

2020 IEEE International Students' Conference on Electrical, Electronics and Computer Science (SCEECS 2020)

**Bhopal, India
22 – 23 February 2020**



**IEEE Catalog Number: CFP2066S-POD
ISBN: 978-1-7281-4863-2**

**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:	CFP2066S-POD
ISBN (Print-On-Demand):	978-1-7281-4863-2
ISBN (Online):	978-1-7281-4862-5
ISSN:	2688-027X

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 INTERNATIONAL STUDENTS' CONFERENCE ON
ELECTRICAL, ELECTRONICS AND COMPUTER SCIENCE
(SCEECS)

TABLE OF CONTENTS

Pg. No.	Paper Title	Paper ID
1	Women's Safety System by Voice Recognition	003
6	Recognition of Power Quality Disturbances Using Hybrid Algorithm Based on Combined Features of Stockwell Transform and Hilbert Transform	004
12	Detection and Classification of Complex Power Quality Disturbances Using Hybrid Algorithm Based on Combined Features of Stockwell Transform and Hilbert Transform	005
18	A Current Based Hybrid Algorithm using Discrete Wavelet Transform and Hilbert Transform for Detection and Classification of Power System Faults in the Presence of Solar Energy	006
24	A Voltage Algorithm using Discrete Wavelet Transform and Hilbert Transform for Detection and Classification of Power System Faults in the Presence of Solar Energy	007
28	A Review on Arrhythmia Classification Using ECG Signals	009
34	Analysis of Underwater Wireless Communication using Visible Light LEDs	011
38	Estimation of Faults in Grid Connected Solar Photovoltaic Farm Using Voltage Based Median and Summing Values Features of Stockwell Transform Based Algorithm	012
44	Recognition of Faults in Grid Connected Solar Photovoltaic Farm Using Current Features Evaluated Using Stockwell Transform Based Algorithm	013
49	Current Based Transmission Line Protection Algorithm Using Signal Processing Techniques	014

55	Voltage Based Transmission Line Protection Algorithm Using Signal Processing Techniques	015
61	Design of Automatic 5 X 5 Dispenser with three kinds of payment modes using Verilog HDL	017
67	Autonomous Robot for Inventory Management in Libraries	018
73	Performance Analysis of DC-OFDM Modulation Scheme in Li-Fi Communication System	019
77	Smart Card For Various Application In Institution	026
82	Symptomization of Rheumatoid Arthritis in Patients on Pathological Examination: A Case Study	029
85	Curve Tracing Method in Segmentation and Detection of Type 2 Diabetes Mellitus in ECGs of Unhealthy Patients	030
91	Detection of Memory Leaks in C/C++	032
97	Reducing Data Redundancy and Analysing Video Using Deep Learning	039
101	Smart Helmet Wiper	040
105	Controller Architecture for Memory BIST Algorithms	043
109	Design of a Circular Slot Antenna with Broadband Dual CP Bi-directional Radiation Pattern	046
113	Contrast-Enhanced Magnetic Resonance Imaging and Computerized Tomographic Examination of Cervical Spine in Pott's Disease: A Case Study	047
116	IV (Intravenous) Tube Flow Control Device With IOT	053
120	Automatic Motorcyclist Helmet Rule Violation Detection using Tensorflow & Keras in OpenCV	055
125	Performance Analysis and Power allocation for Multi Relay Wireless Cooperative NOMA Networks with Diversity Combining strategies	056
131	Discontinuous Pulse Width Modulation Techniques for Modular Multilevel Converter	057

137	Controllable Bidirectional Power Transfer between Electric Vehicle and Grid at Different Loading Condition with Solar Power	059
143	Identifying Depression in a Person Using Speech Signals by Extracting Energy and Statistical Features	060
147	Time Domain Parameters as a feature for single-channel EEG-based drowsiness detection method	061
152	Design of On-Board Battery Charger using Interleaved Bridgeless Type PFC and Phase Shifted Full Bridge Converter	065
157	A Comparative Analysis of Cloud Based Watson System and CNN for Gesture Recognition Systems	066
162	A Smart Wear based Portable Health Monitoring System	068
168	Design and Synthesis of Multi-Segmented Robot to Mimic Serpentine Motion.	069
172	Power Quality Issues and Mitigation approaches for modern power scenarios: encapsulation	070
178	Sleep Monitoring using Laser Blood Flowmeter	071
182	Sensitive Brain-Computer Interface to help manoeuvre a Miniature Wheelchair using Electroencephalography	073
188	Performance Analysis of Partial Shading on Solar Photovoltaic System under Aluminium Reflectors	074
194	Machine Learning convergence for weather based crop selection	075
200	Impact of Distributed Generation in Single area load frequency control on system frequency	077
205	Optimization of Wind Farm Layout Based on Wake Effect Modelling	078
211	Preliminary Analysis of Doppler Collision Occurrence in Various Kinematic Conditions for NavIC System	080
215	Performance Evaluation of On-chip Interconnect System using Prospective Neural Network Design	083
219	Automated E-circuit Designing and Characterization using Prominent Neural Network	085

224	A Survey on the Authentication Techniques in Internet of Things	086
229	Comparative Analysis of Watermark Reconstruction Using Discrete Wavelet Transform and Slantlet Transform for User Identification in Social Media	091
234	Training RNN and It's Variants Using Sliding Window Technique	093
239	Comparison of Various Learning Rate Scheduling Techniques On Convolutional Neural Network	094
244	Garbage management with Smart trash using IoT	098
250	Handwritten Malayalam Character Recognition System using Artificial Neural Networks	101
254	Master-Slave Configuration for Dual-Axis Solar Tracker: Design and Implementation	102
260	Performance Analysis of TMG FinFETs for Low Power Application with Improved Analog/RF Characteristics	103
265	A Novel Step-Channel TFET for Better Subthreshold Swing and Improved Analog/RF Characteristics	104
271	Realization of Power Efficient FIR Filters using Hybrid Accurate-Inaccurate Adder Architecture	105
276	An approximation algorithm for reducing the number of non-zero bits in the filter coefficients	106
282	Design of a Chipless RFID Tag for 2.4 GHz and 5.8 GHz ISM Band Applications	108
286	Design of a Modified Slotted Monopole Fractal Antenna for Wideband Applications	109
290	Design and Simulation of Power Electronics Interface for Modified P & O Maximum Power Point Tracking Under Suddenly Varying Irradiance	110
296	Performance Analysis of a Novel Dual Metal Strip Charge Plasma Tunnel FET	112
301	Novel Perspective Approach to Improve Performance of Nanowire TFET	113
307	IoT Based Solar Panel Analysis using Thermal Imaging	114
312	Various Types of Wireless Battery Management System in EV	115

317	Design of Electric Motorcycle	116
321	Design and Implementation of Junction Boxes for Preventing Animal Attacks in Farms	119
326	Polarization Insensitive Dual Frequency Microwave Absorber for X and Ku Band Applications	120
329	Analysis of Wireless Channel Parameters for the Different Types of Soil in the WUSNs	121
333	Design and Simulation of FinFET based digital circuits for low power applications	123
338	Design and Performance evaluation of Proposed 2 kW Solar PV Rooftop on Grid System in Odisha using PVsyst	124
344	Remote Structural Health Monitoring System for Bridges	125
348	Classification and Summarization for Informative Tweets	128
352	Variability Analysis of On-chip Graphene Interconnects at Subthreshold Regime	130
358	Comparison of SVPWM and SPWM Schemes for NPC Multilevel Inverter	131
364	A Game Theory based Fault Tolerance Routing Scheme for Wireless Sensor Networks	132
369	DSP TMS320F28377S based Speed Control of DC Motor	133
373	An Optimized SVM based Fault Diagnosis Scheme for Wireless Sensor Networks	134
380	Maximization of The Output Power from Photovoltaic Array Under Partial Shading Conditions	136
386	Ultrasonic Guided Waves for Structural Health Monitoring Applications	138
393	Disease Symptom Analysis Based Department Selection Using Machine Learning for Medical Treatment	139
398	Design of Star-Shaped Fractal Antenna for Wideband Applications	140
402	An Efficient and Compact Review of Face Recognition Techniques	143

407	Polarity Estimation in a Signed Social Graph Using Graph Features	145
412	Smart Farming System using IoT for Efficient Crop Growth	147
416	IoT Based Controller for Smart Windows	148
421	Boosting predictions of Host-Pathogen protein interactions using Deep neural networks	150
425	Improvement of Power Quality Using Series Active Power Filter (SAPF)	151
430	Design of Chipless RFID tag using a Modified Swastik-shaped Resonator for UWB band Applications	152
433	Cloud based Accident Detection and Notification System	153
438	Effects of Different Radiations of Electromagnetic Spectrum on Human Health	154
444	Adaptive Fuzzy Network based Transfer Learning for Image Classification	155
448	Sandia Frequency Shift Method for Anti-Islanding Protection of a Grid-tied Photovoltaic System	156
453	A Miniaturized On-Body Textile Antenna Based on Substrate Integrated Waveguide Technology	159
456	Energy Management Strategy for Prosumers under Time of Use Pricing	161
461	Analysis of Equipment Sizing and Designing of 132/33/11KV Substation	163
467	Generating Graph from 2D Flowchart using Region-Based Segmentation	165
472	A Review on Prediction of Early Heart Attack Based on Degradation of Graphene Oxide and Carbon Nanotube using Myeloperoxidase	169
478	Performance Analysis of CFBG and DCF Based on Dispersion Compensation	170
483	Mobile Gantry Robot for Pick & Place Application	171
488	Innovative Design and Analysis of a Closely Spaced 4x4 massive MIMO Antenna Array with Low Mutual Coupling for 5G BTS Application	172
492	Nature Stimulated Dual band, Dual Polarized Aerial with Very Good Isolation for	173

	A-LTE/5G Base Station Applications	
495	Very Novel Design and Mutual Coupling Analysis of a Wideband, Tightly Arranged DP massive MIMO (32T and 32R) Antenna Array for 5G Base Station Application	174
500	Food Quality Detection and Monitoring System	175
504	Design and Synthesis of Chassis of Automated Seed Sowing Robot for BT Cotton Seed.	176
508	Testing MapReduce program using Induction Method	178
513	An Industrial Application Based N2 Gas Digital Pressure Indicator	183
516	Distracted Driver Detection using Stacking Ensemble	184
521	Feature Selection Technique and Its Importance in Machine Learning : A Survey	189
527	A Survey on Machine Learning Approaches and Its Techniques	190
533	Artificial Intelligence based Energy Efficient DCH based WSN using Fuzzy Inference System	194
538	Automatic Object Detection and Separation for Industrial Process Automation	195
543	Design of prominent Time-to-Digital Converter using single electron transistor operating at room temperature	196
548	Energy Management Strategy for Cost Minimization under Time of Use Pricing for Residential Application	198
552	Secure and Success Rate of Packet for WSN using Leach Cluster Head Fuzzy Logic	199
556	Design and Analysis of Multioutput Flyback Converter under Continuous and Discontinuous Conduction mode using PI Controller	201
561	Improved AC-DC Converter Modeling With Advanced Power Decoupling Controller Method	202
565	PAPR and BER Reduction of 5G MIMO Systems Based on Modified SLM and DCT Technique	204

569	Nuisance Tripping Failure Modes and Corrective Actions in Molded Case Circuit Breaker	205
574	Performance Analysis of New SCADA Interface Developed in C# Environment	209
578	Spatio-Spectral Image Fusion Using Local Embeddings	215
581	Air Quality Index Forecasting using Auto-regression Models	216