad Fadhil Pesol, Khairul Nisak Md Hasan
Universiti Teknologi PETRONAS, MALAYSIA

1500-1515 **3A.5**
A Simple Overmodulation Strategy in DTC-Hysterisis Based Induction Machine Drives
A. Jidin, N.R.N. Idris, A.H.M. Yatim
Universiti Teknologi Malaysia, MALAYSIA

1515-1530 **3A.6**
Evaluating the Potential of Solenoid Motion System for Electric Vehicle – Challenging the Conventional Usage of Electric Motor
Syed Zainal Abidin Syed Kamarul Bahrin, Noor Miza Muhamad Razali, Thahirah Syed Jalal, Ungku Anisa Ungku Amirulddin
Universiti Tenaga Nasional, MALAYSIA

1530-1550 Coffee break

1550-1605 **3A.7**
Performance Analysis of an Electric Vehicle in Faulty Inverter Mode
M. Sarardar Zadeh, B. Asaei, M.Hamzeh
University of Tehran, IRAN

1605-1620 **3A.8**
A Quick Dynamic Torque Control for Direct Torque Control-Hysterisis Based Induction Machines
A. Jidin, N.R.N. Idris, A.H.M. Yatim
Universiti Teknologi Malaysia, MALAYSIA

1620-1635 **3A.9**
Practical Current Control Techniques for Torque Ripple Minimization in SR Motors

Gobbi R., K. Ramar
Multimedia University, MALAYSIA

1635-1650 **3A.10**
Bearing Fault Detection in Induction Motor Using Pattern Recognition Techniques
**Jafar Zarei, *Javad Poshtan, **Majid Poshtan*
*Iran University of Science and Technology, IRAN
**The Petroleum Institute of Abu Dhabi, UNITED ARAB EMIRATES

1650-1705 **3A.11**
A Practical Study on the Dynamic Performance of a Controller for an Electromagnetic Levitation System.
**S. Banerjee , **R. Bhaduri, ***D. Prasad*
* NIT/Electrical Engineering Dept., INDIA
** BCET/ Electrical and Electronics Engineering Dept., INDIA
*** Emerson Network Power Private Ltd. /R&D, INDIA

Session 3B
Session Title : Power Electronic Converters 1
Session Chair : Mustafar Kamal Hamzah
Co-Chair : Awang Jusoh
Date : 2 December 2008, Tuesday
Time : 1400-1705
Venue : Hibiscus Seminar Room

1400-1415 **3B.1**
Matrix converter with a new control strategy
M. Pfeifer, G. Schröder
University of Siegen, GERMAN

1415-1430 **3B.2**
Studies on Control Electronics Implementation of Single-Phase Matrix Converter Operating as AC-DC Converter with Active Power Filter
R. Baharom, M. K. Hamzah, A. Saparon, I. R. Ibrahim
Universiti Teknologi MARA, MALAYSIA

1430-1445 **3B.3**
Single Phase Matrix Converter for Inverter Operation Controlled Using Xilinx FPGA
S.Z. Mohammad Noor, M.K.Hamzah, A.Saparon
Universiti Teknologi Mara, MALAYSIA

1445-1500 **3B.4**
Closed-Loop Control of AC/DC Three-Phase Current Injection Series Resonant Converter
**Mohammad Nawawi Seroji, **Andrew J. Forsyth*
*Universiti Teknologi MARA, MALAYSIA
The University of Manchester, UNITED KINGDOM

1500-1515 **3B.5**
Non-Symmetrical SHE-PWM Technique for Five-Level Cascaded Converter with Non-Equal DC Sources
**Mohamed S. A. Dahidah, **Vassilios G. Agelidis*
*The University of Nottingham, MALAYSIA
**The University of Sydney, AUSTRALIA

1515-1530 **3B.6**
Space Vector Modulated and Vector Controlled Three-Level Four-Wire Unidirectional AC-DC-AC Converter
Jarno Alahuhtala, Heikki Tuusa
Tampere University of Technology, FINLAND

1530-1550 Coffee break

1550-1605 **3B.7**
A New Vector Frequency Modulation for Power Conversion Circuits
Akio Takano
Numazu National College of Technology, JAPAN

1605-1620 **3B.8**
New Switching Method for Sheppard-Taylor PFC Converter
M.Rezanejad , M.Dargahi , S.Lesan , A.Ranjbar Noee , M.Karami
Noshirvani Technical University of Babol, IRAN

1620-1635 **3B.9**

Tuning of Control Loops for Grid Connected Voltage Source Converters
Jon Are Suul, Marta Molinas, Lars Norum, Tore Undeland
Norwegian University of Science and Technology, NORWAY

1635-1650 **3B.10**
Overview of Modulation Techniques for the Four-Switch Converter Topology
**M. Monfared, *H. Rastegar, **H. M. Kojabadi*
*Amirkabir University of Technology, IRAN
**Sahand University of Technology, IRAN

1650-1705 **3B.11**
A Development of Fuzzy Control of Hybrid Energy System using Ultracapacitor
**A.Z. Annuar, **A.H.M. Yatim*
*Universiti Malaysia Terengganu (UMT), MALAYSIA
**Universiti Teknologi Malaysia, MALAYSIA

Session 3C
Session Title : Modeling and Simulation
Session Chair : Nobuhiro Harada
Co-Chair : Makbul Anwari
Date : 2 December 2008, Tuesday
Time : 1400-1705
Venue : Acadia Seminar Room

1400-1415 **3C.1**
Dynamic Modeling and Simulation of Solid Oxide Fuel Cell System
A.A.Salam, M.A.Hannan, A.Mohamed
Universiti Kebangsaan Malaysia, MALAYSIA

1415-1430 **3C.2**
Load Modeling Using the Ornstein-Uhlenbeck Process
Magnus Perninge, Mikael Amelin, Valerijs Knazkins
Royal Institute of Technology, SWEDEN

1430-1445 **3C.3**
Advanced Laboratory Scale Model of High Phase Conversion Power Transmission Line
**Hussein Ahmad, **Jambak, M. I.*
*Universiti Teknologi Malaysia, MALAYSIA
**Universitas Sriwijaya, INDONESIA

1445-1500 **3C.4**
Numerical Simulation for Hypersonic Vehicle onboard Magnetohydrodynamic Power Generation
**Nob. Harada, *Takashi Kikuchi, **John T. Lineberry*
*Nagaoka University of Technology, JAPAN
**LyTec LLC, U.S.A

1500-1515 **3C.5**
A Modeling of Self Excited Induction Generators Driven by Compressed Air Energy Based on Field Oriented Control Principle
Varin Vongmanee, Veerapol Monyakul
King Mongkut's University of Technology Thonburi, THAILAND

1515-1530 **3C.6**
Hierarchical Approach in Steam Network Modelling
R. Arghandeh Jouneghani, M. Amidpour, A.Ghaffari
K.N.Toosi University of Technology, IRAN

1530-1550 Coffee break

1550-1605 **3C.7**
A New Method for Small Signal Modeling of UPFC
**H. Kazemi Karegar, **S. Golmohamadzadeh*
*Shahid Beheshti University, IRAN
**Zanjan University, IRAN

1605-1620 **3C.8**
Modeling of Controller for Voltage Sourced Converter based HVDC Transmission System
Ahmed Mahjoub, Ravindra Mukerjee
Universiti Teknologi PETRONAS, MALAYSIA

1620-1635 **3C.9**

PSiM Based Electric Modeling of Supercapacitors for Line Voltage Regulation of Electric Train System
**Sejin Noh , *Jaeho Choi, **Hyung-Cheol Kim, **Eun-Kyu Lee*
*Chungbuk National University, SOUTH KOREA
**Woojin Industrial Systems Co. Ltd., SOUTH KOREA

1635-1650 **3C.10**

Performance Evaluation of Disk MHD Accelerator with Nozzle and Diffuser
**Shinji Takeshita, **Chainarong Buttapeng, *Nob. Harada*
*Nagaoka University of Technology, JAPAN
**University of the Thai Chamber of Commerce, THAILAND

1650-1705 **3C.11**

Analysis of Disk MHD Induction Generator
Pattana Intani, Nobuhiro Harada
Nagaoka University of Technology, JAPAN

Session 3D
Session Title : Computer and AI in Power System 1
Session Chair : Khalid Mohamed Nor
Co-Chair : Zahrul Faizi Hussein
Date : 2 December 2008, Tuesday
Time : 1400-1705
Venue : Daffodil Seminar Room

1400-1415 **3D.1**
Generation Scheduling Methodology for Thermal Units with Wind Energy System Considering Unexpected Load Deviation
**Tomonobu Senjyu, *Shantanu Chakraborty, **Ahmed Yousuf Saber, *Hirofumi Toyama, *Naomitsu Urasaki, ***Toshihisa Funabashi*
* University of the Ryukyus, JAPAN
** King Abdulaziz University, SAUDI ARABIA
*** Meidensha Corporation, JAPAN

1415-1430 **3D.2**
Thermal Unit Commitment Strategy with Solar and Wind Energy Systems Using Genetic Algorithm Operated Particle Swarm Optimization
**Tomonobu Senjyu, *Shantanu Chakraborty, **Ahmed Yousuf Saber, *Hirofumi Toyama, *Atsushi Yona, ***Toshihisa Funabashi*
* University of the Ryukyus, JAPAN
** King Abdulaziz University, SAUDI ARABIA
*** Meidensha Corporation, JAPAN

1430-1445 **3D.3**
Thermal Generation Scheduling Strategy Using Binary Clustered Particle Swarm Optimization Algorithm
**Tomonobu Senjyu, *Shantanu Chakraborty, **Ahmed Yousuf Saber, *Hirofumi Toyama, *Atsushi Yona, ***Toshihisa Funabashi*
*University of the Ryukyus, JAPAN
**King Abdulaziz University, SAUDI ARABIA
***Meidensha Corporation, JAPAN

1445-1500 **3D.4**
Using Support Vector Machines for Determining Voltage Unstable Areas in Power Systems
Muhammad Nizam, Azah Mohamed, Majid al-Dabbagh, Aini Hussain
Universiti Kebangsaan Malaysia, MALAYSIA

1500-1515 **3D.5**
A Fuzzy Based Control Method for Isolated Power Utility Connected PV-diesel Hybrid System to Reduce Frequency Deviation
**Manoj Datta, *Tomonobu Senjyu, *Atsushi Yona, **Toshihisa Funabashi, ***Chul-Hwan Kim*
*University of the Ryukyus, JAPAN
**Meidensha Corporation, JAPAN
***Sungkyunkwan University, JAPAN

1515-1530 **3D.6**
A Novel Adaptive Power Systems Frequency Estimation Algorithm Based on Complex Artificial Neural Network
**I. Sadinezhad, **M. Joorabian, ***A. Nowbakht*
*The University of Sydney, AUSTRALIA
**Shahid Chamran University of Ahavz, IRAN
***Mahashahr Azad University, IRAN

1530-1550 Coffee break

1550-1605 **3D.7**
A New Adaptive Hybrid Neural Network and Fuzzy Logic Based Fault Classification Approach for Transmission Lines Protection
**I. Sadinezhad, **M. Joorabian*
*The University of Sydney, AUTRALIA
**Shahid Chamran University of Ahavz, IRAN

1605-1620 **3D.8**
Taguchi's Method for Optimized Neural Network Based Autoreclosure in Extra High Voltage Lines
Desta Zahlay F., K.S. Rama Rao
Universiti Teknologi PETRONAS, MALAYSIA

1620-1635 **3D.9**
Non-Technical Loss Analysis for Detection of Electricity Theft using Support Vector Machines
J. Nagi, A. M. Mohammad, K. S. Yap, S. K. Tiong, S. K. Ahmed
Universiti Tenaga Nasional, MALAYSIA

1635-1650 **3D.10**
A Comparison amongst Sub-Optimal Ordering Schemes for Power Systems Accompanied with a GA-based Optimal Ordering Method
**M. Heydari Araghi, **H. Yazdanpanahi, **M. Abedi, **G. B. Gharehpetian*
*The University of Western Ontario, CANADA
**Amirkabir University of Technology., IRAN

1650-1705 **3D.11**
Coordinated Control of Once-Through Power Plant Based on Fuzzy Feedback-Feedforward Approach
A. Ghaffari, A. Chaibakhsh
K.N. Toosi University, IRAN

Special Session on Microgrid and Power Electronics Utility Application

Session Chair : Jae-Ho Choi
Date : 2 December 2008, Tuesday
Time : 1400-1530
Venue : Jasmine Seminar Room

1400-1415 **SS.1**
Coordinated Control of Battery Energy Storage System and Diesel Generator for Isolated Power System Stabilization
**Eitaro Omine, *Tomonobu Senjyu, *Endusa Billy Muhando, *Atsushi Yona, *Hideomi Sekine, **Toshihisa Funabashi, ***Ahmed Yousuf Saber*
*University of the Ryukyus, JAPAN
**Meidensha Corporation, JAPAN
***Missouri University of Science and Technology, USA

1415-1430 **SS.2**
A Novel Self-Start Circuit and CBS for Engine-Generator System
**Jin-Woo Ahn, *Dong-Hee Lee, **Dong-Hun Kim*
*Kyungsung University, KOREA
**Kyungpook National University, KOREA

1430-1445 **SS.3**
Sensorless Control of PM Synchronous Generators for Micro Wind Turbines
Nguyen Thanh Hai, Suk-Ho Jang, Hong-Geuk Park, Dong-Choon Lee
Yeungnam University, KOREA

1445-1500 **SS.4**
Power Quality Control Center for the Microgrid System
**Y.H. Chung, *H.J. Kim, *K.S. Kim, *J.W. Choe, **Jaeho Choi*
*LS Industrial Systems Co. Ltd, KOREA
**ChungBuk National University, KOREA

1500-1515 **SS.5**
A Control Strategy for the Grid-connected PV System Using a Z-Source Inverter
**Jong-Hyoung Park, *Heung-Geun Kim, **Tae-Won Chun, *Eui-Cheol Nho, *Hyun-Jin Shin, *Min-Hun chi*
*Kyungpook National University, KOREA
**University of Ulsan, KOREA

1515-1530 **SS.6**
High Performance Wind Power Generation System connected to DC Microgrid
Toshimitsu Morizane, Noriyuki Kimura, Tomoyuki Hamada, Katsunori Taniguchi
Osaka Institute of Technology, JAPAN

Session 3E
Session Title : Energy and Instrumentation
Session Chair : Mohd Wazir Mustafa
Date : 2 December 2008, Tuesday
Time : 1550-1705
Venue : Jasmine Seminar Room

1550-1605 **3E.1**
Optimal Design of Measurement-Type Current Transformer Using Genetic Algorithm
V. Rashtchi, A. Shabani, A. Bagheri
Zanjan University, IRAN

1605-1620 **3E.2**
Tenaga Nasional Berhad Wide Area Measurement System Based Applications
**Sheikh Kamar Bin Sheikh Abdullah, **Nik Sofizan Bin Nik Yusuf*
*TNB Research Sdn. Bhd., MALAYSIA
**TNB Transmission, MALAYSIA

1620-1635 **3E.3**
Energy Balance Analysis of Small Satellite in Low Earth Orbit (LEO)
Sung-Soo Jang, Jaeho Choi
Chungbuk National University, SOUTH KOREA

1635-1650 **3E.4**
State-of-Charge Estimation for Lead-Acid Batteries Based on Dynamic Open-Circuit Voltage
**Kong-Soon Ng, *Chin-Sien Moo, **Yi-Ping Chen, ***Yao-Ching Hsieh*
*National Sun Yat-Sen University, TAIWAN
**Industrial Technology Research Institute, TAIWAN
***National Dong Hwa University, TAIWAN

1650-1705 **3E.5**
Power Compensator for High Power Fluctuating Loads with a Supercapacitor Bank Energy Storage
Antti Virtanen, Heikki Tuusa
Tampere University of Technology, FINLAND

Session 3F
Session Title : Power Market and Deregulation
Session Chair : HW Ngan
Co-Chair : Mohammad Yusri Hassan
Date : 2 December 2008, Tuesday
Time : 14:00 - 17:05
Venue : Orchid Seminar Room

1400-1415 **3F.1**
Enhancing Deregulated Distribution Network Reliability for Minimizing Penalty Cost Based on Reconfiguration Using BPSO
H. Hosseini, S. Jalilzadeh, V. Nabaei, G. R. Zareie Govar, M. Mahdavi
Zanjan University, IRAN

1415-1430 **3F.2**
Transmission Loss Allocation in Deregulated Power System via Superposition and Proportional Tree Methods
**Mohd Wazir Mustafa, **Mohd Herwan Sulaiman*
*Universiti Teknologi Malaysia, MALAYSIA
**Universiti Malaysia Perlis, MALAYSIA

1430-1445 **3F.3**
Allocation of Loss Cost by Optimal and Proportional Tracing Methods
Nahid Aslani Amoli, Shahram Jadid
Iran University of Science and Technology (IUST), IRAN

1445-1500 **3F.4**
Next-Day Peak Electricity Price Forecasting Using NN Based on Rough Sets Theory
**Hirofumi Toyama, *Tomonobu Senjyu, *Shantanu Chakraborty, *Atsushi Yona, **Toshihisa Funabashi, ***Ahmed Yousuf Saber*
*University of the Ryukyus, JAPAN
**Meidensha Corporation, JAPAN
***King Abdulaziz University, SAUDI ARABIA

1500-1515 **3F.5**
Reactive Power Procurement Scheme in Competitive Power Markets
**Fuqiang Zhang, *H.W. Ngan, **Fushuan Wen, *C.W. Yu, *C.Y. Chung, *K.P. Wong*
*The Hong Kong Polytechnic University, HONG KONG
**Zhejiang University, CHINA

1515-1530 **3F.6**
A Risk-Based Approach for Provision of Spinning Reserve by Means of Emergency Demand Response Program
**A. Yousefi, *E. Shayesteh, **F. Daneshvar, *M. Parsa Moghaddam*
*Tarbiat Modares University, IRAN
**Hormozgan Electrical Distribution Company (HEDC), IRAN

1530-1550 Coffee break

1550-1605 **3F.7**
Redistribution of Transmission Loss Based on Z-bus Method
Yi-Ping Chen, Wen-Chen Chu
Tatung University, TAIWAN

1605-1620 **3F.8**

Optimal Unit Commitment Using Equivalent Linear Minimum Up and Down Time Constraints

*[+]*Nadia Zendehdel, *[+]*Ali Karimpour, **[+]*Majid Oloomi*

*Ferdowsi University, IRAN

**Shahrood University of Technology, IRAN

[+]East Electrical Energy Economics Research Group, IRAN

1620-1635 **3F.9**

Improving Zonal Congestion Relief Management Using Economical & Technical Factors of the Demand Side

*Mohamad H.Moradi, *Somayeh.Dehghan, **HamidR.Faridi

*Bu Ali Sina University, IRAN

**National Iranian Oil Company, IRAN

1635-1650 **3F.10**

Congestion Cost Allocation in a Pool-Based Electricity Market

M. P. Abdullah, M. Y. Hassan, F. Hussin

Universiti Teknologi Malaysia, MALAYSIA

1650-1705 **3F.11**

Electricity Market Models in Restructured Electricity Supply Industry

M. Y. Hassan, M. P. Abdullah, A. S. Arifin, F. Hussin, M. S. Majid

Universiti Teknologi Malaysia, MALAYSIA

Session 4A
Session Title : Electrical Machines and Drives 2
Session Chair : Dahaman Ishak
Co-Chair : Norhisam Misron
Date : 3 December 2008, Wednesday
Time : 09:00 - 11:35
Venue : Angsana Seminar Room

0900-0915 **4A.1**
Simulink Implementation of Digital Cascade Control DC Motor Model - A Didactic Approach
M.Nizam.Kamarudin, Sahazati Md.Rozali
Universiti Teknikal Malaysia Melaka (UTeM), MALAYSIA

0915-0930 **4A.2**
Development of Acoustic Emission Diagnostic System for Condition Monitoring of Rotating Machines
Mohammed A. A. Elmaleeh, N. Saad
Universiti Teknologi PETRONAS, MALAYSIA

0930-0945 **4A.3**
Better Performance Pulsed Launcher System by Adjusting Projectile Initial Position
**M. Rezal, **S. J. Iqbal, *Hon K. W.*
*Kuala Lumpur Infrastructure University College, MALAYSIA
**Universiti Putra Malaysia, MALAYSIA

0945-1000 **4A.4**
Permanent Magnet Brushless Machines with Minimum Difference in Slot Number and Pole Number
Mohd Saufi Ahmad, Nurul Anwar Abd Manap, Dahaman Ishak
Universiti Sains Malaysia, MALAYSIA

1000-1015 **4A.5**
Non-linear Modeling of Transformer Using Hammerstein Method
H.Yazdanpanahi, M.A.Hejazi, G.B.Gharehpetian
Amirkabir University of Technology, IRAN

1015-1030 **4A.6**
The Analysis on Effect of Thrust Constant, Spring Constant, Electrical Time Constant, Mechanical Time Constant to Oscillation Displacement of Slot-Less Linear Oscillatory Actuator
**M. Norhisam, *R. N. Firdaus, **F. Azhar,* N. Mariun, *I. Aris, ***Abdul Razak J.*
*University Putra Malaysia, MALAYSIA
**Universiti Teknikal Malaysia Melaka, MALAYSIA
***Malaysian Palm Oil Board, MALAYSIA

1030-1050 Coffee break

1050-1105 **4A.7**
Design and Analysis of a Single Phase Slot-less Permanent Magnet Generator
*M. Norhisam, *M. Norafiza, *M. Syafiq, *I. Aris, **Abdul Razak J.
*Universiti Putra Malaysia, MALAYSIA
**Malaysian Palm Oil Board, MALAYSIA

1105-1120 **4A.8**
Rectangular Current Commutation and Open-Loop Control for Starting of a Free-Piston Linear Engine-Generator
Saiful A. Zulkifli, Mohd N. Karsiti, Abd. Rashid Abd. Aziz

Universiti Teknologi PETRONAS, MALAYSIA

1120-1135 **4A.9**

Power Quality Behavior of Single Phase Fed Adjustable Speed Drive Supplied from Grid of PV Generation

**Makbul Anwari, *M. Imran Hamid, **Taufik*
*Universiti Teknologi Malaysia, MALAYSIA
**California Polytechnic State University, USA

Session 4B
Session Title : Power Electronic Converters 2
Session Chair : Heung-Geun Kim
Co-Chair : Ngah Ramzi Hamzah
Date : 3 December 2008, Wednesday
Time : 09:00 – 12:05
Venue : Hibiscus Seminar Room

0900-0915 **4B.1**
A New Controlling Method Based on Peak Current Mode (PCM) for PFC
**E.Najafi, *A.Vahedi, **A.Mahanfar*
*Iran University of Science and Technology, IRAN
**Simon Fraser University. CANADA

0915-0930 **4B.2**
Comparative Study of CoolMOS and MOSFET in High Frequency Circuit Design
K.N. Hassan , N.A. Jelani, S.S. Sari'at, N.Z. Yahaya
Universiti Teknologi PETRONAS, MALAYSIA

0930-0945 **4B.3**
Single-Phase Shunt Active Power Filter Using Single-switch Incorporating Boost Circuit
**N.R. Hamzah, *M.K.Hamzah, **A.S. Abu Hasim, *N.F.A. Abdul Rahman*
*Universiti Teknologi Mara, MALAYSIA
**Universiti Pertahanan Nasional Malaysia, MALAYSIA

0945-1000 **4B.4**
Single-Phase Single-Switch Boost PFC Regulator with Low Total Harmonic Distortion and Feedforward Input Voltage
H. S. Athab
Multimedia University, MALAYSIA

1000-1015 **4B.5**
FPGA Design of Single-phase Matrix Converter Operating as a Frequency Changer
**M.K. Hamzah, **Z. Idris, *A. Saparon, *M.S Yunos*
*Universiti Teknologi MARA, MALAYSIA
**Universiti Industri Selangor, MALAYSIA

1015-1030 **4B.6**
Balanced Driving System for Multiple Cold-Cathode Fluorescent Lamps
**Hau-Chen Yen, *Zi-Jiann Huang, **Yao-Ching Hsieh, ***Hung-Liang Cheng*
*Fortune Institute of Technology, TAIWAN
**National Dong Hwa University, TAIWAN
***I-Shou University, TAIWAN

1030-1050 Coffee break

1050-1105 **4B.7**
A Novel Single-Stage High-Power-Factor High-Efficiency AC-to-DC Resonant Converter
**Hung-Liang Cheng, **Kuo-Hsing Lee, **Yan-Cun Li, **Chin-Sien Moo*
*I-Shou University, TAIWAN
**National Sun Yat-Sen University, TAIWAN

1105-1120 **4B.8**
Boost Rectifier Using Single-Phase Matrix Converter with Bipolar Output
R. Baharom, M. K. Hamzah, N.R. Hamzah, L. Mohd Kasim

Universiti Teknologi MARA, MALAYSIA

1120-1135 **4B.9**
An Extended Dynamic Matrix Control Design for Quasi-Resonant Converters
F. Tahami, M. Ebad
Sharif University of Technology, IRAN

1135-1150 **4B.10**
Improvement of Input Side Currents of a Three Phase Rectifier Using Cúk Converter in Discontinuous-Capacitor-Voltage Mode Operation
**Md. Raju Ahmed, *Ruma, **M. J. Alam*
*Dhaka University of Engineering & Technology, BANGLADESH
**Bangladesh University of Engineering & Technology, BANGLADESH

1150-1205 **4B.11**
A Predictive Control Strategy for the Sheppard-Taylor Based PFC Rectifier
M.R. Abedi, Ali A. Sahari, F. Tahami
Sharif University of Technology, IRAN

Session 4C
Session Title : Computer and AI in Power System 2
Session Chair : Azah Mohamed
Co-Chair : Abd Rahman Khalid
Date : 3 December 2008, Wednesday
Time : 09:00 - 12:05
Venue : Acadia Seminar Room

0900-0915 **4C.1**
A Novel Approach for a Z-Matrix Building Process Using Genetic Algorithm
A. H. Ranjbar, H. Omranpour, M. Abedi, G.B. Gharehpetian
Amirkabir University of Technology (AUT), IRAN

0915-0930 **4C.2**
Learning the Role of Regulator in Emerging Multi-Energy Market: A Simulation Approach with Agents
Naing Win Oo
Curtin University of Technology, MALAYSIA

0930-0945 **4C.3**
Static Security Assessment Using Artificial Neural Network
I. S. Saeh, A. Khairuddin
University Technology Malaysia, MALAYSIA

0945-1000 **4C.4**
A Comprehensive Power Restoration Approach Using Rule-Based Method for 11kV Distribution Network
**Abd Rahman Khalid, *Sharifah Mumtazah Syed Ahmad, *Asma Shakil, **Nawar Nik Pa, ***Roslin Mohd Shafie*
*Universiti Tenaga Nasional (UNITEN), MALAYSIA
**Universiti Putra Malaysia (UPM), MALAYSIA
***Tenaga Nasional Berhad Research (TNBR), MALAYSIA

1000-1015 **4C.5**
A Solution to Unit Commitment Problem Using Hybrid Ant System/Priority List Method
**Songsak Chusanapiputt, **Dulyatat Nualhong, *Sujate Jantarang, ***Sukumvit Phoomvuthisarn*
*Mahanakorn University of Technology, THAILAND
**Electricity Generating Authority of Thailand, THAILAND
***Chulalongkorn University, THAILAND

1015-1030 **4C.6**
Evaluation of a Generic Virtual Power Plant Framework Using Service Oriented Architecture
Peter B. Andersen, Bjarne Poulsen, Morten Decker, Chresten Træholt, Jacob Østergaard
Technical University of Denmark, DENMARK

1030-1050 Coffee break

1050-1105 **4C.7**
An Artificial Neural-Net Based Method for Predicting Distribution Transformer's Total Harmonic Distortions
**Turhan Türker, **Nuran Yörükeren, **Mehlika Şengül, **Bora Alboyacı*
*Siemens Turkey, TURKEY
**Kocaeli University, TURKEY

1105-1120 **4C.8**
Application of SARSA Learning Algorithm for Reactive Power Control in Power System
M. R. Tousi, S. H. Hosseinian, A. H. Jadidinejad, M. B. Menhaj

Amirkabir University of Technology, IRAN

1120-1135 **4C.9**
Coherency Approach by Hybrid PSO, K-Means Clustering Method in Power System
Moez Davodi, Reza Modares, Ehsan Reihani, Mehdi Davodi, Ali Sarikhani
Shahrood University of Technology, IRAN

1135-1150 **4C.10**
A Comparison Study on Particle Swarm and Evolutionary Particle Swarm Optimization Using Capacitor Placement Problem
Naing Win Oo
Curtin University of Technology, MALAYSIA

1150-1205 **4C.11**
Zonal Partitioning of Deregulated Power Systems using Fuzzy Monte Carlo Simulation
Mina Sajjadi, Mehdi Raoofat
Shiraz University, IRAN

Session 4D
Session Title : Energy and Power Optimisation
Session Chair : Mohd Shah Majid
Co-Chair : Mohammad Yusri Hassan
Date : 3 December 2008, Wednesday
Time : 09:00 - 12:05
Venue : Daffodil Seminar Room

0900-0915 **4D.1**
An Improved Integer Coded Genetic Algorithm for Security Constrained Unit Commitment Problem
S. Golestani, M. Raoofat, E. farjah
Shiraz University, IRAN

0915-0930 **4D.2**
Multipurpose Reconfiguration of Deregulated Distribution Networks Using BGA
S. Jalilzadeh, H. Hosseini, V. Nabaei, G. R. Zareie Govar, M. Zandi
Zanjan University, IRAN

0930-0945 **4D.3**
Fuzzy Mid Term Unit Commitment Considering Large Scale Wind Farms
H. Siahkali
Islamic Azad University, IRAN

0945-1000 **4D.4**
A Chance-Constrained Programming based Approach to Optimal Hydro Energy Allocation
Guozhong Liu, Fushuan Wen
South China University of Technology, CHINA

1000-1015 **4D.5**
Optimal Control of Voltage in Distribution Systems by Voltage Reference Management
**Shohei Toma, *Tomonobu Senjyu, *Atsushi Yona, **Toshihisa Funabashi, *Hideomi Sekine, ***Chul-Hwan Kim*
*University of the Ryukyus, JAPAN
**Meidensha Corporation, JAPAN
***Sungkyunkwan University, KOREA

1015-1030 **4D.6**
Power Plant Optimization in a Regulated Environment Electricity Supply Industry: A Least Cost Generation Approach
**Hema Selanduray, **Mohd Hariffin Boosroh*
*Malakoff Corporation Berhad, MALAYSIA
**Universiti Tenaga Nasional, MALAYSIA

1030-1050 Coffee break

1050-1105 **4D.7**
Secondary Voltage Control: Enhancing Power System Voltage Profile
Salah I. Al-Majed
Saudi Aramco, SAUDI ARABIA

1105-1120 **4D.8**
State Of Art on Load Monitoring Methods
**Hala Najmeddine, *Khalil El Khamlichi Drissi, *Christophe Pasquier, *Claire Faure, *Kamal Kerroum, **Alioune Diop, ***Thierry Jouannet, ***Michel Michou*

*Université Blaise Pascal, FRANCE
**EDF R&D, FRANCE
**Landis+Gyr, FRANCE

1120-1135 **4D.9**
Value of Combining Hydrogen Production with Wind Power in Short-Term Electricity Markets
**Christopher J. Greiner, **M. Korpås, ***T. Gjengedal*
*Norwegian University of Science and Technology (NTNU), NORWAY
**SINTEF Energy Research, NORWAY
***Statkraft, NORWAY

1135-1150 **4D.10**
Comparison of Distribution Transformer Losses and Capacity under Linear and Harmonic Loads
**S.B.Sadati, **A.Tahani, *B.Darvishi, **M.Dargahi, *H.yousefi*
*Mazandarn Electric Power Distribution Company, IRAN
**Noshirvani Technical University of Babol, IRAN

1150-1205 **4D.11**
Multi-Agent Ant System for Redundancy Allocation Problem of Multi States Power System
O. Bendjeghaba, D. Ouahdi
University of Boumerdes, ALGERIA

Session 4E
Session Title : Power Market and Deregulation 2
Session Chair : Musse Mohamud Ahmed
Co-Chair : Md Pauzi Abdullah
Date : 3 December 2008, Wednesday
Time : 09:00 - 11:50
Venue : Jasmine Seminar Room

0900-0915 **4E.1**
A Heuristic Trade off Model for Integration of Distributed Generations in Deregulated Power Systems Considering Technical, Economical and Environmental Issues.
**Arsalan Hekmati, **Reza Nasiri, *Mehdi Bagheri, *Ali Abbaspour Tehrani*
*Sharif University of Technology, IRAN
**Khaje Nasireddin Tousi, IRAN

0915-0930 **4E.2**
Determination of Mean and Variance of LMP Using Probabilistic DCOPF and T-PEM
M. Davari, F. Toorani, H. Nafisi, M. Abedi, G. B. Gharehpetian
Amirkabir University of Technology, IRAN

0930-0945 **4E.3**
Comprehensive model for simultaneous pricing of active and reactive power based on marginal cost theory
M. Aghazadeh Tabrizi, M. E. Hamedani Golshan
Isfahan University of Technology, IRAN

0945-1000 **4E.4**
Determination of the Optimal Incentives and Amount Of Load Reduction For A Retailer To Maximize Profits Considering Demand Response Programs
KIM Dong-Hyun, KIM Dong-Min, KIM Jin-O
Hanyang University, KOREA

1000-1015 **4E.5**
Determination of New Transmission Congestion Charge Allocation Approach for Deregulated Power Systems by Using Network Equivalent
Hossein Zeynal, Mohd Wazir Mustafa
Universiti Teknologi Malaysia, MALAYSIA

1015-1030 **4E.6**
Electricity Price Forecasting Using a Clustering Approach
Kh. Sokhanvar, A. Karimpour, N. Pariz
Ferdowsi University of Mashhad, IRAN

1030-1050 Coffee break

1050-1105 **4E.7**
A New Method for Real Power Transfer Allocation Using Modified Nodal Equations
M.W. Mustafa, S.N. Khalid, H. Shareef, A. Khairuddin
Universiti Teknologi Malaysia, MALAYSIA

1105-1120 **4E.8**
Transmission Network Loss Allocation via Equivalent Bilateral Exchanges Principle and Genetic Algorithm
Sanaz Nouri, Shahram Jadid
Iran University of Science & Technology, IRAN

1120-1135 **4E.9**

Modeling Dynamic Generation Companies' Bidding Strategies

O. Estrada-Cruz, G. Gutierrez-Alcaraz, H. Tovar-Hernández
Instituto Tecnologico de Morelia, MEXICO

1135-1150 **4E.10**

Market Oriented Reactive Power Expansion Planning using Locational Marginal Price

**Mohammad Esmali Falak, *Majid Oloomi Buygi, **Ali Karimpour*
*Shahrood University of Technology, IRAN
**Ferdowsi University, IRAN

Session 4F
Session Title : Power Electronics in Power System
Session Chair : Taufik
Co-Chair : Zainal Salam
Date : 3 December 2008, Wednesday
Time : 09:00 - 12:05
Venue : Orchid Seminar Room

0900-0915 **4F.1**
Design of Power Oscillation Damping Controller for SVC Device
M.W. Mustafa, Nuraddeen Magaji
Universiti Teknologi Malaysia, MALAYSIA

0915-0930 **4F.2**
Optimal Location of Static VAR Compensator (SVC) Based on Small Signal Stability of Power System
Mahmood Joorabian, Ne'matollah Fasih Ramandi, Mazdak Ebadi
Shahid Chamran University of Ahvaz, IRAN

0930-0945 **4F.3**
Optimal Location of FACTS devices for damping oscillations using Residue Factor
Nuraddeen Magaji, M.W. Mustafa
Universiti Teknologi Malaysia, MALAYSIA

0945-1000 **4F.4**
Sensitivity Analysis of TRV in TCSC Compensated Transmission Lines during Fault Clearing by Line CB
A. Parvizi, M. Rostami, A. Majzoob Ghadiri
Shahed University, IRAN

1000-1015 **4F.5**
Stability Improvement of Centurion Electric Power Network using FACTS Controllers
Y. Galu, J.L. Munda, AA Jimoh
Tshwane University of Technology, SOUTH AFRICA

1015-1030 **4F.6**
A Small Scale Static VAR Compensator for Laboratory Experiment
Taufik, Bryan Paet
California Polytechnic State University, USA

1030-1050 Coffee break

1050-1105 **4F.7**
Effect of Interline Power Flow Controller (IPFC) on Interconnected Power Systems Adequacy
**Farrokh Aminifar, *Mahmud Fotuhi-Firuzabad, **Reza Nasiri, *Amin Khodaei*
*Sharif University of Technology, IRAN
**Khaje Nasirreddin Tousi University of Technology, IRAN

1105-1120 **4F.8**
Overview of an Extended Custom Power Park
M. Emin Meral, Ahmet Teke, Mehmet Tumay
Cukurova University, TURKEY

1120-1135 **4F.9**
Parallel Connection of DC/AC Switched Mode Power Converter in Utility Distribution System
Kuan Lee Choo

Multimedia University, MALAYSIA

1135-1150 **4F.10**
Novel Single Phase Grid Connected Current-source PWM Inverter with Harmonic Suppression
Suroso, Toshihiko Noguchi
Nagaoka University of Technology, JAPAN

1150-1205 **4F.11**
Improved Current Control Strategy for Shunt Active Power Filter
Berrin Susluoglu, Vedat M. Karsli
University of Gaziantep, TURKEY

Session 5A
Session Title : Electrical Machines and Drives 3
Session Chair : Gyo-Bum Chung
Co-Chair : Gobbi Ramasamy
Date : 3 December 2008, Wednesday
Time : 1400-1650
Venue : Angsana Seminar Room

1400-1415 **5A.1**
New Design for Electromagnetic Actuator of the VCB and Simulation of Its Static and Dynamic Behavior
**Saeed Jalilzadeh, *Arash Shabani, **Mehdi Zanjani*
*Zanjan University, IRAN
**Pars Switch Company, IRAN

1415-1430 **5A.2**
Development of Artificial Neural Network Based Fault Diagnosis of Induction Motor Bearing
Abd Kadir Mahamad, Takashi Hiyama
Kumamoto University, JAPAN

1430-1445 **5A.3**
Optimal Washing Time Control Algorithm for the Drum Washing Machine Using an Inertia Estimator
**Jung-Hyo Lee, *Chun-Hwan Hwang, *Kyung-min Kim, *Won-Cheol Lee, *Chung-Yuen Won, **Young-Real Kim*
Sungkyunkwan University, SOUTH KOREA
Anyang University, KOREA

1445-1500 **5A.4**
Simulation study of a series hybrid propulsion system for a bimodal tram
**Chang Han Bae, *Seky Chang, *Jai Kyun Mock, *Kang Won Lee, **Seok Youl Hwang*
*Korea Railroad Research Institute, SOUTH KOREA
**KookJe College, SOUTH KOREA

1500-1515 **5A.5**
Measurement of Flux Density Distribution on 100kVA 3-Phase Distribution Transformer Assembled With 90° T-Joint and Mitred Lap Corner Joint with Stagger Yoke by Using Search Coil
Dina M.M. Ahmad, I Daut
Universiti Malaysia Perlis, MALAYSIA

1515-1530 **5A.6**
Estimation of Hot Spot Temperature in Distribution Transformer Considering Core Design Using FEM
**Sh.Taheri, *A.Vahedi, *A.Gholami, **H.Taheri*
*Iran University of Science and Technology, IRAN
**Babol Industrial University, IRAN

1530-1550 Coffee break

1550-1605 **5A.7**
ANN-Based Detection of Broken Coils of Small Generator Stator with Two Parallel Branches in Phase
**Farhad Toorani, **Ahmad Darabi, *Iman Salabeigi*
*Amirkabir University of Technology, IRAN
**Shahrood University of Technology, IRAN

1605-1620 **5A.8**

Coilgun Energized by Commercial Power Supply
Y. Uehara, S. Furuya
Gunma University Faculty of Education, JAPAN

1620-1635 **5A.9**
Magnetic Levitation Control Based-on Neural Network and Feedback Error Learning Approach
**M.Aliasghary, **M. Aliyari Shoorehdeli, ***A.Jalilvand, **M. Teshnehlab*
*Istanbul Technical University, TURKEY
**K. N. Toosi University, IRAN
***Zanjan University, IRAN

1635-1650 **5A.10**
Performance Study of a Diagonal MHD Accelerator for Space Propulsion
**Sukarsan,* Makbul Anwari, **Nobuhiro Harada*
*Universiti Teknologi Malaysia, MALAYSIA
**Nagaoka University of Technology, JAPAN

Session 5B
Session Title : Power Electronic Converters 3
Session Chair : Dong-Choon Lee
Co-Chair : Naziha Ahmad Azli
Date : 3 December 2008, Wednesday
Time : 1400-1635
Venue : Hibiscus Seminar Room

1400-1415 **5B.1**
Self Commutation Soft Switched Bridgeless PFC without Any Extra Switch
M. Mahdavi, H. Farzanehfard
Isfahan University of Technology, IRAN

1415-1430 **5B.2**
Improvement in Ozone Generation with Low Voltage High Frequency Power Converters
**Mochammad Facta, **Zainal Salam, **Awang Jusoh, **Zolkafle Bin Buntat*
*Diponegoro University, INDONESIA
**Universiti Teknologi Malaysia, MALAYSIA

1430-1445 **5B.3**
A Low Ripple Voltage Multiplier for X-ray Power Supply
Shahid Iqbal, Rosli Besar, C.Venkataseshiah
Multimedia University, MALAYSIA

1445-1500 **5B.4**
A Novel Control Scheme for Voltage Multiplier Based X-ray Power Supply
Shahid Iqbal, Rosli Besar, C. Venkataseshaiah
Multimedia University, MALAYSIA

1500-1515 **5B.5**
Particle Swarm Optimization and Genetic Algorithm to Optimizing the Pole Placement Controller on Cuk Converter
M. R. Yousefi, S. A. Emami, S. Eshtehardiha, M. Bayati Poudeh
Islamic Azad University, IRAN

1515-1530 **5B.6**
A Novel Circuit of a Single-Switch Electronic Ballast with a Boost-type Resonant Converter Applied to HID Lamps
Masato H. Ohsato, Kouki Matsuse
Meiji University, JAPAN

1530-1550 Coffee break

1550-1605 **5B.7**
Hardware Construction of a 5 kW Inverter for AC Power Supply Applications
A. Jusoh , N. A. Azli, Z. Salam
Universiti Teknologi Malaysia, MALAYSIA

1605-1620 **5B.8**
The Effect of Different Winding Techniques on the Stray Capacitances of High Frequency Transformers Used in Flyback Converters
**Sina Emrani Saravi, *Abdolhossein Tahani, **Firuz Zare, *Reza Ahmadi Kordkheili*
*Noshirvani Institute of Technology, IRAN

**Queensland University of Technology, AUSTRALIA

1620-1635 **5B.9**

Experimental Evaluation of Three Phase Hybrid Buck Rectifier

Aziz, J.A, Nik Din Muhamad
Universiti Teknologi Malaysia, MALAYSIA

Session 5C
Session Title : Electrical Discharges and Breakdown
Session Chair : Hussein Ahmad
Co-Chair : M. Afendi M. Piah
Date : 3 December 2008, Wednesday
Time : 1400-1705
Venue : Acadia Seminar Room

1400-1415 **5C.1**
A Neuro-Fuzzy Approach for Estimation of Time-to-Flashover Characteristic of Polluted Insulators
M. Savaghebi, A. Gholami, A. Jalilian , H. Hooshyar
Iran University of Science and Technology, IRAN

1415-1430 **5C.2**
Computation of Lightning Flashovers & Backflashover Voltage Levels on 230KV Transmission Lines
M. H. Shwehdi
King Fahd University of Petroleum & Minerals, SAUDI ARABIA

1430-1445 **5C.3**
Backflashover Analysis For 132 kV Kuala Krai-Gua Musang Transmission Line
J. Sardi, M.Z.A Ab Kadir, W. F. Wan Ahmad, H. Hizam, I. Mohamed Rawi, A. Ahmad
Universiti Putra Malaysia, MALAYSIA

1445-1500 **5C.4**
Annealing of Metal Wire by Atmospheric Pressure Discharge Plasma
**Tsubasa Nakamura, **Chainarong Buttapeng, ***Seizo Furuya, ****Nobuhiro Harada*
*Oshima National College of Maritime Technology, JAPAN
**University of the Thai Chamber of Commerce, THAILAND
***Gunma University, JAPAN
****Nagaoka University of Technology, JAPAN

1500-1515 **5C.5**
Genetic Algorithm Application to Corona Inception Voltage Estimation of Various Gas Mixtures
E. Onal
Istanbul Technical University, TURKEY

1515-1530 **5C.6**
Development of Mathematical Equation for Determining Breakdown Voltage of Electrodes Gap
M.A.M. Piah, P.A. Ping, Z. Buntat
Universiti Teknologi Malaysia, MALAYSIA

1530-1550 Coffee break

1550-1605 **5C.7**
Identification of KEMA Arc Model Parameters in High Voltage Circuit Breaker by using of Genetic Algorithm
**Vahid rashtchi, **Abbass Lotfi, ***Ali mousavi*
*Zanjan University, IRAN
**Roozbeh Institute of Technology, IRAN
***Tehran University, IRAN

1605-1620 **5C.8**
Partial Discharge Characteristics of XLPE Cable Joint and Interfacial Phenomena with Artificial Defects
**Yanuar Z. Arief, *Hussein Ahmad, **Masayuki Hikita*
*University of Technology Malaysia, MALAYSIA

**Kyushu Institute of Technology, JAPAN

1620-1635 **5C.9**

The Proposed Humidity Correction Factor of Positive DC Breakdown Voltage of Sphere-Sphere Gap At h/δ Lower than 13 g/m^3

Surasak Phontusa, Supakit Chotigo
King Mongkut's University of Technology Thonburi, THAILAND

1635-1650 **5C.10**

Frequency Spectral Analysis of Electrical Partial Discharge Signals in XLPE Cable under Various Soil Conditions

**Yasmin H. Md Thayoob, **P.S. Ghosh, ***Ahmad Basri Abd Ghani*
*Universiti Tenaga Nasional, MALAYSIA
**RUP Consultant Plus Inc.(M) Sdn. Bhd., MALAYSIA
***TNB Research Sdn. Bhd., MALAYSIA

1650-1705 **5C.11**

Effect of Electrode Material on the Breakdown Voltage of SF_6-N_2 and SF_6-CO_2 Mixtures in a Weakly Non-Uniform Electric Field

H. Sharifpanah, A. Gholami, S. Jamali
Iran University of Science and Technology, IRAN

Session 5D
Session Title : Distributed Generation
Session Chair : Mahmud Fotuhi-Firuzabad
Co-Chair : Musse Mohamud Ahmed
Date : 3 December 2008, Wednesday
Time : 1400-1650
Venue : Daffodil Seminar Room

1400-1415 **5D.1**
Optimal Siting and Sizing of Distributed Generations in Radial and Networked Systems Considering Different Voltage Dependent Static Load Models
R. K. Singh, S. K. Goswami
Jadavpur Unversity, INDIA

1415-1430 **5D.2**
Combination of GA and OPF for Allocation and Active and Reactive Power Optimization in Distributed Generation Units
**M.Hosseini Aliabadi, **B.Behbahani, ***A.Jalilvand*
*Islamic Azad University (Abhar Branch), IRAN
**Amirkabir University of Technology, IRAN
***Zanjan University, IRAN

1430-1445 **5D.3**
Dynamic Simulation of Microturbine Distributed Generators integrated with Multi-Machines Power System Network
M. Z. C. Wanik, I. Erlich
University of Duisburg-Essen, GERMANY

1445-1500 **5D.4**
Reliability Assessment of Distribution System with Distributed Generation
Pedram Jahangiri, Mahmud Fotuhi–Firuzabad
Sharif University of Technology, IRAN

1500-1515 **5D.5**
Decentralized Voltage Control in Distribution System Using Neural Network
**Shohei Toma, *Tomonobu Senjyu, *Yoshitaka Miyazato, *Atsushi Yona, *Kennichi Tanaka, **Chul-Hwan Kim*
*University of the Ryukyus, JAPAN
**Sungkyunkwan University, KOREA

1515-1530 **5D.6**
Analysis of Three Phase Distribution Networks with Distributed Generation
**Syafii, **Khalid Mohamed Nor, ***Mamdouh Abdel-Akher*
*Andalas University, INDONESIA
**University of Technology Malaysia, MALAYSIA
***South Valley University, EGYPT

1530-1550 Coffee break

1550-1605 **5D.7**
DG Allocation Using an Analytical Method to Minimize Losses and to Improve Voltage Security
**P. Alemi, **G.B. Gharehpetian*
*Islamic Azad University, IRAN
**Amirkabir University of Technology, IRAN

1605-1620 **5D.8**

Impact of Wind Power Penetration on Transients and Dynamics of Micro-Grids Due to Wind Turbine Structures and Operation Constraints

S. Mostafa Hashemi-Toghroljerdi, Akbar Ebrahimi
Isfahan University of Technology, IRAN

1620-1635 **5D.9**

Optimal Allocation of DGs and RCSs to Improve Distribution Network Reliability and Network Energy Loss

A. F. Khoshbakht, M. Raoofat
Shiraz University, IRAN

1635-1650 **5D.10**

Gas Based Distributed Generation Systems, A Key To Iran Buildings Growing Energy Demand

R.Arghandeh Jouneghani, R.Parvizi, M.Amidpour, A.Chaibakhsh
K.N.Toosi University of Technology, IRAN

Session 5E

Session Title	**: Power System Planning and Reliability**
Session Chair	**: Azah Mohamed**
Co-Chair	**: Mohd Fauzi Othman**
Date	**: 3 December 2008, Wednesday**
Time	**: 1400-1650**
Venue	**: Jasmine Seminar Room**

1400-1415 **5E.1**
Customized Fault Management System for Low Distribution Automation System
M. M. Ahmed, W. L. Soo
Universiti Teknikal Malaysia Melaka, MALAYSIA

1415-1430 **5E.2**
Autoregressive in Short Term Load Forecast
Zuhairi Baharudin, Nidal Kamel
Universiti Teknologi PETRONAS, MALAYSIA

1430-1445 **5E.3**
Assessment of Power Composite System Annualized Reliability Indices Based on Improved Particle Swarm Optimization and Comparative Study Between the Behaviour of GA and PSO
Gholami, Mohamad Reza, Dr. Hoseini, Seied Hadi, Mohamad Taheri, Meisam
University of Zanjan, IRAN

1445-1500 **5E.4**
Newton-Raphson on Power Flow Algorithm and Broyden Method in the Distribution System
Hui Yang, Fushuan Wen, Liping Wang
South China University of Technology, CHINA

1500-1515 **5E.5**
Risk Based Static Security Assessment in a Practical Interconnected Power System
M. Marsadek, A. Mohamed, M. Nizam, Z. M. Norpiah
Universiti Kebangsaan Malaysia, MALAYSIA

1515-1530 **5E.6**
Effects of Inverter Modulation Index on the Stability of Grid Connected Micro-Turbines
**H. Kazemi Karegar, **A. Shabani*
*Shahid Beheshti University, IRAN
**Zanjan University, IRAN

1530-1550 Coffee break

1550-1605 **5E.7**
Newton-Downhill Algorithm for Distribution Power Flow Analysis
**Hui Yang, *Fushuan Wen, *Liping Wang, **S.N. Singh*
*South China University of Technology, CHINA
**Indian Institute of Technology Kanpur, INDIA

1605-1620 **5E.8**
New Method for Islanding Detection of Wind Turbines
**H. Kazemi Kargar, **J. Mirzaei*
*Shahid Beheshti University, IRAN

**Zanjan University, IRAN

1620-1635 **5E.9**
Power Line Carrier (PLC) Based Communication System for Distribution Automation System
M. M. Ahmed, W. L. Soo
Universiti Teknikal Malaysia Melaka, MALAYSIA

1635-1650 **5E.10**
Online Fault Detection for Power System using Wavelet and PNN
Mohd Fauzi Othman, Hudabiyah Arshad Amari
Universiti Teknologi Malaysia, MALAYSIA

Session 5F
Session Title : Transmission and Distribution
Session Chair : Khaled Ellithy
Co-Chair : Zulkurnain Abdul Malek
Date : 3 December 2008, Wednesday
Time : 1400-1635
Venue : Orchid Seminar Room

1400-1415 **5F.1**
Environmental Benefits Through New Distributed on Site Control Actions Inside European Apartments
D. La Cascia, R. Miceli
University of Palermo, ITALY

1415-1430 **5F.2**
Supervisory Control and Data Acquisition System (SCADA) Based Customized Remote Terminal Unit (RTU) for Distribution Automation System
M. M. Ahmed, W. L. Soo
Universiti Teknikal Malaysia Melaka, MALAYSIA

1430-1445 **5F.3**
A Simplified Approach in Estimating Technical Losses in Distribution Network Based on Load Profile and Feeder Characteristics
**Mau Teng Au , *Tashia M. Anthony , *Nurhafizah Kamaruddin, *Renugah Verayiah, *Sharifah A. Syed Mustaffa, **Marina Yusoff*
*Universiti Tenaga Nasional, MALAYSIA
**TNB Research, MALAYSIA

1445-1500 **5F.4**
Identification of Cross-Border Power Flows in Integrated Networks Based On the Principle of Superposition
Martin Wolter, Benjamin Hühnerbein
Leibniz Universität Hannover, GERMANY

1500-1515 **5F.5**
Load Sharing Characteristic of Single Phase PV Inverter Connected to Grid
**M. Imran Hamid, *Makbul Anwari, *Z. Salam, **Taufik*
*Universiti Teknologi Malaysia, MALAYSIA
**Cal Poly State University, USA

1515-1530 **5F.6**
Laboratory Testing on Overhead Line for Various Load Conditions
E. Sulaiman, M. Saufi, M. Zarafi, B.C. Kok
Universiti Tun Hussein Onn Malaysia, MALAYSIA

1530-1550 Coffee break

1550-1605 **5F.7**
Analysis and Simulation of Possible Bifurcation and Subharmonic Oscillation in Transformer Coupled TCR System.
A. Majzoob Ghadiri, M. Rostami, Ahamad Parvizi
Shahed University, IRAN

1605-1620 **5F.8**
An Experimental Study on Partial Discharge Characteristics of Polyvinyl Chloride (PVC) Under AC – DC Voltages

**Abdul Syakur, **Yanuar Z. Arief, **Zulkurnain A. Malek, **H Ahmad*
*Universitas Diponegoro, INDONESIA
**Universiti Teknologi Malaysia, MALAYSIA

1620-1635 **5F.9**
Voltage Stability Evaluation of Real Power Transmission System Using Singular Value Decomposition Technique
**K. Ellithy, *M. Shaheen, *M. Al-Athba, **A. Al-Subaie, **S. Al-Mohannadi, **S. Al-Okkah, **S. Abu-Eidah*
*Qatar University/Electrical Engineering, QATAR
**Qatar General Electricity and Water Cooperation, QATAR