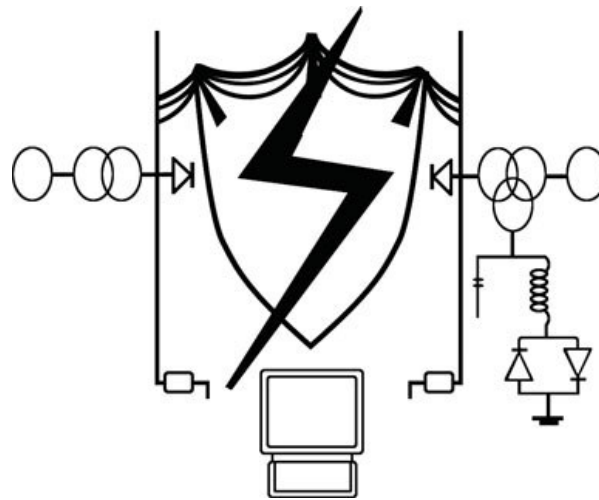




**THIRTEEN
INTERNATIONAL MIDDLE- EAST POWER
SYSTEMS CONFERENCE
MEPCON'2009**

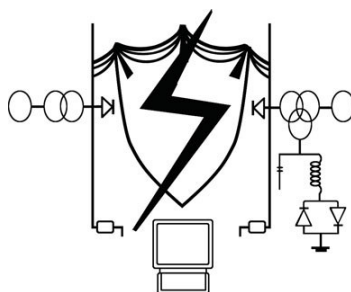


Organized by

**Electrical Engineering Department
Faculty of Engineering
Assiut University
Assiut, Egypt**

December 20-23, 2009

Conference Program



**THIRTEEN INTERNATIONAL MIDDLE- EAST POWER SYSTEM CONFERENCE
MEPCON'2009**

ASSIUT UNIVERSITY, ASSIUT, EGYPT, DECEMBER 20-23, 2009

Under the Auspices of

H. E. Dr. Hassan Ahmed Younes

Minister of Electricity and Energy
Egypt

H. E. Dr. Hany Helal

Minister of Higher Education & Scientific Research
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MEPCON'2009 FINAL PROGRAM

December 20-23, 2009, Assiut, Egypt

Sunday, December 20, 2009

08:00 am – 06:00 pm Arrival of Participants
06:00 pm – 08:00 pm Registration
08:00 pm – 10:00 pm Conference Reception

Monday, December 21, 2009

08:00 am – 09:00 am Registration
09:00 am – 10:30 am Opening Ceremony Main Hall
10:30 am – 11:00 am Coffee Break
11:00 am – 12:30 pm Invited Talk (I) Main Hall
12:30 pm – 02:30 pm Session 1.1 Electrical Machines and Drives (I) Room A
12:30 pm – 02:30 pm Session 1.2 Power Electronics (I) Room B
12:30 pm – 02:30 pm Session 1.3 Power System Distribution Room C
02:30 pm – 04:00 pm Lunch
04:00 pm – 06:00 pm Session 1.4 Power Systems Analysis (I) Room A
04:00 pm – 06:00 pm Session 1.5 Renewable Energy (I) Room B
04:00 pm – 06:00 pm Session 1.6 Computer Applications in Power Systems Room C

Tuesday, December 22, 2009

09:00 am – 10:00 am Invited Talk (II) Room A
10:00 am – 11:00 am Invited Talk (III) Room A
11:00 am – 11:30 am Coffee Break
11:30 am – 01:30 pm Session 2.1 Electrical Machines and Drives (II) Room A
11:30 am – 01:30 pm Session 2.2 Renewable Energy (II) Room B
11:30 am – 01:30 pm Session 2.3 Protection Systems Room C
01:30 pm – 03:00 pm Lunch
03:00 pm – 05:00 pm Session 2.4 Power Systems Analysis (II) Room A
03:00 pm – 05:00 pm Session 2.5 Power Electronics (II) Room B
03:00 pm – 05:00 pm Session 2.6 Flexible AC Transmission Systems Room C

Wednesday, December 23, 2009

09:00 am – 10:30 am Invited Talk (IV) Octal Hall
10:30 am – 11:00 am Coffee Break
11:00 am – 01:00 pm Session 3.1 Electrical Machines and Drives (III) Room A
11:00 am – 01:00 pm Session 3.2 High Voltage Engineering Room B
11:00 am – 01:00 pm Session 3.3 Power Systems Control Room C
01:00 pm – 01:30 pm Closing Ceremony
01:30 pm – Departure of Post Conference Tour Applicants to Luxor

Invited Talk (I)

Coordinator: Prof. Dr. M. Izzularab, Minoufiya University

Electrical Interconnection between Turkey and Europe: Problems and Solutions

Prof. Dr. H. Weber, University of Rostock, Germany

Session 1.1

Electrical Machines and Drives (I)

Chairman: Prof. Dr. A. Mohamedein Alexandria University
Co-Chairman: Prof. Dr. A-R. A. M. Makky Assiut University

- 1 Operation Characteristics of Variable Reluctance Motor Supplied with Bipolar Current
M. A. Shanab, M. M. Khater and A. H. Morsi, Minoufiya University, Egypt
- 2 Three-phase Induction Motor Control Using Single Switch
A. M. Dabroom, Yanbu industrial College, Saudi Arabia
- 3 A Hybrid Ant Colony Optimization Approach Based Local Search Scheme for Multiobjective Design Optimizations
Waiel F. Abd El-Wahed, A. A. Mousa and R. M. Rizk-Allah, Minoufiya University, Egypt
- 4 Vector Oriented Control of Voltage Source PWM Inverter for Wind Energy Conversion System Connected to Utility Grid
Mahmoud M. N. Amin and O. A. Mohammed, Florida International University, Miami, USA
- 5 Excitation Techniques for Permanent Magnet Brushless DC Motor Drive
Mohamed. A. Enany, Hamed. M. Elshewy, Zagazig University, Egypt and Fathy E. Abdel-kader, Minoufiya University, Egypt
- 6 DSP-Based Real-Time Control of a Two Phase Hybrid Stepper Motor
Mohamed S. Zaky, Ehab M. Ismail and Mahmoud M. Khater, Minoufiya University, Egypt
- 7 Analysis and Performance of Doubly-fed Induction Generator
M. Hamdi, I.S.E.T Gafsa, Tunis and Kh. Hasaneen, Benha University, Egypt
- 8 Stand-Alone Wind System with Battery Storage Using Induction Generator and Direct Torque Control
O. E. S. Mohammed, N. M. B. Abdel-Rahim, Benha University, Egypt and A. A. Shaltout, Cairo University, Egypt
- 9 Voltage and Frequency Control of Self Excited Slip Ring Induction Generator Driven by Wind Turbine
A. A. Shaltout, T. M. Abdo, M. M. Halouda, Cairo University, Egypt and A. H. Besheer, Tabuk University, Saudi Arabia

Session 1.2

Power Electronics (I)

Chairman: Prof. Dr. M. A.-R. Badr **Ain-Shams University**
Co-Chairman: Prof. Dr. A. Abdelsattar **Ain-Shams University**

- 1 Control of DC Drive Using AC/DC Fly-back Converter
A. M. Dabroom, Yanbu Industrial College, Saudi Arabia
- 2 A Transformer-less Uninterruptible Power Supply
Ibrahim Abdallah, Arab Academy for Science, Technology & Maritime Transport, Cairo,
Mostafa I. Marei, Ain-Shams University and Hamdy Ashour, Arab Academy for Science,
Technology & Maritime Transport, Alexandria, Egypt
- 3 A Fuel Cell Interface System Based on a High Frequency Link
Mostafa I. Marei, Ayman R. Sadek, and Ahmed A. Abdel-Sattar, Ain-Shams University,
Egypt
- 4 Simplified Sensorless-Based Sliding Mode Observer of the Switched
Reluctance Motor
H. Abdel-Maksoud, M. M. Khater, and A. M. Oshieba, Minoufiya University, Egypt
- 5 Enhancement of Voltage & Current Waveforms using Harmonic Filters
Labib Daloub, University of West Mountain, Libya, Rajeb Ibsaim, University of 7th April,
Libya and Ali Yousef, University of Asuiut, Egypt
- 6 Comparative Evaluation of PID Voltage Mode, PI Current Mode, Fuzzy and
PWM Based Sliding Mode Control for DC-DC Converters
Omar Ellabban and Joeri Van Mierlo, Vrije Universiteit Brussel, Belgium
- 7 Mixing Wavelet Transform and Self-Organizing Mapping Network for
Mitigating Load Capacitor Switching
Ahmed M. Shalaby, Alexandria University, Egypt and Shady A. El-Kashlan, Arab Academy
For Science & Technology (AAST), Alexandria, Egypt

Session 1.3

Power Systems Distribution

Chairman: Prof. Dr. R. Radwan **Cairo University**
Co-Chairman: Prof. Dr. I. Elshaer **Ain-Shams University**

- 1 Distribution Feeder Trippings & Load Thrown off due to Delayed Voltage Recovery
Hisham Omara Ontario, Accenture, District Hastings, USA and Mohamed Nagib Omara, Load Dispatch Center, Oman Electricity Transmission Company, Oman
- 2 Study the Effect of Different Installation Methods on Voltage Drop and Sheath Current of Single-Core Cables
Hassan H. EL-Tamaly, Mohamed A. EL-Aziz A. EL-Rahman, Minia University, Egypt
- 3 A Simplified Model for Ferroresonance Phenomenon in Single Phase Power Transformers
M. Abdel-Salam, A. S. Abdallah, A. Ahmed and R. M. Al-Bouthigy, Assiut University, Egypt
- 4 Fault Diagnosis Method for Distribution System Based on Rough Set Theory and Decision Network
Hossam A. Nabwey, Minoufiya University, Egypt, E. A. Rady, Cairo University, Egypt, A.M. Kozae, Tanta University, Egypt and H. A. Omar, Minoufiya University, Egypt
- 5 Impact of Distributed Generation Modeling on Load Flow, Electric losses and Voltage Profile of Distribution Systems
A.F. Naiem, Y. Hegazy, A.Y. Abdelaziz and M.A. Elsharkawy, Ain-Shams University, Egypt
- 6 A Novel Method for Performing Short Circuit Analysis of Unbalanced Distribution Networks Using Symmetrical Sequence Networks
Mamdouh Abdel-Akher, South Valley University, Egypt and Khalid Mohamed Nor, Universiti Teknologi, Malaysia
- 7 Advantages and Challenges Posed by On-line PD Measurements in Condition Monitoring of Overhead Distribution Networks
G. Murtaza Hashmi, Matti Lehtonen, Helsinki University of Technology, Finland, Mikael Nordman, Ensto Utilities Networks Oy, Finland and Muzamir Isa, Helsinki University of Technology, Finland
- 8 Estimating Upper Confidence Bounds of Electric Power Consumption
Magnus Perninge, Valerijs Kankins, Mikael Amelin and Lennart Soder, Royal Institute of Technology, Stockholm, Sweden
- 9 Improving Power Distribution System Performance by DG Systems Utilization
Yaser. S. Qudaih and T. Hiyama, Kumamoto University, Japan

Session 1.4 Power Systems Analysis (I)

Chairman: Prof. Dr. M. El-Metwally Cairo University
Co-Chairman: Prof. Dr. M. Elsharkawy Ain-Shams University

- 1 Modeling and Computer Simulation of Fault Calculations for Transmission Lines
Adel A. Elbaset, Minia University, Egypt
- 2 Supplemental Control of Voltage Sourced Converter-Based Back-to-Back for Damping Subsynchronous Resonance
S. O. Faried, University of Saskatchewan, Canada, G. Tang, Magna Electric, Saskatoon, Canada, A. Edris, Siemens Energy, San Jose and S. Al-Amr, Technical Vocational and Training Corporation, Saudi Arabia
- 3 Linear HVDC Modeling for Small Signal Stability Studies
Robert Eriksson, Valerijs Knazkins and Lennart Söder, Royal Institute of Technology (KTH), Stockholm, Sweden.
- 4 On-Line Optimal Power Flow Using Evolutionary Programming Techniques
M. M. El Metwally, A. A. El Emary, F. M. El Bendary and M. I. Mosaad, Cairo University, Egypt.
- 5 Ant Colony Optimization Algorithm Based Modified Simplex Method for solving Economic Emission Load Dispatch Problem
Waeil F. Abd El-Wahed, Minoufiya University, Egypt, A. A. Mousa, Minoufiya University, Egypt, M.A.Elsisy, Benha University, Egypt
- 6 Hybrid Particle Swarm Optimization based Local Search for Reactive Power Compensation
W. F. Abd-El-Wahed, A. M. N. Abady, A. A. Mousa and M.A.El-Shorbagy, Minoufiya University, Egypt
- 7 Multiple Saliency Extraction using Discrete Fourier Transform and Advanced Signal Processing
M. K. Metwally and T. M. Wolbank, Vienna University of Technology, Austria
- 8 Analytical and Graphical Tool to Analyse Unbalanced Five-Phase Supply System
SK. Moin Ahmed, Abu Rub Haitham, Saifullah Payami and Atif Iqbal, Texas A&M University at Qatar, Doha, Qatar
- 9 Emission Constrained Economic Power Dispatch using Differential Evolution Algorithm
A. A. Abou EL Ela, Minoufiya University, Egypt, M. A. Abido, King Fahd University of Petroleum and Minerals, Saudi Arabia and S. R. Spea, Minoufiya University, Egypt

Session 1.5

Renewable Energy (I)

Chairman: Prof. Dr. G. Osman **Mansoura University**
Co-Chairman: Prof. Dr. R. Abdelhamid **Helwan University**

- 1 Wind Generators Dynamic Performance with Symmetrical and Unsymmetrical Faults
Maged Fathy Mostafa, SHAKER Consultancy Group, Egypt and Adel A. Shaltout, Cairo University, Egypt
- 2 Detailed Modeling and Control of DFIG Units for Large Wind Farms Using MATLAB
Tamer A. Kawady, Naema M. Mansour, Abdel-Maksoud I. Taalab and Ali M. Osheiba, Minoufiya University, Egypt
- 3 Characteristics of Fixed Speed Wind Turbines Interconnected Grid during Wind Speed Variations
Omar Noureldeen, South Valley University, Egypt
- 4 Computer-aided Design and Control Strategy of PV/FC Hybrid Power System
Adel A. Elbaset, Minia University, Egypt, Takashi Hiyama, Kumamoto University, Japan and Friedhelm Gehrman, Steinbeis University, Germany
- 5 A New Technique for Photovoltaic Module Performance Mathematical Model
A. Elkholy, F. H. Fahmy, Electronics Research Institute, Egypt and A. A. Abou El_Ela, Minoufiya University, Egypt
- 6 Enhancement of Fuel Cell Performance by Super Capacitor
Gamal M. Hashem and Hussein M. Mashaly, Ain-Sham University, Egypt
- 7 Analysis of Magnetic Flux Lines under Long and Short Flux Path Excitation for Switched Reluctance Motors
A. E. Kalas, Suez Canal University, Egypt
- 8 PV Scheme Dynamic Load-Source Matching Controller Using Dynamic Filter Compensator
Mohamed A. El-Sayed and Adel M. Sharaf, Centre of Energy Studies, University of Trinidad and Tobago
- 9 Performance Analysis of Direct Coupled Photovoltaic-Water Pumping Systems
I. I. I. Mansy, S. S. Kaddah, Mansoura University, Egypt and Kh. S. Al-Rasheed, Public Authority for Applied Education and Training, Kuwait

Session 1.6

Computer Applications in Power Systems

Chairman: Prof. Dr. M. Hassan Mansoura University
Co-Chairman: Prof. Dr. G. El-Saady Assiut University

- 1 Dynamic Model of Unit 1 of Ataturk Hydro Power Plant in Turkey
Ibrahim A. Nassar and Harald Weber, University of Rostock, Germany
- 2 Frequency Response Analysis using High Frequency Transformer Model
A. Abu-Siada, S. Douglas and S. Islam, Curtin University of Technology, Australia
- 3 Indices of Supply: Benchmarking EDCs in Egypt
Kamelia Youssef, Hafez El-Salmawy, Shereen AbdAllah, Mohamed Gamea and Safa Samy, Egyptian Electric Utility and Protection Regularity Agency, Egypt
- 4 Experimental Investigation for Digital Power Transformer Fault Detection Based on positive Sequence Admittance Approach
M. Eissa, E. H. Shehab-Eldin, M. E. Masoud and A. S. Abd-Elatif, Helwan University, Egypt
- 5 Study of Electromagnetic Interference from Power Lines on Near by Pipeline and its Mitigation
Ahmed A .Hossam-Eldin and Wael Mokhtar, Alexandria University, Egypt
- 6 Examining the IEC 61850 Communication Based Application for Directional Overcurrent Relay Coordination in Looped Distribution Systems
Walid El-Khattam, Ain-Shams University, Egypt and Tarlochan S. Sidhu, University of Western Ontario, ON, Canada
- 7 Measurement and Analysis of Magnetic Fields in MV/LV Distribution Substation in Egypt
Ahmed A. Hossam-Eldin, Alexandria University, Egypt, Ibrahim Madi and Hanaa. M. Karawia, Alexandria Electrical Distribution Company (AEDC), Egypt
- 8 Dynamic Performance Enhancement of Phasor Measurement Unit
A. Ouadi, H. Bentarzi, S. Boutora, A Signals and Systems Laboratory, Algeria and J. C. Maun, Beams, ULB, Bruxelles, Belgium
- 9 Joint Resistance of Bolted Copper Bus-Bar Connections as influenced by Mechanical Contact Devices Material and Configuration.
Ghareeb Moustafa, Steffen Grossmann, TU Dresden, Germany, Mazen Abdel-Salam, Assiut University, Egypt, S. S. Dessouky and Samir M. El-Makkawy, Suez Canal University, Egypt
- 10 Modeling and Analysis of A New Amorphous Core Transformer Circuits
Mostafa Darwish, University of Wales Newport, UK

Tuesday, December 22, 2009

9:00 am - 10:00 am

Room A

Invited Talk (II)

Coordinator: Prof. Dr. H. Anis, Cairo University

Grid – Integrated Utility – Scale Solar Power Plants

Prof. Dr. G. Osman, Mansoura University, Egypt

Tuesday, December 22, 2009

10:00 am - 11:00 am

Room A

Invited Talk (III)

Coordinator: Prof. Dr. A. A. Ibrahim, South Valley University

Electric Power Quality Overview

Prof. Dr. M. Hassan, Mansoura University, Egypt

Session 2.1

Electrical Machines and Drives (II)

Chairman: Prof. Dr. N. H. Fetih Assiut University
Co-Chairman: Prof. Dr. M. El-Shanawany Minoufiya University

- 1 Optimal Zonal Incremental Self Regulating Controller for Industrial PMDC Motor Drive Systems
Adel M. Sharaf and Adel A. A. El-Gammal, Centre for Energy Studies, University of Trinidad and Tobago UTT
- 2 Robust Speed Control of Permanent Magnet Synchronous Motor Drives
Mohamed S. Zaky, Minoufiya University, Egypt
- 3 Model Predictive Speed Control of a Field Oriented Linear Induction Motor Drive
A. A. Hassan, Yehia S. Mohamed, Minia University, Egypt and Tarek H. Mohamed, Higher Institute of Energy, Aswan, Egypt
- 4 Sliding Mode Control of a Linear Induction Motor Drive
A. A. Hassan, Yehia S. Mohamed and Tarek H. Mohamed, Minia University, Egypt
- 5 Real-time modeling of synchronous generator based on PC
S. Helmy, Amged S. El-Wakeel, MTC, Egypt, M. Abdel Rahman and M. A. Badr, Ain-Shams University, Egypt
- 6 Developed Operation of Switched Reluctance Motor by Advancing the Switching ON Angle
Mahmoud M. Elkholy, Hamid M. Elshwey, Afaf F. Abdel-kader, Zagazig University, Egypt
- 7 Maximum Efficiency Operation of Three Phase Induction Motor Fed From Variable Frequency Single Phase Supply
S. E. Kandil and Mahmoud M. ELKholy, Zagazig University, Egypt
- 8 Dynamic Analysis of a BDFIM with a Simple-proposed Modification in the Cage-Rotor
S. M. Allam, A. M. Azmy, M. A. El-Khazendar, Tanta University, Egypt and A. L. Mohamadein, Alexandria University, Egypt
- 9 Fault Tolerant Control of Three Phase Induction Motor Drive System with Current Regulation Technique
Farouk M. Abdel-Kader, Suez Canal University, Egypt, Elwy E. El-kholy, Minoufiya University, Egypt, A. EL-Saadawi, A. E. Kalas and M.Fawzi, Suez Canal University, Egypt
- 10 A Modified DTC Algorithm for Fault Tolerant Three Phase Induction Motor Drive System
Farouk M. Abdel-Kader, Suez Canal University, Egypt, Elwy E. El-kholy, Minoufiya University, Egypt, A. EL-Saadawi, A. E. Kalas and M.Fawzi, Suez Canal University, Egypt

Session 2.2

Renewable Energy (II)

Chairman: Prof. Dr. M. M. Farghally Assiut University
Co-Chairman: Prof. Dr. H. El-Tamely Minia University

- 1 Energy Supply Characteristic of the Solar Cell and Diesel Engine Combined System with a Prediction Algorithm of Solar Power Generation
Shin'ya OBARA and Abeer Galal El-Sayed Saad, Kitami Institute of Technology, Japan
- 2 Robust MPPT Control Design and Dynamic Performance of a PV-Generator Powered DC Motor-Pump System
Ahmed M. Kassem, Bini-Swief University, Egypt, Ali M. Yousef, Assiut University, Egypt
- 3 Control of Single-Phase Voltage-Source Utility Interactive Systems for Photovoltaic Applications
Naser M. B. Abdel-Rahim, Benha University, Egypt
- 4 Optimization of Hybrid Renewable Energy Systems Powered Reverse Osmosis Desalination Plants
A. A. Hossam-Eldin, A. El-Nashar and A. Ismaiel, Alexandria University, Egypt
- 5 Low Voltage Ride Through Characterization of Single Wind Turbines
Ahmed Samir Awad, Mohamed Abd El Rahman and Mohamed Abd El Latif Badr, Ain-Shams University, Egypt
- 6 Model Predictive Control of a Wind Driven Induction Generator Connected to the Utility Grid
A. A. Hassan, Minia University and Egypt, Ahmed M. Kassem, Bini-Swief University, Egypt
- 7 Modeling and Simulation of a Single Phase Grid Connected Photovoltaic System
Amal A. Hassan, Faten H. Fahmy, Abd El-Shafy A. Nafeh, Electronics Research Institute, Egypt and Mohamed A. El-Sayed, Centre of Energy Studies, University of Trinidad & Tobago
- 8 Thermal Model of Photovoltaic Systems and Temperature Impact on Electrical Parameters
A. Tofighi, M. Kalantar, Iran University of Science and Technology, Iran
- 9 MATLAB-Simulink Model of an Isolated Wind Turbine Induction Generator
S. M. Sharaf, Helwan University, Egypt, A. E. Kalas and M. H. Elfar, Suez Canal University, Egypt

Session 2.3

Protection Systems

Chairman: Prof. Dr. I. Megahid **Alexandria University**
Co-Chairman: Prof. Dr. A. Sayed **Assiut University**

- 1 A Novel Algorithm for Enhancement of Security and Reliability of Power Transformer Protection
A. A. Hossam-Eldin and M. A. Refaey, Alexandria University, Egypt
- 2 A Centralized Fault Diagnosis System for Power Station and Transmission System Based on Fuzzy Relations
Wael M. Soliman, High Dam Power Station, Egypt, Bahaa El-din H. Soudy, Egypt Elec. Trans. Co. (EETC), Egypt, Mohamed A. A. Wahab, Minia University, Egypt and M. M. Mansour, Ain-Shams University, Egypt
- 3 Dynamic Behavior of Arcing Faults in Low Voltage Distribution Networks
Tamer A. Kawady, Abdel-Maksoud I. Taalab, and Mohamed El-Geziry, Minoufiya University, Egypt
- 4 Implementation of Real Time Gabor Transform Coefficients Extraction for Power System Protection Applications
Ayman E. Ibrahim, Ministry of Water Resources & Irrigation Egypt, Tamer A. Kawady, Abdel-Maksoud I. Taalab, Minoufiya University, Egypt
- 5 Investigation of Fault Location Techniques for Underground Power Distribution Networks
Tamer A. Kawady, Abdel-Maksoud I. Taalab and Mahmoud A. El-Sad, Minoufiya University, Egypt
- 6 Novel UHS Distance Protection for EHV Three Terminals Transmission Lines
Dina Mourad, S. Mossa, E. H. Shehab-Eldin and M. E. Masoud, Helwan University, Egypt
- 7 Adaptive Protection for Distribution Systems with Multiple Distributed Generations
A.I. Megahed, Alexandria University, Egypt
- 8 Advanced Technique for Protecting Generator Stator Windings
Said Araby, Egyptian Electrical Holding Company, Egypt, Wael M. F., Helwan University, Egypt, M. G. Hamed, Egyptian Electrical Holding Company, Egypt and E. H. Shehab-Eldin, Helwan University, Egypt

Session 2.4
Power Systems Analysis (II)

Chairman: Prof. Dr. A. Abou El-Ela **Minoufiya University**
Co-Chairman: Prof. Dr. S. O. Faried **University of Saskatchewan**

- 1 Effects of Voltage Sags on the Process Continuity of a Refinery with Induction Motors Loads
M. A. ElGammal, A. Y. Abou-Ghazala, Alexandria University, Egypt and T. I. ElShennawy, Alexandria National Refining and Petrochemical Co., (ANRPC), Egypt.
- 2 Transmission Line Shunt Faults Detection and Classification using Support Vector Machine
A.Y. Abdelaziz, S. F. Mekhamer, A. M. Ibrahim and M. Ramadan, Ain-Shams University, Egypt
- 3 Rural Distribution System Planning Using Genetic Algorithm
A. El-Zein and E. Safie El-Din, Zagazig University, Egypt
- 4 Multi-Core Parallel Programming for Fast-Decoupled Load Flow in Contingency Analysis
Syafii, Universiti Teknologi Malaysia, Malaysia, Mamdouh Abdel-Akher, South Valley University, Egypt and Khalid Mohamed Nor, Universiti Teknologi Malaysia, Malaysia
- 5 Calculation and Analysis of Electric Power Losses in Unbalanced Distribution Systems
Karar Mahmoud and Mamdouh Abdel-Akher, South Valley University, Egypt
- 6 Ascribing Network Flows to Bilateral Transactions
Mohamed Shaaban, Suez Canal University, Egypt
- 7 Short Circuit Analyzes Of Power System Of PETKIM Petrochemical Aliaga Complex
Aykut Can Serrican, Areva T & D Enerji Endustrisi AS, Turkey, Aydogan Ozdemir and Adnan Kaypmaz, Istanbul Technical University, Turkey
- 8 Experimental Verification of Wavelet Based Discrimination Between Fault Current and Inrush Current in Power Transformers
J. A. Erief, Ministry of Education, Egypt, M. Abdel-Hamid, A. S. Attia and M. A. Badr, Ain-shams University, Egypt
- 9 Signature Identification of Switching Transients in Power Systems
Mansour A. Mohamed, Al-Jouf University, Al-Jouf , Saudi Arabia.

Session 2.5

Power Electronics (II)

Chairman: Prof. Dr. S. Abdellatif **Minoufiya University**
Co-Chairman: Prof. Dr. A. Abdeltawab **Minia University**

- 1 **Brushless DC Motor Performance Improvement through Switch-off Angle Control**
Mohamed A. Enany, Hamed M. Elshewy, Zagazig University, Egypt and Fathy E. Abdelkader, Minoufiya University, Egypt
- 2 **Power Quality Analysis of a Network of Adjustable Speed Drives**
M. Anwari, A. N. L. Chung and M. Imran Hamid, Universiti Teknologi Malaysia, Malaysia
- 3 **Ultra-Small, PWM Controlled DC-DC Converter for Battery-Powered Applications**
Yasser Nour, Shimaa F. Nagar, and Mohamed Orabi, South Valley University, Egypt
- 4 **Modulation Strategy for Cascaded Multilevel Converter for 11kV Power Distribution System**
Mohamed Rashed, Christian Klumpner and Greg Asher, University of Nottingham, University Park, Nottingham
- 5 **Robust State Control with Preview for a Multifunction Shunt Active Power Filter**
Osama S. Ebrahim, Ain-Shams University, Egypt
- 6 **RMS, DC, and peak currents for high power single-phase AC/DC rectifier at different input power factor with PWM, quasi-square and square wave operation modes**
Ahmed A. Abdelhafez and Farid N. Abdelbar, Assiut University, Egypt
- 7 **Simple Controller for Boost Converter for Fuel Cell Applications**
M. S. S. Taha, M. B. Abdel-Rahim, O. A. Mahgoub

Session 2.6
Flexible AC Transmission Systems

Chairman: Prof. Dr. M. Tantawy **Mansoura University**
Co-Chairman: Prof. Dr. M. Taalab **Minoufiya University**

- 1 Analysis of Hybrid Feedback Signals for SVC-based Stabilizers to Enhance Power Systems Dynamic Stability
T. Fetouh, M. A. Abido and A. A. Abou El-Ela, Minoufiya University, Egypt
- 2 Newton-Raphson SVC Model for Power Flow Solution with Different Types of Load Models
Abdel-Moamen M. A., South Valley University, Egypt
- 3 Combined SVC and SSSC Controllers for Power System Transient Stability Improvement
G. Shabib, Y. A. Mobarak, High Institute of Energy, Aswan, Egypt and M. H. El-Ahmar, Ministry of Electricity-Energy, Electric Transmission Co., Egypt
- 4 Static VAR Compensator Design for Power System Stabilization Using Bacteria Foraging Optimization Algorithm
E. Salim Ali, Zagazig University, Egypt
- 5 Hopf Bifurcation Improvement by STATCOM Controller Employing Genetic Algorithm Approach
M. E. Mandour and S. M. Abd-Elazim, Zagazig University, Egypt
- 6 A New Approach for the Improvement of Synchronous Generators' Reactive Power Sharing Using STATCOM in Power Plant
Ebrahim A. Badran, Mansoura University, Egypt
- 7 Stability Analysis of a Unified Power Flow Controller
Omar H. Abdalla, Helwan University, Egypt, Mohammed A. E. Ghazy, October University of Modern Sciences & Arts, Egypt and Nermeen A. M. Hassan, Helwan University, Egypt

Wednesday, December 23, 2009 9:00 am - 10:30 am Octal Hall

Invited Talk (IV)

Coordinator: Prof. Dr. A. Hossam-Eldin, Alexandria University

Recent HV Electrostatic Technologies for Environmental Applications

Prof. Dr. A. Mizuno, Toyohashi University of Technology, Japan

Session 3.1
Electrical Machines and Drives (III)

Chairman: Prof. Dr. M. A. – R. Badr Ain-Shams University
Co-Chairman: Prof. Dr. Sh. Saad Minoufiya University

- 1 Investigation of Induction Motor Performance under Various Current Controllers
F. M. Abel Kader, Suez Canal University, Egypt, Elwy E. Elkholy, Minoufiya University, Egypt,
Ahmed E. Kalas and M. El-shahat Dessouki, Suez Canal University, Egypt
- 2 Improving the Dynamic Performance of Brushless Doubly Fed Induction
Generator Driven by Vector Control with Variable Gain
Sayed O. Madbouly, Hussein F. Soliman, Hany M. Hasanien and M. A. Badr, Ain- Shams
University, Egypt
- 3 Control of a Movable Robot Using PLC
Arafa S. Mohamed, Mohamed S. Zaky, Ashraf S. Zein El Din and Hussain A. Yasin, Minoufiya
University, Egypt
- 4 New Variable Band Hysteresis PWM Current Controlled VSI Fed Induction
Motor for Controlling Switching Frequency Variation
F. M. Abel Kader, Suez Canal University, Egypt, Elwy E. Elkholy, Minoufiya University, Egypt,
Ahmed E. Kalas and M. El-shahat Dessouki, Suez Canal University, Egypt
- 5 Halbach Array Linear Motor Actuator for the Total Artificial Heart
A. E. ElGebaly, M. El-Nemr and M. A. El-Khazendar, Tanta University, Egypt
- 6 Transient Model of Eccentric Reluctance Rotor of Brushless Doubly Fed Machine
A. Abdel-Khalik, M. I. Masoud, R. R. Hamdy, A. L. Mohamadein, and M. Magdy, Alexandria
University, Egypt
- 7 Split Capacitors Inverter for Bipolar Excitation of a Switched Reluctance Motor
M. A. El-Khazendar, Tanta University, Egypt, A. E. Kalas, F. M. Abd El-Kader, Suez Canal
University, Egypt and Yasser A. Hawwas, Tanta University, Egypt
- 8 Speed Control of Separately Excited DC Motor by a Neural Network NARMA-
L2 Method
H. A. Mohammed and S. Rowihal Omer, Al-Muktar University, Libya

Session 3.2

High Voltage Engineering

Chairman: Prof. Dr. A.- R. Nosier Ain-Shams University
Co-Chairman: Prof. Dr. A. Hossam -Eldin Alexandria University

- 1 Improved Optimization of The Charge Simulation Method for Sphere-plane Gaps Using Genetic Algorithms
Mohamed M. Abouelsaad, Reda E. Morsi and Abd-Elhadi R. Salama, Benha University, Egypt
- 2 Influence of Water Conductivity on Microplasma Intensity and Carbon Nanotube Solubilization
K. Usama, Cairo University, Egypt, W. Sun, K. Imasaka, J. Suehiro, Kyushu University, Japan and O. Gouda, Cairo University, Egypt
- 3 Preparation of Water-Soluble Carbon Nanotubes Using Ozone Treatment
K. Usama, Cairo University, Egypt, W. Sun, K. Imasaka, J. Suehiro, Kyushu University, Japan and O. Gouda, Cairo University, Egypt
- 4 Dynamic Arc Modeling of Pollution Flashover Process on HV Insulators Under AC Voltage
El-Sayed M. M. El-Refaie, Mohamed T. El-Noaman and Mustafa Kh. Mohamed, Helwan University, Egypt
- 5 Comparative Characterization of Power Lines Based on Risk of Magnetic Fields
Ayman Aboud, Fayoum University, Egypt and Hussein Anis, Cairo University, Egypt
- 6 Internal Discharge in Cavities in Solid Dielectric Materials
A. A. Hossam-Eldin, Alexandria University, Egypt, S. S. Dessouky, S. M. El-Mekkawy and R. A. Abd El-Aal, Suez Canal University, Egypt
- 7 Modeling and Simulation of Electrostatic Precipitators Under High Voltage DC
Ahamed A. Hossam-Eldin and Mohammed A. Ebeed, Alexandria University, Egypt
- 8 A Comparative Study on The Effect of Fertilizer Pollution on The Performance of Polymeric and Semiconducting Glaze Insulators
M. M. Awad, A. Hal, Bahaa A. Arafa, Egyptian Electricity Holding Company, Egypt, and A. Nosseir, Ain-Shams University, Egypt
- 9 Evaluation of RTV Silicone Rubber Coatings of Different Thicknesses and Pollution Levels under Clean Fog Conditions
Amr M. Abd-Elhady and Mohammed A. Izzularab, Menoufia University, Egypt
- 10 Characteristics of Tall-Structure Lightning Electromagnetic Pulse
Ali M. Hussein and Mariusz Milewski, Ryerson University, Toronto, Canada

Session 3.3

Power Systems Control

Chairman: Prof. Dr. M. S. Kandeel Mansoura University
Co-Chairman: Prof. Dr. A. Bahgat Cairo University

- 1 Improvement of Micro-Grid Dynamic Performance during Islanding Mode Using Fuzzy Logic Controller
Rashad M. Kamel, Tokyo University of Agriculture and Technology, Japan, Mahmoud Mahrous, Assuit University, Egypt, Aymen Chaouachi and Ken Nagasaka, Tokyo University of Agriculture and Technology, Japan
- 2 New Fuzzy-Based Approach for Optimal Allocation and Sizing of Capacitor Banks
Mohamed M. Hamada, Mohamed A. A. Wahab, Abou-Hashema M. El-Sayed and Husam A. Ramadan, Minia University, Egypt
- 3 Voltage Control Coordination in Distribution Systems Using Fuzzy Sets and Resilient Simulated Annealing
A. Elmitwally, A. Abdelmageid and I. Tawfeik. Mansoura university, Egypt
- 4 A Neuro-Fuzzy Application for Load Shedding in Power Systems
Ahmed M. A. Haidar, University Malaysia Pahang (UMP), Malaysia, Fathy Mabrouk, Alexandria University, Egypt, Norazila Jaalam, University Malaysia Pahang (UMP), Malaysia and Ahmed A. Bahashwan, Alexandria University, Egypt
- 5 Robust Stabilizer Based on Mixed H Infinity and PID Controller for Interconnected Power System
G. El-Saady, Ali M. Yousef, Assiut University, Egypt, and Ahmed M. Kassem, Bini-Swief University, Egypt
- 6 Enhancement of Multi-machine Power System Performance Using Resistive Superconducting Fault Current Limiter
M. M. A. Mohamed and M. A. Gaafar, South Valley University, Egypt
- 7 Unit commitment with Wind Energy Sources Consideration using a Two-Stage Genetic Based Technique
A. Safie Eldin, Egyptian Electricity Transmission Company, Cairo, Egypt , M. A. H. El-Sayed, Centre of Energy Studies, University of Trinidad and Tobago and Hosam K. M. Youssef, Cairo University, Egypt
- 8 Improving the Transient Frequency Response of Unintentional Islands via Optimal Control
A. Yakout, O. Anaya-Lara and G. Burt, University of Strathclyde, Glasgow, UK