

2017 2nd International Conference on Electrical & Electronic Engineering (ICEEE 2017)

**Rajshahi, Bangladesh
27-29 December 2017**



**IEEE Catalog Number: CFP17D47-POD
ISBN: 978-1-5386-3342-7**

**Copyright © 2017 by the Institute of Electrical and Electronics Engineers, Inc.
All Rights Reserved**

Copyright and Reprint Permissions: Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

****** This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.***

IEEE Catalog Number:	CFP17D47-POD
ISBN (Print-On-Demand):	978-1-5386-3342-7
ISBN (Online):	978-1-5386-3341-0

Additional Copies of This Publication Are Available From:

Curran Associates, Inc
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: (845) 758-0400
Fax: (845) 758-2633
E-mail: curran@proceedings.com
Web: www.proceedings.com

CURRAN ASSOCIATES INC.
proceedings
.com

TABLE OF CONTENTS

SECURITY IN NAKAGAMI-M FADING CHANNEL WITH LOG-NORMAL SHADOWING	1
<i>T. Kumer ; M. Z. I. Sarkar ; D. K. Sarker</i>	
OUTAGE PERFORMANCE ANALYSIS FOR MULTICASTING WITH OPPORTUNISTIC RELAYING.....	5
<i>M. F. Kibria ; M. Z. I. Sarkar ; D. K. Sarker</i>	
PERFORMANCE ANALYSIS OF BINARY POLARIZATION SHIFT KEYING OCDMA FSO SYSTEM UNDER DIFFERENT ATMOSPHERIC CONDITIONS.....	9
<i>Priyanka Kundu ; Md. Jahedul Islam ; Iffat Jarin Talukder</i>	
PERFORMANCE ANALYSIS OF PI, PID AND HYBRID FUZZY CONTROLLER IN MATRIX CONVERTER APPLICATIONS.....	13
<i>Nishat Sharmin Chowdhury ; Monjurul Alam Khan</i>	
RF SUBCARRIER MODULATED FREE SPACE COMMUNICATION SYSTEM WITH COHERENT OPTICAL RECEIVER UNDER WEAK TURBULENT CONDITION	17
<i>Bobby Barua ; S. P. Majumder</i>	
AN EFFICIENT MULTI-THREAD POLLING BASED DBA ALGORITHM FOR SOLVING THE OVER-GRANTING PROBLEM OF LONG-REACH PON	21
<i>Shuvashis Saha ; Monir Hossen</i>	
STANDARD INDICES OF POWER TRANSMISSION SYSTEM EVALUATION: FINANCIAL AND COMMERCIAL POINT OF VIEW	25
<i>Md. Dara Abdus Satter ; Md. Raju Ahmed</i>	
IMPROVED CONTROL OF GRID CONNECTED DFIG WIND TURBINE UNDER LVRT CONDITIONS USING FULL AND PARTIAL COMPENSATION METHODS	29
<i>Md. Razon Chowdhury ; Sumon Chowdhury</i>	
ADVANCEMENTS OF AIR, WATER AND NANOFLUID BASED PHOTOVOLTAIC THERMAL (PV/T) TECHNOLOGIES.....	33
<i>Sumon Chowdhury ; Md. Razon Chowdhury</i>	
EFFICIENT DATA EMBEDDING FOR INTERPOLATION BASED REVERSIBLE DATA HIDING SCHEME.....	37
<i>Md. Abdul Wahed ; Hussain Nyeem</i>	
CIRCULAR PLANNER INVERTED-F ANTENNA FOR IMPLANTABLE BIOMEDICAL APPLICATIONS	41
<i>Md. Murshed Ali ; Md. Enzamam Ibne Bashar ; Md. Kamal Hosain</i>	
H-BRIDGE DRIVEN PROPULSION SYSTEM FOR A LIGHT WEIGHT ELECTRIC VEHICLE USING DC LINK VOLTAGE CONTROLLER.....	45
<i>Alif Md. Asif Khan ; Siam Hasan Khan ; Ahmed Mortuza Saleque</i>	
DESIGNING OF A PLASMONIC HIGH PASS WAVELENGTH FILTER WITH APODIZED GRATING WAVEGUIDE.....	51
<i>Mirza Fuad Adnan ; Md. Mahmudul Hasan ; Mehedi Hasan ; Dewan Saiham ; Rakibul Hasan Sagor</i>	
AN ARTIFICIAL NEURAL NETWORK BASED PREDICTIVE APPROACH FOR ANALYZING ENVIRONMENTAL IMPACT ON COMBINED CYCLE POWER PLANT GENERATION.....	55
<i>Md. Hassanul Karim Roni ; Muhammad Abdul Goffar Khan</i>	
AN EFFICIENT APPROACH TO DETECT SOFT ERROR.....	59
<i>Md. Mizanur Rahman Khan ; Muhammad Sheikh Sadi ; Tania Ferdoushi</i>	
PREDICTION OF DISORDER OF BRAIN USING EEG SIGNAL PROCESSING IN MATLAB GUI PLATFORM	63
<i>Ratri Mukherjee ; Shemul Sutra Dhar ; Kusum Tara</i>	
A REVIEW OF MULTI-PULSE AC-DC POWER CONVERTERS.....	67
<i>Md. Habibur Rahaman ; Md. Rafiqul Islam Sheikh</i>	
BATTERY IMPEDANCE MEASUREMENT USING ELECTROCHEMICAL IMPEDANCE SPECTROSCOPY BOARD.....	71
<i>Md. Kamal Hossain ; S. M. Rakiul Islam</i>	
RFID BASED HOSPITAL LABORATORY AUTOMATION SYSTEM.....	75
<i>K. M. Ahsan-Uz-Zaman ; Kafi Mohammad Ullah ; Omar Faruk Tasin ; Md. Shaidul Kabir Milon</i>	
I-RANGER: A VOICE CONTROLLED ENVIRONMENT INSPECTION ROVERBOT WITH LIVE VIDEO STREAMING AND MECHANICAL GRIPPER	78
<i>N. H. Bhuiyan ; M. K. H. Jewel ; S. Saha ; M. N. Mostakim ; Md. Salim Raza ; M. Shahjahan Ali ; M. W. Haq ; M. Khalid Hossain</i>	

CONTROL OF POWER FACTOR AND REDUCTION OF THD FOR A THREE PHASE GRID CONNECTED INVERTER.....	82
<i>Md. Sanwar Hossain ; Md. Nasmus Sakib Khan Shabbir ; Md. Fayzur Rahman</i>	
EFFICIENT RECTENNA DESIGN FOR HARVESTING MICROWAVE POWER FROM SSPS SYSTEM.....	86
<i>M. S. Islam ; M. S. Hossain ; S. K. Saha</i>	
RATE-DISTORTION ANALYSIS OF AN IMPROVED PIXEL VALUE ORDERING BASED REVERSIBLE EMBEDDING.....	90
<i>Sultan Abdul Hasib ; Hussain Nyeem</i>	
DEVELOPING POLY-MASK FOR AUTOMATIC ROI SELECTION OF MEDICAL IMAGES.....	94
<i>Chowdhury M Abid Rahman ; Hussain Nyeem</i>	
AN IMPROVED MPPT TECHNIQUE – ALTERNATIVE TO FRACTIONAL OPEN CIRCUIT VOLTAGE METHOD	98
<i>Shawon Baroi ; Pejush Chandra Sarker ; Saikot Baroi</i>	
DESIGN AND SIMULATION OF DIFFERENT WIRELESS POWER TRANSFER CIRCUITS	102
<i>Saikot Baroi ; Md. Shahidul Islam ; Shawon Baroi</i>	
POWER QUALITY IMPROVEMENT OF DFIG AND PMSG BASED HYBRID WIND FARM USING SMES.....	106
<i>Md. Ahnaf Abid Khan ; Md. Mofrat Shahriar ; Md. Shahidul Islam</i>	
AN ANALYSIS OF FEATURE EXTRACTION AND CLASSIFICATION ALGORITHMS FOR DANGEROUS OBJECT DETECTION	110
<i>Sakib B. Kibria ; Mohammad S. Hasan</i>	
ANALYTICAL MODEL FOR COUPLING WHISPERING GALLERY MODE SILICA MICROCAVITY FOR SENSING APPLICATION	114
<i>Shovasis Kumar Biswas ; S. M. Rakibul Islam ; Mashfique Ahmed ; Amit Halder ; Md. Rubayet Islam ; Monir Hossain</i>	
STABILITY IMPROVEMENT OF IG BASED WIND FARM USING DFIG.....	118
<i>Md. Imran Hussain Parash ; M. R. I. Sheikh ; D. Datta</i>	
PERFORMANCE ANALYSIS OF DOUBLE LAYER RECTANGULAR MICROSTRIP PATCH ANTENNA ARRAY FOR ISM BAND	122
<i>M. R. Khan ; M. S. Hossain ; A. B. S. Rahman</i>	
STABILITY ENHANCEMENT OF GRID-CONNECTED DFIG WITH GA OPTIMIZED PI CONTROLLER.....	126
<i>N/A</i>	
APPLICATION OF DC CHOPPER TO AUGMENT FAULT RIDE THROUGH OF DFIG BASED WIND TURBINE.....	130
<i>Md. Rahidul Islam ; Md. Golam Ajom ; M. R. I. Sheikh</i>	
NOVEL MULTIRATE DIGITAL FILTER FOR EEG ON FPGA	134
<i>Nazifa Tabassum ; Sheikh Md. Rabiul Islam ; Xu Huang</i>	
A NEW 36-PULSE DIODE RECTIFIER WITH TWO PASSIVE INJECTION CIRCUITS	139
<i>Md. Abdul Malek ; Muhammad Abdul Goffar Khan</i>	
COMPARATIVE ANALYSIS OF THREE DIFFERENT MICROSTRIP PATCH ANTENNAS ON THE RAT MODEL	143
<i>Senjuti Rahman ; Md. Kamal Hosain ; Ajay Krishno Sarkar ; Md. Mehedi Hasan</i>	
MEASUREMENT AND ANALYSIS OF ELECTROMAGNETIC FIELD RADIATION FOR ENGINEERING WORKSHOP USING THREE AXIS TESLA METER.....	147
<i>M. A. Raquib ; M. S. Hossain</i>	
A FORWARD KINEMATICS APPROACH TOWARDS HUMANOID ROBOT HANDWRITING	151
<i>Summit Sayem ; Feroz Ahmed</i>	
RECOGNIZING HAND-BASED ACTIONS BASED ON HIP-JOINT CENTERED FEATURES USING KINECT.....	155
<i>Ahmed Al Marouf ; Md. Ferdousur Rahman Sarker ; Shah Md. Tanvir Siddiquee</i>	
A STUDY OF MOLTEN CARBONATE FUEL CELL BASED POWER GENERATION FOR BANGLADESH	159
<i>Md. Matiur Rahman ; Minhaz Ur Rashid ; Md. Shahid Ullah</i>	
MITIGATING INFORMATION DISCLOSURE ATTACKS IN THE CLOUD BY BLOCKING INVALID USER AND FIGURE OUT PROBLEMS TO SOLVE DDOS BY ANALYZING STACKOVERFLOW QUESTIONS.....	163
<i>Mehjabin Rahman</i>	
PERFORMANCE COMPARISON OF PARTITION BASED CLUSTERING ALGORITHMS ON IRIS IMAGE PREPROCESSING	167
<i>Md. Sabbir Ejaz ; Md. Ali Hossain ; Abdul Matin ; Md. Tanvir Ahmed</i>	

DESIGN AND IMPROVEMENT OF PATTERN QUALITY IN CIRCULARLY POLARISED SLOT ARRAY ANTENNA FOR DIRECT BROADCAST SATELLITE APPLICATIONS	171
<i>Md Zahidul Islam ; Mst. Nishat Yasmin Koli ; Karu P. Esselle</i>	
A SIMPLISTIC, EFFECTIVE, AND ADAPTIVE APPROACH TOWARDS CLASSIFYING MEDICAL RECORDS ACCORDING TO ICD-10 USING MACHINE LEARNING FOR EFFICIENT STATISTICS	175
<i>Abu Shakil Ahmed ; Khaled Mohammed Saifuddin</i>	
MODELING AND SIMULATION OF A PV POWER GENERATING SYSTEM USING MMC CONVERTER AND HIGH FREQUENCY MAGNETIC LINK	179
<i>Saikot Baroi ; Md. Shahidul Islam ; Shawon Baroi</i>	
DESIGN AND SIMULATION OF A WIRELESS CHARGING SYSTEM FOR ELECTRIC VEHICLES	182
<i>Saikot Baroi ; Md. Shahidul Islam ; Shawon Baroi</i>	
SENSORLESS CONTROL OF STAND-ALONE BDFIG WITH COMPENSATION FROM ROTOR SPEED OBSERVER	186
<i>Dinghao Dong ; Wei Xu ; Yi Liu ; Caiyong Ye ; Md. Rabiul Islam</i>	
FACIAL EXPRESSION RECOGNITION BASED ON SUPPORT VECTOR MACHINE USING GABOR WAVELET FILTER.....	190
<i>Sagor Chandro Bakchy ; Mst. Jannatul Ferdous ; Ananna Hoque Sathi ; Krishna Chandro Ray ; Faisal Imran ; Md. Meraj Ali</i>	
ELECTRONIC AND VIBRATIONAL PROPERTIES OF SINGLE LAYER TRANSITION METAL DICHALCOGENIDES (TMDC).....	194
<i>Md. Rasidul Islam ; Md. Masud Rana ; A. S. M. Jannatul Islam</i>	
CDTE THIN FILM FABRICATION BY THERMAL EVAPORATION TECHNIQUE	199
<i>Md. Mahedi Hassan ; M. A. Matin ; Md. Mahade Sarkar ; H. Mahmud</i>	
VEHICLE TO VEHICLE COMMUNICATION USING RF AND IR TECHNOLOGY	203
<i>Eftekhar Hossain ; Nursadul Mamun ; Md. Fahim Faisal</i>	
COMPARISON OF NONINVASIVE HEART RATE MONITORING SYSTEM USING GSM MODULE AND RF MODULE.....	208
<i>A. R. Barai ; M. R. Rahman ; A. K. Sarkar</i>	
AN IMPROVED GRAPHENE FET WITH REDUCED MILLER CAPACITANCE USING EXTENDED GATE STRUCTURE AND HETEROGENEOUS OXIDE DIELECTRIC	212
<i>Muhammad Navid Anjum Aadit ; Ummay Sumaya Khan ; Shamima Nasrin Juthi</i>	
A LOW COST OBSTACLE AVOIDING AUTONOMOUS VEHICLE WITH GLOBAL POSITIONING SYSTEM	216
<i>Md. Nazmul Karim ; Md. Sakib Uddin ; Minhaz Ur Rashid ; Md. Matiur Rahman ; Abdul Kadar Muhammad Masum ; S. M. Taslim Reza</i>	
LIE DETECTION FROM SINGLE FEATURE OF FUNCTIONAL NEAR INFRARED SPECTROSCOPIC (FNIRS) SIGNALS	220
<i>Md. Asadur Rahman ; Mohiuddin Ahmad</i>	
HYBRID CLADDING STRUCTURED GOLD COATED PHOTONIC CRYSTAL FIBER BIOSENSOR BASED ON SURFACE PLASMON RESONANCE.....	224
<i>Alok Kumar Paul ; Abu Bakar Siddiquir Rahman ; S. M. Abdur Razzak ; Ajay Krishno Sarkar</i>	
PREDICT STUDENT'S ACADEMIC PERFORMANCE AND EVALUATE THE IMPACT OF DIFFERENT ATTRIBUTES ON THE PERFORMANCE USING DATA MINING TECHNIQUES.....	228
<i>Md. Hasibur Rahman ; Md. Rabiul Islam</i>	
DIMENSIONING OF ZERO GRID ELECTRICITY CELLULAR NETWORKING WITH SOLAR POWERED OFF-GRID BS	232
<i>Abu Jahid ; Sanwar Hossain</i>	
IMPROVED FEATURE EXTRACTION USING SEGMENTED FPCA FOR HYPERSPECTRAL IMAGE CLASSIFICATION	236
<i>M. P. Uddin ; M. A. Mamun ; M. A. Hossain</i>	
LOOSELY COUPLED GPS/INS INTEGRATED NAVIGATION SYSTEM BASED ON KALMAN FILTER AND COMPLEMENTARY FILTER FOR AIRCRAFT	240
<i>Md. Amirul Islam ; Sujit Saha</i>	
PERFORMANCE ANALYSIS OF THREE PHASE INVERTERS WITH DIFFERENT TYPES OF PWM TECHNIQUES	244
<i>Airin Rahman ; Md. Moshir Rahman ; Md. Rabiul Islam</i>	
EXPERIMENTAL CHARACTERIZATION OF A TEXTILE ANTENNA WORKING AT 2.4 GHZ	248
<i>Khaleda Ali ; Md. Saheb Ali ; Md. Nuruzzaman ; Hasanur Rahman Chowdhury ; Anis Ahmed</i>	

DESIGN AND ANALYSIS OF SERVO CONTROLLER IN TRIPLE-STAGE HARD DISK DRIVE SERVO SYSTEM	252
<i>Md. Arifur Rahman ; Alamgir Hossain</i>	
A SURVEY ON STUDENTS' AWARENESS ABOUT E-WASTE IN BANGLADESH	256
<i>Md Nafize Sadik ; S. M. Nayeem Arefin ; Mehnaz Tabassum</i>	
MODIFIED SQUARE LATTICE PHOTONIC CRYSTAL FIBER (SLPCF) INCORPORATING EDFA AND DEFINITE POWER CW LASER FOR IMPROVED ROF LINK	260
<i>Md. Azizul Hakim ; Zinat Mahol Sathi</i>	
HANDLING REALTIME TRAFFIC USING CONGESTION CONTROL ALGORITHMS UNDER MEANFIELD DOMAIN	264
<i>Am Rahman ; Abdullah Al Mamun ; Alma Islam</i>	
A NOVEL REGENERATIVE BRAKING SYSTEM OF BLDC MOTOR FOR LIGHTWEIGHT ELECTRIC VEHICLES: AN ANALYSIS OF BRAKING CHARACTERISTICS	268
<i>S. M. Baque Billah ; Mohammad Jakaria ; Pronab Nath</i>	
PERFORMANCE ANALYSIS OF RECTANGULAR, CIRCULAR AND ELLIPTICAL SHAPE MICROSTRIP PATCH ANTENNA USING COAXIAL PROBE FEED	272
<i>Md. Abdullah- Al- Mamun ; Sham Datto ; Md. Shahinur Rahman</i>	
EXTRACTION OF LINEAR AND NON-LINEAR FEATURES OF ELECTROCARDIOGRAM SIGNAL AND CLASSIFICATION	276
<i>Sudip Deb ; Sheikh Md. Rabiul Islam ; Fatema Tuj Johura ; Xu Huang</i>	
OFDM TIME AND FREQUENCY OFFSET COMPENSATED SIGNAL EXTRACTION WITH INCREASED SINR FOR HIGH DETECTION PROBABILITY	280
<i>Md Mukit ; Wahida Chowdhury ; Md Asgar Hossain ; Paroma Jahan</i>	
DETERMINING THE OPTIMUM TILT ANGLE AND ORIENTATION FOR PHOTOVOLTAIC (PV) SYSTEMS IN BANGLADESH	284
<i>M. A. A. Mamun ; Md Rasel Sarkar ; M. Parvez ; Mst. Jesmin Nahar ; Md. Sohel Rana</i>	
PERFORMANCE OF SVM, CNN, AND ANN WITH BOW, HOG, AND IMAGE PIXELS IN FACE RECOGNITION	288
<i>Kh Tohidul Islam ; Ram Gopal Raj ; Abdullah Al-Murad</i>	
NON ISOLATED DC-DC STEP UP CONVERTER WITH HIGH VOLTAGE GAIN FOR RENEWABLE ENERGY APPLICATIONS	292
<i>M. Al Mamun ; A K M Kamrul Hasan ; Abdullah Al Mahfazur Rahman</i>	
ROBUST FACE RECOGNITION USING RADIAL BASIS PROBABILISTIC NEURAL NETWORK	296
<i>Mrinal Kanti Dhar ; Md. Sanwar Hussain</i>	
DESIGN OF RECTANGULAR PATCH ANTENNA ARRAY USING DIFFERENT FEEDING TECHNIQUE	300
<i>Mst Hasneara Khatun ; Reefat Inum ; Nazia Tasnim</i>	
INVESTIGATION OF SEMICONDUCTOR DOPED B6 NANOCLUSTER: A FIRST PRINCIPLE STUDY	304
<i>Milon ; Syed Mahedi Hasan ; Md. Rakib Hossain ; Md. Kamal Hossain ; Jahirul Islam Khandaker ; Farid Ahmed ; Md. Abul Hossain</i>	
THE PLANAR B₆ CLUSTER AS A MOTIF FOR DOPING METAL CATION (AL³⁺): A DFT STUDY	308
<i>Md. Rakib Hossain ; Milon ; Syed Mahedi Hasan ; Md. Kamal Hossain ; Jahirul Islam Khandaker ; Farid Ahmed ; Md. Abul Hossain</i>	
FIR FILTER DESIGN USING AN ADJUSTABLE SPECTRAL EFFICIENT WINDOW FUNCTION	312
<i>Tapash Karmaker ; Md. Shamim Anower ; Md. Ahasan Habib</i>	
EFFICIENT DUTY CYCLE MANAGEMENT FOR REDUCTION OF ENERGY CONSUMPTION IN WIRELESS SENSOR NETWORK	316
<i>Nazia Suraia Usha ; Monir Hassen ; Shuvashis Saha</i>	
INDEMNITY FOR FREQUENCY DISRUPTION IN A SMART GRID DURING CYBER-ATTACK	320
<i>M. A. Rahman ; M. S. Rana ; M. S. Anower</i>	
CROWD RECKONING TOWARDS PREVENTING THE REPEAT OF '2015 HAJJ PILGRIMS STAMPEDE'	324
<i>A. Musa ; M. M. Rahman ; M. S. Sadi ; M. S. Rahman</i>	
PERFORMANCE ANALYSIS OF THE COMMUNICATION SATELLITE AT THE PROPOSED ORBITAL SLOTS FOR BANGLADESH	328
<i>Amit Podder ; Animesh Bosu</i>	
EXPERIMENTAL ANALYSIS FOR LIQUID BASED THERMOELECTRIC ELECTRONIC COOLING (LTEEC) SYSTEM	332
<i>Abu Raihan Mohammad Siddique ; Manar Al-Jethelah ; Shaikh Hasibul Majid ; Shohel Mahmud</i>	
Author Index	