

2020 IEEE Region 10 Symposium (TENSymp 2020)

**Dhaka, Bangladesh
5-7 June 2020**

Pages 1-563



**IEEE Catalog Number: CFP20TEO-POD
ISBN: 978-1-7281-7367-2**

**Copyright © 2020 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:	CFP20TEO-POD
ISBN (Print-On-Demand):	978-1-7281-7367-2
ISBN (Online):	978-1-7281-7366-5
ISSN:	2640-821X

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

2020 IEEE Region 10 Symposium (TENSYMP), 5-7 June 2020, Dhaka, Bangladesh

Paper ID	Paper Title	Page No
2	Effect of Chemical Doping on Thermal Conductivity of Zigzag Phosphorene Nanoribbon	1-4
7	Performance Evaluation of t-SNE and MDS Dimensionality Reduction Techniques with KNN, ENN and SVM Classifiers	5-8
10	Modelling of Dried Banana Leaves based Microwave Absorber over 1-7 GHz Frequency Range	N/A
12	IoT Based Smart Helmet and Accident Identification System	14-17
13	Improved Identification Performance of Lysine Glycation PTM using PSI-BLAST	18-21
20	Investigation on the Temperature and Size Dependent Mechanical Properties and Failure Behavior of Zinc Blende (ZB) Gallium Nitride (GaN) Semiconducting Nanowire	22-25
21	Predicting the Possibility of Being Malignant Tumor based on Physical Symptoms using IoT	26-30
23	Image Classification using DNN with improved optimizer	31-35
26	Cost- effective Sea Water Purification System Using Solar Photovoltaic	36-39
28	Native Vehicles Classification on Bangladeshi Roads Using CNN with Transfer Learning	40-43
31	Power Quality Mitigation in Weak AC Grid with Low X/R Ratios using Distribution Static Compensator Controlled by LMF Algorithm	44-47
36	Performance Analysis and Scaling Behavior of Ultra-Scaled 20nm III-V (InAs) HEMTs System with 2-D Tunneling Effects on Leakage Current	48-51
58	Design of High Speed and Low Offset SR Latch Based Dynamic Comparator	52-55
61	28/38 GHz Dual-Band Microstrip Patch Antenna with DGS and Stub-Slot Configurations and Its 2x2 MIMO Antenna Design for 5G Wireless Communication	56-59
62	Developing a Secured and Reliable Vehicular Communication System and Its Performance Evaluation	60-65
65	Designing Solar Charging Station for Electric Car at Dhaka-Chattogram National Highway in Bangladesh	66-69
66	Design and Implementation of A Low Power Energy Harvested Head-mountable Deep Brain Stimulation Device	70-73
70	Open Circuit Fault Detection in Neutral Point Clamped Inverter-A Voltage Model Based Analysis	74-77
74	Real-Time Family Member Recognition Using Raspberry Pi for Visually Impaired People	78-81
78	Secrecy Capacity via Cooperative Transmitting under Rayleigh and Nakagami-m Fading Channel	82-85
86	Robust Control of Frequency for Multi-Area Power System	86-89
91	Mobile App-Based Early Warning System for Landslides Using Land Monitoring Through GSM	90-93
92	A Study on the Parametric Evaluation of a Tubular Structured Electromagnetic Energy Harvester	94-97

2020 IEEE Region 10 Symposium (TENSYMP), 5-7 June 2020, Dhaka, Bangladesh

93	Mathematical Morphology aided Random Forest Classifier based High Voltage Porcelain Insulator Contamination Level Classification.	98-101
96	Incorporating Multiple Assay Operations and Cross Contamination Avoidance in Digital Microfluidic Biochips with Reduced Number of Pins	102-105
101	Best Relay Transmission Aided Energy Harvesting in a Multi Relay Cooperative Network	106-109
105	Automatic Mass Classification in Breast Using Transfer Learning of Deep Convolutional Neural Network and Support Vector Machine	110-113
109	Credit Card Fraud Prediction and Classification using Deep Neural Network and Ensemble Learning	114-119
114	Mitigation of Power Quality Disturbances Using Dynamic Voltage Restorer with PI Controller, PLL and Super Capacitor Based Storage System	120-125
115	Feature Fusion Based Background Model Learning for Video Object Detection	126-129
117	Early detection of Sepsis in critical patients using Random Forest Classifier	130-133
124	Feature Subspace Detection for Hyperspectral Images Classification using Segmented Principal Component Analysis and F-score	134-137
126	Single Support Phase Gait Kinematics and Kinetics for a Humanoid Lower Limb Exoskeleton	138-141
127	Identification of Epileptic Seizure in EEG Signals Using DWT and ANN	142-145
136	Closed Domain Bangla Extrinsic Monolingual Plagiarism Detection and Corpus Creation Approach	146-149
138	Feature Reduction Based on the Fusion of Spectral and Spatial Transformation for Hyperspectral Image Classification	150-153
139	Target Class Oriented Subspace detection for hyperspectral image classification by using Mutual Information and Cross Cumulative Residual Entropy	154-157
140	Interference free device-to-device aided cooperative relaying scheme	158-161
142	A Novel Approach to Categorize News Articles from Headlines and Short Text	162-165
146	Self-Powered Automatic Dual Axis Tracking and Positioning System Design	166-169
148	Android App Based Bluetooth Controlled Low Cost Cloth Folding Machine	170-173
149	Multiclass Classification for Bangla News Tags with Parallel CNN Using Word Level Data Augmentation	174-177
150	Diabetic Retinopathy Detection using Texture Features and Ensemble Learning	178-181
153	Reliable and Effective Data Reduction Workflow for High-Dimensional Gene Expression Data	182-185
155	Assistive Technology for Visually Impaired using Tensor Flow Object Detection in Raspberry Pi and Coral USB Accelerator	186-189
156	CNN Based Diabetic Retinopathy Status Prediction Using Fundus Images	190-193
158	Upoma: A Dynamic Online Price Comparison Tool for Bangladeshi E-commerce Websites	194-197
159	Efficient Triple Junction Organic Solar Cell	198-201

2020 IEEE Region 10 Symposium (TENSYMP), 5-7 June 2020, Dhaka, Bangladesh

160	Performance Evaluation of a Quasi-TM Mode Silicon Optical Modulator	202-205
161	SMART GRID DYNAMIC PRICING ALGORITHM FOR BENEFIT MAXIMIZATION OF SERVICE PROVIDERS AND CONSUMERS	206-209
163	Predicting priority needs for Rehabilitation of refugees based on machine learning techniques from monitoring data of Rohingya refugees in Bangladesh	210-213
165	A Comprehensive Dialect Conversion Approach from Chittagonian to Standard Bangla	214-217
169	A Novel Approach for Waste Collection, Automated Waste Collecting Robot with Advanced Image Recognition Technology and on board Robotic Arm	218-221
172	Identifying Extrinsic Functional Activation of Brain Regions using BOLD Signals	222-225
174	Performance Analysis of Linearly-arranged Concentric Circular Antenna Array Using Robust ODL Technique	226-229
175	Electronic and Optical Properties of Sn Doped Hexagonal BN Monolayer: A First-principle Study	230-233
185	Comparison of Analytical and Non-Sequential Monte Carlo Simulation Techniques for Generation Adequacy Assessment	234-237
186	Semantic Segmentation of Self-Supervised Dataset and Medical Images using combination of U-Net and Neural Ordinary Differential equations	238-241
196	Implementation of an Instrumented Crutch with Scalable E-Care Architecture Using IoT	242-245
201	Broadband Supercontinuum Generation in Mid-Infrared Range (0.8 μm – 4.5 μm) Using Low Power Dispersion-Engineered CMOS Compatible Silicon-Rich Nitride (SRN) Waveguide	246-249
205	LyFor: Prediction of lysine formylation sites from sequence based features using support vector machine	250-253
206	Design and Characterization of Miniaturized Implantable PIFA Antenna for MICS Band Application	254-257
209	Pseudo-Static Master-Slave Match-Line Scheme for Sustainable-Performance and Energy-Efficient Content Addressable Memory	258-261
211	A New Classification Technique: Random Weighted LSTM (RWL)	262-265
213	Intregation of Home Assistance with a Gesture Controlled Robotic Arm	266-270
214	A New Polling Algorithm for Dynamic Data Transmission Sequence of Cluster-based PON	271-274
216	An approach towards energy saving smart dry wet waste segregation and notification system	275-278
219	Pothole and Speed Breaker Detection Using Smartphone Cameras and Convolutional Neural Networks	279-282
221	Automatic Text Summarization Using Gensim Word2Vec and K-Means Clustering Algorithm	283-286
222	A Novel Design of A Dual-Powered Automatic Peltier Effect Cooler	287-290
223	An IoT based Smart Assistive Device for the Visually Impaired	291-294

2020 IEEE Region 10 Symposium (TENSYMP), 5-7 June 2020, Dhaka, Bangladesh

224	Understanding Customer Sentiment: An opinion mining approach for lexical analysis of restaurant reviews	295-299
229	Designing and Prototyping of an Electromechanical Ventilator based on Double CAM operation Integrated with Telemedicine Application	300-303
234	Comparison among Supervised Classifiers for Classification of Brain Tumor	304-307
240	Implementation of Automated Bengali Parts of Speech Tagger: An Approach Using Deep Learning Algorithm	308-311
241	An Alternative PWM Controlled High Efficient Solution for 60 Volt Electric Vehicle Charging System to Replace Typical Iron Core Charger: A Comprehensive Technical Performance Assessment and Comparison of Efficiency	312-315
243	Low Cost, Portable ECG Monitoring and Alarming System Based on Deep Learning	316-319
245	A Compendious Performance Analysis of a Movable Solar Powered Boat for Enhanced Efficient Small-Scale Irrigation System by Using MPPT Based SPWM Controlled Single-Phase Inverter	320-323
247	Bifacial Module Based Multilevel Solar Panel System: A Comparative Study	324-327
248	An Algorithmic Approach to Driver Drowsiness Detection for Ensuring Safety in an Autonomous Car	328-333
253	EMG Controlled Bionic Robotic Arm using Artificial Intelligence and Machine Learning	334-339
254	Statistical Analysis of the Power Consumption by Industrial Sewing Machine of Bangladesh and Performance Assessment of an Energy Efficient Solution by Using Single Phase Variable Frequency Drive	340-343
257	An IOT Based System for Printing Braille Letter from Speech	344-347
258	Secure and Transparent KYC for Banking System Using IPFS and Blockchain Technology	348-351
259	CARDIAC ARRHYTHMIA DETECTION IN AN ECG BEAT SIGNAL USING 1D CONVOLUTION NEURAL NETWORK	352-357
262	Extraction of Fetal ECG in a Non-invasive Way and Estimation of Fetal Heart Rate	358-361
265	Prediction of Parkinson's Disease by Analyzing fMRI Data and Using Supervised Learning	362-365
270	Low Profile Multi-slotted Patch Antenna for Lower 5G Application	366-369
271	Glove Based American Sign Language Interpretation Using Convolutional Neural Network And Data Glass	370-373
272	An Improved Non-Isolated DC-DC Converter Involved with High Static Gain	374-377
273	An Emperical Framework of Idioms Translator From Bengali to English: Rule Based Approach	378-381
274	Investigation of a Four-element Textile Multiple Input Multiple Output Antenna for Ku-Band Applications	382-385
278	Design and Implementation of a Smart Bike Accident Detection System	386-389
284	A Neural Network Model to Identify the Crisis-related Actionable Informative Tweets for Disaster Management	390-393

2020 IEEE Region 10 Symposium (TENSYMP), 5-7 June 2020, Dhaka, Bangladesh

285	A Hyper-ledger Fabric Framework as a Service for Improved Quality E-voting System	394-397
286	An IOT Based Interactive LPG Cylinder Monitoring System with Sensor Node Based Safety Protocol for Developing Countries	398-401
287	Impact Analysis of Cyber Attack under Stable State of Power System: Voltage Stability	402-405
289	Integration of Solar Power into Electric Grid based on Voltage at Critical Contingency	406-411
292	Secured IOTA Enabled Crypto-Platform with Discretionary Mining Capabilities and Miner Nomination based on First-Price Sealed Bid Auction Theory	412-416
298	Design of a Smart Gateway for Edge Enabled IoT Applications	417-420
299	A Study on Sustainable Development Goal 7: Future Plan to Achieve the Affordable and Clean Energy-Bangladesh Perspective	421-426
304	An Extended Model for a Punch Through (PT) Trench Insulated Gate Bipolar Transistor (IGBT) and Its Transient Characteristics	427-430
307	An Approach to Suspect Criminal Activity and Trace The Identity Using Multiple Surveillance Camera	431-435
308	Low Cost Smart E-Pants Using Intermittent Electrical Stimulation under Interferential Current Protocol for the Prevention of Pressure Ulcer	436-439
309	Protik : Bangla Sign Language Teaching Aid for Children with Impaired Hearing	440-443
313	Deep Learning Based Steel Sheet Surface Defect Detection System	444-448
315	PROTOTYPE SMART HOME ENVIRONMENT WITH BIOFEEDBACK	449-452
323	Surface optimization of Nano-Structured bimetallic metamaterial on optical fiber for multi-disease sensing through exhaled air	453-456
326	An Improved Service Model for Higher Impact and Sustainability of Data Centers in Bangladesh	457-460
327	Performance Estimation of 5G NYUSIM Massive MIMO Statistical Channel Models for Millimeter-Wave Communication	461-464
328	Design of A Palm leaf Shaped Compact Microstrip Patch Antenna for Millimeter Wave Band Applications	465-468
332	Power System Optimization Model using Economic Load Dispatch	469-472
333	Filtering theory for a power system dynamics in the presence of stochastic damping coefficient	473-476
339	Creation of a Cost Efficient and Effective Personal Assistant Robot using Arduino & Machine Learning Algorithm.	477-482
340	Optimization of Electric Vehicle Charging to Shave Peak Load for Integration in Smart Grid	483-488
341	Building Decentralized Image Classifiers with Federated Learning	489-494
394	A Comparative Study on Various Binary Classification Algorithms and their Improved Variant for Optimal Performance	495-498
400	Design of a Solar Assisted Autonomous Surveillance Vehicle	499-503

2020 IEEE Region 10 Symposium (TENSYMP), 5-7 June 2020, Dhaka, Bangladesh

425	Design and implementation of a wireless charging system for electric vehicles	504-507
428	Vibration Measurement & Analysis Using Arduino Based Accelerometer	508-512
429	Power Grid Classification through Electrical Network Frequency and its Multiple Frequency Components	513-516
432	Real Time Human Face Detection and Recognition Based on Haar Features	517-521
433	Mini Economical Anechoic Chamber	522-525
443	Application of Image Processing and Industrial Robot Arm for Quality Assurance Process of Production	526-530
447	Robust Sensor Selection for Sidewalk Obstacle Avoidance using Reinforcement Learning	531-534
449	Wind Energy Resource Assessment of the South Gobi region in Mongolia	535-538
450	Wind Turbine Power Control for Turbulence Wind Speed	539-542
463	Applications of Smart Customer Model for Smart grid	543-546
488	Power factor Controlling and Monitoring wirelessly through computer	547-551
493	CPU Based YOLO: A Real Time Object Detection Algorithm	552-555
494	Use of Deep Learning Approach on UAV imagery to Detect Mistletoe Infestation	556-559
498	Over-Frequency Mitigation Using Coordinated Generator Shedding Scheme in a Low Inertia Power System	560-563
500	Web-Based Small Scaled Portable Data Acquisition and Control Unit for Demand Side Load	564-567
503	An Analytical Investigation of Finite Blocklength Information Theory	568-571
504	Analytical Model of Band-to-Band Tunneling in ATLAS-TFET	572-575
505	Lightning Performance Analysis on 400 kV Transmission Line of Bangladesh Power System Network	576-581
507	Link Constrained Real-time Electrocardiogram Compression with Controlled Payload Packet Size	582-585
508	Performance Analysis of BLDC Motor using an Improved Controller	586-589
510	Real Time Distance and Mobility Detection of Obstacles Using a Smart Multisensor Framework for Visually Impaired People	590-593
512	Design and Implementation of a Nursing Robot for Old or Paralyzed Person	594-597
514	Design and Implementation of a Control System for CanSat Comeback Mission with Ground Station Communication Link	598-601
515	Non-Pervasive Monitoring of Daily-Life Behavior to Access Depressive Symptom Severity Via Smartphone Technology	602-607
519	A Sagnac Interferometer and PCF Based Highly Sensitive Temperature Sensor	608-611
520	Polarization-maintaining and Polarization-filtering Negative Curvature Hollow Core Fiber in THz Regime	612-615
525	Power Transfer Equations Applied to Generators	616-621
528	Wideband Rectangular Dielectric Resonator Antenna Array for ISM Band Applications	622-625

2020 IEEE Region 10 Symposium (TENSYMP), 5-7 June 2020, Dhaka, Bangladesh

529	An Artificial Intelligence Based Day Lag Technique for Day Ahead Short Term Load Forecasting	626-629
533	A Comprehensive Pre-processing Approach for High-Performance Classification of Twitter Data with several Machine Learning Algorithms	630-633
534	IoT Based Cost Efficient Muscle Stimulator for Biomedical Application	634-637
537	Economic Assessment of a Concrete and Floating Based Solar Chimney Power Plant in Bangladesh for Renewable Power Generation	638-641
538	Performance Analysis of Switched Inductor-based Dual-Input DC-DC Converter with High DC-Voltage Gain	642-645
539	Fault Current Limiter Controller for the Protection of Inverter Based Distributed Generation	646-649
540	Workfunction engineering based Broken Gate TFET: modeling and simulation based theoretical analysis	650-653
541	Fuzzy Logic-Refined Color Channel Transfer Synergism based Image Dehazing	654-657
543	A Combined Linguistic-Movement Model based Bengali Text Entry Method for Physically Handicapped People	658-661
544	Impact of Self-Heating and Nano-Gap Filling Factor on AlGaAs/GaAs Junction-Less DG-MOSFET Based Biosensor for Early Stage Diagnostics	662-665
545	An Empirical Study to Analyze the Impact of Instagram on Students' Academic Results	666-669
546	Design and Implementation of Parabolic Trough Solar Thermal Collector	670-673
547	Transformer Insulation Paper Moisture Measurement Using Optical Fiber as Sensor	674-677
550	Characterization of Symmetric and Asymmetric Double Gate Junctionless Field Effect Transistor in Subthreshold Region	678-681
551	Voltage Performance Analysis with Integration of Utility Scale Solar PV Plant in Bangladesh National Grid	682-685
554	GPU Accelerated Indexing for High Order Tensors in Google Colab	686-689
556	Multi-Frame Low-Dose CT Image noise reduction using Adaptive Type-2 Fuzzy filter and Fast-ICA	690-693
557	Open-Circuit Voltage and Short-Circuit Current Estimator for Photovoltaic Module	N/A
560	Low loss hollow core optical fibers combining lattice and negative curvature structures	698-701
566	A Novel Approach to Rapidly Generate Document from Hand Drawn Flowcharts	702-705
567	Analysis of Malware Prediction Based on Infection Rate Using Machine Learning Techniques	706-709
569	Performance Analysis of a UWB RFID System with Hybrid SC-EGC Receive Combining Technique	710-713
570	An Effective Switched-Capacitor Based Thirteen Level Inverter with Low Total Harmonic Distortion	714-717
571	Implementation of Torque Sensor Technology in Electric bicycle with Solar Charging Kit	718-721

2020 IEEE Region 10 Symposium (TENSYMP), 5-7 June 2020, Dhaka, Bangladesh

573	Analysis of stability and control of helicopter flight dynamics through mathematical modelling in Matlab	722-725
576	A Novel Asymmetric Multilevel Inverter with Phase Disposed Switching Technique for Grid Integration of Solar Photovoltaic Systems	726-729
579	Numerical Investigation on Dielectrophoresis Blood Cell Separation for Different Applied Voltage and Red Blood Cell Size	730-733
581	Design and Development of an Aircraft Type Multi-functional Autonomous Drone	734-737
585	A Novel Highly Sensitive, Highly Birefringent and Low Loss Suspended Core PCF Sensor for Alcohol Detection in THz Regime	738-741
586	DeepBanglaNet: A Deep Convolutional Neural Network to Recognize Bengali Handwritten Digits	742-745
587	Three Stage Class AB Power Amplifier in 90nm CMOS Process for IoT Applications	746-749
588	Skin Lesion Classification Using Densely Connected Convolutional Network	750-753
589	A Transparent Conductive Material Based Circularly Polarized Nano-antenna for THz Applications	754-757
591	Classification of Parkinson's Disease by Analyzing Multiple Vocal Features Sets	758-761
592	Static Hand Gesture Recognition for American Sign Language using Deep Convolutional Neural Network	762-765
597	Decoding Categorical Speech Perception from Evoked Brain Responses	766-769
599	Performance Evaluation of 1kW Asynchronous and Synchronous Buck Converter-based Solar-powered Battery Charging System for Electric Vehicles	770-773
601	Development of One-kilowatt Capacity Single Phase Pure Sine Wave Off-grid PV Inverter	774-777
603	Improved Emotion Recognition from Microblog Focusing on Both Emoticon and Text	778-782
606	Recognition of Handwritten Bangla Number Using Multi Layer Convolutional Neural Network	783-786
609	Multi Reference Modulation Based Grid Integration of Cascaded Half Bridge MLI for Medium Voltage PV Application	787-790
610	Low Mutual Coupling Four-Port MIMO Antenna Array for 3.5 GHz WiMAX Application	791-794
611	DEVELOPMENT AND STUDY OF 28GHZ ANTENNA FOR DIFFERENT SHAPES AND WORK ON ANTENNA TRANSPARENCY FOR CELLULAR DEVICES	795-798
612	A Mixed Convolution Neural Network for Identifying RNA Pseudouridine sites	799-802
616	A Deep Neural Network Based Optimization Approach for Wireless Resource Management	803-806
617	A Neural Network Based Approach for Recognition of Basic Emotions from Speech	807-810
620	Design and Development of an Autonomous Pesticides Spraying Agricultural Drone	811-814

2020 IEEE Region 10 Symposium (TENSYMP), 5-7 June 2020, Dhaka, Bangladesh

621	Predictive Modeling on MEG Signal to Classify Hand and Wrist Movement using UNEQ and KNN	815-818
622	Empirical Wavelet Fractal Texture Analysis for Skin Disease Identification	819-822
624	Early Depression Detection from Social Network Using Deep Learning Techniques	823-826
627	1.5V, 71.3dB Gain, 103dB CMRR, 0.21mW, high performance a two stage op-amp designed in Cadence using 90nm CMOS process for Bio-medical Applications	827-830
629	Load Flow Analysis of a Six Bus System for a Bulk Scale Replacement of Conventional Lighting Loads in a Distributed Network	831-834
631	SRCBT: Secure Regeneration of Corrupted Blocks by TPA in Cloud	835-838
633	Design and implementation of a Low-Power 1V, 77.26uW 6-bit SAR ADC using 90nm CMOS process in Cadence Virtuoso for Biomedical appliance	839-842
634	Performance Analysis of different types of wind energy system for Blackstart of Microgrid	843-846
636	Semantic Regularization for Blind image Deconvolution in Medical Images with extended sparseness	847-850
637	Through-the-Wall HB100 Radar Signal Processing for Estimating Frequency of Vibrating Diaphragm	851-854
640	Ultrasound Image Analysis for Normal Pregnancy and Ectopic Pregnancy Using MATLAB	855-858
641	A Novel Framework for implementation of Land Registration and Ownership Management via BlockChain in Bangladesh	859-862
643	Optimization of Next Generation Cellular Networks using Reinforcement Learning	863-867
646	A newer multi-robot search algorithm using Probabilistic Finite State Machine and routine random switching of exploration approaches	868-871
648	A modified control approach for Voltage Source Converter to regulate voltage and power flow in Distribution Network	872-875
651	A Systematic Automation of Direct Assessment of Outcomes Attainment in Outcome Based Education	876-879
653	Convenient Way to Detect Ulcer in Wireless Capsule Endoscopy Through Fuzzy Logic Technique	880-883
654	Learning Based Resource Allocation Under Limited Backhaul Capacity of Millimeter Wave Networks	884-887
655	Transfer Learning based Diabetic Retinopathy Detection with a Novel Preprocessed Layer	888-891
658	Multi-connectivity for URLLC: Performance Comparison of Different Architectures	892-895
659	Design and Analysis of Future Hybrid Micro Grid System for Matiranga	896-899
660	Vehicle Registration and Information Management using Blockchain based Distributed Ledger from Bangladesh Perspective	900-903
661	Time Division Multiplexed Data Analysis Technique using Auto-Morphing Experimental Studies of PV Systems to Minimize Variability	904-907

2020 IEEE Region 10 Symposium (TENSYMP), 5-7 June 2020, Dhaka, Bangladesh

663	IoT enabled Low power and Wide range WSN platform for environment monitoring application	908-911
667	Saccharin Detection in Food Using Hollow-core Photonic Crystal Fiber	912-915
668	A Real-Time Wrong-Way Vehicle Detection Based on YOLO and Centroid Tracking	916-920
669	Prediction of Formylation Sites by Incorporating Sequence Coupling into General PseAAC	921-924
670	Design of Low Power Stacked Inverter Based SRAM Cell with Improved Write Ability	925-928
671	Optimization of Interior Permanent Magnet Machine Embedded with Ferrite Magnets by Varying Air-gap and Width of Permanent Magnets	929-932
673	Hybrid Technique for Classification of Hyperspectral Image Using Quadratic Mutual Information	933-936
675	Design and Implementation of a Safety Fire Fighter (SAFF) Robot with Dual Controlling Mechanism	937-940
676	DeepGlut: A Deep Learning Framework for Prediction of Glutarylation Sites in Proteins	941-944
677	A Comparative Study of Different Types of Convolutional Neural Networks for Breast Cancer Histopathological Image Classification	945-948
678	Secrecy Performance Analysis over Inverse Gamma Composite Multicast Fading Channels	949-952
679	Performance Study of NVL Technique Based Robust Uniform Concentric Circular Array Beamformer under Mismatch Condition	953-956
681	Efficient Computing of Higher Order Array Indices in Parallel using GPU	957-960
682	A New Multilevel Inverter with Alleviated Number of Switches for Renewable Energy Applications	961-964
684	Bangla Compound Character Recognition using Support Vector Machine (SVM) on Advanced Feature Sets	965-968
685	Performance Enhancement of Aluminum doped ZnO based Lead-free Perovskite Solar Cell	969-972
686	Identification of Query-Oriented Influential Users in Online Social Platform	973-976
687	Improvement of Face and Eye Detection Performance by Using Multi-task Cascaded Convolutional Networks	977-980
689	Design and Analysis of Elliptical Microstrip Patch Antenna at 3.5 GHz for 5G Applications	981-984
692	A Hybridized Feature Extraction Approach To Suicidal Ideation Detection From Social Media Post	985-988
694	Efficient Blockchain System based on Proof of Segmented Work	989-992
695	Control of a Multi-Pulse SVM Based Unified Power Flow Controller (UPFC)	993-996
698	Classification of Underrepresented Text Data in an Imbalanced Dataset Using Deep Neural Network	997-1000
701	Human Age and Gender Estimation using Facial Image Processing.	1001-1005
702	Analyzing Multicast Routing Algorithms on Software Defined Network	1006-1009
705	Optical Characterization of Sputter Deposited CdS Thin Films and Measurement of Deposition Rate	1010-1013

2020 IEEE Region 10 Symposium (TENSYMP), 5-7 June 2020, Dhaka, Bangladesh

706	Identifying the Risk of Cardiovascular Diseases From the Analysis of Physiological Attributes	1014-1017
708	Brain Tumor Classification With Inception Network Based Deep Learning Model Using Transfer Learning	1018-1021
711	Strength of Composition Attacks in Multiple Independent Data Publication	1022-1025
712	Testing of Dielectric Strength of Transformer Oil, Insulation Paper and Corona Effect of Wire	1026-1029
713	Automated Detection of Lung Cancer Using CT Scan Images	1030-1033
714	Characterization of a linear generator for sea wave	1034-1037
717	Adaptive Update in Deep Learning Algorithms for LiDAR Data Semantic Segmentation	1038-1041
718	Multicast Security at the Physical Layer over Hyper Gamma Fading Channel	1042-1045
719	Advanced Wireless Control & Feedback Based Multi-functional Automatic Security System	1046-1049
720	Design of Microstrip Patch Antenna on Rubber Substrate with DGS for WBAN Applications	1050-1053
721	Discovering and Tracking Query Oriented Topical Clusters in Online Social Networks	1054-1057
723	A Wide Tuning Range LC VCO through Switched Capacitor Bank using TSMC 180nm Technology	1058-1061
724	Lung nodule Detection and Classification using Deep Neural Network	1062-1065
726	Towards Uncertainties Control: Fuzzy Proportional Controller Design Implementation for Distributed Generation Based Single-phase Islanded Microgrid	1066-1069
727	Sentence Generation using LSTM Based Deep Learning	1070-1073
728	Traffic Forecasting with Deep Learning`	1074-1077
729	Highly Area-Efficient Implementation of Modular Multiplication for Elliptic Curve Cryptography	1078-1081
730	A Compact Modified Octagonal Microstrip Patch Antenna for Bandwidth Enhancement and Harmonic Suppression	1082-1085
733	Secrecy Performance of Multicasting over Shadowed Rician Fading Channel	1086-1089
734	Improving QoS of Peer to Peer Multimedia Services by Employing Multiple Upstream Wavelengths in EPON	1090-1093
736	Fault Analysis of High Voltage Transmission Line in Bangladesh: Barapukuria to Bibiyana	1094-1097
737	Supervised Deep Learning Methods for Human pre-miRNA Identification	1098-1101
738	Human Abnormality Detection based on Bengali Text	1102-1105
740	Programmable Single Electron Transistor: A modified Macro-model & its Applications	1106-1109
742	Design of microstrip patch sensor for non-invasive body electrolyte monitoring.	1110-1113
743	RKHW:Recognition of Kannada Handwritten Words using SVM Classifier with Convolutional Neural Network	1114-1117

2020 IEEE Region 10 Symposium (TENSYMP), 5-7 June 2020, Dhaka, Bangladesh

744	Application of Internet of Things (IoT) to Develop a Smart Watering System for Cairns Parklands – A Case Study	1118-1122
745	Theoretical Investigation of a GaAs Based Novel Air Slot Nano-Plasmonic Coupler	1123-1127
746	Smart Monitoring and Controlling System for Aquaculture of Bangladesh to Enhance Robust Operation.	1128-1133
747	Modeling of a 400 kV Transmission Line of Bangladesh Power System Network	1134-1139
748	Design and Analysis of a Non-Uniform Planar Antenna Array	1140-1143
749	Adaptive Diagonal Loading of MVDR Beamformer For Sustainable Performance In Noisy Conditions	1144-1147
750	A Single Phase to Single Phase Step-Down Cycloconverter with Reduced THD for Variable Speed Drive Applications	1148-1151
752	Object and Currency Detection with Audio Feedback for Visually Impaired	1152-1155
754	Financial Cost-Benefit Analysis of 132 kV Power Transmission Projects in the Public Utility Sector of Bangladesh: An Unsubsidized LDC Post-Graduation Scenario	1156-1159
755	A Fully Automatic Transport System with LoRa and Renewable Energy Solution	1160-1163
756	Investigation on short channel GGNMOS ESD protection device for low power IC	1164-1167
761	Effect of Annealing Temperature on the Structural and Optical Properties of CdS Thin Films Deposited by CBD	1168-1171
762	Effect of Aluminium (Al) and Copper (Cu) Doping on Characteristics of Tin Oxide (SnO ₂) Thin Film	1172-1175
763	Arabic To Bangla Machine Translation Using Encoder Decoder Approach	1176-1179
765	Suitable Base Station Position Selection for Post Disaster Quick Road Network Recovery in a Vulnerable Congested Area	1180-1184
766	Climate Exodus : The Migration Catastrophe of Bangladesh	1185-1188
768	Design and Analysis of Plasmonic Temperature Sensor Utilizing Photonic Crystal Fiber	1189-1192
769	Near-field Communication enabled Voice and Touch integrated Home Automation for the Elderly and Disabled	1193-1196
770	Promising SPR Biosensors Applying 2D Materials with α -SnSe Allotrope for Sensing Applications	1197-1200
771	Performance Investigation of Robust Linearly Constrained Minimum Variance Beamforming for Uniform Circular Array	1201-1204
772	An Affordable CanSat Design and Implementation to Study Space Science for Bangladeshi Students	1205-1208
773	Genetic Algorithm with Updated Multipoint Crossover Technique and its Application to TSP	1209-1212
778	Development of IoT Based Real Time Cardiac State Monitoring System	1213-1216
779	Prediction of Epileptic Seizures using Support Vector Machine and Regularization	1217-1220

2020 IEEE Region 10 Symposium (TENSYMP), 5-7 June 2020, Dhaka, Bangladesh

781	Fully Lead-Free All Perovskite Tandem Solar Cell With Improved Efficiency: Device Simulation Using SCAPS-1D	1221-1224
783	Secure Wireless Multicasting over α - η - μ Fading Channel	1225-1228
784	Image Processing Intelligence Analysis for Robo-Res 1.0: A Humanoid Rescue-Robot	1229-1232
786	Computational study highlighting the possibility of using plasmonic nanoparticles made of aluminum and alloys of aluminum to enhance the opto-electronic performance of thin-film solar cells	1233-1236
787	On the possibility of using a “sandwich” configuration comprising a plasmonic silver-silica core-shell nanoparticle together with a homogeneous silver nanoparticle to enhance the opto-electronic performance of thin-film solar cells	1237-1240
789	Efficient multi-dimensional range key query by dimension transformation	1241-1244
792	Design and Testing of an MPPT Algorithm Using an Intelligent RBF Neural Network and Optimum Relation Based Strategy	1245-1248
793	IoT Based Smart Watercraft System	1249-1252
796	Heart rate variability analysis for diagnosis of diabetic peripheral neuropathy	1253-1256
799	On Predicting and Analyzing Breast Cancer using Data Mining Approach	1257-1260
803	Extraction of Sequence from Handwritten Numerals and Recognition Using LSTM	1261-1264
806	Robust and Extraordinary Electron Transport in 2D Hexagonal Lattice Topological Insulator in the presence of random potential barrier	1265-1268
807	AR Basketball: Consolidating Fingerstroke-level Model for a Visuo-Haptic Augmented Reality based Smartphone Application	1269-1272
812	Performance Analysis of Most Prominent Machine Learning and Deep Learning Algorithms In Classifying Bangla Crime News Articles	1273-1277
814	EEG Based Autism Detection Using CNN Through Correlation Based Transformation of Channels' Data	1278-1281
817	Effective Segmentation on 24-hour Holter Recording for Classifying Microvascular Complications of T2DM	1282-1285
818	A Novel Implementation of Computer Generated Hologram for Highly Secure Communication Using Gerchberg-Saxton (GS) Algorithm	1286-1289
819	Input-based Analysis Approach to Prevent SQL Injection Attacks	1290-1293
820	Design and Implementation of WSN Based Indoor Environmental Monitoring System Using Multiple Sensor Data Acquisition with IoT Integration	1294-1298
826	A Sub-frame Based Feature Extraction Approach from Split-Band EEG Signal for Sleep Apnea Event Detection Using Multi-Layer LSTM	1299-1302
827	Classification of Bengali Sign Language Characters by Applying a Novel Deep Convolutional Neural Network	1303-1306
831	Email Spam Detection using Bidirectional Long Short Term Memory with Convolutional Neural Network	1307-1311

2020 IEEE Region 10 Symposium (TENSYMP), 5-7 June 2020, Dhaka, Bangladesh

832	A Secure IoT Data Communication and Sharing Framework Based on Permissioned Blockchain	1312-1316
834	A Cost-Effective Voice Controlled Electronic Braille for Independent Learning of Visually Impaired People	1317-1320
835	Ultrasonic Sensor based Efficient and Energy Saving Street Lighting System	1321-1324
836	A Low Cost Boat Distress Alert And Safety System	1325-1328
837	A Novel Approach to Fault Diagnosis of High Voltage Transmission line - A Self Attentive Convolutional Neural Network Model	1329-1332
839	Automatic Detection of Eye Cataract using Deep Convolution Neural Networks (DCNNs)	1333-1338
842	Steady-State Thermophysical Simulation of a 3D CAD Model of Human-Eye	1339-1342
844	Design and Analysis of Silicon Carbide Microneedles for Transdermal Drug Delivery	1343-1346
847	Wavelet Based Entropy Features for Facial Expression Recognition	1347-1350
848	A fully automated system to detect malaria parasites and their stages from the blood smear	1351-1354
849	Mango Fruit's Maturity Status Specification Based on Machine Learning using Image Processing	1355-1358
850	An Assistance System for Visually Challenged People Based on Computer Vision and IOT	1359-1362
853	Synthetic Error Dataset Generation Mimicking Bengali Writing Pattern	1363-1366
854	Query Expansion for Bangla Search Engine Pipilika	1367-1370
857	Mining Hepatitis C Virus Infected Patient's DataApplying Machine Learning Methods	1371-1374
858	A cross shaped drop filter design based on Photonic Band Gap for optical communication network	1375-1378
862	Design of a low cost Hand Gesture Controlled Automated Wheelchair	1379-1382
867	EsharaGAN:An Approach to Generate Disentangle representation of sign language using InfoGAN	1383-1386
869	Investigation of Gain in Bismuth Doped Fibre Considering ASE under 830 nm Pump	1387-1391
872	A Novel Approach for E-mail Classification Using FastText	1392-1395
876	Impact of Correlation on the Security in Multicasting through $\kappa - \mu$ Shadowed Fading Channels	1396-1399
880	Design and Analysis of a Slotted Micro-cantilever based Biosensor for Detection of P24 Antigen in HIV Diagnoses	1400-1403
881	Design and Implementation of Fire Extinguishing Ball Thrower Quadcopter	1404-1407
884	Investigation of the Effect of MFCC Variation on the Convolution Neural Network-based Speech Classification	1408-1411
887	A Comparative Study on Design and Characterization of Single Gate and Double Gate Multi-Channel Junctionless Nanowire Transistors	1412-1415
888	Enhancement of Resulting Image Search Engine (ERISE) by Content-Based Image Retrieval System	1416-1419

2020 IEEE Region 10 Symposium (TENSYMP), 5-7 June 2020, Dhaka, Bangladesh

889	Design and Evaluation of a SWB Decagonal Patch Textile Antenna for WBAN Applications	1420-1423
890	Delay-Optimized Traffic Forwarding Mechanism in Software Defined Networking	1424-1427
892	Performance Evaluation of a High Gain DC-DC Converter for DC Microgrid Applications	1428-1431
894	Novel Adaptive Reaching Law of Sliding Mode Control for an Upper Limb Exoskeleton Robot	1432-1437
900	CONFLICTS IN BETZ LIMIT AND AN ALTERNATIVE APPROACH FOR WIND TURBINES	1438-1443
901	A Novel Diagnosis System Using Regularized Encoder-Decoder Based Generative Probabilistic Network for Parkinson's Disease	1444-1447
903	Reduced-Order Robust Nonlinear Controller Design for Speed Control of Electro-Mechanical System	1448-1451
904	Investigating Novel DGS Design in Bandpass Filter for Harmonics Profile Optimization	1452-1455
908	Robust Deep Neural Network Model for Identification of Malaria Parasites in Cell Images	1456-1459
909	Design an Efficient Graphene Based Antenna for Wireless Applications	1460-1463
911	Domain Specific Factoid Question Answering by Regular Expression Generation	1464-1467
913	Reduced Switch Multilevel Inverter with Symmetrical & Asymmetrical DC Sources for Solar PV Applications	1468-1473
917	A Framework for Mind Wandering Detection Using EEG Signals	1474-1477
921	Identification and Recognition of Printed Distorted Characters Using Proposed DCR Method	1478-1481
926	Fast Response and Energy Efficient Caching Policy Design and Analysis for Information Centric Networking with Flexible User Mobility	1482-1485
927	Diagnosis of Polycystic Ovary Syndrome Using Machine Learning Algorithms	1486-1489
929	Performance Analysis of the Overcurrent Protection for the Renewable Distributed Generation Dominated Microgrids	1490-1493
932	Effect of Varying Anastomosis Angles for Non-Newtonian Pulsatile Blood Flow through Artery Bypass Graft Models: an LES Study	1494-1497
936	A Wearable Snap-on Button Antenna for on Body Application	1498-1501
939	Regularized Singular Value Decomposition Based Multidimensional Convolutional Neural Network for Hyperspectral Image Classification	1502-1505
940	Design of Loop Antenna as a Partial Discharge Measurement and Detection System on Metal-Enclosed High Voltage Apparatus	1506-1510
941	Physical Adversarial Attacks Against Deep Learning Based Channel Decoding Systems	1511-1514
942	Performance Analysis of Indoor Positioning System Using Visible Light Based on Two-LEDs and Image Sensor for Different Handhold Situation of Mobile Phone	1515-1518

2020 IEEE Region 10 Symposium (TENSYMP), 5-7 June 2020, Dhaka, Bangladesh

944	Optimal Planning of PV-DG Units in A Distribution System by Biogeography-based Optimization	1519-1522
945	Automated IoT-based water quality measurement and analysis tool	1523-1526
946	Smart Glass for Awareness of Important Sound to People with Hearing Disability	1527-1530
952	A Comprehensive Survey on Computer Vision Based Approaches for Moving Object Detection	1531-1534
955	Optics of Perovskite-based Highly Efficient Tandem Solar Cells	1535-1538
960	Structural, optical and magnetic properties of B8, FeB8, CoB8, NiB8 nanoclusters: A DFT study	1539-1542
965	Z-Source Inverter (ZSI) based reconfigurable architecture for solar photovoltaic (PV) microgrid	1543-1546
966	Classification of Bangla News Articles Using Bidirectional Long Short Term Memory	1547-1551
969	Near-band edge UV emission and band gap engineering of highly transparent BaSnO ₂ nanocrystalline thin films	1552-1555
973	Robot knee orthosis to prevent falling during a standing up assistace	1556-1559
977	Voltage Control of Single Phase Islanded Microgrid by Fuzzy Logic Controller for Different Loads	1560-1563
978	Effects of Noise on Performance Comparison Between RASTA-PLP & MFCC based Bangla ASR Using Convolutional Neural Network	1564-1567
979	Comparison of Infrared and Red Photoplethysmography signals for Non-calibrated Non-invasive Blood Glucose Monitoring	1568-1571
980	A Comparative Study of Neural Network Architectures for Lesion Segmentation and Melanoma Detection	1572-1575
984	Retinal Blood Vessel Extraction Based on Adaptive Segmentation Algorithm.	1576-1579
986	Early Detection of Glaucoma for computer Aid System.	1580-1583
987	A Millimeter Wave Channel Modeling with Spatial Consistency in 5G Systems	1584-1587
988	A Complex Network Analysis of River Transportation in Bangladesh	1588-1591
990	TransResUNet: Improving U-Net Architecture for Robust Lungs Segmentation in Chest X-rays	1592-1595
991	An Unsupervised Approach for Road Surface Crack Detection	1596-1599
995	Compact Fractal Shaped MIMO Antenna for Portable UWB Applications	1600-1603
996	LSRU: A Novel Deep Learning based Hybrid Method to Predict the Workload of Virtual Machines in Cloud Data Center	1604-1607
998	FPoW: An ASIC-resistant Proof-of-Work for Blockchain Applications	1608-1611
1001	What can Nighttime Lights tell us about Bangladesh?	1612-1615
1006	Investigation of Optimal Concentration of QDs on the Performance of QD-Based Luminescent Solar Concentrators	1616-1619
1008	PEE based Reversible Watermarking Algorithm for authentication and security of Medical Images	1620-1623
1009	Slotted-core microstructure fiber for chemical sensing in terahertz regime	1624-1627

2020 IEEE Region 10 Symposium (TENSYMP), 5-7 June 2020, Dhaka, Bangladesh

1011	Life Cycle Assessment of Climate Change and GHG Emission from Natural Gas Thermal Power Plant	1628-1631
1015	Application of Machine Learning on ECG Signal Classification Using Morphological Features	1632-1635
1016	Does electric prepaid meter intervention decrease payment delinquency in southern Dhaka city?	1636-1639
1018	Highly Sensitive Hollow Core Photonic Crystal Fiber Based Methyl-Alcohol Detector for Liquid Analytes in THz Regime	1640-1643
1019	SIMULATION BASED NON-INVASIVE DETECTION OF SKIN CANCER (BASAL CELL CARCINOMA) USING MILLIMETER-WAVE REFLECTOMETRY)	1644-1647
1022	Hand Gesture Recognition Based on Surface Electromyogram Signal (sEMG) with Muscular Contraction Level and Real Time Implementation on An Artificial Prosthetic Wrist Using Artificial Neural Network (ANN)	1648-1651
1023	Development of a Neural Network based model for Non-obtrusive Computation of BP from Photoplethysmograph	1652-1655
1024	Suitability Investigation of the Different Classifiers in fNIRS Signal Classification	1656-1659
1028	Fault Management in DFIG-Based Wind Turbine Using Sophisticated Advanced solid State Fault Current Limiter	1660-1663
1032	Porosity optimization of Dye-Sensitized Solar Cell using Particle Swarm Optimization Technique	1664-1667
1033	Enhanced Prediction of Lysine Propionylation Sites using Bi-peptide Evolutionary Features Resolving Data Imbalance	1668-1671
1035	Security Analysis of a Truck Hiring Application in Bangladesh	1672-1675
1037	Ellipse Core Based Photonic Crystal Fiber with High Nonlinearity and Higher Numerical Aperture	1676-1679
1039	An SPR-based optical biosensor with shared plasmonic materials and optimized graphene layer: An Angular interrogation approach	1680-1683
1041	Determination the best resting position using Electrogastrography after having a light meal	1684-1687
1043	Investigation of TCP Performance in 5G mmWave Networks	1688-1691
1044	Kinematics and Simulation Model of Autonomous Indonesian "Becak" Robot	1692-1695
1046	A New Single Input-Multiple Output Switching Converter using Circular Capacitors for E-Vehicle Applications	1696-1699
1048	Deep Generative Model for Single Image DeHazing on Embedded Platform	1700-1703
1050	Wi-Fi Frame Classification and Feature Selection Analysis in Detecting Evil Twin Attack	1704-1707
1051	Design and Analysis of Transformer-less HVDC Transmission System for Inter-Country Distance	1708-1712
1052	An Efficient Routing Protocol for Secured Communication in Cognitive Radio Sensor Networks	1713-1716
1054	Stability Analysis of Grid Integrated BESS Based Hybrid Photovoltaic (PV) and Wind Power Generation	1717-1720

2020 IEEE Region 10 Symposium (TENSYMP), 5-7 June 2020, Dhaka, Bangladesh

1056	Lattice Structure Dependent Modulation of Photonic Band Gap in Gallium Phosphide Based 2D Photonic Crystal	1721-1724
1057	STATCOM-Supercapacitor Control for Performance Improvement of Multimachine System	1725-1728
1058	Combining Unsupervised and Supervised Learning to Predict the Ripeness of any Fruit Based on Color	1729-1733
1059	Horizontal Vertical and SuperQueen Parity (HVSQ) Method for Soft Error Tolerance	1734-1737
1060	RNA secondary structure prediction using Fruit Fly Optimization Algorithm	1738-1742
1061	Interrelation Between TRM, Wind Power and Wind Speed	1743-1746
1062	Automated Risk Prediction by Measuring Pneumothorax Size using Deep Learning Approach	1747-1751
1063	Developing an IoT Networks-based Testbed for Software-Defined Networks	1752-1755
1065	Blockchain based Land Registry with Delegated Proof of Stake (DPoS) Consensus in Bangladesh	1756-1759
1070	Design and Performance analysis of a low loss Photonic Crystal Fiber in THz regime	1760-1763
1073	Finite Element Method Based Design and Analysis of Internal Coated and External Coated PCF Temperature Sensors	1764-1769
1074	Ponno Aalap: An Interactive Web Portal for Improving Consumer Experience	1770-1774
1076	Cross stockwell transform analysis of leakage current based surface contamination prediction of Metal Oxide Surge Arrester	1775-1778
1084	A Novel Method to Implement STDP Learning Rule in Verilog	1779-1782
1085	Efficient Approach to Detect Epileptic Seizure using Machine Learning Models for Modern Healthcare System	1783-1786
1087	Numerical Analysis of Lattice-matched InAlAs/InGaAsP/InGaAs based Triple-junction Solar Cell using MATLAB/Simulink	1787-1790
1088	Smart Home Shield & Automation System Using Facebook Messenger Chatbot	1791-1794
1089	Design and Evaluation of Liquid Filled PCF Temperature Sensor Based on SPR	1795-1799
1090	IoT Based Smart Home Automation and Demand Based Optimum Energy Harvesting and Management Technique	1800-1803
1092	Maize Diseases Image Identification and Classification by Combining CNN with BiDirectional Long Short-Term Memory Model	1804-1807
1093	Efficiency Evaluation of P&O MPPT Technique used for Maximum Power Extraction from Solar Photovoltaic System	1808-1811
1094	Design of an Intelligent Transport System for Dhaka City	1812-1815
1095	Design and Construction of a Vertical Axis Wind Turbine (VAWT) and Its Performance Prediction for Low Wind Speed Environment	1816-1819
1096	Design and Analysis of Soft Switching PWM DC-DC Power Converter with High Frequency Transformer Link for Portable Arc Welding Machine	1820-1823

2020 IEEE Region 10 Symposium (TENSYMP), 5-7 June 2020, Dhaka, Bangladesh

1104	Spin Transport Of Dirac Electrons In Hexagonal Lattice Topological Insulator In The Presence Of Edge Imperfections	1824-1827
1107	Early Stage Brain Tumor Detection on MRI Image Using a Hybrid Technique	1828-1831
1108	Design of a Triple Band Rectangular Slot Microstrip Patch Antenna for Wireless Applications	1832-1835
1109	A Self Sustaining Microgrid for Supplying Electrical Load in Rural Areas	1836-1839
1111	A Low-cost, Low-energy Wearable ECG System with Cloud-Based Arrhythmia Detection	1840-1843
1112	High Fidelity Embedding of Electronic Patient Record in Medical Images	1844-1847
1116	Thermal Transport in Carbon Doped Armchair Stanene Nanoribbons: A Molecular Dynamics Study	1848-1851
1117	Analog Signal Processing Based Hardware Implementation of a Real Time Audio Visualizer	1852-1856
1119	An application based comparative study of LPWAN technologies for IoT environment	1857-1860