

International Conference on Advances in Electrical Engineering, 2011 (ICAEE 2011)

December 19-20, 2011

Independent University, Bangladesh



Conference Program Schedule



Organized by

Independent University, Bangladesh (IUB)



Cooperating Organization

The International Society for Optical Engineering



Technical Co-sponsor

The Institution of Engineering and Technology

Conference Program Schedule

Day 1

December 19, 2011

Registration & Conference Kit Distribution

Venue: Level 4 Lobby, Academic Building

Time: 08:30 AM – 9:00 AM

Inaugural Session

Venue: Lecture Theater (Room 5002), Level 4, Academic Building

Time: 09:00 AM - 10:00 AM

Inaugural Session Program Details

- 9:00 AM - Recitation from the Holy Quran
- 9:10 AM - Welcome address by the Chair, Local Organizing Committee
- 9:20 AM - Address by the Chair, International Program Committee
- 9:30 AM - Address by the Special Guest
- 9:40 AM - Address and official inauguration by the Chief Guest
- 9:50 AM - Vote of thanks by the Secretary, Local Organizing Committee
- 10:00 AM - End of inaugural session

Tea Break

Time: 10:00 AM - 10:30 AM, **Venue:** Level 4 Lobby, Academic Building

Key Note 1

Room Number: 5002, Lecture Theater, Level 4, Academic Building

Time: 10:30 AM - 11:15 AM

Session Chair: Prof. M. M. A. Rahman, Grand Valley State University, USA

Title: Advances in Power Electronics and Applications in Renewable Energy

Speaker:

Professor Muhammad H. Rashid

Electrical and Computer Engineering

University of West Florida, USA

Technical Session 1: *Communication and Wireless Systems*

Room Number: 6007, Level 4, Academic Building

Time: 11:15 AM - 1:00 PM

Session Chair: Prof. Ayman Al-Falou, ISEN Brest, France

Paper ID 14 - Performance of Q-ary Pulse Position Modulation Free-Space Optical Communications using Gamma-gamma and Negative Exponential Atmospheric Turbulence Model

Bobby Barua, Mirza Moazzem Hossain, Md. Rezwan Islam, Md. Khairul Bashar

Paper ID 52 - Performance Analysis and Development of an Efficient Handover Scheme for PMIPv6 in IEEE 802.16/WiMAX Network

Kheya Banerjee, Md. Masud Rana, Zulkernine Ibne Tahasin, Rokon Uddin

Paper ID 68 - A Rigorous Taxonomy Based Survey of Location Systems for Ubiquitous Computing

Md. Tarek Habib, Abdul Halim Miah, Farruk Ahmed

Paper ID 69 - Performance Evaluation of IEEE802.11e EDCA Mechanism by Changing Contention Free Burst (CFB) Mode on Single Access Point (AP) based WLAN System

M. S. Hussain, N. M. S. K. Chowdhury, F. Ahmed

Paper ID 80 - Distributed Cooperative Spectrum Sensing Based Cognitive Radio Prototype for Reliable Spectrum Sharing

Wasim Arif, N. Madhusudan Rao

Paper ID 81- PAPR Reduction of an OFDM Signal Using Double Companding Technique

Subaha Mahmuda, Tabassum Nasrin Haque, Feroz Ahmed

Paper ID 90 - Design Challenges and Scope for Cognitive Radio Wireless Networks in Bangladesh

Tasnia Jahed, Ipshta Das, Niaz Iqbal, Sanjida Hossain Sabah, Hasan Shahid Ferdous

Paper ID 94 - Location Based Information System using OpenStreetMap

Md. Rashidujjaman Rifat, Shubrami Moutushy, Syed Ishtiaque Ahmed, Hasan Shahid Ferdous

Technical Session 1P: Power Systems and Renewable Energy

Room Number: 6008, Level 4, Academic Building

Time: 11:15 AM – 1:00 PM

Session chair: Dr. Khosru M. Salim, Independent University, Bangladesh

Paper ID 13 - Single-phase Grid Tie Photovoltaic Inverter for Residential Application

Syafrudin Bin Masri, Tan Kheng Kwan, Ragu Raman

Paper ID 41 - Analysis of the Area Under the Peaks of EQE and Estimation of the Fill Factor of Different Blend Compositions of P3HT: PCBM Organic Solar Cells

W. A. Khan, J. Rozario, F. F. Mallik

Paper ID 47 - Solar Adsorption Cooling: A Case Study on the Climatic Condition of Dhaka

R. A. Rouf, K. C. A. Alam, M. A. H. Khan, T. Ashrafee, M. Anwer

Paper ID 61 - Microcontroller Based Three Phase Induction Motor Controller for Photovoltaic Applications

Nafisa Binte Yousuf, Khosru M. Salim, Rafid Haider

Paper ID 62 - Implementing Sinusoidal PWM in a Single Chip Microcontroller to Operate a Full Bridge Solar Inverter

Rafid Haider, Md. Rajin Alam, Khosru M. Salim, Nafisa Binte Yousuf

Paper ID 71 - Investigation of Dye-Sensitized Nano-Crystalline TiO₂ Solar Cell: Prospect, Problems and Remedies

Zawad Hossain, Md. Mosaddeq Rahman

Paper ID 83 - High Efficient Multi-junction Photovoltaic Cell based on Indium-Phosphide-Oxide, Indium-Gallium-Arsenide and Indium-Gallium-Antimony

Mir Abdulla-Al-Galib, S. Barua, K. M. A. Salam, M. A. Awal, R. P. Wijesundera

Paper ID 108 - Electricity Generation by Using Biogas and Oxygen-enriched air from Swine Manure for a Farm owner Requirement

Tsung-Han Lee, Wei-Tsung Lin, Chun-Hsiang Yang, Chiun-Hsun Chen

Paper ID 112 - Maximaizing of distributed generation using particle swarm optimization

Pires BAS, Oliveira CBM, Medeiros Jr. MF

Lunch Break

Time: 1:00 PM-1:45 PM, **Venue:** IUB Cafeteria, Ground Floor, Library Building

Key Note 2

Room Number: 5002, Lecture Theater, Level 4, Academic Building

Time: 1:45 PM – 2:30 PM

Session Chair: Prof. Abdus Sobhan, Independent University, Bangladesh

Title: Graph Theory and Perfect Graphs

Speaker:

Professor Rajat K. Pal

Department of Information Technology

Assam University, India

Technical Session 2: Digital Signal and Image Processing

Room Number: 6007, Level 4, Academic Building

Time: 2:30 PM - 3:45 PM

Session Chair: Prof. Swapna Banerjee, Indian Institute of Technology Kharagpur

Paper ID 21 - Quality Improvement and Quality Assessment of Digital Images

Sharmin Ahmed, Tasnim Nasir, Mohiuddin Ahmad

Paper ID 66 - Quality Assessment of ECG Signal using Symlet Wavelet Transform

Md. Abdul Awal, Sheikh Shanawaz Mostafa, Mohiuddin Ahmad

Paper ID 82 - Reconfigurable Architecture of a RRC FIR Interpolation Filter for Multi-Standard Digital Up Converter

Indranil Hatai, Swapna Banerjee, Indrajit Chakrabarti

Paper ID 106 - Efficient Classification of Multispectral Imagery for Oil Spill Detection

P. Sidike, J. Khan, M. Alam, R. Gollapalli and S. Bhuiyan

Tea Break

Time: 3:45 PM - 4:15 PM, **Venue:** Level 4 Lobby, Academic Building

Technical Session 3: Power Electronics and Drives

Room Number: 6008, Level 4, Academic Building

Time: 4:15 PM – 5:30 PM

Session Chair: Prof. Muhammad H. Rashid, University of West Florida, USA

Paper ID 10 - Vector Control of a Cost-Effective FSTP Inverter Fed Synchronous Reluctance Motor

Kalyan Kumar Halder, Md. Abdur Rafiq, B. C. Ghosh

Paper ID 35 - High Performance Sensorless Control of Induction Motor Drive with Space Vector Modulation

Md. Habibullah, Kalyan Kumar Halder, Md. Abdur Rafiq, B. C. Ghosh

Paper ID 64 - Design and Development of A computer controlled Three-phase inverter for Precise Speed variation of A Three-phase Induction Motor

Md. Aziz Ul Huq, Farruk Ahmed

Paper ID 70 - Efficiency Comparison of VSC-HVDC System With Shrinking Span Membership Function Fuzzy Logic Controller and SPWM Control

R. Roy, S. Biswas, D. Debnat, H.S. Sah, I.K.Dutta

Paper ID 114 - Temporal Behavior Analysis of Different Parameters of Electric Ignition System for Combustion Engines

Shaiyek Taslim, Shaikh Tousif, Rahman Musfequr, Rahman Mahbubur, Alam Shamaul, Sagar Chandra

Paper ID 115 - Single Phase Two-Stage AC-to-DC Series Resonant Converter for Medium to High Power Applications

M. M. A. Rahman, M. M. Atiqur Rahman

Day 2

December 20, 2011

Key Note 3

Room Number: 5002, Lecture Theater, Level 4, Academic Building

Time: 9:00 AM – 9:45 AM

Session Chair: Prof. Rajat K. Pal, Assam University, India

Title: The Nuts and Bolts of Optical Image Compression and Encryption Methods

Speaker:

Professor Ayman Al-Falou

Optical Signal and Image Processing Laboratory (Vision lab)
ISEN Brest, France

Technical Session 4: *Digital Logic Design and VLSI*

Room Number: 6007, Level 4, Academic Building

Time: 9:45 AM – 11:15 AM

Session Chair: Dr. Afzal Hossain, Nanova Corporation, USA

Paper ID 8 - Design of a MIPS Instruction Set Simulator (ISS) for a Multicore Computer Architecture Research in SystemC

Mohammad Qayum, Louis Johnson, Mohammad Haque, Nafish Quarishi

Paper ID 25 - Crosstalk Minimization is a Challenge in Designing High Performance VLSI Circuits

Achira Pal and Rajat K. Pal

Paper ID 45 - Test Vector Compression Technique in VLSI Circuits

Satyendra N. Biswas, Sunil R. Das, Mansour H. Assaf

Paper ID 57 - Is Queuing Model Good for Processor Fast Benchmarking?

Afzal Hossain

Paper ID 73 - Switching from Real to PVAM Mode Operation of Intel 80286 High Performance Architecture

Golam Mostafa

Paper ID 75 - Development of an 8-Bit Microprocessor Learning System using Intel 8085 Architecture

Golam Mostafa

Technical Session 4P: *RF and Microwave Techniques*

Room Number: 6008, Level 4, Academic Building
Time: 9:45 AM – 11:15 AM
Session Chair: Dr. Prodipto Das, Assam University, India

Paper ID 9 - High-Resolution Doppler Profiles for UWB Radar Signals using MUSIC Method

Nafish Quaraishi, Mohammad Qayum, Mohammad Haque

Paper ID 22 - Measurement and Prediction of Indoor Signal Propagation for ISM Band

Nusrat Tanzim, Khandkar Rashid

Paper ID 44 - Radio Frequency Controlled Vehicle Tracking System

Koushik Guha, Akash Mukherjee, Sanjib Das

Paper ID 59 - Wideband Four-Branch Inverted-F Antenna for WLAN/WiMAX Applications

Debabrata Kumar Karmokar, Sumi Kundu, Md. Selim Hossain, Khaled Mahbub Morshed

Paper ID 86 - Estimation of Rain Attenuation over DTH Antenna in India using DAH Model

Prodipto Das, Sajal Debnath, Abhijit Paul

Tea Break

Time: 11:15 AM - 11:45 AM, **Venue:** Level 4 Lobby, Academic Building

Technical Session 5: *Biomedical Engineering & Bioinformatics*

Room Number: 6007, Level 4, Academic Building
Time: 11:45 AM – 1:00 PM
Session Chair: Dr. Satyendra N. Biswas, Independent University, Bangladesh

Paper ID 31 - Correlation of Heart-rate and Cardiac Cycle Duration under Different Body Positions and Breathing

Sheikh Shanawaz Mostafa, Md. Abdul Awal, Muhammad Muinul Islam, Mohiuddin Ahmad

Paper ID 65 - Improvement of Medical Imaging Equipment Maintenance Management of Bangladesh

Md. Anwar Hossain, Mohiuddin Ahmad

Paper ID 67 - Genetically Optimized HMM for Robust Speaker Identification in Noise

Md. Rabiul Islam, Md. Fayzur Rahman, M. Abdus Sobhan

Lunch Break

Time: 1:00 PM - 1:45 PM, **Venue:** IUB Cafeteria, Ground Floor, Library Building

Technical Session 6: *Semiconductor and Nanotechnology*

Room Number: 6008, Level 4, Academic Building

Time: 1:45 PM – 3:00 PM

Session Chair: Prof. Srimanta Baishya, National Institute of Technology, India

Paper ID 11 - Capacitance measurement of a SOI Tunnel FET

B. Bhowmick Shome, S. Baishya and J. Sen

Paper ID 55 - Impact of Quantum Mechanical Correction in Surface Potential Based Compact Model on the Drain Current of Nanoscale MOSFETs

M. M. Mahmud, N. Haque, S. Sumaia, A. Haque

Paper ID 97 - Structural and magnetic properties of Cu substituted Mn-Zn ferrites

F. Alam, H. N. Das, A. K. M. Akther Hossain

Paper ID 98 - Impact of Cr³⁺ on the structural and magnetic properties of Mn-Cr-Zn ferrites

F. Alam, M. I. Rahman, A. K. M. Akther Hossain

Paper ID 99 - Effect of Annealing on Structural and Electrical Properties of Zn_{0.2}Cd_{0.8}S Thin Film Deposited by Spray Pyrolysis

J. Saha, K. Azad, J. Podder

Paper ID 103 - Design and Characterization of InGaN Based 1.55 μm Lasers Using Thermal Modeling

Md. Jahirul Islam, Md. Rafiqul Islam, Md. Mottaleb Hossain

Technical Session 6P: *Intelligent Systems and Robotics*

Room Number: 6007, Level 4, Academic Building

Time: 1:45 PM – 3:00 PM

Session chair: Prof. Farruk Ahmed, Independent University, Bangladesh

Paper ID 29 - Dynamic Computation of Load Power Factor through the Evaluation of Maclaurin $\cos x$ Function using 8051 Microcontroller Architecture

Golam Mostafa

Paper ID 40 - Offline Handwritten Character Recognition using Artificial Neural Network

R. H. Laskar, J. Mehedi, Priyesh Sethia, Sriyans Patwa, A. Sarkar and G. Snigdha

Paper ID 49 - Indoor Positioning Using LED Based Visible Light Communication and Image Sensors

M. S. Rahman, B. Y. Kim² and K. D. Kim

Paper ID 53 - Mobile Banking and Payment System Using Bluetooth Media

Kheya Banerjee, Md. Masud Rana, Md. Margoob Mahfuz, Md. Amjad Khan

Paper ID 58 - Cloud-based E-governance with WiMAX for Developing Country

Ireen Sultana and M. A. Razzak

Paper ID 100 - Spiking Neural Networks on High Performance Computing Platforms

Chong Chen and Tarek M. Taha

Paper ID 104 - Simulated Annealing Variants in Solving The Staff Transfer Problem

Sriyankar Acharyya

Paper ID 105 - A Hybrid Obstacle Avoidance Strategy for Active Bat IPS Guided Holonomic Mobile Robots

Md. Reaz Ashraful Abedin

Conference Dinner

Date: 20 December 2011, Tuesday

Time: 6:00 PM-9:00 PM

Venue: Atrium, 50-52 Progoti Sharani, Block-J, Baridhara, Dhaka-1212

Phone: +880-2-8810692, +880-1712-444422

E-mail: atrium_bd@yahoo.com

Announcement of the Best Paper Awards

Date: 20 December 2011, Tuesday

Time: 6:30 PM

Venue: Atrium, 50-52 Progoti Sharani, Block-J, Baridhara, Dhaka-1212

Presentation Timing Details

Contributed papers:

Presentation - 10 mins

Q & A - 2 mins

Keynote papers:

Presentation - 35 mins

Q & A - 10 mins

Location map of IUB and Atrium (conference dinner place)

