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Editors

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FOREWORD

Ladies and Gentlemen,

I would like to welcome all participants to **The 2013 7th IEEE International Power Engineering and Optimization Conference (PEOCO 2013)**. I am very glad to know that this conference has received overwhelming response from delegates of several continents. I hope this conference will provide a platform to share the knowledge and disseminate research findings among the delegates. PEOCO has been established in the IEEE Malaysia, Power and Energy (PES) Chapter calendar as a yearly event. You may find that the proceedings of previous PEOCO Conference Series have been published in IEEE Xplore and indexed in Scopus. It allows broader citation to our publications and may increase our H-Index; which may be beneficial to all of us.

I was also made to understand that PEOCO2013 received hundreds of international reviewers participations which have ensured the standing of the accepted papers. In this regard, I would like to express my appreciation and gratitude to all the international reviewers for providing technical review and expertise to PEOCO 2013. On behalf of the IEEE Malaysia PES Chapter, I would like to extend my deep appreciation and gratitude to the organizing committee for their success in organizing this conference for seven consecutive years. To all delegates and participants, I wish you a fruitful discussion and enjoyable stay in Langkawi, The Beautiful Malaysia.

Thank you.

Prof. Dr. Mohd. Zainal Abidin Ab. Kadir
Chair
IEEE Malaysia, PES Chapter

MESSAGE FROM THE CONFERENCE CHAIR

Assalamualaikum and Good Day.

I am honoured to welcome all delegates to the 2013 IEEE 7th International Power Engineering and Optimization Conference (PEOCO2013). Welcome to Langkawi, the Beautiful and Historic Island. This time, PEOCO is held at Langkawi Island from 3 to 4 June 2013 at The Bayview Hotel, Langkawi. sponsored by the IEEE Malaysia, Power and Energy Chapter (PES).

The occasion creates a forum for scientists, engineers, researchers and practitioners on the varied spectrum in Power Engineering and Optimization Techniques. We have received approximately 266 papers submissions from 25 countries for the event. In making sure that all accepted papers are of international standing, hundreds of international reviewers worldwide have volunteered to review the papers; which eventually only 145 papers are to be presented within 3 parallel technical sessions in 15 tracks. We will also have 2 distinguished keynote speakers in this event.

Knowing that Langkawi is a historic island, delegates are free to arrange their personal excursion as there are various activities around. PEOCO2013 allows an opportunity for old friends and colleagues to get together, and more importantly, to welcome new peers in broad areas of expertise.

On behalf of the organizing committee I would like to take this opportunity to express our gratitude to all international reviewers who have been working hard in ensuring that all accepted papers are of international standing. We would like to thank all authors, session chairpersons, international reviewers, delegates and sponsors for your great support and contribution to make this event a success. To the organizing committee, colleagues and friends, Thank you very much. I would also like to encourage you to explore the beautiful sights of Langkawi during your stay and do enjoy the conference.

Thank you.

Assoc. Prof. Dr. Ismail Musirin
Organizing Chair, PEOCO2013

CONFERENCE SCHEDULE

MONDAY (3 JUNE 2013)

Session 1A

Power Electronics & Converter

Room : Room A

Time : 14:30 – 15:50

Chair : Dr. Nabil Hidayat

14:30	<u>Develop High Power LED Driver Using LTspice Software</u> <i>Muhammad Ikram Mohd Rashid</i>
14:40	<u>Implementing Buck Converter for a Battery Charging using Soft Switching Techniques</u> <i>Mohamed Alsaghayar, M. Salem, A. Jusoh, and N. Runzi N. Idris</i>
14:50	<u>DC-AC Inverter Using Hysteresis Current Controller with Low Pass Filter for WECS</u> <i>Khalid Haroun Mohamed Abdelgadir, Taib Ibrahim, Nordin B Saad</i>
15:00	<u>Random Pulse Width Modulation Technique for a 4-level Inverter</u> <i>David George, M. R. Baiju</i>
15:10	<u>High Power Factor Neutral Point Type Converter</u> <i>Nabil Hidayat, Norazam A Wahab, Khudzairi M Idris</i>
15:20	<u>Switching Strategy for Neutral Point Type Converter</u> <i>Nor Rafidah Mhd Saad, Zulkifli Othman, Syed Abdul Mutalib Al Junid, Nabil Hidayat, Khairul Khaizi Mohd Shariff, Ismail Musirin</i>
15:30	<u>A DXCCII-Based Four-Quadrant Multiplier</u> <i>Montree Kumngern</i>
15:40	<u>A Current-Mode Multiplier/Divider Using a Current Amplifier</u> <i>Montree Kumngern</i>

Session 3A

Transmission and Distribution

Room : Room A

Time : 08:45 – 10:30

Chair : Dr. Taib Ibrahim

08:45	<u>Overvoltage Study of a Real HVDC Project Based MATLAB</u> <i>Xin Cao; Shenglin Wang; Lei Chen</i>
08:55	<u>Market Efficiency and MW Margin to Voltage Instability</u> <i>Bala Venkatesh</i>
09:05	<u>Correlation of Furfural and Moisture Content with Age of Transformers</u> <i>Masoud Aminian; Mohd Zainal Abidin Ab Kadir; A Salmiaton; Wan Fatinharrah Wan Ahmad; MTaufig; Mahdi Izadi</i>
09:15	<u>An Effective Approach to Determine the Sensitive Transmission Lines Due to the Effect of Hidden Failure in a Protection System</u> <i>Nur Ashida Salim; Muhammad Othman; Md Salleh Serwan; Ismail Musirin</i>
09:25	<u>Optimal Penalty Method in Distribution Service Restoration Using Genetic Algorithm</u> <i>Ehsan Moazani; Mohd Zainal Abidin Ab Kadir; Hashim Hizam; Maryam Mirzaei</i>
09:35	<u>GIS Surface Assessment by Image Processing Particle Detector</u> <i>Muhammad Faisal Agos; Nor Asiah Muhammad</i>
09:45	<u>Investigation on the Effects of Line Parameters to the Lightning Performance of 132 kV Kuala Krai-Gua Musang Line</u> <i>Junainah Sardi</i>
09:55	<u>Reconfiguration and DG Placement Considering Critical System Condition</u> <i>Seyed Javad Mirazimi; Maisam Nematollahi; Mahdi Tadayon; Mohammad Hossein Ashourian</i>
10:05	<u>Communication Module for Mobile Personal Health Record</u> <i>Ali Al-Habsi; H.L. Seldon</i>

Session 4C

Power Quality, Protection and electromagnetic Compatibility

Room : Room C

Time : 10:45 – 12:30

Chair : Dr. Hadi Zayandehroodi

10:45	<u>Overcurrent Relays Coordination for Industrial Radial System</u> <i>Omar Aliman, Ismail Musirin</i>
10:55	<u>Power Quality Signals Detection Using S-Transform</u> <i>Nur Hafizah Tul Huda; Abdul Rahim Abdullah; Mohd Hatta Jopri</i>
11:05	<u>Modeling and Analysis of Applying Single Phase Matrix Converter in Dynamic Voltage Restorer</u> <i>Emi Diyana Rosli; Nabil Hidayat; Siti Zaliha Mohammd Noor; Noraliza Hamzah; Rijalul Fahmi Mustapa</i>
11:15	<u>Remote Terminal Unit (RTU) Hardware Design and Implementation Efficient in Different Application</u> <i>Wan Nor Shela Ezwane Wan Jusoh; Datuk Prof. Dr. Mohd Ruddin Ab Ghani; Mohd. Ariff Mat Hanafiah; Siti Hajar Ramen</i>
11:25	<u>Induction Motors Performance Under Symmetrical Voltage Sags and Interruption - Test Result</u> <i>Syafruddin Hasan; Surya Harid</i>
11:35	<u>Reliability Worth Analysis of Distributed Generation Enhanced Distribution System Considering the Customer Cost Model Based on Optimal Radial Basis Function Neural Network</u> <i>Alireza Heidari; Vassilios Agelidis; Hadi Zayandehroodi</i>
11:45	<u>Active Filter Under Unbalanced and Distorted Conditions</u> <i>Kamel Djazia; Fateh Krim; Mustapha Sarra</i>
11:55	<u>Experimental Study on the Impact of Harmonics on Transformer</u> <i>Gary Soh Thian Lim; Dalila Mat Said; Nasarudin Ahmad; Khalid Mohammed Nbr; Fatimah Salim</i>
12:05	<u>Optimal Relay Placement in Microgrids Considering Critical Clearing Time</u> <i>Seyed Javad Mirazimi; Bahare Salehi; Mahdi Tadayon; Hamid Karshenas</i>
12:15	<u>A Direct Approach Used for Solving the Distribution System and Harmonic Load Flow Solutions</u> <i>Siti Mariam Mohd Shokri; Muhammad Othman; Zilaila Hj. Zakaria; Muhd Azri Abdul Razak; Mat Nasir Kari; Ismail Musirin; Nur Ashida Salim</i>