



# The 4th International Conference on Advances in Electrical Engineering (ICAEE)

**28-30 September, 2017**

Venue: Independent University, Bangladesh

## Program Schedule



**Organized by**

Independent University, Bangladesh



**Technical Co-sponsor**

The Institution of Electrical & Electronics Engineers



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IEEE Bangladesh Section EMB Society

# Conference Program Schedule

## Day 1

**Thursday , 28 September 2017**

### **Registration & Conference Kit Distribution**

**Time:** 8:00 AM – 9:00 AM

**Venue:** Lobby, IUB Auditorium

### **Inaugural Session**

**Time:** 9:30 AM - 10:30 AM

**Venue:** IUB Auditorium

- 09:30 AM Welcome address by Dr. M. Abdur Razzak, General Chair, ICAEE 2017
- 09:35 AM Address by Prof. Shahriar Khan, Dean, School of Engineering & Computer Science, Independent University, Bangladesh
- 09:40 AM Address by Prof. Quazi Deen Mohd Khosru, Chair, IEEE Bangladesh Section
- 09:45 AM Address by Engr. Kabir Ahmed Bhuiyan, President, The Institution of Engineers Bangladesh
- 09:50 AM Address by the Chief Patron and Chair, Local Advisory Committee of ICAEE 2017, Prof. M. Omar Rahman, Vice Chancellor, Independent University, Bangladesh
- 10:00 AM Address and Official Inauguration by the Chief Guest, Nasrul Hamid MP, Hon'ble State Minister for Power, Energy & Mineral Resources, Government of People's Republic of Bangladesh
- 10:15 AM Handing over of crests to guests of ICAEE 2017
- 10:25 AM Vote of Thanks by Dr. Mustafa Habib Chowdhury, Organizing Chair, ICAEE 2017
- 10:30 AM End of Inaugural Session

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### **Tea Break**

**Time:** 10:30 AM - 11:00 AM, **Venue:** Multipurpose Hall

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### **Technical Session 1-1: Power Systems - I**

**Time:** 11:30 AM – 1:00 PM

**Venue:** Room 6007, Level 6, Academic Block

**Session Chair:** Prof. Kazi Khairul Islam, Uttara University

#### **Paper ID 7161. Assessment of Stabilizing Controls for a Non-autonomous Microgrid System**

A. H. M. A. Rahim, M.M. Atiqur Rahman, Rokeya K. Shifat

#### **Paper ID 7177. Design and Performance of Power Generation Using Speed Breaker with the Help of Rack and Pinion Mechanism**

Md. Emran Hossain, Md. Rokib Hasan, Kazi Tahsan Ahmed, Md. Naoshat Munim

**Paper ID 7183. Modelling and Control of Statcom to Ensure Stable Power System Operation**

Arghya Saha, Shameem Ahmad, Afrin Aktar Soma, Mohammad Zahirul Amin

**Paper ID 7194. Empirical Analysis of Leakage Current Upwelling and Eventual Breakdown Phenomena in Terminals in a Vacuumed Compressor under Rated Operation**

Pranab Chakma, Md. Hasibul jamil

**Paper ID 7222. Partial Discharge Modeling with Increasing Applied Voltages across Different Void Sizes**

Christina AJ, M. A. Salam, Q. M. Rahman, Md. Shamsul Arifin, Fushuan Wen, S. P. Ang, Syeed Hasan

**Paper ID 7233. Power System Stability Enhancement Through Optimal Design of PSS Employing PSO**

Md Shafiullah, Md Juel Rana, M. A. Abido

**Paper ID 7269. Power Compensation by DSTATCOM plus SCESS**

Rajib Baran Roy, Jerome Cros, Enamul Basher, Shahana Akhter

**Technical Session 1-2: Solid State Devices, Nanotechnology, Microprocessors & VLSI - I**

**Time:** 11:30 AM – 1:00 PM

**Venue:** Room 6008, Level 6, Academic Block

**Session Chair:** Prof. K. M. A. Salam, North South University

**Paper ID 7150. Comparative Study of Full Adder Circuit with 32nm MOSFET, DG-FinFET and CNTFET**

S. M. Ishraquul Huq, Maskura Nafreen, Tasnim Rahman and Sushovan Bhadra

**Paper ID 7176. Temperature Comparison of GaAs/AlGaAs Based Double Barrier Resonant Tunneling Diode Considering NEGF**

Santu Saha, Kushal Biswas, and Mehedi Hasan

**Paper ID 7182. Optimization of Design Framework for Real-Time Microcontroller Applications**

Kishore K. Chidella, Abu Asaduzzaman, Avinash Chintam, and Muhammad F. Mridha

**Paper ID 7220. CNTFET based Multiplexers and Magnitude Comparator**

Mohd. Zean, Abdul Aziz, Minhajul Islam, M. Salman Morshed Abir, Shuvra Saha

**Paper ID 7242. High-Performance GaN-Based Green LEDs**

Md. Rokib Hasan, Ahsan Intishar Tomal

**Paper ID 7332. Threshold Voltage of UTB XOI FET**

Muhammad Mainul Islam, Md. Shamim Sarker, Md. Nur Kutubul Alam, Md. Rafiqul Islam

**Paper ID 7347. Effect of Bandgap on the Performance of AlGaAs/GaAs Dual Junction Solar Cell**

Md. Kamrul Hasan, Lutfun Nahar Lata, and Khairul Alam

## **Technical Session 1-3: RF & Microwave Systems, Antenna**

**Time:** 11:30 AM – 1:00 PM

**Venue:** Room 6009, Level 6, Academic Block

**Session Chair:** Prof. Mostafizur Rahman, Khulna University of Engineering & Technology

### **Paper ID 7166. Performance Analysis of Body Implantable PIFA at Different Substrate Material**

Sadia Sultana, Raja Rashidul Hasan, Tonmay Kumar Mondal, Raja Tariqul Hasan Tusher, Sadia Zabin

### **Paper ID 7204. An Advanced Design of Pattern Reconfigurable Antenna for Wi-Fi and WiMAX Base Station**

Atik Mahabub, Md Nazmul Islam, Md. Mostafizur Rahman

### **Paper ID 7274. Miniaturized UWB Antenna with Excellent Frequency Ratio and Bandwidth Enhancement for Wireless Applications**

M. Tarikul Islam, M. Samsuzzaman, M.N. Rahman, M.T. Islam

### **Paper ID 7291. Design and Simulation of Different Shaped (S, E, C and Combined S-E-C) Multiband MPA Array Using Advanced Design System**

Liton Chandra Paul, Shamsun Nahar, Tushar Kanti Roy

### **Paper ID 7296. Rectangular with Half Circle Cut-out Microstrip Patch Antenna for C-Band Applications**

M.M. Ali, M. Tarikul Islam, M. Samsuzzaman, M.T. Islam

### **Paper ID 7298. Design of a Patch Antenna Operating at ISM Band for Brain Tumor Detection**

Tulsi Chowdhury, Rehnuma Farhin, Raja Rashidul Hassan, Mohammad Shams Alam Bhuiyan, Rafat Raihan

## **Technical Session 1-4: Biomedical Electronics, Systems and Applications - I**

**Time:** 11:30 AM – 1:00 PM

**Venue:** Room 6013, Level 6, Academic Block

**Session Chair:** Dr. Khondaker Abdullah Al Mamun, United International University

### **Paper ID 7143. Real Time Direction-Sensitive Fall Detection System Using Accelerometer and Learning Classifier**

Shaikh Farhad Hossain, Md Zahurul Islam and Md. Liakot Ali

### **Paper ID 7180. A Novel Technique to Analyze Mammography Images for Breast Cancer**

A. Asaduzzaman, P. Mitra, K.K. Chidella, K.A. Saeed, K. Cluff, and M.F. Mridha

### **Paper ID 7202. Solar Powered Smart Wearable Health Monitoring and Tracking Device Based on GPS and GSM Technology for Children with Autism**

Iftexhar Uddin Ahmed, Nazia Hassan, Humayun Rashid

### **Paper ID 7203. Design and Development of a Smart Baby Monitoring System based on Raspberry Pi and Pi Camera**

Aslam Forhad Symon, Nazia Hassan, Humayun Rashid, Iftexhar Uddin Ahmed, S M Taslim Reza

**Paper ID 7280. Blood Vessel Detection from Fundus Image Using Markov Random Field Based Image Segmentation**

Nafize Ishtiaque Hossain, Sakib Reza

**Paper ID 7336. Implantable LC passive resonance based therapeutic device for the treatment of neural disorder of renal(urinary bladder) system failure**

Md. Samiul Alam, Meher, Muhammad Muntasirul, and Md. Mohammad, S.S

**Paper ID 7369. Hardware and Software Implementation of Real Time Electrooculogram (EOG) Acquisition System to Control Computer Cursor with Eyeball Movement**

Zakir Hossain, Md. Maruf Hossain Shuvo, and Prionjit Sarker

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**Lunch Break**

**Time:** 1:00 PM - 2:00 PM, **Venue:** Multipurpose Hall

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**Keynote and Invited Session 1**

**Time:** 2:00 PM - 3:30 PM

**Venue:** Gallery 5002

**Session Chair:** Prof. Farruk Ahmed, Independent University, Bangladesh

**Keynote Speech 1**

**Time:** 2:00 PM - 2:45 PM

**Title:** Point-Of-Care Devices and Bio-Nano-Enviro Sensors for Better Health Care

**Speaker:** Dr. V. R. Singh, Life Fellow IEEE and Chair, IEEE-IMS/EMBS Delhi  
Professor, National Physical Laboratory, New Delhi, India

**Invited Speech 1**

**Time:** 2:50 PM – 3:30 PM

**Title:** Positioning in IoT-based Information Systems

**Speaker:** Dr. Liza Bte Abdul Latiff, Senior Member IEEE  
Professor, School of Engineering and Advanced Technology,  
UniversitiTeknologi Malaysia

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**Tea Break**

**Time:** 3:30 PM - 3:45 PM, **Venue:** Level 5 Lobby, Academic Block

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**Technical Session 2-1: Cloud Computing, Algorithms, Mobile & Software Applications - I**

**Time:** 4:00 PM – 6:00 PM

**Venue:** Room 6007, Level 6, Academic Block

**Session Chair:** Dr. Amitabha Chakraborty, BRAC University

**Paper ID 7167. Smartphone Based Flying Object Reporting System**

Md. Saiful Islam, Md. Shajid-UI-Mahmud, Md. Syedul Amin, Md Hossam-E-Haider

**Paper ID 7297. An Efficient Intra Thread Scheduling Based Decentralized Online Multi Thread Polling Scheme for Improving QoS of PON**

Manisha Das Chaity, Monir Hossen, and Shuvashis Saha

**Paper ID 7312. Improving Quality of Service in Cloud Computing Architecture Using Fuzzy Logic**

Himadri Shekhar Mondal, Md. Tariq Hasan, Taposh Kumar Karmokar, Shamlendu Sarker

**Paper ID 7376. Enhancing Engineering Studies in Developing Countries using OpenModelica**

Mohammed Ahsan Adib Murad, Luigi Vanfrettiy, Mohammad Rokonuzzamanz, and Rashedul Amin Tuhinx

**Paper ID 7383. Distribution System Monitoring by Using Micro-PMU in Graph-Theoretic Way**

Anik Tahabilder, Noorjahan Rahman, Pronob K. Ghosh, Soumesh Chatterjee

**Paper ID 7387. Predicting Higher Secondary Results by Data Mining Algorithms with VBR: A feature Reduction Method**

Nazmul Shahadat, Musfiqur Rahman, Sakil Ahmed, Bushra Rahman

**Paper ID 7427. An Efficient Approach to Enhance Memory Reliability**

Rumana Afrin and Muhammad Sheikh Sadi

**Paper ID 7433. A Priority Based Dynamic Resource Mapping Algorithm For Load Balancing In Cloud**

Farzana Sadia, Nusrat Jahan, Lamisha Rawshan, Madina Tul Jebaand Dr. Touhid Bhuiyan

**Paper ID 7437. Enhancing the Security of Cloud Computing: Genetic Algorithm and QR Code Approach**

Samrat Kumar Dey, Md. Raihan Uddin, Kh. Mohaimenul Kabirand Md. Mahbubur Rahman

**Paper ID 7456. A Better Blueprint using Evolutionary Game Theory for Retransmission of Self-Organized Data Aggregation Techniques**

Md. Salehin Ferdous Kader, Sabrina Tasnim, Mir Muntasir Hossain, and Shekh Istiak Ahmed

**Technical Session 2-2: Signal and Image Processing - I**

**Time:** 4:00 PM – 6:00 PM

**Venue:** Room 6008, Level 6, Academic Block

**Session Chair:** Dr. Md. Atiqur Rahman Ahad, University of Dhaka

**Paper ID 7138. A New Approach of Feature Extraction of Printed Bengali Characters**

Alvi Mahadi, Munira Akter Lata, Mohammad Abu Yousuf

**Paper ID 7179. A Fast Double-Talk Detection Algorithm Based on Signal Envelopes for Implementation of Acoustic Echo Cancellation in Embedded Systems**

Md. Shamim Hussain, Md. Ajoad Hasan, Md. Faizul Bari, and A. B. M. Harun-Ur-Rashid

**Paper ID 7248. Language Independent Statistical Approach for Extracting Keywords**

Md. Mahfuzur Rahamanand Md. Ruhul Amin

**Paper ID 7292. A Comparison between Hybrid Models for Classifying Bangla Isolated Basic Characters**

S.M.A. Sharif, Mahdin Mahboob

**Paper ID 7293. Evil Method: A Deep CNN model for Bangla handwritten numeral classification**

S M A Sharif and Mahdin Mahboob

**Paper ID 7319. A New Approach of Image Quality Index**

Sheikh Md. Rabiul Islam, Md. Tariqul Islam, Xu Huang

**Paper ID 7355. Study of Speckle Noise Reduction from Ultrasound B-mode Images using Different Filtering Techniques**

Tanpia Tasnim, Md. Maruf Hossain Shuvo, and Sabbir Hasan

**Paper ID 7360. Modified Markovian Decision Process Model for Limited Data Rate Usage Algorithm**

Rupam Deb, Prakash Chandra Mondal, Md Mahfuzul Islam, Md. Jashim Uddin

**Paper ID 7391. A New Hybrid Approach for Brain Tumor Classification using BWT-KSVM**

Afsana Islam, Md Foisal Hossain, Chandan Saha

**Technical Session 2-3: Robotics, Control and Automation**

**Time:** 4:00 PM – 6:00 PM

**Venue:** Room 6009, Level 6, Academic Block

**Session Chair:** Dr. Lamia Iftekhar, North South University

**Paper ID 7373. Simplistic Approach to Design a Prototype of Autonomous, Affordable, and Highly Efficient Agricultural Sprayer Robot**

Shanta Niloy Paul, Abu Shakil Ahmed, Md. Nurunnabi Mollah, Md Munim Rayhan, Eklas Hossain

**Paper ID 7400. Automatic Vehicle Identification System using Machine Learning and Robot Operating System (ROS)**

Mohammad Rokonzaman, M. Abdullah Al Amin, Masum Howlader Kazi Main Uddin Ahmed and Muhammad Towhidur Rahman

**Paper ID 7404. Efficient System Reduction Modeling of Periodic Control Systems with Application to Circuit Problems**

Mohammad Sahadet Hossain, Sufi Galib Omar, Aniqah Tahsin, Ekram Hossain Khan

**Paper ID 7430. Architecture of a Multi Functional Humanoid Robot (SM - 1805)**

Md. Mainol Hasan

**Paper ID 7457. A Two-Wheeled Self-Balancing Robot with Dynamics Model**

Md. Iman Ali, Md. Modasser Hossen

**Paper ID 7479. Design and Development of an Autonomous Floodgate Using Arduino Uno and Motor Driver Controller**

S.M. Saifur Rahman Faisal, Iftekhar Uddin Ahmed, Humayun Rashid, Remon Das, Md. Mobarak Karim, S M Taslim Reza

**Paper ID 7517. Design and Construction of an Underwater Robot**

Sanjib Kumar Deb, Jahed Hossen Rokky, Tuton Chandra Mallick, Ms. Juliana Shetara

**Paper ID 7526. Development of a Computer Vision based Eggplant Grading System**

Yeasmin Ara Akter, Mohammad Osiur Rahman

**Paper ID 7537. An Autonomous Robot: Using ANN to Navigate in a Static path**

Md. Samiul Haque Sunny, Eklas Hossain, Taskia Nadriba Mimma, Shifat Hossain

**Paper ID 7544. Evaluation and Development of a Self-ruling Internal Control System for Preventing Car Accidents Using Artificial Neural Network**

Md. Samiul Haque Sunny, Eklas Hossain, Amit Sutradhar, Manash Mandal, Md. Abdur Rafiq

**Technical Session 2-4: Wireless Communications**

**Time:** 4:00 PM – 5:00 PM

**Venue:** Room 6013, Level 6, Academic Block

**Session Chair:** Prof. Khawza Iftekhar Uddin Ahmed, United International University

**Paper ID 7200. A Dynamic Data Placement Policy for Heterogeneous Hadoop Cluster**

Santa Maria Shithil, Tushar Kanti Saha and Tanusree Sharma

**Paper ID 7308. A Resource Utilizing Approach Towards Implementing Indoor Localization Using Wi-Fi Network**

S.M. Siratim Mustaqim, Avijeet Biswas, Rafiul Hasan and Amitabha Chakrabarty

**Paper ID 7446. Analysis of Orthogonal Space Time Block Codes Exploiting CSI in LTE Communication**

S. M. Shamsul Alam, Abdullah-Al-Mamun, S. M. Shoaib

**Paper ID 7449. Effectiveness of Filter Bank Multicarrier Modulation for 5G Wireless Communications**

Md. Motahar Hossain Mishu, M. Rubaiyat Hossain Mondal

**Paper ID 7523. Investigation of Rayleigh and Rician Fading Channels for State of the Art (SOA) LTE-OFDM Communication System**

A.K. M. Baki, Md. Wasif Absar, Tasnim Rahman, and K.M. Arif Ahamed

**Technical Session 2-5: Power Electronics and Smart Power Grid**

**Time:** 5:00 PM – 6:00 PM

**Venue:** Room 6013, Level 6, Academic Block

**Session Chair:** Prof. A. K. M. Baki, Ahsanullah University of Science and Technology

**Paper ID 7118. A Novel Non Isolated DC-DC Step up Converter for Photovoltaic Systems**

M. Al Mamun, Golam Sarowar, Md. Ashraful Hoque, Abdullah Al M. Rahman



**Paper ID 7277. An Effective Algorithm for Demand Side Management in Smart Grid for Residential Load**

Mir Muntasir Hossain, Kazi Rehnuma Zafreen, Abidur Rahman, Muhammad Ahsan Zamee, and Tareq Aziz

**Paper ID 7327. Microcontroller Based Combination of Two Distinct Power Electronic Converters**

Abdullah Mahmud, Maisha Farzana, Anamul Ahsan, Muhtasheem Ajwad Mahin, Taufiquzzaman, Adnan Mohammad

**Paper ID 7350. Field Oriented Rectangular Current Regulated PWM Control of Permanent Magnet Brushless DC Motor**

Md. Ashraful Islam, Md. Belal Hossen, Md. Soyaeb Hasan, Bashudeb Chandra Ghosh

**Paper ID 7498. A Three-Bit Threshold Inverter Quantization Based CMOS Flash ADC**

Al-Ahsan Talukder, Md. Shamim Sarker

## Day 2

Friday, 29 September 2017

### Registration & Conference Kit Distribution

**Time:** 08:00 AM – 9:00 AM

**Venue:** Level 5 Lobby, Academic Block

### Keynote and Invited Session

**Time:** 9:00 AM - 10:30 AM

**Venue:** Lecture Gallery 5002, Academic Block

**Session Chair:** Prof. Kazi Khairul Islam, Uttara University

### Keynote Speech 2

**Time:** 9:00 AM - 9:45 AM

**Title:** Challenge for Fusion Energy: High Priority Study on Divertor and Plasma-Material Interactions

**Speaker:** Dr. Noriyasu Ohno  
Professor, Department of Electrical Engineering,  
Graduate School of Engineering  
Nagoya University, Japan

### Invited Speech 2

**Time:** 9:50 AM - 10:30 AM

**Venue:** Lecture Gallery 5002, Academic Block

**Title:** Solar Photovoltaics: A Journey from Simple Silicon towards Exotic Materials for Cost-competitive Electricity Generation

**Speaker:** Dr. Nowshad Amin, Senior Member IEEE  
Professor, Department of Electrical, Electronic and Systems Engineering  
Faculty of Engineering and Built Environment  
The National University of Malaysia

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### **Tea Break**

**Time:** 10:30 AM - 10:45 AM, **Venue:** Level 5 Lobby, Academic Block

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### **Technical Session 3-1: Communication Systems and Networks**

**Time:** 11:00 AM – 1:00 PM

**Venue:** Room 6007, Level 6, Academic Block

**Session Chair:** Prof. Md. Shah Alam, Bangladesh University of Engineering and Technology

**Paper ID 7128. High Pressurized Xenon Gas-filled Hollow Core Kagome Photonic Crystal Fiber for Transmission of THz Waves**

Mohaiminul Islam, Md. Anwar Hossain, Fahmida Haque, Nguyen Hoang Hai, and Yoshinori Namihira

**Paper ID 7257. QoS Aware User Association in Massive MIMO Enabled Hetnets for DTU and NDTU Traffic**

Md. Kamran Chowdhury Shisher, Tasmeen Zaman Ornee and Md. Farhad Hossain

**Paper ID 7287. On Reinforcing Automatic Teller Machine (ATM) Transaction Authentication Security Process by Imposing Behavioral Biometrics**

Prakash Chandra Mondal, Rupam Deb, and Md. Nasim Adnan

**Paper ID 7295. Scheduled Multi Gate Polling (SMGP) Algorithm for Delay Reduction of Long Reach PON based Access Network**

Shuvashis Saha and Monir Hossen

**Paper ID 7338. On the Performance of High Order QAM Signals for Analog and Digital Radio over Fiber Systems**

Md. Rafeeun Noby Babir, Pallab K. Choudhury

**Paper ID 7348. Modified Expected Transmission Time for Calculating Effective Transmission Time**

Md. Amirul Islam, Md. Jahidul Islam, Md. Aminul Islam and Mohammed Nasir Uddin

**Paper ID 7463. TCP Performance Evaluation under MANET Routing Protocols in Disaster Recovery Scenario**

AK Md Ismaruni Pg Hj Sani, S.H. Shah Newaz, Wida Susanty binti Haji Suhaili, Swabik Musa Abdalla Wani, Au Thien Wan, Sarwar Jahan

**Paper ID 7466. Performance Analysis of Receiver Power Sensitivity of Advanced Modulation Formats In WDM Based Standard Mode Fibre For Next Generation Data Rate**

MD Shahrukh Adnan Khan, Md Masum Howlader, Muhammad Ahad Rahman Miah, Sakhawat Hossen Rakib, Abdullah Al Amin, Sharsad KaraKuni

**Paper ID 7492. Performance Analysis of 1 Tb/s RZ Modulated 1550 nm VCSEL based Optical Link**

Mohammad Tanvir Hannan, Mohammad Asaduzzaman, Mohammad Istiaque Reja, Jobaida Akhtar

**Paper ID 7518. Performance Analysis of 15Gb/s VCSEL based Optical Links of 683nm, 863nm, 1550nm Wavelengths in presence of EDFA and SOA**

Mohammad Tanvir Hannan, Mohammad Asaduzzaman, Mohammad Istiaque Reja, Jobaida Akhtar

**Technical Session 3-2: Renewable Energy - I**

**Time:** 11:00 AM – 1:00 PM

**Venue:** Room 6008, Level 6, Academic Block

**Session Chair:** Prof. Khosru Mohammad Salim, Independent University, Bangladesh

**Paper ID 7125. Feasibility Study of ICS as a Source of Thermo Electric Generator**

Anwarul Islam Sifat, Md. Milon Uddin, Kazi Mohammad Arfatul Islam

**Paper ID 7135. A Cheap Way to Develop Absorber Layer of Solar Cell Using CuO Thin Film**

Tazdik Patwary Plateau

**Paper ID 7219. Concentrated Solar Power System- A Pilot System Modeling with MATLAB and its Prospect in Bangladesh**

Sree Bash Chandra Debnath, Md. Rahim Uddin, Md. Raisul Islam, and Md. Reya Shad Azim

**Paper ID 7238. Dual Axis Solar Tracking System-A Comprehensive Study: Bangladesh Context**

Amit Chakraborty Chhoton, Narayan Ranjan Chakraborty

**Paper ID 7309. Design and Simulation of an Independent Solar Home System with Battery Backup**

A.K. Podder, K. Ahmed, N. K. Roy and P.C. Biswas

**Paper ID 7313. Drive train Design and Feasibility Analysis of Electric Three-Wheeler Powered by Renewable Energy Sources**

Ahmed Mortuza Saleque, Siam Hasan Khan, Alif Md. Asif Khan, Sabrina Hoque

**Paper ID 7316. A Performance Study based on Comparative Analysis between SCIG and DFIG based Wind Energy Conversion System in a Microgrid at St. Martin's Island**

Abir Muhtadi, Ahmed Mortuza Saleque

**Paper ID 7361. HOMER Based Hydrogen Fuel Cell System Design for Irrigation in Bangladesh**

Tania Khadem, S.M. Baque Billah, Sujoy Barua, Md. Shahadat Hossain

**Paper ID 7370. Characteristics Comparison of Pyrolysed Oils Obtained from Waste of Plastic, Tyres and Biomass Solid**

Naim Ul Hasan, Md. Mahfujur Rahman, Raisul Imran Rahat

**Paper ID 7420. Impact of Power Deviation Ratio on Selection of Sites to Build Solar Power Generation System**

Ahammad, and Kazi Khurshidi Haque Dia

### **Technical Session 3-3: Signal and Image Processing - II**

**Time:** 11:00 AM – 1:00 PM

**Venue:** Room 6009, Level 6, Academic Block

**Session Chair:** Prof. Md. Abdur Rahman, American International University, Bangladesh

**Paper ID 7412. Multiview Three Dimensional Reconstruction of Real Life Object**

Masud An Nur Islam Fahim, Abdullah Al Murad and Md. Foisal Hossain

**Paper ID 7414. An Efficient Single Chord-based Accumulation Technique (SCA) to Detect More Reliable Corners**

Mohammad Asiful Hossain, Abdul Kawsar Tushar, and Shofiullah Babor

**Paper ID 7422. LBP Histogram for Scale Independent Bangla Character Recognition**

Sk. Md. Masudul Ahsan, Md. Masum Billah, Nabil Sarwar Rahat

**Paper ID 7425. A Novel Outlier Detection Based Approach to Registering Pre- and Post-resection Ultrasound Brain Tumor Images**

Haradhan Chel, P K Bora

**Paper ID 7432. A Comparative Approach to Email Classification Using Naive Bayes Classifier and Hidden Markov Model**

Sebastian Romy Gomes, Sk Golam Saroar, Md Mosfaiul Alam Telot, Behroz Newaz Khan, Amitabha Chakrabarty, Mr. Moin Mostakim

**Paper ID 7471. Real-Time Fire Detection Using Enhanced Color Segmentation and Novel Foreground Extraction**

Rubayat Ahmed Khan, Jia Uddin, Sonia Corraya

**Paper ID 7487. Information Prediction in Sensor Networks Using Milne-Simpson's Scheme**

Md. Monirul Islam, Zabir Al Nazi, Md. Masud Rana, A.B.M. Aowlad Hossain

**Paper ID 7503. Determination of Perceptual Dissimilarity Induced by Bangla Vowel**

S. M. Hasnat Ullah, Md. Mahbub Hasan

**Paper ID 7504. Modified Mel-frequency Cepstral Coefficients (MMFCC) in Robust Text-dependent Speaker Identification**

Md. Atiqul Islam

**Paper ID 7545. An Automated Speech-Language Therapy Tool with Interactive Virtual Agent and Peer-to-Peer Feedback**

Maitraye Das, Abir Saha

### **Technical Session 3-4: Biomedical Electronics, Systems and Applications - II**

**Time:** 11:00 AM – 1:00 PM

**Venue:** Room 6013, Level 6, Academic Block

**Session Chair:** Prof. Muhibul Haque Bhuyan, Southeast University

**Paper ID 7186. Real Time Patient Monitoring System Based on Internet of Things**

Mohammad Salah Uddin, Jannat Binta Alam, and Suraiya Banu

**Paper ID 7365. Spatial and NSCT Features Based MRI Brain Image and Tumor Classification**

Chandan Saha and Md. Foisal Hossain

**Paper ID 7367. Non-visual Environmental Imaging and Object Detection through Electrical Impedance Tomography**

Md.Al-Amin Hossain, Jannatul Ferdous, Mehnaz Tabassum

**Paper ID 7415. Relationship Between Level of Blood Sugar and Current Profile by Electrolysis Process**

Kusum Tara, Ajay Krishno Sarkar

**Paper ID 7444. An Evaluation of Smartphone Apps for Preventive Healthcare Focusing on Cardiovascular Disease**

Kaiynath Zaman, Khondaker Abdullah Al Mamun

**Paper ID 7450. Classification of Seizure and Non-Seizure Activity in Seizure Patients Using Time-Frequency Domain Processing of Gamma Band EEG Signals**

Tanima Tasmin Chowdhury, Shaikh Anowarul Fattah, Celia Shahnaz

**Paper ID 7455. 'Bolte Chai' – An Android Application for Verbally Challenged Children**

Md. Nasfikur R. Khan, Hamudi H. Sonet, F. Yasmin, Sarmila Yesmin, Farhana Sarker, Khondaker A. Mamun

**Paper ID 7460. Real-time Monitoring of Heart Conditions Via Electrocardiogram Processing at Different Lifestyle Situations**

Kusum Tara, Ajay Krishno Sarkar

**Paper ID 7502. Treatment of Chlamydomonas by Generation of High Voltage Discharge Plasma at Water Surface**

M. A. Halim, Ruma

**Paper ID 7508. Watch IT: An Assistive Device for Deaf and Hearing Impaired**

Md. Sadad Mahamud and Md. Saniat Rahman Zishan

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**Lunch Break**

**Time:** 1:00 PM - 2:00 PM, **Venue:** IUB Cafeteria Faculty Dining Hall

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**Keynote and Invited Session 3**

**Time:** 2:00PM - 3:30 AM

**Venue:** Lecture Gallery 5002, Academic Block

**Session Chair:** Prof. Raqibul Mostafa, United International University

**Keynote Speech 3**

**Time:** 2:00PM - 2:45 AM

**Venue:** Lecture Gallery 5002, Academic Block

**Title: Wireless Power Transfer for Guided Vehicles**

**Speaker:** Minoru Okada  
Professor, Nara Institute of Science and Technology, Japan

### **Invited Speech 3**

**Time:** 02:50 PM - 03:30 PM

**Venue:** Lecture Gallery 5002, Academic Block

**Title: Power Performance Tuning in Low Power VLSI Circuit Design**

**Speaker:** Prof.Subir Kumar Sarkar, Senior Member IEEE  
IEEE Electron Device Society Distinguished Lecturer  
Professor & Former Head,  
Department of Electronics and Telecommunication Engineering  
Jadavpur University, India

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### **Tea Break**

**Time:** 3:30 PM - 3:45 PM, **Venue:** Level 5 Lobby, Academic Block

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### **Technical Session 4-1: Power Systems - II**

**Time:** 4:00 PM – 6:00 PM

**Venue:** Room 6007, Level 6, Academic Block

**Session Chair:** Dr. Q. D. Hossain, Chittagong University of Engineering and Technology

**Paper ID 7122. An Experimental Thermographic Safety Audit Focusing on Temperature Rise vs Load in Electrical Installations in a Bangladesh Garments Factory**

S M Raisul Islam, Md. Mozammel Huque, Liakot Ali Khan, Md. Imran Hossain

**Paper ID 7208. A Comparative Study on Different Placement Algorithms of Battery Energy Storage System in Microgrid**

Fabliha Ahmed, Ayman Uddin Mahin, Anisha Islam, Tareq Aziz

**Paper ID 7326. Detection and Locating the Point of Fault in Distribution Side of Power System Using WSN Technology**

Bahar Uddin, Asif Imran and Muhammad Asad Rahman

**Paper ID 7328. Measurement of Grounding Parameters of Manggis Substation**

M. A. Salam, Q. M. Rahman, Q. D. Hossain, Fushuan Wen, <sup>1</sup>Nurul Hanisah, Syeed Hasan

**Paper ID 7331. Power Grid Vulnerability Ranking: A Linear Programming Approach**

A. B. M. Nasiruzzaman, A. B. M. Shakeruzzaman, Most. Nahida Akter

**Paper ID 7359. Detection of Transmission Line-Fault through CWT Based Bewley Lattice Diagram**

Rehnuma Shabnam Ananya, Mohtasim Ahmed Chowdhury, Asif Khan, A. K. M. Baki

**Paper ID 7382. Performance Evaluation of Power Transmission System in Bangladesh**

Md. Dara Abdus Satter, Md. Raju Ahmed

**Paper ID 7421. Partial Discharge Detection through Ranked-Ordered-**

### **Wavelet Based Compressive Sensing**

A. K. M. Baki

### **Paper ID 7443. An Analysis on the Required Reinforcement for Embedding a Nuclear Power Plant in a Generic Power System**

Muhammad Rashedul Haq Rashed, Mostafa Zaman, Mobassear-ul-Islam, and Md. Farsid Raihan

### **Paper ID 7500. Design and Performance Analysis of Neural Network Based Dynamic Stability Controller for Multi-Generator Power System**

Tahmida Islam, Md. Rafiqul Islam, Shantanu Bose

## **Technical Session 4-2: Circuits, Systems and IoT - I**

**Venue:** Room 6008, Level 6, Academic Block

**Session Chair:** Dr. A. K. M. Muzahidul Islam, University of Liberal Arts

### **Paper ID 7144. Implementation of a Vehicle Tracking System using Smartphone and SMS service**

Nusrath Jahan, Kamal Hossen and Muhammad Kamrul Hossain Patwary

### **Paper ID 7178. Hardware Design and Implementation of Bengali Braille Embosser**

M. Ashifur Rahman, K. Dhar, and M.Ahsan Ullah

### **Paper ID 7225. A Proposed Multi-channel System for Public Libraries in Bangladesh**

Md. Mahboob Karim, Ashratuz Zavin, Nabila Shahnaz Khan, Sanjida Nasreen Tumpa, Muhammad Nazrul Islam

### **Paper ID 7244. Smart Anti-Theft Vehicle Tracking System for Bangladesh based on Internet of Things**

Mohammad Salah Uddin, Md. Mohiuddin Ahmed, Jannat Binta Alam and Maruf Islam

### **Paper ID 7294. An Affordable Displacement Measurement Tool for Structural Health Monitoring**

S M A Sharif, Md. Fakhra Alam Faisal, Mahdin Mahboob, M Shamim Miah

### **Paper ID 7340. High Performance Cost Effective Formalin Detector Using Conductivity Property**

Adharaa Neelim Dewanjee, Mrinmoy Dey, Muhammad Rashedul Haq Rashed, Anik Muhury and Jitu Prakash Dhar

### **Paper ID 7354. Smart E-Agriculture Monitoring System: Case Study of Bangladesh**

Juthi Kundu, Supriya Debi, Saleh Ahmed, and Sajal Halder

### **Paper ID 7419. IoT based Energy and Gas Economic Home Automation System using Raspberry Pi 3**

Ahmed Imteaj, Tanveer Rahman, Hosna Ara Begum and Mohd Shamsul Alam

### **Paper ID 7429. Development and validation of a low-cost visible light Spectrophotometer**

Md. Ashfaque – E – Alam, Md. Rakibul Islam and Ismat Jabeen Faria

**Paper ID 7431. Smart Disaster Notification System**

Md. Fahim Sikder, Sajal Halder, Tanvir Hasan, Md. Jamal Uddinand Mrinal Kanti Baowaly

**Technical Session 4-3: Renewable Energy - II**

**Time:** 4:00 PM – 5:15 PM

**Venue:** Room 6009, Level 6, Academic Block

**Session Chair:** Prof. Subrata Kumar Aditya, University of Dhaka

**Paper ID 7154. Automated Demand Response Strategies using Home Energy Management System in a RES-based Smart Grid**

Izaz Zunnurain, Md. Nasimul Islam Maruf

**Paper ID 7268. Designing of a Pelamis Wave Energy Converter in Matlab Simulink and Studying the Output Characteristics with Variation to Electrical and Mechanical Parameters**

Ferdus Wahid, Tasneem Sanjana, Avishek Roy, Qazi Tareq, Miftah Al Karim

**Paper ID 7448. GIS- Based Solar Irradiation Forecasting Using Support Vector Regression and Investigations of Technical Constraints for PV Deployment in Bangladesh**

Md. Masum Howlader, Md. Mahfuj Howlader, Md. Rokonzaman, Md. Shahrukh Adnan Khan, Aziz Un Nur, Abdullah Al Amin

**Paper ID 7494. Modeling and Simulation of Highly Efficient Ultra-thin CIGS solar cell with MoSe<sub>2</sub> tunnel**

E. M. K. Ikbali Ahamed, M. A. Matin, Nowshad Amin

**Paper ID 7514. Challenges of Photovoltaic Based Hybrid Minigrid for Off-grid Rural Electrification in Bangladesh**

MD Ahsan Kabir, A S M Monjurul Hasan, Taiyeb Hasan Sakib, S J Hamim

**Paper ID 7556. Mathematical Modeling of Solar Domestic Hot Water System (SDHWS) with Thermal Storage Tank**

Md. Nazrul Islam, A.K.M Abdul Malek Azad

**Technical Session 4-4: Solid State Devices, Nanotechnology, Microprocessors & VLSI - II**

**Time:** 5:15 PM – 6:15 PM

**Venue:** Room 6009, Level 6, Academic Block

**Session Chair:** Prof. Khairul Alam, East-West University

**Paper ID 7245. Influence of Device Performance of Sub-10 nm GaN-Based DG-MOSFETs over Conventional Si-Based SG-MOSFETs**

Md. Rokib Hasan

**Paper ID 7468. Fabrication of a Cost Effective Thermal Evaporation System For Thin Film Deposition**

Roni Paul, Prof. Dr. Md. Faruk Hossain, Md. Sifatul Muktadir Kazi Newaj Faisal

**Paper ID 7497. Optimization of InSb QWFET Layer Structure for High-Speed and Low Power Nano Electronics Applications**

S.S. Mahtab, M.J. Alam, A.M. Khan, Z. Uddin, A.A. Mamun and M.M. Uddin



**Paper ID 7516. Material Specific Simple Modeling Approach for Tunnel Junction Parameters Compatible for Multijunction Solar Cells**

Md. Sazzadur Rahman and Sazzad Hasan

**Paper ID 7524. Performance of SMGAA and DMGAA SiGe MOSFETs: A Comparative Study**

A. Z. M. Taiyer, S. M. Jahadun-Nobi, Md. Rafiqul Islam

**Technical Session 4-5: Cloud Computing, Algorithms, Mobile & Software Applications - II**

**Time:** 4:00 PM – 5:00 PM

**Venue:** Room 6013, Level 6, Academic Block

**Session Chair:** Dr. Mahady Hasan, Independent University, Bangladesh

**Paper ID 7187. Motif Discovery in Unaligned DNA Sequences Using Genetic Algorithm**

Al Muttakin, Mohammad Rezwanaul Huq

**Paper ID 7351. Segmentation and Classification of Lung Tumor from 3D CT Image using K-means Clustering Algorithm**

Prionjit Sarker, Md. Maruf Hossain Shuvo, Zakir Hossain, and Sabbir Hasan

**Paper ID 7467. Biometric Encryption Using Duffing Map**

Md. Mahmudul Hasan, Tareq Mohammad Faruqi, Muntaha Tazrean, Tanveer Hossain Chowdhury

**Paper ID 7483. A Simplified Parabolic Interpolation Based Reversible Data Hiding Scheme**

Md. Abdul Wahed Hussain Nyeem

**Paper ID 7549. Hand Sign Language Recognition for Bangla Alphabet Based on Freeman Chain Code and ANN**

Mohammad Mahadi Hasan, Md. Khaliluzzaman, Shabiba Akhtar Himel and Rukhsat Tasneem Chowdhury

**Technical Session 4-6: Circuits, Systems and IoT - II**

**Time:** 5:00 PM – 6:00 PM

**Venue:** Room 6013, Level 6, Academic Block

**Session Chair:** Prof. Md. Liakot Ali, Bangladesh University of Engineering & Technology

**Paper ID 7451. Smart Care: An Intelligent Assistant for Pregnant Mothers**

Sanjida Nasreen Tumpa, Anika Binte Islam, Md. Tasnim Manzur Ankon

**Paper ID 7461. Comparative Analysis of Computation Models for IoT: Distributed Fog vs. Conventional Cloud**

Tasnia Ashrafi Heya, Sayed Erfan Arefin, Md. Arshad Hossain and Amitabha Chakrabarty

**Paper ID 7465. Smart Home Solutions with Sun Tracking Solar Panel**

Faisal Bin Shahin, Pranti Tawheed, Md. Faijul Haque, Md. Rakib Hasan and Md. Nasfikur R. Khan

**Paper ID 7481. A New Design Approach of Home Automation System for Patients with Physical Disability to Reduce Water Wastage and Power Consumption using Renewable Energy**

Humayun Rashid, Sayed Bin Osman, Nazia Hassan, Iftekhar Uddin Ahmed, Remon Das, Md. Mobarak Karim

**Paper ID 7493. Anti-theft Vehicle Tracking and Regaining System with Automatic Police Notifying Using Haversine Formula**

Tareq Monawar, Shafayat Bin Mahmud, and Avijit Hira

**IEEE BDS WIE Session**

**Time:** 2:00 PM – 4:30 PM

**Venue:** Room 5012, Level 5, Academic Block

**Session Chair:** Ms. Samantha Lubaba Noor, BRAC University

**Speaker 1:** Ms. Shamima K Choudhury

Fellow, *Bangladesh Physical Society (BPS)*

Retired Professor, Department of Physics, University of Dhaka,

Former Director, Bose Centre for Advanced Study and Research In Natural Sciences

Former Senate Member, University of Dhaka,

Team Leader, WIP, Bangladesh

Fellow, Bangladesh Society for Non-destructive Testing (BSNDT)

**Speaker 2:** Ms. Shahida Sultana

Deputy Secretary

Innovation Specialist

Access to Information Program

Prime Minister's Office

**Speaker 3:** Dr. Jesmin

Professor, Department of Genetic Engineering and Biotechnology

University of Dhaka

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**Conference Dinner, Dr. Fatema Rashid Best Paper Award, Reception & Closing Ceremony**

**Chief Guest:**

Prof. Saiful Islam, Vice Chancellor, Bangladesh University of Engineering & Technology

**Date:** 29 September 2017, Friday

**Time:** 7:00 PM-10:00 PM

**Venue:**

Garlic 'n Ginger Restaurant, Shop# 1C-037, 1st Floor, Jamuna Future Park, Dhaka

Phone: 01913397202, Website: [www.garlic-n-ginger.com](http://www.garlic-n-ginger.com)

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## Day 3

**Saturday, 30 September 2017**

### City Tour

**Time: 10:00 AM – 12:30 PM**

#### Venue:

1. National Pariliament
2. Banani Puja Mondop

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### **Presentation Timing Details**

#### **Contributed papers (oral presentation):**

Presentation 10 mins  
Q & A 2 mins

#### **Keynote & Invited papers:**

Presentation 40 mins  
Q & A 5 mins

#### **Invited papers:**

Presentation 35 mins  
Q & A 5 mins

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