

2019 International Conference on Computer, Communication, Chemical, Materials and Electronic Engineering (IC4ME2 2019)

**Rajshahi, Bangladesh
11 – 12 July 2019**



**IEEE Catalog Number: CFP19O58-POD
ISBN: 978-1-7281-3061-3**

**Copyright © 2019 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:	CFP19O58-POD
ISBN (Print-On-Demand):	978-1-7281-3061-3
ISBN (Online):	978-1-7281-3060-6

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

**International Conference on Computer, Communication, Chemical, Materials and
Electronic Engineering, IC⁴ME²-2019, 11-12 July, 2019**

Table of Contents

Paper ID	Title	Page No.
	Author Name	
5	Current and future prospects of geothermal energy in Bangladesh <i>Avijit Mallik, Md. Arman Arefin, Asif Bin Karim and Mohammad Rahat Rahman</i>	1
8	Present Situation and Future Trend of Renewable Energy in South Asian Countries: A Review <i>Md. Washim Akram and Pobitra Kumar Halder</i>	4
22	Characterization of structure and dielectric properties of solid state synthesized (1-x)Bi _{0.5} Na _{0.5} TiO ₃ - xBaTiO ₃ ceramic around the MPB region <i>Sazia Tanzin, Srabonty Biswas Toma and Mst. Sharmin Mostari</i>	10
24	Depression Analysis from Social Media Data in Bangla Language using Long Short Term Memory (LSTM) Recurrent Neural Network Technique <i>Abdul Hasib Uddin, Durjoy Bapery and Abu Shamim Mohammad Arif</i>	14
28	An Integer-Constrained Genetic Algorithm for Sensor Placement in Structural Health Monitoring <i>Munni Rani Banik and Tonmoy Das</i>	18
31	Demand-side Fuel-cells and Controllable Loads to Reduce Operational Costs of Micro-grid through Optimal Unit Commitment <i>Harun Or Rashid Howlader, Ahmed Yousuf Saber and Tomonobu Senjyu</i>	23
43	EEG Classification for MI-BCI using CSP with Averaging Covariance Matrices: An Experimental Study <i>Abu Saleh Musa Miah, Md. Khademul Islam Molla and Md.Rabiul Islam</i>	27
51	Development of a Microprocessor Based Smart and Safety Blind Glass System <i>Md. Tobibul Islam Islam, Mohiuddin Ahmad and Akash Singha Bappy</i>	32
53	Extractive Text Summarization Technique Using Fuzzy C-Means Clustering Algorithm <i>Shafiul Gani, Md. Iftekharul Mobin and Jia Uddin</i>	36
66	Music Evoked Brain Lobe Activation Using Spectral Features form EEG <i>Chowdhury Azimul Haque, Monira Islam, Md.Salah Uddin Yusuf and Abdul Munem Saad</i>	40
71	A Statistical mmWave Channel Modeling for Backhaul Networks in 5G Communications <i>Md Munjure Mowla, Hussnin Binte Hamid Dutty and Iftekhar Ahmad</i>	44
74	Competency Test in Cricket Defensive Drive using Double Pendulum Dynamics <i>Shadhon Chandra Mohonta and Ajay Krishno Sarkar</i>	48
78	Assessment of Mobility Models in Unmanned Aerial Vehicle Networks <i>Md Munjure Mowla, Md Ashiqur Rahman and Iftekhar Ahmad</i>	52
79	Superior Performance of Surface Plasmon Resonance Biosensor for Recognizing of DNA Hybridization <i>Tarik Bin Abdul Akib, Md. Nazmuschayadat and Md. Biplob Hossain</i>	56
80	An Agent Based Dynamic Knowledge Profile Framework <i>Salah Uddin, Tabassum Chowdhury and Kazi Hassan Robin</i>	60
82	Phonon Transmission of Vacancy Disordered Armchair Silicene Nanoribbon <i>Ashraf Hossain Howlader, Naim Ferdous, and Md. Sherajul Islam</i>	N/A
83	Low temperature synthesis of carbon nanostructure and effect of temperatures on the growth of amorphous carbon nanostructure <i>Rahul Saha Joy, Mir Mohammad Adil and Md. Abdullah Al Mahmood.</i>	65
84	A Cryptographic Algorithm Based on ASCII and Number System Conversions along with a Cyclic Mathematical Function <i>Mahmudul Hasan Moon, Md. Palash Uddin, Masud Ibn Afjal, Md. Al Mamun, Md. Abu Marjan and Adiba Mahjabin Nitu</i>	69
85	Design an Optimal LQG Control for Maintaining Nominal Frequency of a Single Area Power System <i>Fariya Tabassum and Dr Md. Sohel Rana</i>	74
87	Study on the Performance of ZnO/CuO Heterojunction Solar Cell: Simulation and Experimental <i>Abdul Kuddus, Md. Ferdous Rahman, S. Tabassum, J. Hossain and Abu Bakar Md. Ismail</i>	78
90	CPW-fed Ultra-wideband Flexible Disc Monopole Antenna Design for Early Detection of Brain Stroke <i>Md. Ashikur Rahman and Md. Foisal Hossain</i>	82

**International Conference on Computer, Communication, Chemical, Materials and
Electronic Engineering, IC⁴ME²-2019, 11-12 July, 2019**

91	Investigation of the Electrical, Optical & Structural Characteristics of Mixed Halide Perovskite Thin Films <i>M. A. Karim, S. K. Biswas, and M. A. Rahman</i>	88
92	Study the Optical and Structural Properties of Cu-doped ZnO Thin Films for Solar Energy Applications <i>S. K. Biswas, M. A. Karim, Arifuzzaman Rajib, and M. A. Rahman</i>	92
93	A Secure QR Code System for Sharing Personal Confidential Information <i>Md. Ahamed and Hossen Mustafa</i>	96
97	An Efficient Modified Bagging Method for Early Prediction of Brain Stroke <i>Md. Azizul Hakim, Md. Zahid Hasan, Md. Mahabur Alam, Md. Mehadi Hasan and Mohammad Nurul Huda</i>	100
98	Sentiment Analysis with NLP on Twitter Data <i>Md. Rakibul Hasan, Maisha Maliha and Dr. M. Arifuzzaman</i>	104
101	Feasibility Study of Electrical Energy Generation from Poultry Waste in Bangladesh <i>Md. Arif Ud Zaman, Md. Rashed Kamal and Shadhon Chandra Mohonta.</i>	108
105	Making Non-fired Brick Using Locally Produced Induction Furnace Steel Slag <i>Upoma Saha, Afzal Hossain and Fahmida Gulshan</i>	112
112	Saliency Detection using the Combination of Boundary Aware Color-map and Seam-map <i>Aminul Islam, Sk. Md. Masudul Ahsan and Joo Kooi Tan</i>	116
116	Design and implementation of sorting algorithms based on FPGA <i>A. F. M. Fahad Alif, Sheikh Md. Rabiul Islam and Polash Deb</i>	120
118	An Approach for Recognizing Vehicle Based on Appearance <i>Md. Abdullah Al Mamun and Kaushik Deb</i>	124
119	Integrated Use of Rough Sets and Artificial Neural Network for Skin Cancer Disease Classification <i>Md. Zahid Hasan, Shadman Showmik and Nusrat Zahan</i>	128
120	Automated Prediction of Phishing Websites Using Deep Convolutional Neural Network <i>K. M. Zubair Hasan, Md Zahid Hasan and Nusrat Zahan</i>	132
121	Comparison of Sacrificial Anode and Impressed Current Cathodic Protection Methods using Electric Resistance of Mild Steel <i>Mohammad Hanif, Bijoy Harun, Md. Aminul Islam, Nur Mohammad and Kazi Tanvir Ahmmed</i>	136
127	Age Estimation From Facial Image Using Convolutional Neural Network(CNN) <i>Sadia Mahjabin, Md. Mahfujul Alam and Kamrul Hasan Talukder</i>	140
128	Bangladeshi Plant Recognition using Deep Learning based Leaf Classification <i>Sultana Umme Habiba, Md. Khairul Islam and Sk. Md. Masudul Ahsan</i>	144
134	Multi-Camera Tracking System Applications Based on Reconfigurable Devices: A Review <i>Farhana Binte Sufi, Julio Daniel Dondo, Fernando Rincon Calle and Juan Carlos Lopez Lopez</i>	148
135	Design and Implementation of a Hospital Based Modern Healthcare Monitoring System on Android Platform <i>Sudipta Bain Sagar, Monira Islam and Md. Salah Uddin Yusuf</i>	153
136	Effect of Smoking in EEG Pattern and Time-Frequency Domain Analysis for Smoker and Non-Smoker <i>Md. Mahmudul Hasan, Nafiul Hasan, Azizur Rahman and Md. Mustafizur Rahman</i>	157
139	Automated Biogas Grid for Sustainable Development in Rural Area <i>A. M. Jahirul Islam, Kishor Roy, Jyotirmoy Saha and Amitabha Barua</i>	161
140	Performance Study of a Grid Connected Permanent Magnet Synchronous Generator based Wind Turbine System <i>Dr. Subir Datta, Akibul Islam, Tridip Saikia and Dr Shuma Adhikari</i>	165
145	An Improved Approach for Underwater Image Enhancement Through Color Correction, Contrast Synthesis and Dehazing <i>Md. Sajedul Islam, Md. Ali Hossain and Dr. Md. Al Mamun</i>	169
156	Application of mechanical separation techniques for the beneficiation of river born silica <i>Mohammad Rajib, Md. Fahad Hossain, Basudeb Kumar Malo and Mahfuza Parveen</i>	N/A
161	State Modeling to Investigate the CW Pumping Behaviour of Organic Solid-State Lasers <i>Md Johirul Haque, Md Rejvi Kaysir, Md Jahirul Islam and Md Rafiqul Islam</i>	173
162	Efficient FPGA Implementation of Unified Point Operation for Twisted Edward Curve Cryptography <i>Md. Rownak Hossain, Md. Selim Hossain and Yinan Kong</i>	177

**International Conference on Computer, Communication, Chemical, Materials and
Electronic Engineering, IC⁴ME²-2019, 11-12 July, 2019**

164	Extraction of natural dyes from mango (<i>Mangifera indica</i>) seed kernel and their dyeing characteristics on cotton fabric <i>Md. Abdullah Al Mamun, Md. Saiful Islam, Mohammad Mamun Hossain and Mubarak Ahmad Khan</i>	N/A
165	Scenario of Solid Waste Generation Disposal and Transportation at the University of Rajshahi <i>Md. Jewel and Md. Rahman</i>	181
168	AVAQ-EDCA: Additional Video Access Queue Based EDCA Technique for Dense IEEE 802.11 AX Networks <i>Md. Mahmudul Hasan and Mohammad Arifuzzaman</i>	185
171	Rotating Element Bearing Fault Diagnosis Using Discrete Cosine Transform and Supervised Machine Learning Algorithm <i>Kangkan Bhakta, Niloy Sikder, Abdullah-Al Nahid and M M Manjurul Islam</i>	189
178	Optical Network-based Clustering Hierarchy for Energy Efficiency in Vehicular Ad Hoc Network <i>Md. Forhad Hossen, Md. Ashfaqul Islam, Monir Hossen and Shuvashis Saha</i>	193
182	Detecting and Preventing IP Spoofing and Local Area Network Denial(LAND) Attack for Cloud Computing with the Modification of Hop Count Filtering(HCF) Mechanism <i>Subrina Sultana, Sumaiya Nasrin, Farhana Kabir Lipi, Md Afzal Hossain, Zinia Sultana and Fatima Jannat</i>	198
190	Fabrication of Silver (Ag) Dispersed Epoxy-Chitosan Biodegradable Nanocomposites <i>Abu Mahmud, Chaity Dev, Moumita Tasnim Meem, Md. Abdul Gafur, Nazmul Haque and Md. Asadul Hoque</i>	N/A
192	Formation and Development of Eco-friendly Antimicrobial Superabsorbent Hydrogel for Personal Healthcare <i>Md. Obaidul Haque, Md. Ibrahim H. Mondal, Md. Abu Sayeed, Moslima Khatun and H. Jahan Kadri</i>	204
195	Antimicrobial Activity of Chitosan and Its Derivatives Exhausted Cotton Fabrics as Ecofriendly Antimicrobial Agents <i>Md. Roknuzzaman, Md. Ibrahim H. Mondal, Md Ahsan Habib, Firoz Ahmed and Md. Nazmul Huda</i>	N/A
196	Microstructure & dielectric study of (1-x)Bi _{0.5} Na _{0.5} TiO ₃ - xBiTiO ₃ solid solutions by varying sintering temperature <i>Srabonty Biswas Toma, Sazia Tanzin and Mst. Sharmin Mostari</i>	208
198	Stabilization of Glucose Oxidase Enzyme in Liquid Reagent <i>Aktarun Nahar, Mohammad Taufiq Alam, Taposh Shingha Roy, Abdun Naim, Rahnuma Bhuiyan Evon and Nusrat Zahan</i>	N/A
201	Low Loss Microstructure Optical Fiber Refractive Index Sensor based on Surface Plasmon Resonance <i>Md Aslam Mollah, Md. Yousufali, Md. Rifat Bin Asif Faysal, Md. Abdul Mazid and Ripon Marma</i>	212
202	Numerical Modeling to evaluate the performance of FBG-based Strain Sensors <i>Ahsan Yaqub Rabbi, Md Rejvi Kaysir and Md Jahirul Islam</i>	216
212	Delineating Common Cell Pathways that Influence Type 2 Diabetes and Neurodegenerative Diseases using a Network-based Approach <i>Utpala Nanda Chowdhury, Md. Al Mehedi Hasan, Shamim Ahmad, M. Babul Islam, Julian M.W. Quinn and Mohammad Ali Moni</i>	220
214	Statistical Analysis of an Outdoor mmWave Channel Model at 73 GHz for 5G Networks <i>Sumaiya Haq Aftabi Momo and Md Munjure Mowla</i>	226
216	Verifying the Methods for Determination of Optimum pH and Temperature of Pectinolytic Enzyme <i>Taposh Shingha Roy, Mohammad Taufiq Alam, Rahnuma Bhuiyan Evon, Nusrat Zahan, Aktarun Nahar and Abdun Naim</i>	N/A
218	Determination of Calcium Content of Certain Vegetables Available in Rajshahi Central City Market <i>Rahnuma Bhuiyan Evon, Mohammad Taufiq Alam, Taposh Shingha Roy, Aktarun Nahar, Nusrat Zahan and Abdun Naim</i>	N/A
219	Aerodynamic Analysis on Double Wedge Airfoil at Different Mach Numbers with Varying Angle of Attacks Using Computational Fluid Dynamics <i>Asif Kabir, S M Mokarram Hossain, Ahsan Hafiz and Abdullah As Sayeed</i>	230

**International Conference on Computer, Communication, Chemical, Materials and
Electronic Engineering, IC⁴ME²-2019, 11-12 July, 2019**

221	Finger Movement Classification Based on Statistical and Frequency Features Extracted from Surface EMG Signals <i>Chyon Bhattacharjee, Niloy Sikder, Tariq Hasan and Abdullah-Al Nahid</i>	236
226	Breast Cancer Detection & Tumor Localization Using Four Flexible Microstrip Patch Antennas <i>Md. Mamun Ur Rashid, Ashiqur Rahman, Liton Chandra Paul, Jarin Raza, Bijoy Podder and Ajay Krishno Sarkar</i>	240
227	Application of Si-NPs Extracted from the Padma River Sand of Rajshahi in Photovoltaic Cells <i>Md. Rounakul Islam, Abdul Kuddus, Asma Aktar, Sakhawat Hossain and Abu Bakar Md. Ismail</i>	246
229	Bengali Informative Chatbot <i>Md. Kowsher, M Ashrafal Alam, Md. Jashim Uddin, Md. Rafiqul Islam, Nuruzzaman Pias and Abu Rayhan Md Saifullah</i>	250
230	Detecting Third Umpire Decisions & Automated Scoring System of Cricket <i>Md. Kowsher, M Ashrafal Alam, Md. Jashim Uddin, Faisal Ahmed, Md Wali Ullah and Md. Rafiqul Islam</i>	256
233	A Distributed Method Analysis for Enabling Device-to-Device Communications in Millimeter Wave Bands <i>Md Abid Hassan Mitul and Md Munjure Mowla</i>	263
235	Performance Analysis of Multicasting Over Rician-K Fading Channels: A Secrecy Tradeoff <i>A. S. M. Badrudduza, Milton Kumar Kundu, Md. Zahurul Islam Sarkar and Dilip Kumar Sarker</i>	267
236	Secure Wireless Multicasting with Mixture Gamma Distribution for Generalized-K Fading Channels <i>Milton Kumar Kundu, A. S. M. Badrudduza, Md. Zahurul Islam Sarkar and Dilip Kumar Sarker</i>	271
241	Wet Chemical etching for edge Isolation of Solar cell using HNA <i>Md Milon Uddin, Tanvir Hassan Mojumder and Nasif Shams</i>	275
243	Nonlinear Temporal Analysis of Uterine EMG for Preterm Birth Classification <i>Irtiza Hasan, Auditi Das and Mohammed Imamul Hassan Bhuiyan</i>	280
245	A Lossless Bit Isolation Algorithm for Data Compression by Using Static Dictionary <i>Md. Tariqul Islam, Romana Rahman Ema, Md. Riadul Islam and Tajul Islam</i>	284
248	Design and Implementation of Automated Switching and Real Time Monitoring of Hybrid Solar System <i>Apu Saha, Somnath Misra, M.S. Muhit and Asif Karim</i>	289
251	A Precise Breast Cancer Detection Approach Using Ensemble of Random Forest with AdaBoost <i>Tanbin Islam Rohan, Awan-Ur- Rahman, Abu Bakar Siddik, Monira Islam and Md. Salah Uddin Yusuf</i>	294
252	Network-based quantitative frameworks to identify pleiotropic factors that influence for cardiomyopathy progression <i>Md. Nasim Haidar, M. Babul Islam, Utpala Nanda Chowdhury, Julian M.W. Quinn, Mohammad Ali Moni and Fazlul Huq</i>	298
253	Optical characterization of nonradiative centers in GaAs:N d-doped superlattices by using below-gap excitation light <i>Md. Dulal Haque, Norihiko Kamata, A. Z. M. Touhidul Islam, Md. Julkarnain, Shuhei Yagi, Hiroyuki Yaguchi and Yoshitaka Okada</i>	303
254	Vacancy Induced Electronic Properties of Two Dimensional Silicon Carbide: A First Principles Calculation <i>Md. Rasidul Islam, A. S. M. Jannatul Islam and Md. Sherajul Islam</i>	307
256	Traffic Sign Recognition by Integrating Convolutional Neural Network and Support Vector Machine <i>Shawkh Ibne Rashid, Md. Azharul Islam and Md. Al Mehedi Hasan</i>	311
257	SVM Model for Feature Selection to Increase Accuracy and Reduce False Positive Rate in Falls Detection <i>Md Rashed-Al-Mahfuz, Md. Robiul Hoque, Bimal Kumar Pramanik, Md. Ekramul Hamid and Mohammad Ali Moni</i>	317
259	Synthesis of Facial Image using Conditional Generative Adversarial Network <i>Shuvendu Roy, M. A. H. Akhand and N. Siddique</i>	322
266	Breast Cancer Diagnosis Models Using PCA and Different Neural Network Architectures <i>Md. Mehedi Hasan, Md. Rakibul Haque and Mir Md. Jahangir Kabir</i>	328

**International Conference on Computer, Communication, Chemical, Materials and
Electronic Engineering, IC⁴ME²-2019, 11-12 July, 2019**

270	A new Proposal for Enhancement of Protection Scheme for Microgrids <i>S.M.G Mostafa, H.M. Enamul Haque and Khaled Syfullah Fuad</i>	332
274	Effect of different enbNodes on Millimeter Wave Communication <i>Nasimul Hyder Maruf Bhuyan and Mamun Ahmed</i>	337
275	An Optimal LQG-DC Control for Compensating Voltage Fluctuation in a Single Area Power System <i>Fariya Tabassum and Dr Md Sohel Rana</i>	340
285	Prognostic Biomarker Identification for Pancreatic Cancer by Analyzing Multiple mRNA Microarray and microRNA Expression Datasets <i>Azmain Yakin Srizon and Md. Al Mehedi Hasan</i>	344
286	A Low Cost Intelligent Multi Wireless Sensor Network Perspective on Real Time Traffic Surveillance <i>Imteaz Rahaman, Md. Farhamdur Reza, Mohammad Hasibul Hasan Hasib, Mohammad Iqbal Hossain, S. M. Arman Hossain and Pallab Kumar Sarkar</i>	348
287	CLASSIFICATION of GAS BUBBLE in a DOPPLER ULTRASOUND SIGNAL using SYNCHROQUEEZING TRANSFORM <i>Mst. Rehena Khatun, Dr. Md. Ekramul Hamid and Md. Iqbal Aziz Khan</i>	352
290	Bengali Handwritten Alphabet Recognition using Deep Convolutional Neural Network <i>Sifat Ahmed, Fatima Tabsun, Abdus Sayef Reyadh, Asif Imtiaz Shaafi and Faisal Muhammad Shah</i>	356
291	Capacitive Indoor Tracking Using Floor Tiles <i>Md. Tarek Salman Suvro</i>	360
295	Evaluating the Effect of Transmission Range (TX) on the Performance of DSDV, AODV and DSR in Vehicular Ad hoc Network (VANET) Traffic Scenarios <i>Md. Jahidul Islam, Ayesha Khatun, Md. Mahin and Nayeema Islam</i>	364
298	Design and Simulation of PV Based Harmonic Compensator for Three Phase load <i>Mohammad Abdur Razak, Mohammad Jawed Jaman Fahim, Naeemul Islam, Md. Anis Uz Zaman and Rajvi Sutra Dhar</i>	368
299	Object Detection Based Security System Using Machine learning algorithm and Raspberry Pi <i>Hasan Hashib, Md. Leon and Ahmed Mortuza Saleque</i>	374
302	A Systems Biology Approach to Identifying Genetic Markers that Link Progression of Parkinson's Disease to Risk Factors related to Ageing, Lifestyle and Type 2 Diabetes <i>Najmus Sakib, Utpala Nanda Chowdhury, M. Babul Islam, Fazlul Huq, Julian M.W. Quinn and Mohammad Ali Moni</i>	378
303	Suppression of Mode Conversion by Improved Shielding Effect of Ethernet Cable Connector Based on Imbalance Factor Matching <i>Md Ashraful Islam, Ryota Irishika, Kengo Iokibe and Yoshitaka Toyota</i>	383
304	Extraction of Sound Signal from Tiny Vibrations in Motion Magnified Video Using Optical Flow <i>Khatuna Zannat Mim, Abdullah Arafat Miah and Mohiuddin Ahmad</i>	387
307	Pyrolysis of Polypropylene Plastics: A Prospective Way for Alternative Fuel <i>Md. Thowfikul Alam, M.M. Rahman, Md. Tazul Islam and Noor As Sadiq Shawon</i>	N/A
314	Finding Topic-Aware Intimate Online Social Groups <i>Swarna Das and Md. Musfique Anwar</i>	391
324	Differential Embedding and Chirikov Map based Image Watermarking in Transformed Domain <i>Syeda Saida Khadeeza Nawrin and Chandan Saha</i>	395
329	A Hybrid Approach of Feature Selection and Feature Extraction for Hyperspectral Image classification <i>Asif Ahmmed Joy and Md. Al Mehedi Hasan</i>	399
333	Throughput Analysis for Wideband Opportunistic Radio Network <i>Shohely Tasnim Anindo, Teethiya Datta and Sk. Shariful Alam</i>	403
334	Design and Implementation of an FDM Based 3D Printer <i>Md. Muzammal Hoque, Md. Mehedi Hashan Jony, Md. Mehedi Hasan and Dr. Md. Hasnat Kabir</i>	407
335	Identification of Metabolomic Biomarker using Multiple Statistical Techniques and Recursive Feature Elimination <i>Tahsin Masrur and Md. Al Mehedi Hasan</i>	412

**International Conference on Computer, Communication, Chemical, Materials and
Electronic Engineering, IC⁴ME²-2019, 11-12 July, 2019**

339	Performance Study of UPQC under Non-linear load, Unbalance linear load, Symmetrical and Asymmetrical Faults <i>Dr Subir Datta, Akibul Islam, Tridip Saikia, Dr Shuma Adhikari and Bappa Roy</i>	416
340	Internet of Things Based Model for Smart Campus: Challenges and Limitations <i>Imam Hossain, Dipankar Das and Md. Golam Rashed</i>	420
343	Enhancing Wireless Security Over Weibull Fading Multicast Channel <i>Md. Zashid Iqbal, Abu Saleh Mohammad Nafis, A. S. M. Badrudduza, Milton Kumar Kundu and Md. Zahurul Islam Sarkar</i>	424
344	Optimization of multilayer antireflection coatings for improving performance of silicon solar cells <i>Md. Shaon Sarker, Most. Farzana Khatun, Sheikh Rashel Al Ahmed and Jaker Hossain</i>	428
353	Detection Performance Analysis for Wideband Cognitive Radio Network : A Compressive Sensing Approach <i>Teethiya Datta, Shohely Tasnim Anindo and Sk. Shariful Alam</i>	432
359	Design of the ABS polymer based multimode planar large core 1x2 splitter fabricated by 3D printing technology <i>Md. Mehedi Hasan, Md. Muzammal Hoque, Md. Mehedi Hasan Jony and Md. Hasnat Kabir</i>	436
364	Photonic Crystal Fiber Refractive Index Sensor based on Surface Plasmon Resonance <i>Md. Rifat Bin Asif Faysal, Md. Aslam Mollah, Md. Yousufali, Md. Abdul Mazid and Ripon Marma</i>	440
365	Heart Condition Monitoring Using Ensemble Technique Based on ECG Signals' Power Spectrum <i>Ananna Rahman, Niloy Sikder and Abdullah-Al Nahid</i>	444
366	Power Quality Improvement with Single Phase Boost Rectifier using Fuzzy Logic Control <i>Sabbir Ahamed Shubho, Kamrul Huda, Kazi Abu Zilani and Dr. Mohammad Rubaiyat Tanvir Hossain</i>	448
369	Social Media User's Safety Level Detection through Classification via Clustering Approach <i>Md. Kalim Amzad Chy, Sheikh Arif Ahmed, Ali Haider Doha, Abdul Kadar Muhammad Masum and Shahidul Islam Khan</i>	452
372	Performance analysis of NRZ-OOK, RZ-OOK and 8-QAM modulated VCSEL based optical link <i>Abdul Bakir Billa and Md. Jahedul Islam</i>	456
378	An Advanced Distribution Layer Solution to Improve Bandwidth Utilization and Media Quality for Multi-Access Network Management in Wide Area Network <i>Saad Mazhurul Huque, Imam Muhammad Amirul Maula and Syed Zahidur Rashid</i>	461
380	Indigenous Fish Classification of Bangladesh using Hybrid Features with SVM Classifier <i>Md. Aminul Islam, Md. Rasel Howlader, Umme Habiba, Rahat Hossain Faisal and Md. Mostafijur Rahman</i>	465
381	Misadjustment Measurement with Normalized Weighted Noise Covariance based LMS Algorithm <i>Md. Shoriful Islam, Rubaiyat Yasmin, Shihab Kaviraz and Most. Meftahul Zannat</i>	469
382	PID Controller Based Automatic Solar Power-Driven Grass Cutting Machine <i>Md. Rawshan Habib, Koushik Ahmed, Naureen Khan, Mahbubur Rahman Kiran, Md. Ahasonul Habib, Md. Tanvir Hasan and Omar Farrok</i>	473
383	A Comparative Analysis of Band Selection Techniques for Hyperspectral Image Classification <i>Md. Rifaet Ullah, Md. Al Mehedi Hasan, Julia Rahman and Md. Khaled Ben Islam</i>	477
385	Fault Ride Through Capability Enhancement of DFIG Based Wind Farm Using Advanced Converter Topology <i>Md. Rashidul Islam, Md. Najmul Huda, Md. Mahmudul Hasan, Jakir Hasan and Dhruvo Das Abir</i>	483
395	Temperature Dependent Thermal Conductivity of Graphene Nanoribbon (GNR) for Different Interatomic Potentials: An Equilibrium Molecular Dynamics Study <i>Md Asaduz Zaman Mamun, Mst. Hafsa Begum, Minhaj Muhtashim, Md. Shakil Mahmud Jiban and Tarequl Islam</i>	487
396	Diabetic Retinopathy Classification with a Light Convolutional Neural Network <i>Sanaullah Chowdhury, Faozia Rashid, Niloy Sikder and Abdullah-Al Nahid</i>	491
403	ACENTRIST: An Augmented Census Transform Histogram for Aerial Image Classification <i>Badal Chandra Mitra, Ayesha Akter, Rahat Hossain Faisal and Md Mostafijur Rahaman</i>	495

**International Conference on Computer, Communication, Chemical, Materials and
Electronic Engineering, IC⁴ME²-2019, 11-12 July, 2019**

406	Extended Noise Adaptive Binary Pattern for Garments Pattern Classification <i>Ayesha Akter, Badal Chandra Mitra, Rahat Hossain Faisal and Md Mostafijur Rahaman</i>	499
411	Improvement of Contrast of Terahertz Images of a Terahertz Chemical Microscopy using Adaptive Digital Filter <i>Feroz Ahmed, Toshihiko Kiwa, Tatsuki Kamiya, Yuki Maeno, Kenji Sakai and Keiji Tsukada</i>	503
412	SYNTHESIS AND MICROSCOPIC STUDY OF ZINC SULFIDE NANOPARTICLES <i>Amrit Regmi, Bibek Raj Bhattarai and Surendra K Gautam</i>	507
414	Cadmium Sulfide Nanoparticles: Synthesis and Characterization <i>Bibek Raj Bhattarai, Amrit Regmi and Surendra K Gautam</i>	511