2021 International Conference on Recent Trends on Electronics, Information, Communication & **Technology (RTEICT 2021)**

Bangalore, India 27-28 August 2021

Pages 1-494



IEEE Catalog Number: CFP21F77-POD ISBN:

978-1-6654-0254-5

Copyright © 2021 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:
 CFP21F77-POD

 ISBN (Print-On-Demand):
 978-1-6654-0254-5

 ISBN (Online):
 978-1-6654-3559-8

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



2021 IEEE International Conference on Recent Trends in Electronics, Information & Communication Technology (RTEICT-2021)

Table of Contents

Preface Message

Sl. No.	Paper ID	Title of the Paper	Page Number
1	28	Hybrid plasmonic electro-optic microring modulator using Indium Tin Oxide	1-4
2	11	Summarization and Prioritization of Amazon Reviews based on multi-level credibility attributes	5-9
3	40	Beam Forming Network Design Using 4*4 Butler Matrix for ISM Band-III (24GHz) Applications	10-14
4	30	Implementation of Sensor Fusion for a Mobile Robot Application	15-20
5	71	A Novel Domino Technique To Reduce Power Dissipation And Delay Variations	21-27
6	57	Performance Analysis of Light Illuminations and Image Quality Variations and its Effects on Face Recognition	28-33
7	63	A Low-Voltage Ride-Through strategy using fuzzy based controller for 3phase grid connected PV system	34-37
8	67	Optimization of Electrode Design in Capacitance Liquid Level Sensor	38-42
9	279	Detection and Prediction of Neurological Disorder Using Tremor Signals and Machine Learning Algorithms	43-50
10	78	A Complete Telemetry Solution for COVID-19 Infected Person by Using IoT	51-54
11	62	Temperature and Humidity Monitoring in Silo	55-59
12	70	Performance of Bidirectional Isolated DC-DC Converter with PV system and Energy storage Bank	60-65
13	99	Polynomial Based Linear Regression Model To Predict Covid-19 Cases	66-69
14	83	A Comparative Study of Performance Analysis of Solar PV With Interleaved DC-DC Converters	70-75
15	96	Secure And Transparent Crowdfunding Using Blockchain	76-80
16	147	Comparison on DC bus voltage selection and real-time implementation of 24 V DC stand-alone PV system with a remote monitoring feature	81-86
17	130	Evaluation of RCNN parameters for Senile dementia diagnosis using ADNI dataset	87-90
18	122	Battery charging using a hill climbing MPPT algorithm and heuristic algorithm (MPPT)	91-96
19	154	PILLBOT: Non-Contact Medicine Dispensing System for Patients in Quarantine	97-100
20	168	Linearity Enhancement of Class-AB, S-Band HEMT PA Using	101-106

		Balanced Configuration	
21	178	Speech Enhancement Techniques and its Implementation	107-111
		Subspace and Frequency Domain Speech Enhancement	
22	180	Techniques	112-116
23	272	Security Enhancement of Iiot with Permissioned Blockchain and Cloud Computing	117-121
24	149	Garbage Classifying Application Using Deep Learning Techniques	122-130
25	271	A Novel Ternary D Flip-Flop using Pass Transistors based on GNRFET	131-134
26	134	Design and Simulation of X-Band Transmitter Chain for Radar Application	135-140
27	173	Parameter Based Literature Survey of COVID-19 Mortality Dynamics Using Machine Learning Techniques	141-145
28	84	Design of Efficient Scan Flip-Flop	146-150
29	175	Non-Invasive Devices for Early Diagnosis of Oral Potentially Malignant Disorders: A Comparative Analysis	151-155
30	196	Smart Scape: Fall Detection Using Sensors With Shoes For Accident Falls	156-160
31	201	LDP Video Target Simulator for Testing Mission Software in Combat Aircrafts	161-165
32	116	Modified Nine Level Multi Level Inverter Topology for Trinary Sequences with Reduced Switches and Switching Losses	166-171
33	398	Hardware Design of PIC Microcontroller based Charge controller and MPPT for the Standalone PV-Battery charging System	172-175
34	189	Use of Gesture Recognition for Differently Abled Persons	176-179
35	431	Robotic Process Automation for Resume Processing System	180-184
36	225	Improved Frequency Estimation Technique for FMCW Radar Altimeters	185-189
37	254	Efficient MODEM Design For SDR Application	190-195
38	327	Brushless DC Motor Based E-Rickshaw Controller Design	196-200
39	396	Dual-Band Circularly Polarized Compact Planar Dual Slot Monopole Antenna	201-205
40	191	Design of Microcontroller based Smart Car Parking System	206-210
41	305	Application of UPQC-PV in Medium Voltage Radial Distribution System to Mitigate Voltage Sag-Swell	211-216
42	297	Categorization of EEG Using Hybrid Features and Voting classifier for Motor Imagination	217-220
43	248	Hybrid Density-based Adaptive Clustering using Gaussian Kernel and Grid Search	221-226
44	384	Chronic kidney disease prediction using machine learning techniques	227-232
45	381	Comparative Analysis of different Machine Learning Classifiers for Prediction of Diabetic Retinopathy	233-239
46	382	Detection of Melanoma Skin Cancer using Dermoscopic Skin Lesion Images	240-245
	166	Performance Analysis of MD5 and SHA-256 Algorithms to	246-250
47	100	Maintain Data Integrity Design and Implementation of 8-Bit Vedic Multiplier in 18nm	251-256

		FinFET Technology	
49	358	Prognosis of Supervised Machine Learning Algorithms in Healthcare Sector	257-261
50	364	EmotionNet: ResNeXt Inspired CNN Architecture for Emotion Analysis on Raspberry Pi (6PAGES)	262-267
51	136	Intelligent Secure Smart Locking System using Face Biometrics	268-273
52	436	Observer-based Sensorless Field oriented control of PMSM motor for EV application	274-279
53	135	Frontal Facial Expression Recognition Based on Convolutional Neural Network and Haar-Cascade Descriptors	280-284
54	255	A Comparative Analysis of Deep Neural Network Models using Transfer Learning for Electrocardiogram Signal Classification	285-290
55	245	Thermal image enhancement using kurtosis based clipping histogram method.	291-296
56	341	A Comparative Analysis Of Extreme Gradient Boosting Technique With Long Short-Term Memory And Layered Recurrent Neural Network For Electricity Demand Forecas	297-302
57	501	Design and implementation of aspect Based Sentiment Analysis of Hotel Reviews .	303-309
58	372	Implementation of Smart Energy Meter through Prepaid Transaction using IOT	310-314
59	439	Memory Leak Detection Tools: A Comparative Analysis	315-320
60	219	Emotion Based Music Recommendation System for Specially-Abled	321-325
61	433	Performance Improvement of Navic Signal Using Real-time Filtering Techniques	326-330
62	231	Design of Control Unit for Off-grid and Grid Connected Solar-Wind Hybrid System Suitable for Supplying Power to both AC and DC Loads	331-338
63	256	Hardware Implementation of Pipelined FFT using Polyphase Decomposition	339-343
64	299	A Compact millimeter-wave antenna with enhanced gain for 5G wireless communication	344-347
65	309	Optimal Solution To Economic Load Dispatch By Modified Jaya Algorithm	348-352
66	357	SBTHCT: Segmentation of Brain Tissues using Hybrid Clustering Technique	353-356
67	360	Discharge analysis and temperature management of LiFePO4 battery pack for Electric Vehicles	357-360
68	417	Optimization of Microfluidic Pressure Sensing Mechanism Integrated Microcantilever in Microchannel	361-365
69	239	Real Time Monitoring and Controlling of Water Levels in Tank with Improved Blynk Features	366-370
70	240	Smart Home Light Intensity Control using Potentiometer method for Energy Conservation	371-375
71	370	Statistical Forecasting of Vegetation Indices using Integrated Neuro-Fuzzy Inference System with Bio-Inspired Techniques	376-381
72	359	Defect detection in PCBs using convolutional neural network	382-386
73	427	Extended Elastic Optical Networks using C+L+S bands and	387-394

		effective Spectrum Allocation	
74	326	Printed Reflect Array Design for SAR Applications	395-400
75	68	Energy efficient routing with sleep mode and threshold activation	401-405
76	405	Efficient enhancement of underwater images using color	406-411
		correction and fusion	
77	390	Intelligent Dyslexia Prediction Empowered with Optimization Techniques	412-415
78	397	Insolation prediction for reliable energy storage using deep learning algorithms	416-419
79	337	Performance Analysis of Alzheimer's Disease Detection System with Various Classifiers	420-423
80	209	Design And Implementation Inteligent Inverter For Grid Connected PV System	424-428
81	302	Unstructured Medical Text Classification using Machine Learning and Deep Learning Approaches	429-433
82	400	Study of Fake News Detection using Machine Learning and Deep Learning Classification	434-438
83	264	Performance analysis of CPU & GPU for Real Time Image/Video	439-443
84	346	Performance Analysis of CMOS, PTL and GDI Based Braun Multiplier for Signal Processing Applications	444-447
85	389	Array Factor Code Development of Fractal Array Antenna using Python: A Mini-Study on Free and Open Source Software for Antennas	448-451
86	458	Speech Bandwidth Extension using DWT+DCT steganography technique	452-457
87	344	Vertical Scaling of Virtual Machines In Cloud Environment	458-462
88	200	Autonomous Precision Landing with UAV and Auto charging	463-466
89	387	A Hybrid Approach of ANN-GWO Technique for Intrusion Detection	467-472
90	347	Rectification of impaired whisper speech signals	473-479
91	333	Conflict Management of Multi Modal RFID in Asset Tracking	480-484
92	386	Smart Cold Storage and Inventory Monitoring System	485-488
93	207	Takagi-Sugeno Fuzzy based Controllers for Grid Connected PV-Wind-Battery Hybrid System	489-494
94	280	Anoxic Microbial Methanogenic Detection For Food Safety Sustentation	495-498
95	385	Correlation Based Breast Cancer Detection using Machine Learning	499-504
96	301	High Isolation With Fork-Shaped Stub In Compact UWB-MIMO Antenna Using CMA	505-511
97	418	Energy Management System for Microgrids	512-516
98	450	A Video Surveillance based Security Model for Military Bases	517-522
99	356	Finite Element Analysis and Mathematical Modelling of Rosen Piezoelectric Transformer: A Review	523-530
100	426	Machine Learning and IoT Based EEG Signal Classification for Epileptic Seizures Detection	531-537
101	273	Energy Efficient Greedy Scheduling of Tasks for DVFS Enabled Heterogeneous Multicore Processors	538-542
1		A Comparative Analysis on Speech Enhancement and Coding	543-549

		Techniques	
103	282	Configuring and Verifying Bi-directional Forwarding Detection Functionality in WCDMA Base Transceiver Station	550-554
104	287	A Comparative Analysis of Deep Learning Approaches in Intrusion Detection System	555-562
105	226	SelfiePass: A Shoulder Surfing Resistant Graphical Password Scheme	563-567
106	5	Automation of HealthCare Modality's Storage System Monitoring Process	568-572
107	291	Video Analytics-based Ingredient Detection for Smart Chef using YOLOv3 and ImageAI	573-578
108	412	Podcast Hosting Using Spectral Gating And Speech Recognition Methodology	579-583
109	423	A millimeter-wave microstrip patch antenna and 1x4 array for 5G communication	584-586
110	260	Encryption of Data over HTTP (Hypertext Transfer Protocol) /HTTPS (Hypertext Transfer Protocol Secure) Requests for Secure Data transfers over the Internet	587-590
111	155	Efficient and secure data storage system on the cloud using blockchain	591-595
112	22	Cloud based real time data analysis of Electric Vehicle model using Thing Speak through IoT	596-600
113	437	Dual band compact microstrip antenna with defected ground for modern wireless applications	601-605
114	366	Classification of heart disease from ECG signals using Machine Learning	606-609
115	286	Analysis of Advanced Speed Control Methods for PLC-based Induction Motor Drive	610-614
116	228	T1w MRI Brain Tumor Image Segmentation using Active Contour Models and Convolution Neural Network Fusion	615-620
117	162	An Analysis for the Prediction of Prefetched Content on Social Media	621-625
118	300	Monitoring the Movements of Wild Animals and Alert System using Deep Learning Algorithm	626-630
119	330	A Comparative Analysis of LEACH, TL-LEACH and EHCA Algorithms for Wireless Sensor Networks (WSNs)	631-636
120	348	Breast Mass Classification with Deep Transfer Feature Extractor Model and Random Forest Classifier	634-641
121	362	Design and Comparative Study of DC-DC Quadratic Buck-Boost Converter and Cascaded Buck-Boost Converter	642-646
122	393	A Deep Learning Model for Face Expression Detection	647-650
123	394	Detecting Deepfakes Using Deep Learning	651-654
124	399	Early Detection of Spondylosis using Point-Based Image Processing Techniques	655-659
125	351	Feature Selection Approach for Oil Palm Fruit Grading Expert System	670-674
126	451	Study of Various Techniques for the Classification of Hateful Memes	675-679
127	295	A Critical Evolution of Multifunctional DSTATCOM for Power	680-684

		Quality Improvement and Grid Integration of RES in Distribution System	
128	210	Design and Analysis of DTMOS based Low Voltage OTA and its Filter Application	685-689
129	434	Design and Simulation of Cognitive Radio Networks with Selective Reporting SU Cluster	690-697
130	181	Optimal metro route identification using Q-Learning	698-702
131	7	A Centralized Management System Software Framework to aid in EV Charging	703-707
132	250	Navigation Systems Using A*	708-712
133	182	Analysis of high speed design on a multilayer PCB substrate	713-717
134	363	Eye-Blink artifact Detection and Removal Approaches for BCI using EEG	718-721
135	102	Comparative Analysis of Edge Computing and Edge Devices: Key Technology in IoT and Computer Vision Applications	722-727
136	103	Quantum Convolutional Neural Networks (QCNN) Using Deep Learning for Computer Vision Applications	728-734
137	104	3D Object Detection and Tracking Methods using Deep Learning for Computer Vision Applications	735-738
138	108	Smart irrigation and Crop health prediction	739-742
139	110	Design and Implementation of Low Power and High- Speed Full Adder	743-748
140	377	Power Efficient and High-performance 4-bit Dadda Multiplier using Multiplexer based BEC-1 converter	749
141	223	Design and Development of Automatic Gardening System using IoT	750-754
142	227	Brain Tumor Segmentation of T1w MRI Images Based on Integrated Clustering Algorithm.	755-759
143	144	Medicine Assistant and Diet Remainder for Secure Healthcare	760-763
144	145	Serverless Computing and the Emergence of Function-as-a-Service	764-769
145	160	Impact of Low Frequency Noise Source over Tunnel Field Effect Transistor in Nano Regime	770-773
146	233	Modelling and FDTD Analysis of OLED using Nano Photonic structures to reduce losses	774-778
147	235	Designing, Analysis and Synthesis of 32-Bit Configurable Hack CPU	779-783
148	265	Vector Control of Doubly fed Induction Machine for an Electric Vehicle Application	784-787
149	310	An Automatic Overloaded Vehicle Monitoring and Prevention System using IoT	788-792
150	429	IoT and Deep Learning based Smart Greenhouse Disease Prediction	793-799
151	293	Optimal PMU Placement for Power System State Estimation Using Improved Binary Flower Pollination Algorithm	800-804
152	502	Optimum Power Point Tracking Technique for Standalone Solar Photovoltaic System	805-808
153	247	Design of Bio Inspired Maple Leaf Microstrip Patch Antenna Array with Different Substrates for Wireless Applications	809-812

154	241	Stabilizing Voltage Fluctuations in Wind Energy Conversion System using Arduino controlled Buck- Boost Converter	813-817
155	159	System-on-Chip Security Validation and Recent Trends	818-823
156	221	Emotional Speech Cloning using GANs	824-828
157	19	A Game of Life on a Pythagorean Tessellation	829-834
158	24	Performance Analysis of CNTFET-ReRAM based Crossbar Network for In-Memory Computing	835-839
159	229	Classification of soil types from GPR B Scans using deep learning techniques	840-844
160	296	A Low Cost Virtual Guide for Next Generation Smart Museums	845-849
161	349	Design and Synthesis of Compact SIW Diplexer with High Isolation	850-853
162	369	Threat Assessment Industrial Robot	854-858
163	428	Divide and Scramble - A Recursive Image Scrambling algorithm utilizing Rubik's Cube	859-863
164	314	Performance Evaluation of Graph Partitioning on Many-core System	864-868
165	443	Parkinson's disease Diagnosis using Voice Signals by Machine Learning Approach	869-872
166	459	Signature Based Radar Target Classification	873-879
167	416	IoT Based Secluded HRV System for Monitoring Hypertensive Patients	880-883
168	269	A Solar Powered Kiosk for Contactless Body Temperature Sensor and Hand Sanitizer Dispenser to Monitor and Control Covid-19 Disease	884-888
169	345	Elliptical Curve Cryptography Design Principles	889-893
170	406	Analysis on Texture Feature Extraction Methods for Face	894-897
171	409	Recognition in New Born Multiband Microstrip Patch Antenna for C and X Band Applications	898-901
172	61	A Multiband Microstrip Patch Antenna with Non Contact Feeding Technique	902-905
173	270	Long Short Term Memory and Non-linear Autoregressive Models for Prayer Time Prediction	906-911
174	186	Adaptive Robotic Path Planning Using ML	912-917
175	249	A comparative analysis on reconfigurable and multiband antennas for 5G and other wireless applications	918-922
176	308	Digital multiband filter design with power spectrum analysis for Electrocardiogram signals	923-927
177	27	Energy Efficient Beamforming for 5G	928-933
178	503	IOT enabled T-shirt for long-term monitoring of sleep disordered breathing	934-938
179	504	Implementation of Health Monitoring System for Patients using Li-Fi Technology	939-942
180	505	Development of Automated System for Detection of Diabetic Retinopathy	943-946
181	506	Glove Based Deaf-Dumb Sign Language Interpreter	947-950
182	507	Touchless Electronic Voting Machine With An Ai-Facial Recognition	951-955

183	500	A Comparative Analysis of Low Energy Adaptive Clustering Hierarchyand Power Efficient Gathering in Sensor Information System Progressive Conventions	956-959
184	508	Design And Development Of Intelligent System For Dairy Farming	960-964
185	509	Implementation Of Smart Card For Vehicles Documentation Verification Using IOT	965-969
186	510	Isolation And Dispensing Of Dc-To-Dc Power Supply To High Power Electrical Application Circuits	970-974
187	511	Comparison of Power Dissipation for CMOS and FinFET Dependent 6T SRAM at 18 nm Technology	975-979
188	512	Detecting and Tracking Of Multiple Objects in a single frame with YOLO	980-984
189	513	Face Mask Detection and Temperature Scanning for the Covid-19 Surveillance System	985-989
190	514	Design and Implementation of The Magnetic Coils in Parking Areas and Roads to get Continues Wireless Charging for Electric Vehicles	990-994